

# IFRS Sustainability Standard : Climate-related Disclosures (IFRS S2) 2024

**The Stock Exchange of Thailand**

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# About This Report

# 1. About This Report

## Climate-Related Disclosure align with IFRS S2 Standard

### Overview and Scope of The Report

The Stock Exchange of Thailand (SET) commits to driving Thai businesses toward sustainability, with a strong focus on addressing climate change through four key pillars:



Pillar 1: Preparing for regulatory changes



Pillar 2: Committing to GHG emissions reduction



Pillar 3: Addressing climate change with advanced technology



Pillar 4: Fostering collaboration to reduce GHG emissions

To demonstrate its commitment to addressing climate change, SET has disclosed its 2024 climate-related information in compliance with the IFRS S2 standard for the first time. This report provides insights into climate governance, the assessment of climate-related risks and opportunities on the SET's operations, as well as the risk management framework, targets, indicators, and progress related to climate initiatives. The report covers information for the fiscal year January 1–December 31, 2024.

### Climate-Related Disclosures

This report represents the first standalone disclosure of climate-related information in accordance with the IFRS S2 standard. It is aligned with the core elements of the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD) to demonstrate a commitment to transitioning toward a low-carbon business model and to serve as a role model in climate-related disclosures. The primary target audience of this report includes regulators, listed companies, securities companies, fund management companies, investors, non-governmental organizations (NGOs), and other stakeholders interested in the SET's climate-related initiatives.

#### Verification and Assurance

- The climate-related risks and opportunities presented in this report have been verified for accuracy by relevant departments within the organization. Additionally, they have been reviewed by Greenhouse Gas Emission Reduction Working Group and Sustainability Committee
- Greenhouse gas emissions data, covering Scope 1, Scope 2, and Scope 3 in 2024, have been verified by the University of Phayao. This verification aligns with the requirements of the Thailand Greenhouse Gas Management Organization (Public Organization) (TGO).



# SET's Journey Towards Net Zero



## 2. SET's Journey Towards Net Zero

2017

### Beginning the Journey

- ✓ Assessed greenhouse gas (GHG) emission from Scope 1, Scope 2, and partially in Scope 3.
- ✓ Set a target to reduce electricity consumption, a major source of emissions, by 3% from 2018.
- ✓ Committed to transitioning into a low-carbon organization.
- ✓ Establishment of the Energy and Environment Working Group

2018

### Commitment to GHG Reduction

- ✓ Submitted the Solar Rooftop and High-Efficiency Lighting projects to the T-VER program. Achieved carbon credits amounting to 901 tCO<sub>2</sub>e per year.

2019

### Building Networks to Reduce GHG Emissions

- ✓ Launched the "Care the Bear, Change the Climate Change by Eco Event", engaging over 45 organizations and reducing GHG emissions by 7,635 tCO<sub>2</sub>e.
- ✓ Offset GHG emissions using carbon credits and received the Carbon Neutral certification from TGO.

2020

### Initiating Green Procurement

- ✓ Developed a Green Procurement Guide with a goal to achieve 70% green procurement across SET's operations.
- ✓ Expanded collaboration to reduce GHG emissions through the "Climate Care Collaboration Platform".

2021

### Supporting GHG Reduction Across the Value Chain

- ✓ part of the organization's energy conservation plan
- ✓ Engaged over 300 organizations in the "Climate Care Collaboration Platform", collectively reducing of more than 12,000 tCO<sub>2</sub>e.
- ✓ Began assessing Scope 3 GHG emissions in accordance with the TGO guidelines and the GHG Protocol.

2030

### Near-Term Target

- ✓ Reduce Scope 1, 2, and 3 GHG Emissions by 42% Compared to the Base Year (2022)

2024  
-  
2025

### Foundation for Net Zero

- ✓ Assessed climate-related risks and opportunities, along with mitigation measures according to the IFRS S2 standard.
- ✓ Developed near-term and long-term science-based targets.

2023

### Towards Net Zero in Compliance with International Standards

- ✓ Established Working Group on Driving Greenhouse Gas Emission Reduction
- ✓ Committed to Science Based Targets initiative (SBTi) to set targets based on scientific principles in line with SBTi standards, aiming to achieve Net Zero by 2050.

2022

### Integrating Climate Action into Organization Strategy

- ✓ Initiated the integration of climate action into the organization's sustainability strategy, embedding climate change adaptation and mitigation as a core focus.



Net Zero Target

0  
2050

# Executive Summary



### 3. Executive Summary

#### Governance

The Board of Directors and Management of the SET prioritize managing climate-related risks as an integral part of the organization's sustainability strategy. The SET's climate strategy is overseen by the Subcommittee on Corporate Governance and Sustainability and the Subcommittee on Risk Management, both operating under the Board of Directors. Additionally, the GHG Emission Reduction Steering Committee is responsible for managing climate-related activities and initiatives.

#### Strategy

In 2024, the SET initiated the assessment of climate-related risks and opportunities in alignment with the IFRS S2 framework. The financial impact assessment revealed that:

1. Under the SSP5-8.5 scenario, flood risk is assessed as moderately high in the short, medium, and long term.
2. The risk from mandatory carbon pricing is assessed as low to moderate in the medium term and relatively high to high in the long term. However, if the SET successfully implements its plans and achieves targets under the SBTi framework, this risk could be mitigated to a low to moderate level.
3. Climate-related opportunities identified include: (1) Emission trading platform for the mandatory carbon market, (2) Carbon credit trading center, and (3) Climate-related indices. While revenue generated from these opportunities may not be significant, they contribute to the sustainability of capital market development. Additionally, these mechanisms play a key role in supporting Thailand's climate goals and the transition to a low-carbon economy.

The SET plays a critical role in the nation's financial system as the central hub for securities trading and fundraising. Any disruption in its operations would have significantly impact the capital market and the national economy. To address climate-related risks effectively, the SET has developed a comprehensive response plan, including strategies for managing physical risks and a roadmap to achieve Net Zero by 2050. Additionally, the SET collaborates with relevant public and private sector stakeholders to prepare for and capitalize on climate-related opportunities.

#### Risk Management

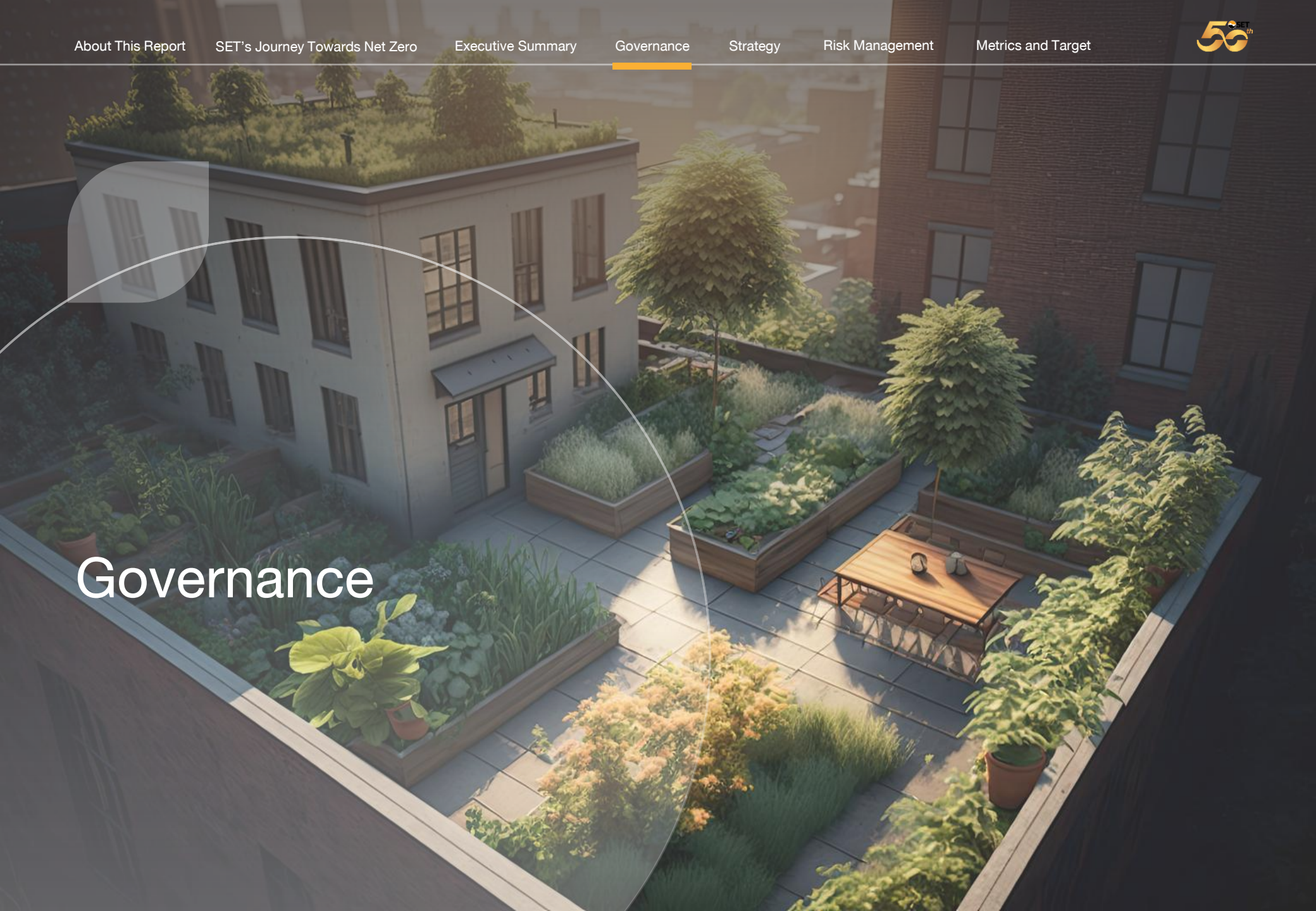
The SET has integrated the management of climate-related risks and opportunities into its organizational risk management framework, encompassing both operational structures and risk management processes. Furthermore, the response plans for climate-related risks and opportunities have been incorporated into the organization's strategic and operational plans. In 2024, the SET established processes for identifying, assessing, prioritizing, and monitoring climate-related risks and opportunities.

#### Metrics and Targets

The SET has set short-term and long-term GHG reduction targets for Scopes 1, 2, and 3, aiming for a 42% reduction by 2025 compared to the 2022 baseline and a 90% reduction by 2050 compared to the same baseline. To monitor progress, SET has established performance indicators for climate change management as part of its organizational KPIs. These indicators influence the performance evaluation and compensation of both executives and employees, based on predetermined proportions at each level. Additionally, the SET has initiated the use of internal carbon pricing and carbon credit offsetting as part of its climate action strategy.



# Governance



## 4.1 Climate-Related Governance Structure

### 1) SET Board's Oversight of Climate-Related Risks and Opportunities



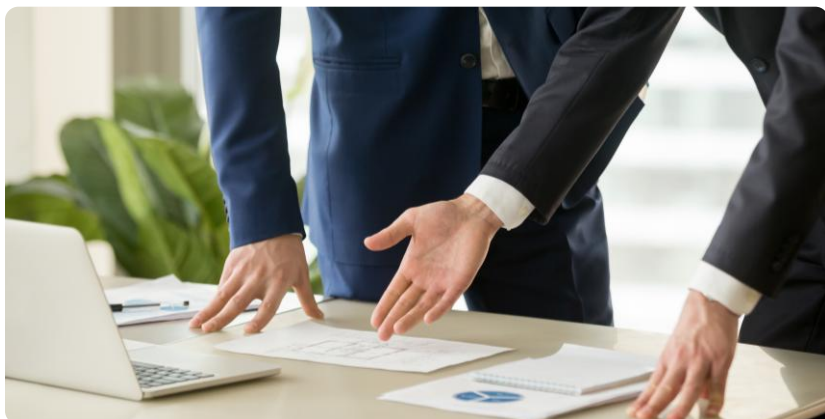
The SET's climate strategy is overseen by the Subcommittee on Sustainability and the Subcommittee on Risk Management, operating under the Board of Governors of the SET.

The Subcommittee on Sustainability meets at least quarterly to provide recommendations and review the development of governance and sustainability plans. Climate change management is a key sustainability issue considered in 2024. During the year, the Subcommittee held two meetings to discuss the assessment of climate-related risks and opportunities, trends and regulatory frameworks related to climate change, and the SET's commitment to setting science-based targets in alignment with SBTi criteria.

The Subcommittee on Risk Management meets at least quarterly to oversee and review issues related to climate change risks. In 2024, the Subcommittee convened once to discuss the assessment of climate-related risks, climate risk management, and the integration of these risks into the SET's overall risk management framework.

## 2) Roles of the Management Committee

The Management Committee of the SET, led by the President, is responsible for overseeing climate-related management at both strategic and policy levels. This ensures effective implementation at the operational level by providing resource support and making investment decisions for greenhouse gas (GHG) reduction projects. These efforts are crucial for enabling the SET to effectively manage climate-related risks and opportunities. Additionally, the Management Committee provides guidance and recommendations to the Greenhouse Gas Emission Reduction Steering Committee on matters related to emissions management. This support drives tangible progress and ensures the efficiency of GHG reduction initiatives.



## 3) Roles of Working Group on Driving Greenhouse Gas Emission Reduction

The Working Group on Driving Greenhouse Gas Emission Reduction is chaired by a senior executive and includes members from departments directly or indirectly involved in climate-related operations. The committee is responsible for overseeing climate-related management, which includes setting targets, developing climate strategy plans, reporting, and monitoring climate performance. Additionally, the committee provides recommendations and guidance to ensure that the implementation of climate strategies aligns with the established plans.

The Greenhouse Gas Emission Reduction Steering Committee is also responsible for ensuring that all relevant departments integrate SET's climate strategy into their respective operations.





## 4.2 Climate-Related Skills and Training for Board and Management

Most board members of the SET have extensive experience in sustainability and risk management (as illustrated in the picture below). They are capable of enhancing SET's climate governance. Additionally, the Board, Management Committee, and relevant working groups regularly participate in ESG-related training, including specialized on climate change. These training programs aim to build knowledge, foster understanding, and keep participants updated on emerging challenges arising from the ongoing climate crisis.

### Specialized Knowledge and Expertise



In 2024, climate-related training primarily focused on the opportunities and risks associated with climate change for the Stock Exchange, Thailand's progress in enacting climate legislation, and the Stock Exchange's advancements in preparing climate disclosures in accordance with the IFRS S2 standard. Key activities included:

### Climate-Related Training

#### Training Session 1/2024:

**Topic:** Climate Risks and Opportunities

**Objective:** To enhance understanding of climate risk and opportunity assessment for the SET. The training aimed to equip participants with the knowledge to analyze climate risks, identify opportunities, and develop responsive strategies effectively.

#### Training Session 2/2024:

**Topic:** Climate Change Act and Carbon Market

**Objective:** To provide insights into national developments related to and prepare participants to address potential risks and opportunities resulting from the Climate Change Act and Carbon Market.



An aerial photograph of a river winding through a dense, lush green forest. The river is a deep blue color, contrasting with the vibrant green of the trees. A small boat is visible on the river, moving towards the right. A large, semi-transparent white circle is overlaid on the image, centered on the river. The word 'Strategy' is written in white, sans-serif font in the lower-left quadrant of the image.

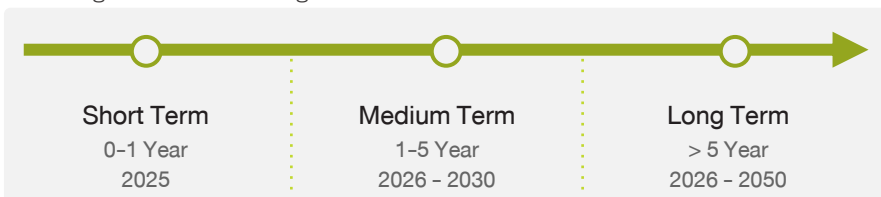
# Strategy



## 5.1 Overview of Climate-Related Risks and Opportunities

The climate change crisis is a significant challenge impacting economies and business operations globally. As a key player in capital market development, The SET plays a vital role in enhancing the preparedness of stakeholders within the capital market value chain to adapt to future changes. Therefore, it is imperative for the Stock Exchange to assess climate-related risks and opportunities and establish appropriate strategies to build resilience for its business operations and value chain.

In 2024, the SET began conducting climate-related risk and opportunity assessments following the IFRS S2 framework. The SET evaluated the overall risks and opportunities using Scenario Analysis and divided into three phases. These phases align with the timeline for setting climate management targets under the Science Based Targets Initiative (SBTi) whereby the short and medium terms are guided by near term target, the long term is focused on reaching the Net-zero target.” as follows:

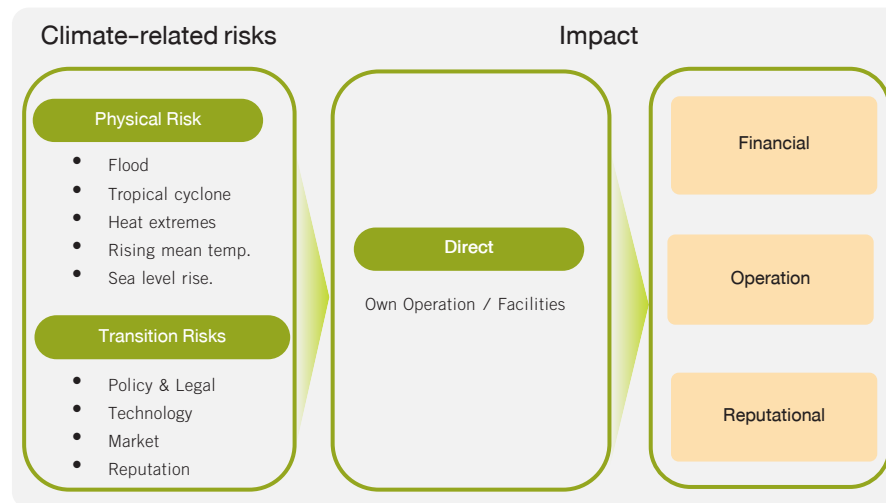


In addition to identifying risks, including physical risks and transition risks categorized by timeframes, the SET has also quantitatively assessed the financial impacts of flood risks and mandatory carbon pricing mechanisms. Furthermore, the SET has developed plans to manage both physical and transition risks to enhance the resilience of its business operations. These plans will be further detailed in sections 5.2 and 5.3.

Additionally, the SET has assessed its business opportunities related to the transition to a low-carbon economy. These opportunities include: (1) A trading platform for greenhouse gas emissions allowances under the mandatory carbon market, (2) A carbon credit trading center and (3) Climate-related indices. These opportunities not only support the expansion of SET's business operations but also contribute to the sustainable development of the capital market. Furthermore, they serve as critical mechanisms to help Thailand achieve its climate goals and transition to a low-carbon economy.

### Scope of Risk and Opportunity Assessment

In 2024, the SET assessed both physical risks and transition risks, focusing on risks and opportunities that directly impact the SET's business operations, as illustrated in the diagram.





## 5.2 Physical Risk

### 1) Scenarios Used for Physical Risk

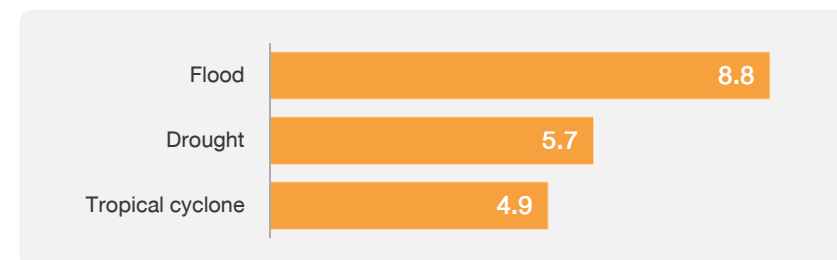
#### Assessment

SET utilized climate scenarios from the Intergovernmental Panel on Climate Change (IPCC), specifically the Shared Socio-economic Pathways (SSPs). These scenarios project climate change based on future socio-economic and economic factors, resulting in varying levels of greenhouse gas emissions between 2001 and 2100, as illustrated. SET selected two scenarios for its assessment: SSP2-4.5 (RCP 4.5) and SSP5-8.5 (RCP 8.5). Details are summarized in the accompanying table.

Scenario	Description
SSP2-4.5 (RCP 4.5)	This pathway assumes that social, economic, and technological trends remain relatively <b>unchanged from historical patterns</b> . GHG emissions stay at current levels and begin to decline around mid-century but do not reach net-zero before 2100. Consequently, the global average temperature is projected to rise by 2.1 °C to 3.5 °C during 2081–2100.
SSP5-8.5 (RCP 8.5)	This pathway emphasizes economic development <b>driven by increased fossil fuel use</b> , with minimal climate change mitigation efforts. As a result, greenhouse gas emissions nearly double by 2050, leading to a global average temperature increase of 3.3 °C to 5.7 °C between 2081 and 2100.

### 2) Context of Thailand

The Climate Risk Assessment Report for Thailand (2021), prepared by the World Bank (WB) and the Asian Development Bank (ADB), identifies flooding as the natural disaster with the most significant economic and human impacts in the country. Between 2035 and 2044, over 2 million people are projected to be affected by river flooding. Between 2070 and 2100, coastal flooding is expected to impact over 2.4 million people. In addition to flooding, other severe natural disasters include droughts and cyclones. The hazard indices for flooding, droughts, and cyclones are illustrated in the accompanying figure.



Source: INFORM Risk, Country Risk Profile Version 2021

Regarding the increase in the average temperature of the country, data from climate change projections using downscaled global climate models by the Regional Climate Change and Renewable Energy Research Center at Ramkhamhaeng University indicate that Thailand's temperature is expected to rise by 1.0 °C during 2020–2040, by 1.5 °C during 2045–2160, and by 2.0 °C during 2050–2170.

Source: Climate Change and Economy: Part 1: Situation and Impacts of Climate Change, Puey Ungphakorn Institute for Economic Research.

## 5.2 Physical Risk

### 3) Impacts of Physical Risks on SET's Business Operations under SSP2-4.5 and SSP5-8.5 Scenarios

Physical Risk	Timeframes and SSP Scenarios						Impacts on SET	Financial Impacts
	Short		Medium		Long			
	2-4.5	5-8.5	2-4.5	5-8.5	2-4.5	5-8.5		
Flooding	●	●	●	●	●	●	<ul style="list-style-type: none"><li>Disruption to business continuity</li><li>Loss of service opportunities leading to reduced revenue</li><li>Increased expenses for disaster prevention and restoration of damaged assets</li><li>Higher costs due to increased insurance premiums</li><li>Rising costs of goods or services due to supplier or service provider risks</li></ul>	<p>In general, physical risks have a limited impact on SET's business operations as it is a service-based industry. However, Thailand faces significant flooding risks, and SET's main building is located in Bangkok, which is vulnerable to pluvial flooding caused by heavy rainfall and the insufficient capacity of the city's drainage system. According to the assessment under the SSP5-8.5 scenario, it was found that:</p> <ul style="list-style-type: none"><li>At a 2% probability level, flooding could rise to 2.52 meters above street level, resulting in prevention and damage costs for the Stock Exchange exceeding 144 million THB, which is classified as a relatively moderate level of risk.</li><li>If damages are assessed at varying flood heights with probabilities ranging from 0.2% to 10.0%, the average annual damage cost is estimated at 18 million THB per year.</li></ul>
Cyclone	●	●	●	●	●	●		
Rising sea level	-	-	●	●	●	●		
Extreme heat event	-	-	●	●	●	●	<ul style="list-style-type: none"><li>Increased energy costs to maintain optimal temperatures for technology systems and employee health</li><li>Rising costs of goods or services due to risks faced by producers or service providers</li></ul>	
Rising average temperature	-	-	●	●	●	●		

## 5.2 Physical Risk

### 4) Financial Impacts of Flooding on SET's Business Operations

Flooding is classified as a significant physical risk to SET's operations due to its relatively high likelihood in Thailand, potentially causing damage or disruptions to business activities. As a result, SET has chosen to evaluate the financial impacts of flooding on its operations. The assessment incorporates data from various sources, including: (1) World Bank Climate Change Knowledge Portal, (2) Aqueduct, (3) European Commission's Joint Research Centre (EU-JRC), (4) Bangkok Metropolitan Administration's Drainage Office. The findings indicate that pluvial flooding (caused by heavy rainfall and inadequate drainage in Bangkok) poses a greater risk to SET's assets than fluvial flooding (from rivers or streams) or coastal flooding.

For the assessment of flood damage caused by heavy rainfall, the SET utilized data from two sources: (1) Scenario SSP2-4.5: Data from Aqueduct. (2) Scenario SSP5-8.5: Data from EU-JRC, which aligns with historical flood events in Bangkok. The details are summarized in the table below.

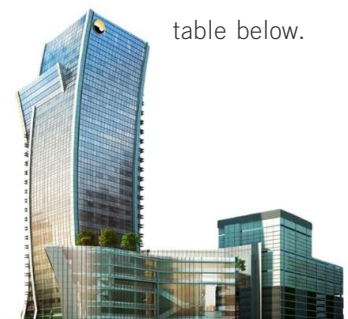
Timeframe	Short – Medium - Long	
Scenario	SSP2-4.5	SSP5-8.5
Flood Depth	< 1.8 meters	2.52 meters above street level
Likelihood	2%	2%
Financial Impact	< 13 million THB	144 million THB
Risk Level	Low	Moderate

Note: Risk Level

Low	Moderate	Moderate to High	High
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#### Financial Impact Detail

	Flood Depth	Cost	Total
Prevention Costs	0 – 0.5 meters	0.06 million THB	3.06 million THB
	0.5 – 1.8 meters	3.00 million THB	
Damage Costs	0.5 – 1.8 meters	10 million THB	137 million THB
	1.8 – 2.52 meters	127 million THB	
Business Continuity Costs	4.00 million THB Data from the 2011 flood event		4 million THB
Financial Impact at a Flood Depth of 2.52 Meters			144 million THB

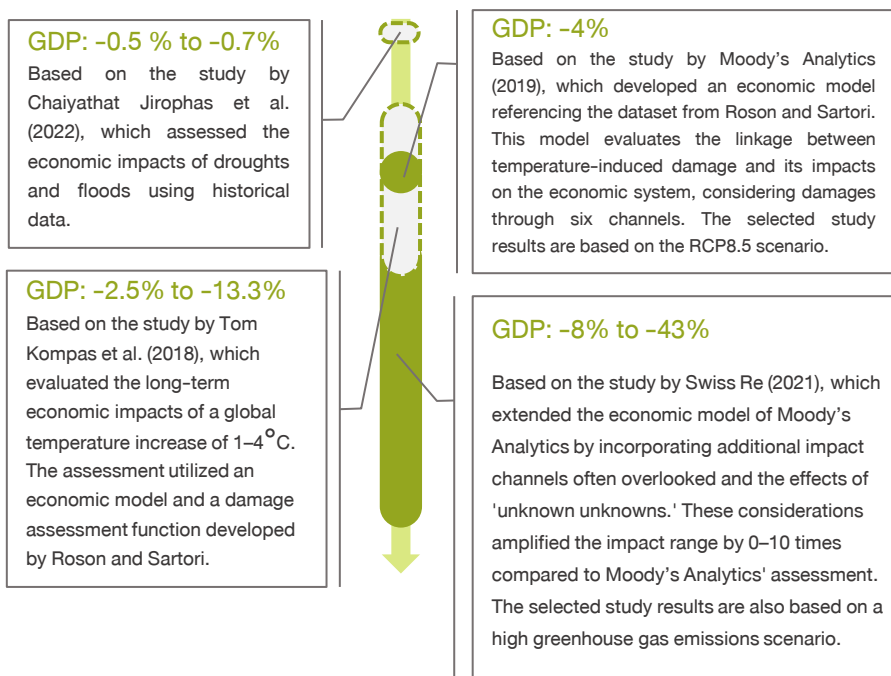




## 5.2 Physical Risk

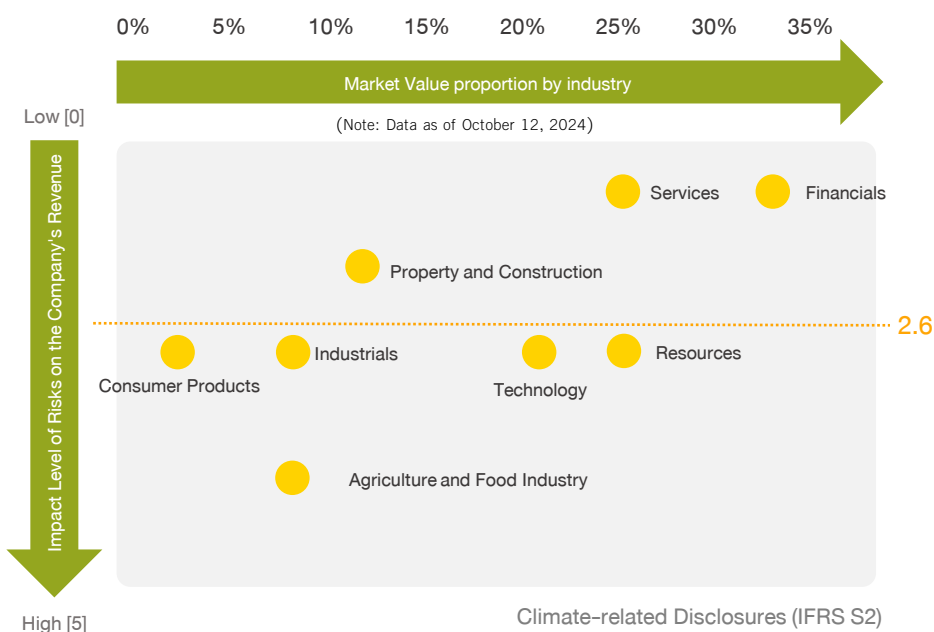
### 5) Impacts of Physical Risks on the National Economy

The SET has further studied the impacts of physical risks on the national economy. It was found that physical risks could reduce the country's Gross Domestic Product (GDP) by 0.5% to 43%, as illustrated. The minimum impact of 0.5% reflects an assessment based solely on historical data for droughts and floods. The maximum impact of 43% is derived from an evaluation conducted by Swiss Re, which developed an economic model based on Moody's Analytics. This assessment incorporates typically overlooked economic impact channels and unpredictable effects.



### 6) Impacts of Physical Risks on Listed Companies

The SET has also assessed physical risks for listed companies, categorized by eight industry groups and sectors: Agriculture and Food Industry, Consumer Products, Financials, Industrials, Property and Construction, Resources, Services, and Technology. The industry groups and sectors with high physical risk include Agriculture and Food Industry, while those with low physical risk include Services and Financials. When the risk levels are averaged based on the proportion of market value, physical risks are expected to impact the revenue of listed companies, resulting in a reduction rated at 2.6 out of 5.0.



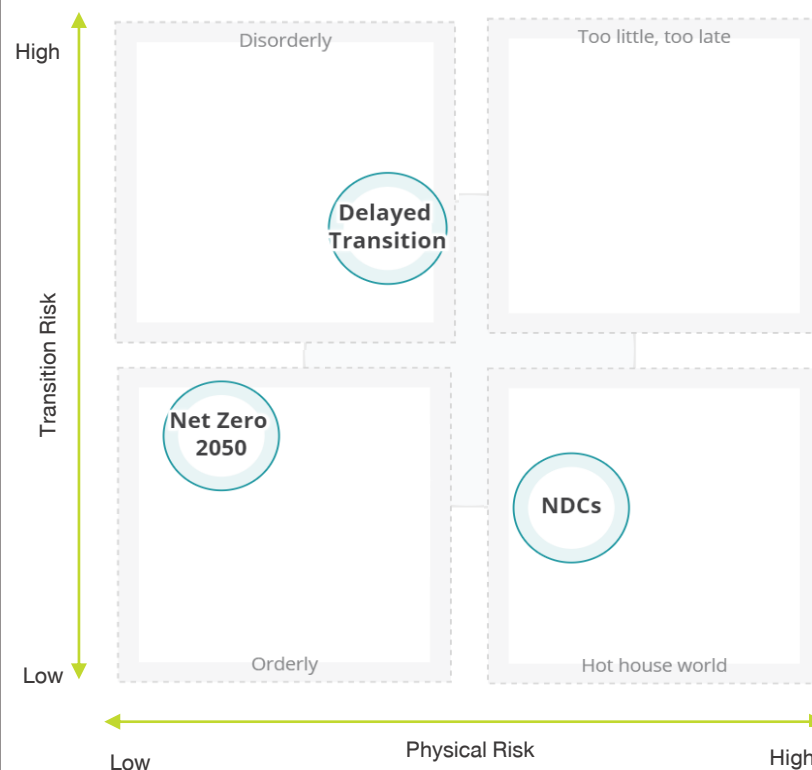
## 5.3 Transition Risk

### 1) Transition Risk Assessment Scenarios

The SET has referenced climate scenarios developed by the Network for Greening the Financial System (NGFS) and selected three scenarios: (1) NDCs (Nationally Determined Contributions), (2) Delayed Transition, and (3) Net Zero 2050. Details of each scenario are as follows:

Scenario	Description
NDCs	<ul style="list-style-type: none"> <li>This scenario assumes that countries maintain moderate and varied climate commitments, reflected in the conditional NDCs as of early 2021, continuing throughout the 21st century</li> <li>GHG emissions will decline but still lead to a temperature increase of 2.6°C.</li> <li>Carbon pricing is introduced in 2025, starting at 4 USD/tCO<sub>2</sub>e and reaching 74 USD/tCO<sub>2</sub>e by 2050.</li> </ul>
Delayed Transition (DT)	<ul style="list-style-type: none"> <li>This scenario assumes that countries do not implement new climate policies until 2030, with highly varied actions across nations.</li> <li>GHG emissions increase beyond acceptable levels and then decline sharply after 2030.</li> <li>Carbon pricing is introduced in 2035 at 75 USD/tCO<sub>2</sub>e, reaching 325 USD/tCO<sub>2</sub>e by 2050.</li> </ul>
Net Zero 2050 (NZ)	<ul style="list-style-type: none"> <li>This scenario focuses on limiting global temperature rise to 1.5°C through stringent climate policies and innovations that aim to reduce GHG emissions to net zero by 2050.</li> <li>Carbon pricing is introduced in 2025 at 19 USD/tCO<sub>2</sub>e, reaching 938 USD/tCO<sub>2</sub>e by 2050.</li> </ul>

The level of transition risk varies across each NGFS scenario, as shown in the diagram.



## 5.3 Transition Risk

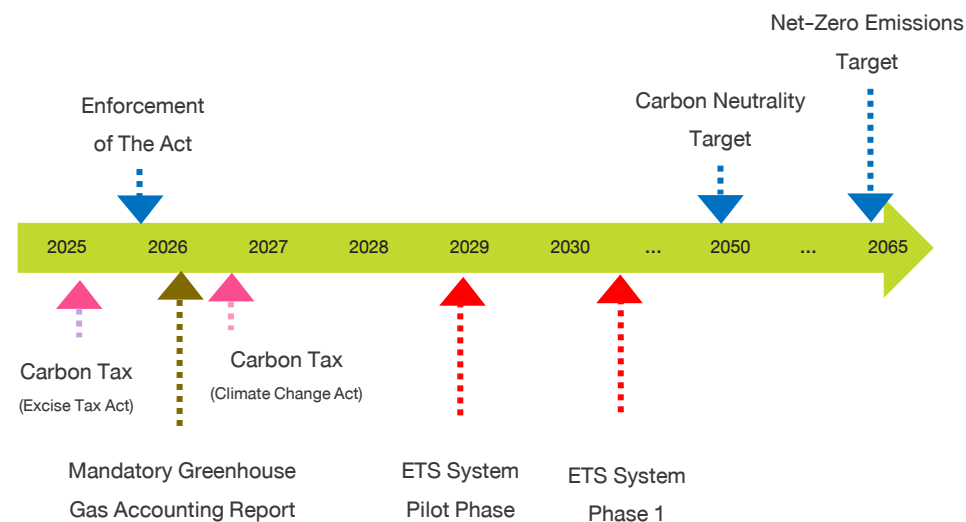
### 2) Thailand Context

Following Thailand's announcement of its goals for Carbon Neutrality by 2050 and Net-Zero GHG Emissions by 2065, several initiatives have been undertaken to achieve these targets. One significant step is the development of a legal framework at the national level. In early 2024, the Department of Climate Change and Environment held public hearings on the Climate Change Act. This legislation is expected to have the following impacts on the private sector:

- (1) Mandatory Greenhouse Gas Accounting and Reporting:** Businesses subject to the regulation will be required to report their greenhouse gas emissions annually. This will result in additional costs for businesses associated with preparing these reports.
- (2) Carbon Tax:** The government plans to impose a carbon tax on products that emit greenhouse gases during use, such as fossil fuels and refrigerants. While the Climate Change Act is still under development, the Excise Department has announced plans to introduce a carbon tax under the Excise Tax Act. The tax rate will be set at 200 THB per tCO<sub>2</sub>e for fuel products, starting in late 2024. Initially, the tax will be allocated as a portion of the existing excise tax to raise awareness and will not significantly impact businesses. However, as additional carbon taxes are implemented, they will increase operating costs for businesses

- (3) Emission Trading System (ETS):** The ETS establishes allowances for greenhouse gas emissions allocated to qualifying businesses. Once the ETS is enforced, businesses will face increased costs due to: (1) Expenses for Allocated Allowances: Costs will rise as the government gradually reduces the number of free allowances provided, and (2) Self-Investment or Purchasing Allowances: Businesses must either invest in their own emissions reduction measures, purchase allowances from other businesses, or face penalties as applicable.

The timeline for implementing these tools and their anticipated impacts on private sector operating costs is summarized in the accompanying figure.



Note: Referring to the public consultation session on the mandatory greenhouse gas (GHG) emissions reporting.



## 5.3 Transition Risk

### 3) Impacts of Transition Risks on the SET's Business Operations Under Scenarios Developed by NGFS

Transition Risk	Timeframe and Scenario									Impact on SET	Financial Impact
	Short			Medium			Long				
	NDC	DT*	NZ**	NDC	DT*	NZ**	NDC	DT*	NZ**		
Mandatory data disclosure	●	●	●	●	●	●	●	●	●	● Increased costs for data collection, reporting, and verification for the SET	Similar to physical risks, transition risks are not expected to have a direct and severe impact on the SET's operations, as its business activities have a low level of GHG emissions. However, these risks will significantly affect listed companies, particularly those with high emissions. This, in turn, will have an indirect impact on SET through its effects on the capital market and the overall economy of the country. However, in 2024, as Thailand is developing regulations for mandatory carbon pricing and reporting mechanisms SET assessed the financial impact of carbon pricing at various levels. This assessment, based on NGFS scenarios, assumes a baseline case where the SET's GHG emissions increase by 2.2% annually. ● Medium-term (2026–2030): The additional costs from carbon pricing are estimated at 1.4–41 million THB per year, equivalent to 0.05%–1.59% of the 2024 EBITDA. ● Long-term (2031–2050):The additional costs from carbon pricing are projected to range between 33–416 million THB per year, equivalent to 1.28%–16.13% of the 2024 EBITDA.  Details of the assessment will be explained in the following section.
Mandatory carbon pricing mechanism	-	-	-	●	●	●	●	●	●		
Transition costs	●	●	●	●	●	●	-	-	-	● Direct investment costs for the SET and businesses in low-carbon technologies ● Higher costs for the SET in procuring low-GHG emission goods or services. These goods and services currently have higher short- to medium-term costs as mandatory carbon pricing mechanisms remain insufficient to make low-GHG options competitive.	
Changes in consumer behavior	●	●	●	●	●	●	●	●	●		
Stakeholder concerns	●	●	●	●	●	●	●	●	●	● Reduced revenue from decreased investment demand. This can arise from reputational issues in climate management, lack of transparency in disclosures, or a loss of confidence in the SET's products or services.	

## 5.3 Transition Risk

### 4) Financial Impacts of Mandatory Carbon Pricing Mechanisms

To assess the financial impacts of mandatory carbon pricing, The SET utilized carbon price data for Thailand from NGFS for the medium- and long-term periods. In the short term, no mandatory carbon pricing mechanisms affecting the SET's costs are expected to be enforced. The assessment results are summarized in the accompanying table.

An assessment was conducted to evaluate the financial impact in the scenario where SET successfully implements its plans and achieves the SBTi targets. This would significantly reduce the financial impact of mandatory carbon pricing mechanisms on the SET's operations, limiting it to no more than 0.85% of EBITDA in 2024 in both the medium-term and long-term periods, as illustrated in the table below.

Timeframe	Scenario	Likelihood	Carbon Price (THB/tCO <sub>2</sub> e)	GHG Emissions for Scope 1 and Scope 2 (tCO <sub>2</sub> e)	Business-As-Usual (BAU)		Implementing SBTi	
					Financial Impact (Million Baht)	Risk Level	Financial Impact (Million Baht)	Risk Level
Short	NDC	100%	-	7,200	-	Low	-	Low
	DT	50%	-		-	Low	-	Low
	NZ	50%	-		-	Low	-	Low
Medium	NDC	100%	180	8,200	1	Moderated	0.7	Moderated
	DT	50%	-		-	Low	-	Low
	NZ	50%	5,000		41	Moderated	19	Moderated
Long	NDC	100%	2,600	12,700	33	Moderated in High	2	Moderated
	DT	50%	11,300		144	Moderated in High	8	Low
	NZ	50%	32,800		416	High	22	Moderated

## 5.3 Transition Risk

### 5) Impacts of Transition Risks on the National Economy

The SET has further studied the impacts of transition risks on the overall economy of the country. Key transition risks to monitor include mandatory carbon pricing mechanisms, such as the Carbon Border Adjustment Mechanism (CBAM) and carbon taxes and emissions trading systems that will be implemented once the Climate Change Act is approved. Regarding the impact of the CBAM, it was found that the carbon fees paid by exporters of goods subject to this mechanism to the European Union account for 0.009% of GDP. If the EU expands its scope to include chemicals, plastics, paper, and glass, and the United States implements CBAM as well, the carbon fees paid by exporters would account for 0.025% of GDP. As for mandatory carbon pricing mechanisms in Thailand, a study by the World Bank indicates that such implementation could lead to an economic transition resulting in a 0.5% to 1.2% expansion of GDP, as illustrated.

#### GDP: +0.5% to +1.2%

- Based on the World Bank (2023) study assessing the macroeconomic impacts of carbon pricing on Thailand using the E3 model, it is assumed that the carbon price in 2030 will range from 21 to 41 USD/tCO<sub>2</sub>e.
- The study found that Thailand's GDP is expected to grow, driven by two key factors: Increased investment value from the transition to a low-carbon economy, and Trade balance adjustments improving Thailand's economic position

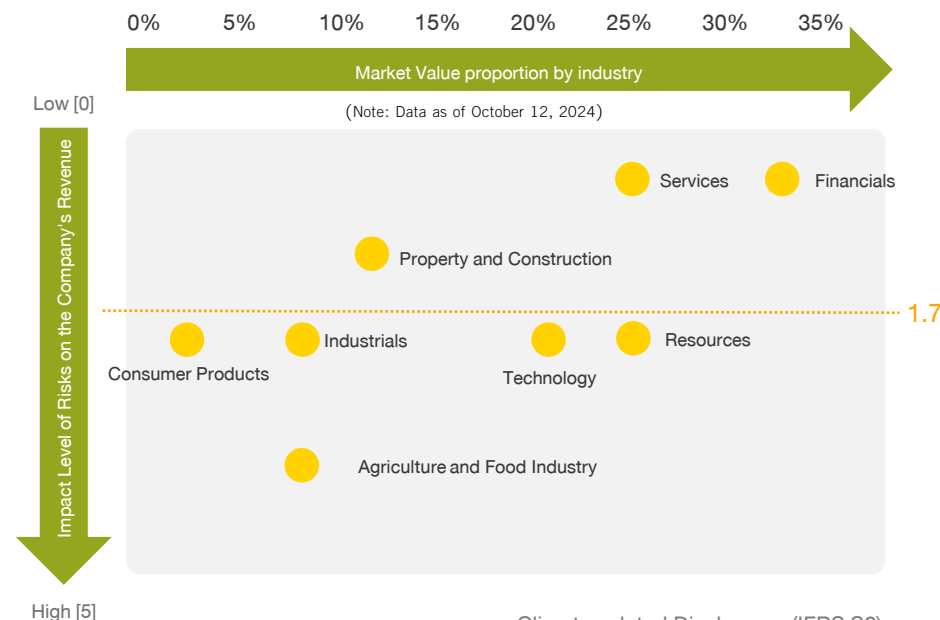


#### GDP: -0.009% to -0.025%

- Based on the Krungsri Research (2024) study, which estimates the proportion of carbon fees paid by exporters to the European Union relative to Thailand's GDP.
- In the current EU CBAM scenario, covering steel and iron, aluminum, cement, fertilizers, hydrogen, and electricity, the proportion is -0.009%.
- If the EU CBAM expands to include chemicals, plastics, paper, and glass, and the US CBAM is implemented, the proportion increases to -0.025%.

### 6) Impacts of Transition Risks on Listed Companies

In addition, the SET has assessed the transition risks for listed companies by categorizing into eight sectors: Agriculture and Food Industry, Consumer Products, Financials, Industrials, Property and Construction, Resources, Services, and Technology. The industry groups and sectors with high transition risks include Resources, and low transition risks include Services and Financials. When transition risks are averaged based on market capitalization proportions, it is found that the impact of transition risk will result in a revenue decline for listed companies at a level of 1.7 out of 5.0.



## 5.4 Climate-Related Opportunities

SET recognizes the opportunities associated with climate change, including improving resource efficiency, adopting renewable energy, developing new products and services, and engaging stakeholders to ensure the sustainability of its business operations. Additionally, SET is committed to creating an ecosystem that fosters sustainable development in the capital market, serving as a critical mechanism to help Thailand achieve its climate goals.

Under its strategic plan to achieve Net Zero emissions, SET has integrated resource efficiency and renewable energy adoption into its Scope 1 and Scope 2 emissions reduction plans.

Additionally, stakeholder engagement has been incorporated into its green procurement plan to reduce Scope 3 emissions. The strategy also includes plans to raise awareness across the organization and provide continuous ESG education to listed companies.

Therefore, the Stock Exchange focuses on assessing climate-related opportunities in the development of new products and services, including: (1) Emission Trading Platform for the mandatory carbon market, (2) Carbon Credit Trading Center, and (3) Climate-Related Indices. The details are summarized in the accompanying table.

Opportunity	Timeframe and Scenario									Impacts on SET
	Short			Medium			Long			
	NDC	DT	NZ	NDC	DT	NZ	NDC	DT	NZ	
Emissions Trading Center for the Mandatory Carbon Market				●	●	●	●	●	●	<p>The Emission Trading System (ETS) for the mandatory is essential for driving GHG reduction efforts. SET is well-prepared to develop a system and has analyzed the projected GHG emissions volume to be traded and the revenue increase for SET, as detailed below.</p> <ul style="list-style-type: none"><li>● <b>2029–2030</b>, ETS will be piloted, initially applying to the energy and industrial sectors. GHG emissions from major emitters is estimated to be 115 MtCO<sub>2</sub>e. While analysis of international markets indicates an average trading volume of approximately 15% of total allowances, it is estimated that only 1% will be traded during this pilot phase. Therefore, the projected trading volume of allowances is approximately 1.15 MtCO<sub>2</sub>e.</li><li>● <b>2031</b>, the ETS will be fully enforced, and the GHG emissions is projected to decrease by 2% annually from the 2029. The GHG emissions from major emitters is estimated to be approximately 110 MtCO<sub>2</sub>e. With a trading proportion of 15% of total allowances, it is therefore estimated that 16.5 MtCO<sub>2</sub>e will be traded.</li></ul> <p>The revenue will be derived from fees, which will depend on the business model chosen.</p>



## 5.4 Climate-Related Opportunities

Opportunity	Timeframe and Scenario									Impacts on SET
	Short			Medium			Long			
	NDC	DT	NZ	NDC	DT	NZ	NDC	DT	NZ	
Carbon Credit Trading Center				●	●	●	●	●	●	Carbon credits are considered one of the financial instruments to support climate action. Given that SET possesses the infrastructure to accommodate carbon credit trading, it has conducted a study and analysis of the projected volume of carbon credits to be traded through its platform, as follows: <ul style="list-style-type: none"><li><b>Voluntary Carbon Credits:</b> These currently lack significant driving factors for expansion and are expected to be traded directly, bypassing the SET.</li><li><b>Carbon Credits for the International Mandatory Market:</b> The demand is driven by requirements from ICAO. The estimated trading volume is projected to increase from 30,000 tCO<sub>2</sub>e per year in 2027 to 120,000 tCO<sub>2</sub>e per year in 2035</li><li><b>Carbon Credits for the Domestic Mandatory Market:</b> The demand will arise from the full enforcement of ETS in 2029, which permits the use of carbon credits up to 15%. The estimated trading volume is projected to increase from 120,000 tCO<sub>2</sub>e per year in 2027 to 3 MtCO<sub>2</sub>e per year in 2035.</li></ul> Additionally, other products include Renewable Energy Certificates (RECs). The estimated trading volume is projected to increase from 150,000 RECs in 2027 to 620,000 RECs in 2035
				●	●	●	●	●	●	A review of global climate investment trends reveals that climate-focused investment funds have experienced rapid growth over the past five years, reaching a total of USD 500 billion, which accounts for 18% of all sustainable funds globally. Over half of these funds are passively managed. These funds can be categorized into four main types: (1) Businesses with low GHG (2) Businesses with clear transition plans toward a low-carbon economy, (3) Businesses in low-carbon technology, and (4) Clean energy businesses.  In the context of Thailand, SET has assessed the total asset value of climate-focused investment funds based on two key approaches: (1) Estimated at 18% of sustainable funds, expected to be around 5.7 – 30 billion THB in 2025. (2) Estimated at 1% of passively managed funds, expected to be around 61 billion THB in 2025. Thus, the total asset value of climate-focused investment funds in Thailand is expected to range from 1.6 – 6.1 billion THB.
Climate-Related Indices										

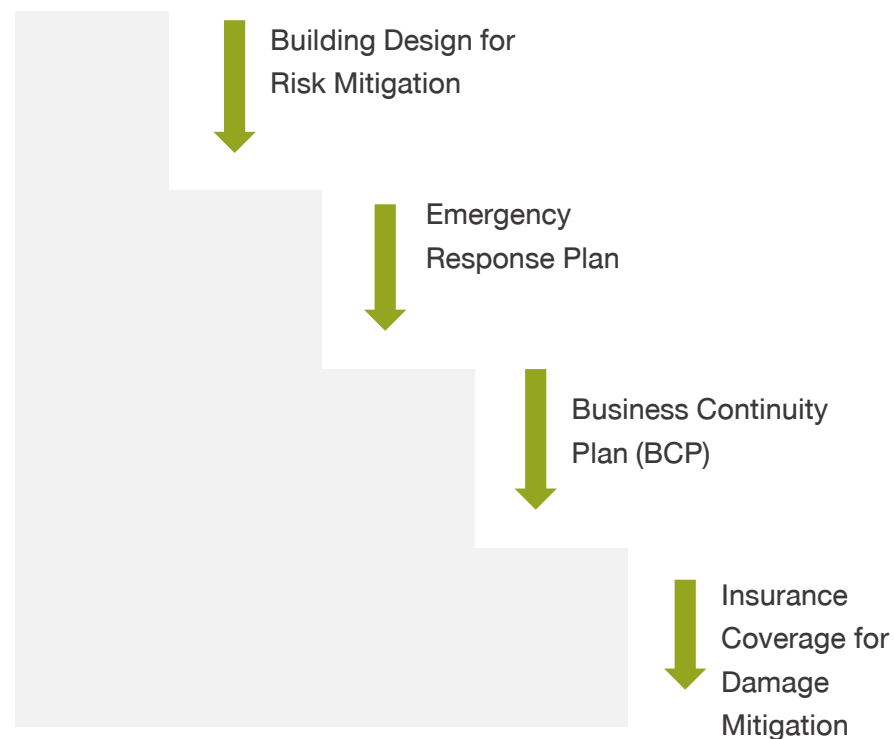
## 5.5 Mitigation

### 5.5.1 Mitigation for Managing Physical Risks

As the SET serves as a central hub for securities trading and fundraising in the country, any disruption to its operations could significantly impact the capital market and the national economy. Therefore, effective risk response planning is essential. Based on a physical risk assessment in Section 5.2, the SET faces high flood risk under the SSP5–8.5 scenario.

The SET has developed the following physical risk response plans:

1. **Building Design for Risk Mitigation** such as Designing the SET building to minimize flood impact by elevating it 1.8 meters above street level and ensuring it can handle rainfall exceeding 100 mm/hour, and Adopting green building standard.
2. **Emergency Response Plan** which includes communication protocols for responsible agencies and procedures for all employees across the organization in the event of a disaster.
3. **Business Continuity Plan (BCP)** to ensure continuous business operations and facilitate recovery to normal operations within a reasonable timeframe.
4. **Insurance Coverage for Damage Mitigation** to help manage risks and mitigate financial impacts when damage occurs.



## 5.5.2 Mitigation for Achieving Net Zero by 2050

The SET recognizes the necessity for the Thai economy to transition to a low-carbon economy and the importance of managing GHG emissions within its own operational boundaries. The SET has outlined strategies to address the risks and opportunities of this transition as follows:

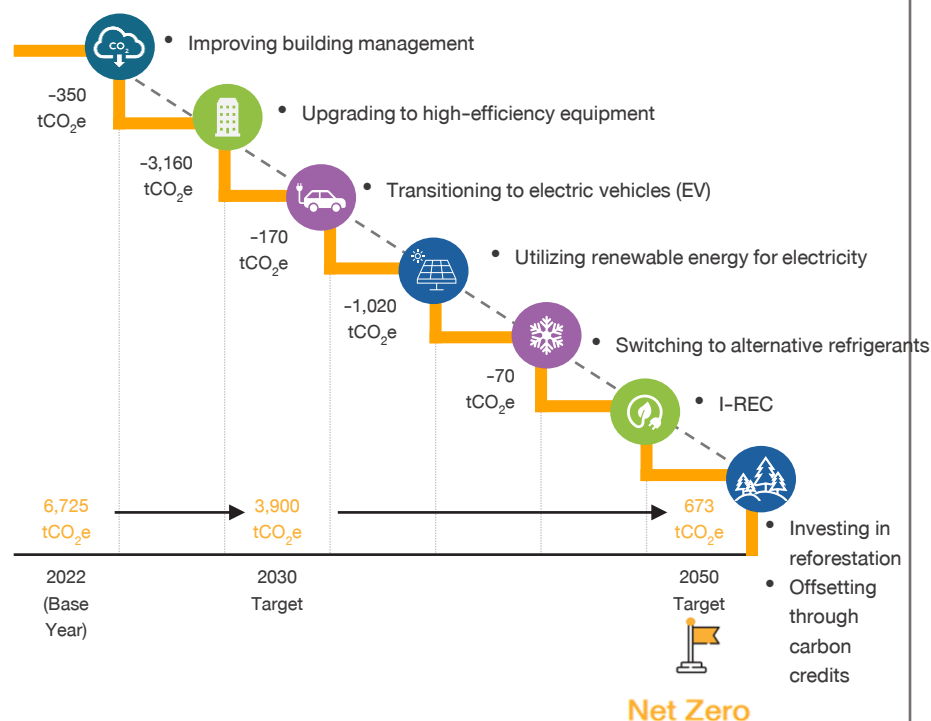
- 1. Setting Clear Targets:** In 2023, the SET announced its Net Zero Commitment to achieve net-zero GHG emissions by 2050. It also set a short-term target to reduce GHG emissions by 42% compared to the baseline year by 2030. The SET has pledged to the Science-Based Targets initiative (SBTi) to set targets in line with its standards.
- 2. Developing a Net Zero Strategy by 2050:** including (1) Reducing Scope 1 and Scope 2 emissions, (2) Reducing Scope 3 emissions, (3) Raising awareness among stakeholders across the organization, and (4) Developing a climate-focused ecosystem



## 5.5.2 Mitigation for Achieving Net Zero by 2050

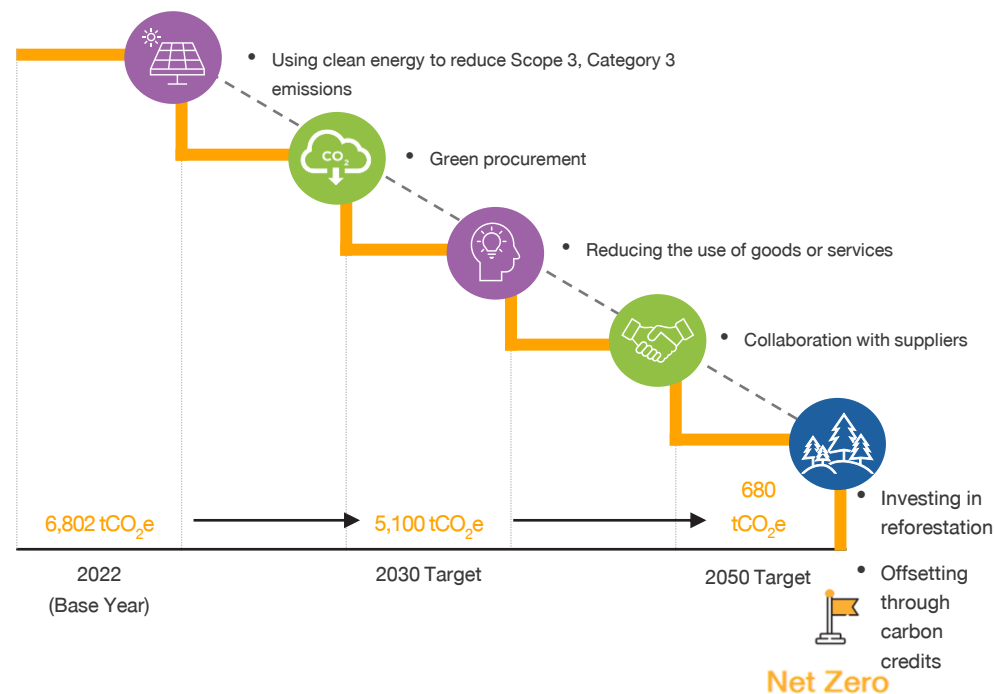
### 1) Plan to Reduce Scope 1 and Scope 2 GHG Emissions

Includes key measures such as energy conservation initiatives, improving building management, replacing equipment with high-efficiency alternatives, transitioning to electric vehicles, utilizing renewable energy, switching to low-GWP refrigerants, adopting I-REC, investing in reforestation projects, offsetting emissions with carbon credits, and applying Internal Carbon Pricing (ICP) to encourage investments in GHG reduction projects.



### 2) Plan to reduce Scope 3 GHG emissions

includes key measures such as implementing green procurement practices, fostering collaboration with service providers and product manufacturers, and promoting the use of clean energy. A Green Procurement Guide for Net Zero has been developed, focusing on eight high-GHG-emitting product categories as the initial target for action.





## 5.5.2 Mitigation for Achieving Net Zero by 2050

### 3) Plan to Raise Awareness among Stakeholders Across the Organization

The SET has incorporated sustainable growth, considering economic, social, and environmental aspects, as one of its core organizational values under the SET DNA. Addressing climate change requires collaboration from all stakeholders within the organization. Therefore, the SET has developed a plan to raise awareness throughout the organization, which includes: Developing communication materials to disclose information on climate change management, Conducting training sessions to enhance knowledge, Running campaigns to promote awareness, and Organizing activities to engage employees and foster their participation.

Public Relations

Training Sessions

Awareness Campaigns

Engagement Activities

### 4) Plan to Develop a Climate Ecosystem

The SET plans to support the development of an ecosystem for the transition to a low-carbon economy, addressing the needs of a wide range of stakeholders, including listed companies, project developers, and regulatory agencies. The support initiatives are divided into two main categories: Building climate knowledge and understanding across all sectors, and Develop infrastructure to support climate action.

Building Climate Knowledge  
and Understanding

Develop infrastructure



Library | Tools | Guides  
Trainings | Expert pools

**Advisory  
Service**

Climate in Action  
For Listed Companies

**SETCarbon**

End-to-end GHG Data  
Management and Solutions

**ClimateCare**  
Platform

Climate Care Platform

## 5.5.3 Mitigation for Leveraging Climate-Related Opportunities

The SET has collaborated with relevant public and private sectors to prepare for climate-related opportunities. The response plan focuses on developing three types of new products and services, identified as key priorities for 2024, summarized as follows:

### Emissions Trading Center for the Mandatory Carbon Market

As assessed in Section 5.4, while the revenue generated by the SET from developing a system to support carbon credit trading for the Mandatory Carbon Market may not be significant, such a system is essential for the country. Therefore, the SET places great importance on this initiative. The SET has conducted studies on carbon credit trading platforms in countries with ETS, assessed its own readiness to develop such a system, and engaged in discussions with relevant stakeholders. These include the Department of Climate Change and Environment, which plays a key role in the Climate Change Act and is responsible for overseeing the ETS under the proposed legislation.

In 2025, the SET plans to conduct a detailed study to ensure that the system can support the implementation of ETS, which is expected to begin operation as outlined in the Climate Change Act.

### Carbon Credit Trading Center for the Voluntary Carbon Market

The SET firmly believes that carbon credits are a vital tool for driving climate action in economic sectors beyond those mandated by law, such as the forestry sector. These initiatives can create employment opportunities, support local communities, generate co-benefits, and contribute to Thailand's achievement of its greenhouse gas reduction targets (NDC).

**The SET has collaborated with the Securities and Exchange Commission (SEC), the Department of Climate Change and Environment, and the Thailand Greenhouse Gas Management Organization (Public Organization) to develop an effective and transparent regulatory mechanism for a carbon credit trading center. Additionally, the SET is working on designing an appropriate model for the trading center.**

### Climate-Related Indices

As outlined in Section 5.4, the SET anticipates opportunities for growth in climate-related indices. However, access to climate-focused funds is currently limited by a lack of data and clear criteria. Improved regulations are expected to enhance data quality in the coming years. Additionally, increasing awareness among companies and investors about climate risks and opportunities is critical to stimulating investment growth.

**The SET plans to develop tools to enhance data readiness and support the sustainable development of the market.**



# Risk Management





## 6.1 Climate-Related Risks Management

The SET has integrated the management of climate-related risks into its organizational risk management processes, both structurally and operationally. Furthermore, the response plans for climate-related risks have been incorporated into the organization's action plans and strategies.

Under the supervision of the SET Board of Directors and executive management, which prioritize effective organizational risk management to address both external and internal factors, the SET has adopted international standards such as COSO ERM and ISO 31000. These frameworks ensure an efficient risk management process aligned with the organization's strategies and objectives. Risk management processes are integrated into decision-making and strategic planning to ensure consistent operations and build confidence among all stakeholders.

The SET has established a clear risk management structure. The SET Board of Directors has assigned the Risk Management Subcommittee to oversee, review, and provide recommendations on risk management policies for the SET Group. These policies are then submitted to the Board of Directors for approval.

Executives and employees of the SET Group are responsible for monitoring and managing risks at both the departmental and project levels. This includes activities such as Risk and Control Self-Assessment (RCSA) and managing risks in new projects. The Risk Management Division provides guidance on risk assessment and management to the management team and regularly prepares reports on key risk statuses for executives, the Risk Management Subcommittee, the SET Board of Directors, and the boards of subsidiary companies.

Additionally, the Risk Management Division coordinates and implements risk management processes across the SET Group and fosters a risk management culture among executives and employees within the organization.

### Risk Management Policy of the SET

1. **Responsibility Across All Levels:** Risk management is the responsibility of employees at all levels. Employees must be aware of risks arising from their operations, continuously monitor, and manage risks across various aspects to maintain an acceptable and appropriate level.
2. **Adherence to International Standards:** Risk management processes must follow international best practices and be consistent throughout the organization. Risk management is integrated into decision-making, strategic planning, work plans, and operations to enhance operational excellence and build stakeholder confidence.
3. **Risk Prevention and Mitigation:** Guidelines are established to prevent and mitigate risks associated with SET group operations to avoid potential damage or losses. Regular monitoring and evaluation of risk management effectiveness are conducted.
4. **Regular Reporting:** Risk management updates are continuously reported to senior management, the Risk Management Subcommittee, the Audit Committee, the SET Board of Governors, and subsidiary boards.
5. **Specific Risk Policies:** Specific risk management policies are established to align with the current business context, such as the Business Continuity Management Policy, IT Security Policy, and IT Risk Management Policy.

## 6.2 Processes for Identifying, Assessing, Prioritizing, and Monitoring Climate-Related Risks and Opportunities

The SET recognizes the significance of climate-related risks and opportunities and has incorporated Environmental, Social, and Governance (ESG) Risk into its Risk Taxonomy. Each type of risk is assigned a distinct acceptable risk level, which is reviewed annually.

In 2024, the SET assessed climate-related risks and opportunities using the IFRS S2 framework. The risks were categorized into two main types: Physical risks and Transition risks.

In identifying climate-related risks and opportunities, SET gathered climate-related data from various international sources, such as IPCC assessment reports, World Bank reports, International Energy Agency (IEA) reports, and resources from the Network for Greening the Financial System (NGFS). Additionally, domestic data, including climate legislation initiatives by the Department of Climate Change, and insights from the risk and opportunity assessments of other stock exchanges worldwide, were incorporated. These sources, combined with an evaluation of Thailand's context, were used to identify the SET's specific risks and opportunities.

To assess the impacts of climate-related risks and opportunities, SET collected relevant data from both external and internal sources and conducted scenario analysis. For physical risks, the SET utilized climate scenarios from the IPCC, specifically the Shared Socio-economic Pathways (SSPs). For transition risks, scenarios developed by the Network for Greening the Financial System (NGFS) were employed, as outlined in Section 5. These scenarios were used to evaluate both financial impacts and non-financial impacts, such as reputation, operations, and regulatory implications.

In its risk assessment process, the SET has developed a Risk Map to prioritize risks effectively. Risks are categorized into four levels: High, Moderately High, Moderate, and Low. The acceptable risk levels are Moderate and Low. For risks assessed as Moderately High or above, additional risk management measures must be implemented beyond the existing ones, considering both costs and benefits.

To ensure resilience against climate-related risks and opportunities, the SET will establish guidelines to prevent and mitigate risks affecting the SET and its value chain. These guidelines aim to avoid potential damage or losses. Additionally, the SET will conduct regular monitoring and evaluation of risk management effectiveness.

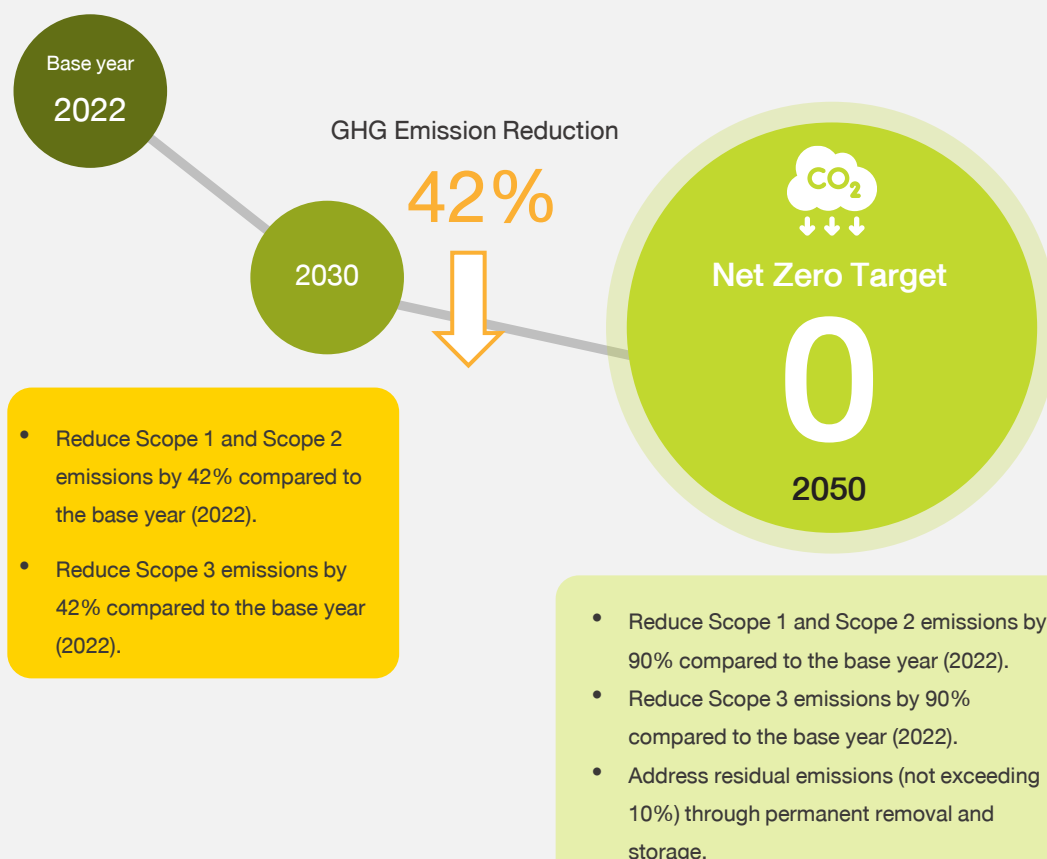


# Metrics and Targets



## 7.1 Indicators and Performance Evaluation for Climate Change Management

### Greenhouse Gas Emission Reduction Targets (Scope 1, 2, and 3)



The SET has established key performance indicators (KPIs) and targets to evaluate its performance in addressing climate change. These KPIs are integrated into the organization's overall performance metrics, influencing the compensation of both executives and employees proportionally at each level.

Short-term and long-term targets are clearly defined for the reduction of greenhouse gas (GHG) emissions in Scopes 1, 2, and 3, with annual plans outlining specific activities to achieve these reductions. Annual KPIs and targets align with activities such as: Increasing the number of electric vehicles, Raising the proportion of low-carbon refrigerants used in air conditioning systems, Enhancing energy efficiency in buildings, and Expanding the installed capacity of solar rooftop systems.

## 7.2 Greenhouse Gas Emissions

The greenhouse gas (GHG) emissions data reflects the SET's performance from January 1 to December 31, 2024, along with historical data for 2022 and 2023.

Since 2021, SET has comprehensively assessed its GHG emissions across Scope 1, 2, and 3. For Scope 3, SET continues to enhance the accuracy and coverage of its emissions data. In 2024, the SET assessed Scope 3 GHG emissions across six categories, including:

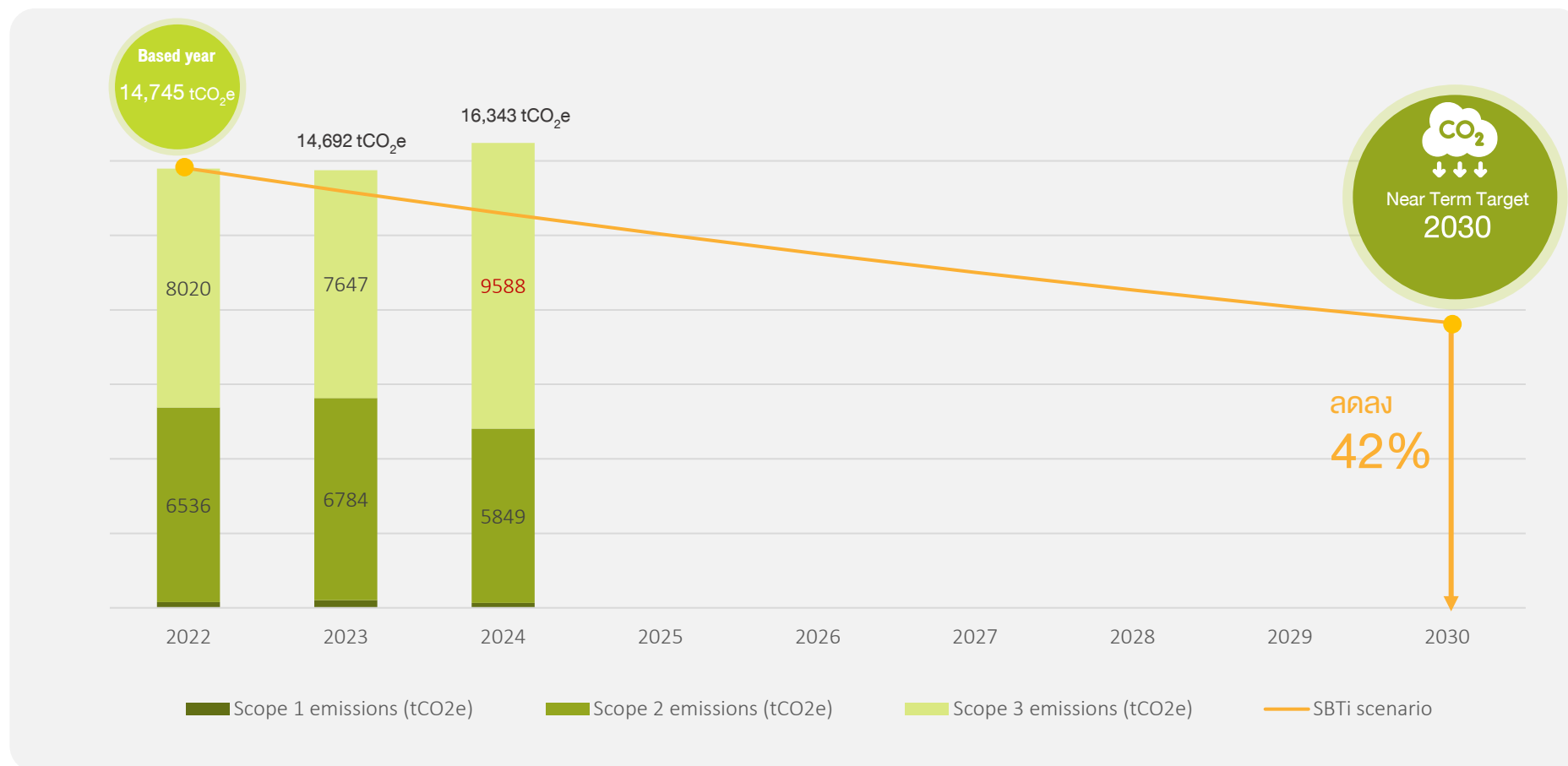
- Category 1: Purchased goods and services
- Category 2: Capital goods
- Category 3: Fuel-and energy-related activities
- Category 4: Upstream transportation & distribution
- Category 6: Business travel
- Category 7: Employee commuting

To ensure data quality, the SET's Scope 1, 2, and 3 emissions data have been verified by the University of Phayao. The verification was conducted in accordance with the standards set by the Thailand Greenhouse Gas Management Organization (TGO).

Greenhouse Gas Emissions (Unit: tons of CO <sub>2</sub> equivalent; tCO <sub>2</sub> e)		2022	2023	2024	% Change between 2023 and 2024
Scope 1 and 2	Scope 1: Direct Greenhouse Gas Emissions	189	261	186	11%
	Scope 2: Indirect Greenhouse Gas Emissions from Energy Consumption (Location-Based)	6,536	6,784	6,569	(29%)
	Total Scope 1 and 2 (Location-Based)	6,725	7,045	6,755	(3%)
Scope 3*	Category 1: Purchased goods and services	1,357	1,676	6,061	259%
	Category 2: Capital goods	1,373	921	1,308	42%
	Category 3: Fuel- and energy-related activities	1,335	1,390	1,346	(3%)
	Category 4: Upstream transportation & distribution	2,755	2,546	-	0%
	Category 6: Business travel	233	313	220	(30%)
	Category 7: Employee commuting	948	802	699	(13%)
	Total Scope 3	8,020	7,647	9,588	25%
	Total Scope 1, 2, and 3	14,745	14,692	16,343	11%
Emission Intensity	Scope 1 and 2 Emission Intensity per Area (tons of CO <sub>2</sub> equivalent/square meter)	0.08	0.09	0.08	(4%)
	Scope 1 and 2 Emission Intensity per Operating Revenue (tons of CO <sub>2</sub> equivalent/million THB)	0.89	1.03	1.05	2%

Note: \*For Scope 3 calculations in 2022 – 2023, the classification and Emission Factors have been adjusted and re-verified to align with SBTi recommendations. For 2024, this process is still in progress.

## 7.3 Performance in Reducing Greenhouse Gas Emissions



In 2024, Scope 1 and 2 greenhouse gas emissions decreased from the base year, a result of the continuous implementation of various GHG reduction projects. For Scope 3, emissions increased; however, plans are in place to reduce these emissions in the future. These initiatives include, but are not limited to, adopting environmentally friendly procurement criteria to achieve Net Zero (Green Procurement for Net Zero), fostering collaboration with suppliers (Supplier Engagement), and applying Internal Carbon Pricing (ICP)

## 7.3 Performance in Reducing Greenhouse Gas Emissions

### Reducing GHG Emissions in Scope 1 and Scope 2



As of 2024, the SET has transitioned 11 vehicles in its fleet to electric vehicles (EVs), accounting for 25% of the total fleet. This initiative has reduced Scope 1 emissions by approximately 48 tCO<sub>2</sub>e per year, representing 25% of Scope 1 emissions in the 2022 baseline year.

Additionally, the SET has installed 8 EV charging stations at its headquarters to facilitate charging for employees and visitors using EVs.



In 2024, the SET prioritized improvements in building management to reduce energy consumption. These measures resulted in an electricity savings of approximately 20 kilowatt-hours (kWh), equivalent to 0.14% of total electricity usage. Additionally, replacing equipment with high-efficiency alternatives saved another 64 kWh, or about 0.46% of total electricity usage.



In 2024, the SET expanded the installed capacity of its solar rooftop system to 320 kW, generating approximately 263 kWh of electricity, which accounted for 1.9% of total electricity consumption. This initiative contributed to a reduction of approximately 132 tCO<sub>2</sub>e

### Reducing GHG Emissions in Scope 3

The SET has developed a Green Procurement Guide for Net Zero and initiated its implementation with eight high-GHG-emitting product categories. Additionally, in 2024, the Stock Exchange collaborated with suppliers of goods and services, such as Thailand Post, Papermate (Thailand), Fujifilm Business Innovation, and T.K.S. Technology, to develop greenhouse gas (GHG) data and jointly reduce GHG emissions from the use of key products and services.

### Raising Awareness Among Stakeholders Across the Organization

- **4 April 2024:**

Organized a training session for executives and SET's personnel on climate-related risks and opportunities.

- **30 September 2024:**

Organized a company-wide training to enhance understanding and provide updates on emerging climate-related issues, and discuss strategies to achieve Net Zero target.

- **17 December 2024:**

Organize a Net Zero Day event to enhance understanding of SET's personnel on GHGs, communicate the Net Zero plan, and exchange ideas for developing plans and projects to ensure the efficiency of climate actions.



## 7.3 Performance in Reducing Greenhouse Gas Emissions

### Internal Carbon Pricing (ICP)

The SET has established an internal carbon pricing mechanism as a tool to drive the achievement of GHG reduction targets. The carbon price is applied in the form of a Shadow Price to support decision-making for energy reduction project investments, integrating it into financial costs. It is also used for selecting low-carbon goods and services, with the carbon price being incorporated into the pricing of products and services. The initial carbon price, applied to certain projects and product categories, is determined based on factors such as regulatory requirements, benchmarking with similar businesses, and academic research. The SET plans to expand the scope of application in the following year and adjust the carbon price to a level that effectively supports the transition to a low-carbon organization.



### Carbon credit



As part of its Net Zero plan, the SET has outlined a strategy to offset the remaining 10% of GHG emissions through investments in reforestation projects and the purchase of carbon credits. This initiative aims to achieve net-zero emissions by 2050, supporting projects that contribute significantly to sustainable GHG reduction while also promoting the voluntary carbon market.

## 7.3 Performance in Reducing Greenhouse Gas Emissions

### Developing a Climate Ecosystem



A centralized knowledge hub for sustainability development in the capital market, offering over 2,000 learning resources, workshops, seminars, and scholarships for sustainability education. It serves as a foundation for fostering ESG DNA among capital market professionals and has established the SET ESG Experts Pool, currently comprising over 300 members

#### Advisory Service

The SET is committed to promoting decarbonization strategies and operations among businesses in the capital market through its in-depth advisory program. In 2024, workshops and in-depth consultations were conducted for listed companies (LCs) on collecting and calculating Scope 1 and 2 greenhouse gas data, as well as for Scope 3 data. A total of 107 listed companies participated in the program



A tool for managing, storing, and calculating greenhouse gas emissions data from business activities, capable of generating reports in dashboard format and integrating with other systems, such as SET's ESG Data Platform and data owners for energy and resource usage. In 2024, the system was pilot-tested with 20 companies and officially launched on January 16, 2025. Additionally, we collaborated with partner organizations to drive data management through SETCarbon, covering everything from data import to utilizing the data for product development. This initiative will benefit both listed companies and Thai entrepreneurs.



A platform for organizational greenhouse gas reduction, calculating emissions reductions in accordance with TGO standards. In 2024, the platform had 736 member organizations, achieving a GHG reduction of 32,521 tCO<sub>2</sub>e, a 75.93% increase from the previous year. The reductions are categorized as follows: Care the Bear: GHG reductions from organizing events and activities, totaling 6,654 tCO<sub>2</sub>e. Care the Whale: GHG reductions from waste management at the source, amounting to 25,867 tCO<sub>2</sub>e. Care the Wild: Ecosystem restoration through reforestation, absorbing 680 tCO<sub>2</sub>e.



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