TCFD REPORT 2025

In accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

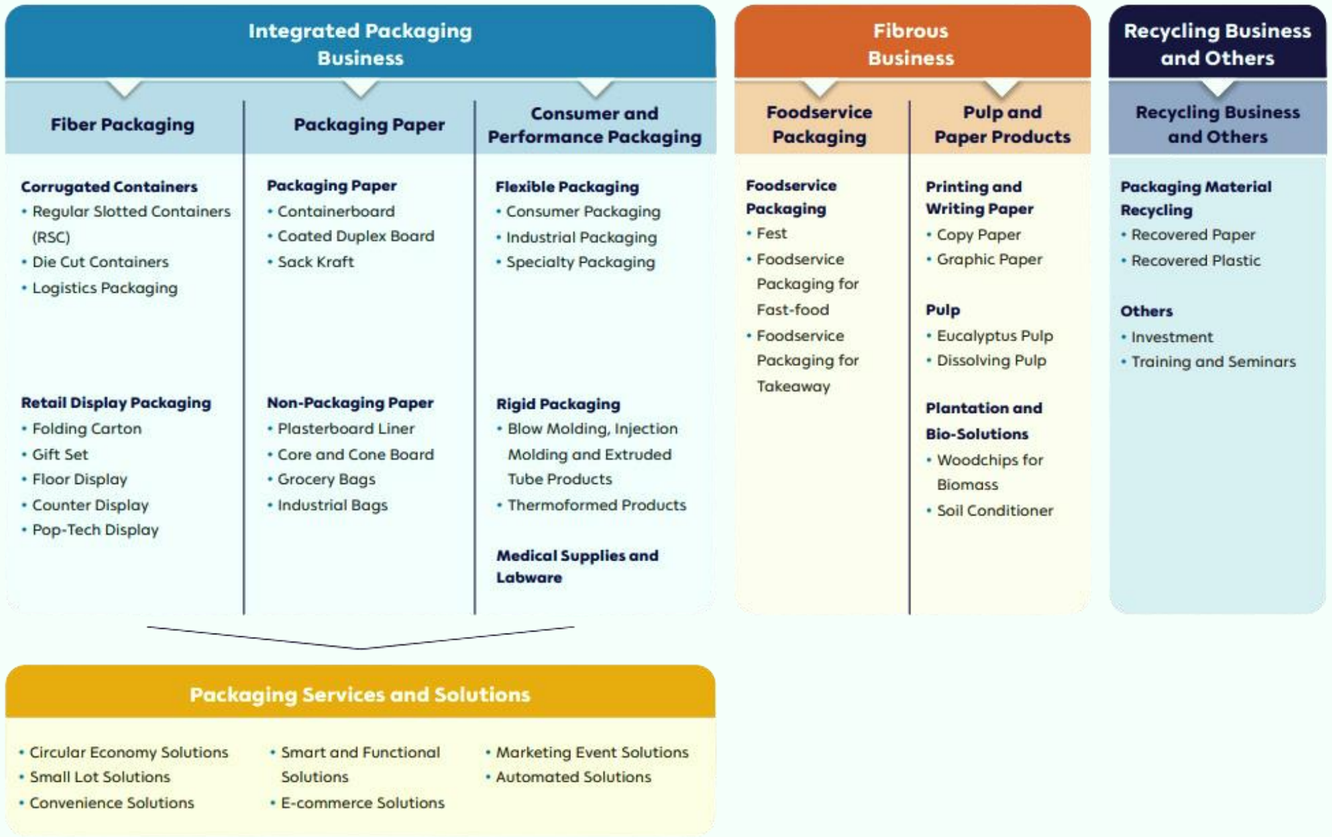
SCG Packaging Public Company Limited
1 Siam Cement Road., Bangsue, Bangkok 10800, Thailand

TABLE OF CONTENTS

1 INTRODUCTION

1.1 About SCGP

SCG Packaging Public Company Limited (SCGP) has 4 core value in conducting business: Adherence to Fairness, Dedication to Excellence, Belief in the Value of the Individual, and Concern for Social Responsibility. Our vision is to be “A leading multinational consumer packaging solutions provider through innovative and sustainable offerings”.



SCGP’s Business Strategy as follows :

- Pursuing quality growth through merger & partnership and organic expansion.
- Aiming to become a top-of-mind packaging in solution provider through innovations and sustainable products/services in response to e-commerce mega-trend.
- Achieving operational excellence.
- Operating businesses based on the principle of sustainable development in line with ESG (Environmental Social, and Governance) concepts..

SCGP is organized into 3 main operating segments:

- Integrated Packaging Business, Fibrous Business, and Recycling Business & Others

The business is conducted with high importance :

- The Environment, Society, and Corporate Governance (ESG), with a commitment to comply with the SCG ESG Pathway Scheme given by the parent company, SCG**.**
- To correspond with our company’s vision, SCGP has implemented the ESG 4 Plus guidelines, which consist of:
  1) Aim for Net Zero
  2) Go Green
  3) Lean Inequality
  4) Emphasize collaboration, fairness, and transparency.

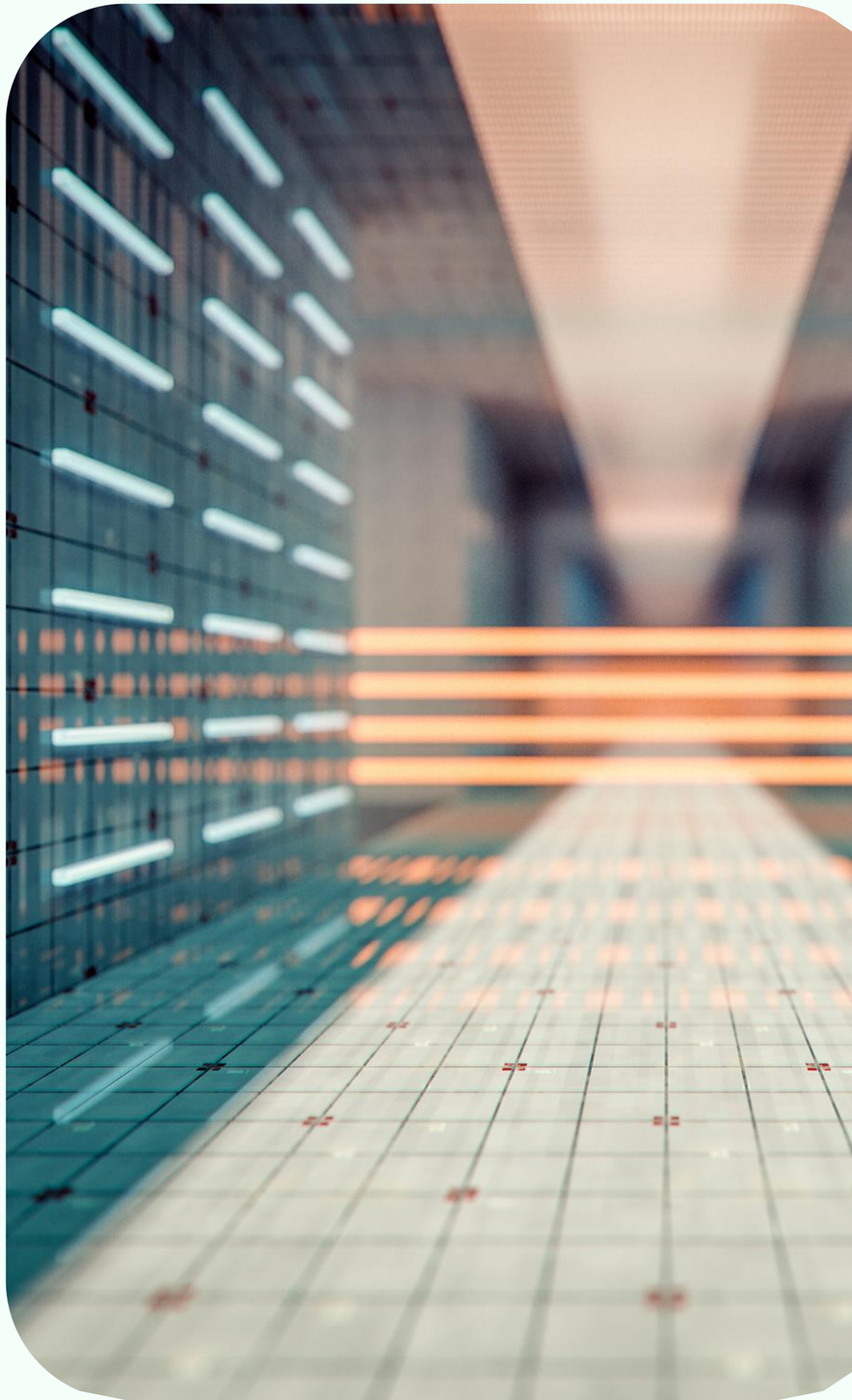
1.2 About This Report

Our disclosure is adapted from Task Force on Climate Related Financial Disclosures TCFD) Recommendation, which corresponds to four main topics: Governance, Strategy, Risk Management, and Metrics and Targets, including: Global Standard on Responsible Corporate Climate Lobbying.

TCFD Framework

The term 'corporate climate lobbying' refers to those activities carried out by corporations or their agents to directly or indirectly influence climate-significant policy decision-making by political or bureaucratic actors. Climate-significant policy refers to any environmental or non-environmental public policy with non-trivial implications – positive or negative – for realizing the temperature goals of the Paris Agreement. Such lobbying – also commonly known as advocacy – can have a significant impact on the stringency and effectiveness of public climate policy. It is not only a matter of societal concern, but also an issue of material, financial, significance for corporations and their investors

2 GOVERNANCE



2.1 SCGP Sustainability Structure and Climate-Related Issues Oversight

SCG Packaging (SCGP) is committed to conducting business in alignment with sustainable development guidelines and goals, focusing on Environmental, Social, and Governance (ESG) aspects. Our aim is to drive organizational growth while ensuring the stability of business expansion. We prioritize maintaining a stable financial position and delivering suitable returns to our shareholders.

To ensure the efficient and effective implementation of an Enterprise Risk Management System, the Board of Directors has established the **SCGP Risk Management Policy**, following international best practices. Additionally, the Board has also established **the SCGP Sustainable Development Policy**. This policy ensures that all SCGP operations are based on sustainable development principles, taking into account risks and opportunities to improve work processes at all levels of the organization. Our focus extends to fulfilling the demands and expectations of all stakeholders in the short and long term, as well as addressing social and environmental impacts.

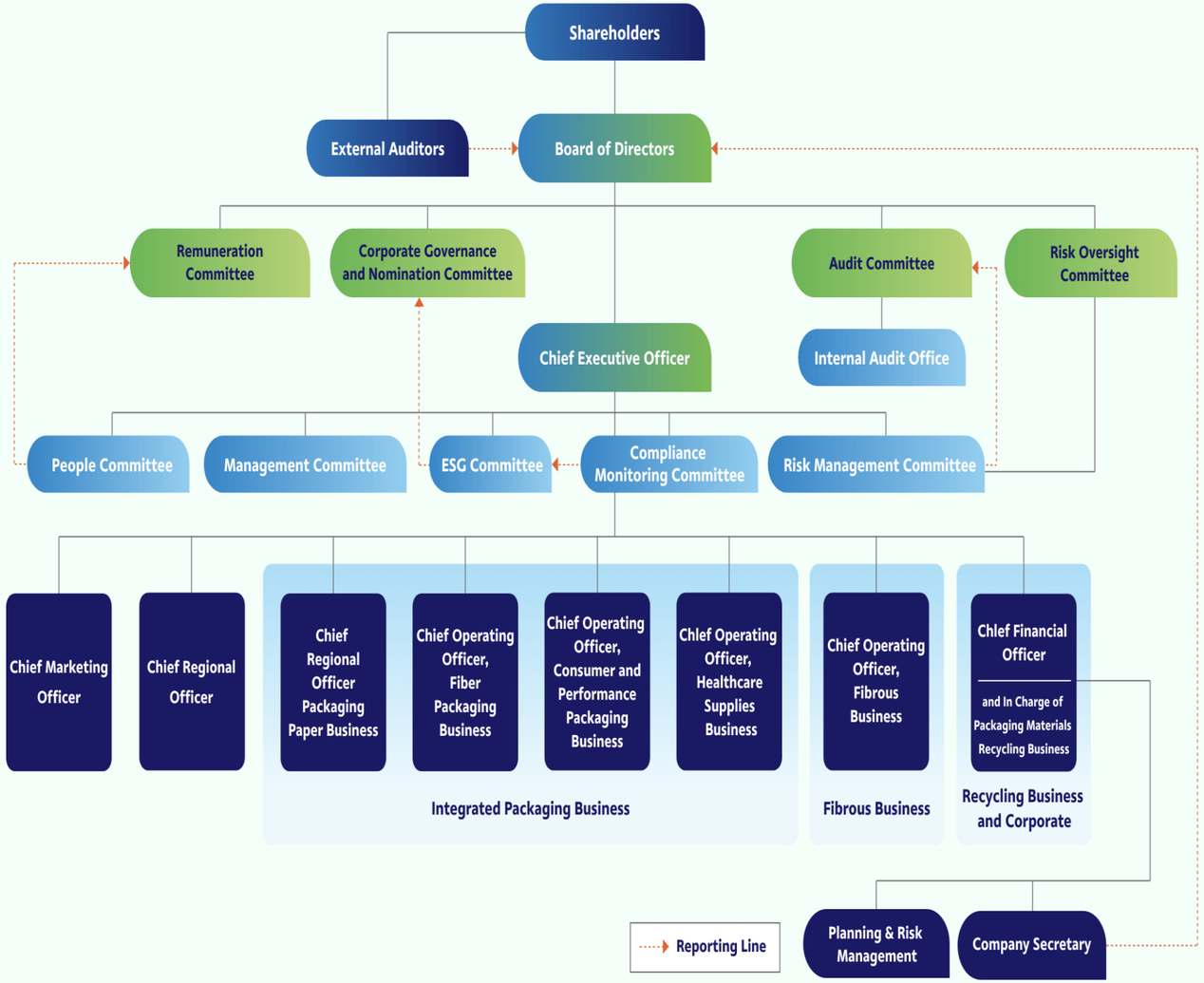
To govern and reinforce all relevant functions in executing sustainable development strategies throughout the SCGP value chain, we have established the **Corporate Governance Structure** and **Sustainability Structure.**

In 2022, SCGP developed and improved the Environmental and Climate Change Policy, Biodiversity Policy, and Product Stewardship Policy for precise and robust sustainability development. **A reporting line** from the ESG Committee to the Governance and Nomination Committee has also been added to the Corporate Governance Structure at the Board of Directors Meeting No. 240 (8/2022).

Through these initiatives, SCGP is committed to driving sustainable growth and making positive contributions to society and the environment.

2.1 SCGP Sustainability Structure and Climate-Related Issues Oversight

SCGP Corporate Governance Structure



Indeed, Energy & Climate Change-related matters involve various key stakeholders beyond the ESG committee at SCGP. These include the Board of Directors (BOD), the Board of Directors Sub-committees, the committees chaired by the BOD representative, the dedicated ESG Committee's sub-committee, the ESG department, and the operational teams. Together, these parties collaborate and contribute their expertise to address and tackle the complexities of these important issues.

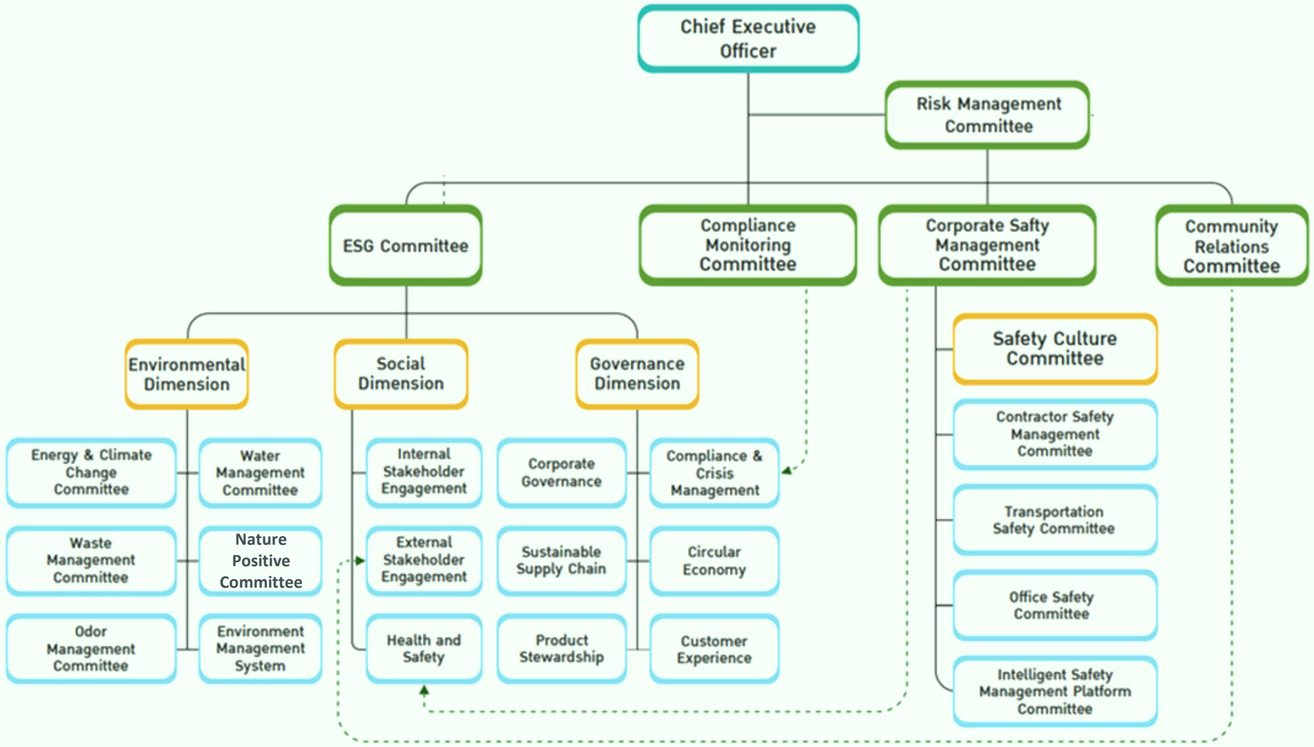
A. SCGP's Board of Directors: This group comprises 8 directors who possess extensive experience, skills, and expertise in ESG. Their inclusion ensures that energy and climate change-related matters are deliberated upon at the highest level of decision-making.

B. The Board of Directors Sub-committees: The Audit Committee plays a pivotal role in overseeing and monitoring climate-related risks and opportunities.

C. Committees chaired by the BOD representative: The Risk Management Committee (RMC) and the ESG Committee are instrumental in managing and mitigating risks associated with climate change. They actively contribute to formulating innovative strategies that promote sustainability.

D. ESG Committee's Sub-committee: Operating within the Environmental Dimension, the Energy & Climate Change Committee focuses on addressing energy-related challenges and developing solutions to mitigate the adverse impacts of climate change.

2.1 SCGP Sustainability Structure and Climate-Related Issues Oversight



ESG Committee and its committees and working groups under E, S, & G dimensions (Apart from SCGP Sustainability Structure)

The Board of Directors (BOD) plays a crucial role in ensuring sustainable value creation and promoting the Company's business objectives. As leaders, they define key objectives and business goals that prioritize sustainable value creation. One of the BOD sub-committees, **the Audit Committee**, oversees climate-related issues on behalf of the BOD. They are responsible for monitoring and addressing climate-related risks and opportunities.

The ESG Committee and **the Risk Management Committee (RMC)** are responsible for managing Climate-Related Risks & Opportunities. These committees collaborate on enterprise climate resilience, setting targets, formulating strategies, and implementing effective management practices. **The Energy and Climate Change Committee**, a specific committee working under the ESG Committee, focuses on addressing climate-related issues and reports to the ESG Committee.

Both the ESG Committee and RMC comprise representatives from the business and operational levels. The Chief Executive Officer serves as the Committee Chairman and represents the Board of Directors in these committees. Regular progress reports on performance and key actions are provided to the Corporate Governance (CG) Committee and the Audit Committee, respectively.

To stay informed about advancements within SCGP and global outlook on Climate-related issues and Risk Management, the BOD receives updates through in-house seminars, discussions, and a Specific Director Training Program. These platforms allow board members to exchange comments, updates, and ideas in an open environment.
SCGP engages in various activities and initiatives to promote sustainability and address climate-related challenges.

SCGP engages in various activities and initiatives to promote sustainability and address climate-related challenges. Examples of these include discussion sessions on the Medium Term Plan 2023-2027, meeting was focusing on Net Zero technologies that would be applicable to SCGP including changes in law & regulation and carbon price that to be prepared in advance as transition risk. The availability and impact of these changes have been discussed to define the options that to immediately do now or do later when applicable.

2.2 Management's Role in Assessing and Managing Climate-Related Risks & Opportunities

The Board of Director

Define key objectives and business goals that promote sustainable value creation

Objectives

The Audit Committee

- Establishes risk management policies
- Oversees the risk management process and practice
- Evaluates the risk management system to ensure efficiency, effectiveness, and compliance with established system.

Oversight overview of risks and opportunities

Define and Consider

ESG policy, strategy and target setting and monitoring

Risk Management Committee
The ESG Committee

Under ESG Committee, the core responsible committee is Energy and Climate Change Committee but Water Management Committee, and Natural Climate Solution Committee incorporated with Product Stewardship and Circular Economy Committee are cooperating to provide execution guidance for operational levels such as responsible functions and factories.

The RMC

- Chaired by the CEO (The BOD representative)
- Establish the risk management structure and identify responsible persons.
- Consider and approve climate strategies to assess climate-related risks and opportunities including transition, and physical risks.
- Review risk appetite statement, risk profile and monitor the performance of risk management throughout the organization.
- Apply scenario analysis to help plan and monitor projects, reduce risks and increase opportunities.
- Business Continuity Management (BCM) is already introduces to minimize any friction in the operation.
- Report the risks and the risk management performance to the Audit Committee quarterly.
- Communicate feedback to respective department including ESG Committee

The ESG Committee

- Chaired by the CEO (The BOD representative)
- Decision make for ESG policy, strategy, and metric & target
- Control and monitor ESG Performance
- Collaborate and communicate with the operational level to implement relevant policies, and strategies to achieve defined metrics and targets
- Follow up on annual plan execution
- Operating results reporting and suggestions provided to The CG Committee and SCG Sustainable Development Committee.

Energy and Climate Change Committee

- Establishes Policies & Guidelines related to Energy management & GHG emission reduction
- Energy and GHG Reduction Projects driving
- Sourcing clean energies
- Studies and seeks technologies and experts to use for the benefit of business operation
- Targets controlling and performance reporting to the ESG Committee

Facilitating and Execution

SCGP Operational Level (Factories)

- Drive ESG projects to align with policies and strategies, reduce climate-related risks, and meet defined targets
- Report performance and any issues to made decision to ESG committee

Execution

2.3 Climate-Related Position Adopted Criteria

SCGP proactively engages in collaborative efforts with governments, businesses, and society to achieve a harmonious balance between environmental, social, and governance factors based on the principles of sustainability. In order to ensure effective representation in climate-related organizations, SCGP designates high-ranking employees, including C-level executives, directors, and management personnel, to serve as the company's representatives. These individuals are entrusted with the responsibility of driving policies, strategies, and implementing actions that are in line with the Paris Agreement and global standards.

In 2023 SCGP actively participates in various climate-related management organizations to advance the goals of the Paris Agreement and pursue a Net Zero pathway. These organizations include both national-level entities such as the Thailand Carbon Neutral Network (TCNN) and the Thailand Greenhouse Gas Management Organization (Public Organization) (TGO), as well as international entities such as the United Nations Global Compact (UNGC) through the Global Compact Network Thailand (GCNT) and the Science Based Targets initiative (SBTi). These partnerships and collaborations are instrumental in advancing initiatives that are aligned with SCGP's sustainability goals.

Through these dedicated efforts, SCGP strives to make a significant impact on the environment and contribute to the creation of a more sustainable future.

Organization

carbon neutral network | wbcsd | UN Global Compact Network Thailand | Science Based Targets

SCGP position

Joining TCNN as a Climate Action Initiator and Climate Action Leading Organization member, declaration of intention to reduce GHG emissions and towards Net Zero by 2050, target and plan clearly which are aligned with Paris Agreement and support Thailand commitment, including collaborating for developing projects and a carbon offset market.

SCGP received the "Climate Action Leading Organization: CALO" gold-level recognition in 2024 from TCNN for their outstanding achievements in measuring and reducing greenhouse gas emissions.

SCGP reports its sustainability performance in alignment with WBCSD guidelines, with ongoing monitoring and evaluation in key areas such as GHG emissions, water management and waste management. Additional, Joining as a member of WBCSD's Forest Solutions Group (FSG) and provides environmental and social information support to create guidelines related to forest products and deforestation. Including the contents of the TNFD Forestry Sector Guidelines.

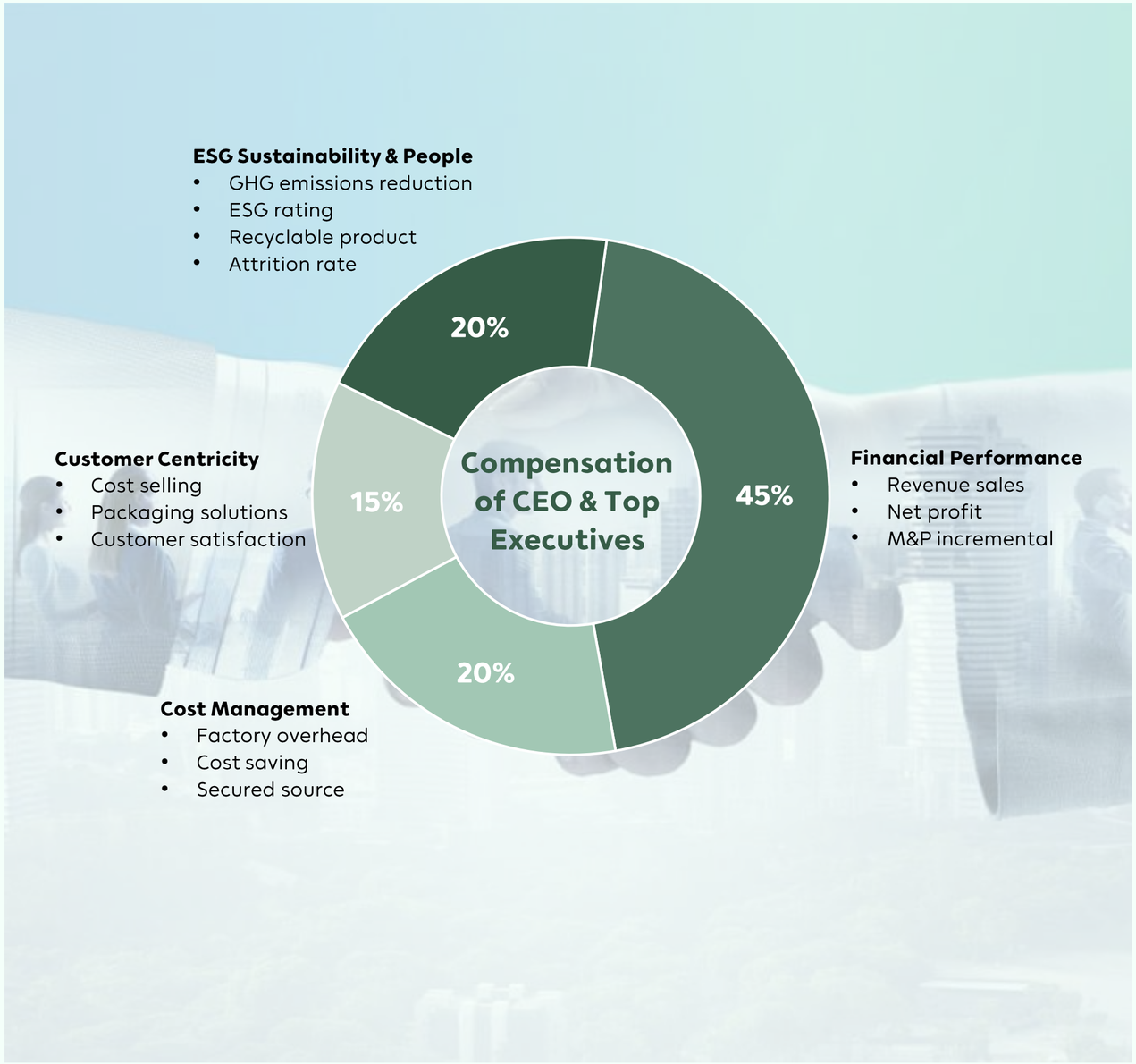
Supporting the 10 Principles of the United Nations Global Compact in the areas of human rights, labour, environment, and anti-corruption. Committing to making those principles part of our strategy, culture, and day-to-day operations and, collaborating, driving any policies or declaration to enhance societal goals, such as UN SDGs, including the intention to address the issue of “Preventing and solving problems caused by climate change”

SCGP participated in the seminar on the topic " Partnership for Human Capital 5.0 – Towards Sustainable Intelligence" with UNGCNT, to develop human capital and adapt to the challenges and sustainable global trends.

Target set and committed for GHG emission reduction based on scientifically accepted and internationally recognized standards and aligning with the goals of the Paris Agreement. The initiative seeks to establish targets and find ways to reduce the impact of climate change.

2.4 Climate-Related Incentive

Performance Evaluation and Compensation Management for the Chief Executive Officer (CEO) and Top Executives



SCGP recognizes the importance of climate change management across all levels of operation. This begins with establishing greenhouse gas (GHG) emission reduction as one of the organization's core goals and developing Key Performance Indicators (KPIs) aligned with the company's Net Zero commitment by 2050. These KPIs are designed and cascaded from senior management to the operational level, involving key personnel including the Chief Executive Officer (CEO), Chief Operating Officers (COOs), ESG & Sustainability Director, managers, and employees.

The Board of Directors is responsible for monitoring and evaluating the performance of the CEO and top executives on an annual basis. The performance evaluation and compensation consideration are based on the Balanced Scorecard framework, which comprises four main criteria:

1. Financial Performance
2. Customer Satisfaction & Centricity
3. Cost Management
4. ESG Sustainability & People

The ESG Sustainability & People category accounts for 20% of the total performance evaluation. This category includes critical KPIs such as the reduction of GHG emissions.

In summary, if overall performance meets climate-related targets, incentives are provided in both monetary and non-monetary forms. Monetary incentives are offered in the form of variable bonuses, while non-monetary incentives are reflected in performance scores, which may lead to future promotion opportunities.

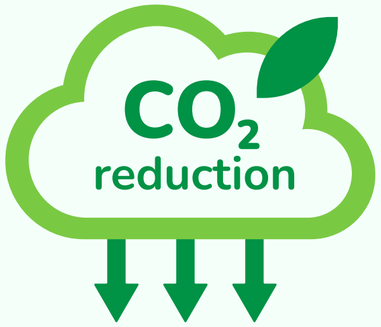
https://sustainability.scgpackaging.com/en/governance/corporate-governance

3

STRATEGY

3.1 Climate-Related Risks and Opportunities Scenario Analysis (Short, Medium, and Long term)

SCGP has identified the climate-related risks and opportunities over short, medium and long term. SCGP has adopted ERM framework to study and embrace TCFD. Standard TCFD's approach for climate scenario included 6 steps;



The climate change issue is the interest topics of worldwide. The impacts from climate change are increasing and more severe ever year. The 28th United Nations Climate Change Conference (COP 28) has taken significant steps in addressing this by agreeing on key actions. COP28 emphasizes aiming for the 1.5 °C target by reducing global greenhouse gas emissions by 43% by 2030 and 60% in 2035, compared to emissions in 2019, and aims to reach Net Zero Emissions by 2050 and reached a historic consensus that the world will transition away from fossil fuels. Countries have committed to accelerating their efforts to reduce greenhouse gas (GHG) emissions, including people and all business are concerned the impact of climate change, so they are focus on low carbon products and services. There are opportunities for SCGP to create environmentally friendly and low carbon products and services through innovation and technology.

SCGP's Climate Scenario Analysis Approach

1 Ensure Governance

Integrate scenario analysis into strategic planning and/or enterprise risk management framework. Assign oversight to relevant board committee/sub-committees. Identify which internal (and external) stakeholders to involve and how.

2 Assess Materiality of Climate-related Risks

- Market and Technology Shifts
- Reputation
- Policy and Legal
- Physical Risk

What are the current and anticipated organizational exposures to climate-related risks and opportunities? Do these have the potential to be material in the future? Are organizational stakeholders concerned?

3 Identify and Define Range of Scenarios

- Transition Risk Scenarios
- Physical Risk Scenarios

What scenarios (and narratives) are appropriate, given the exposures? Consider input parameters, assumptions, and analytical choices. What reference scenario(s) should be used?

4 Evaluate Business Impacts

Impact on:
- Input costs
- Operating costs
- Revenues
- Supply chain
- Business interruption
- Timing

Evaluate the potential effects on the organization's strategic and financial position under each of the defined scenarios. Identify key sensitivities.

5 Identify Potential Response

Responses might include:
- Changes to business model
- Changes to portfolio mix
- Investments in capabilities and technologies

Use the results to identify applicable, realistic decisions to manage the identified risks and opportunities. What adjustments to strategic/financial plans would be needed?

6 Document and Disclose: Document the process; communicate to relevant parties; be prepared to disclose key inputs, assumptions, analytical methods, outputs, and potential management responses.

3.2 Risks & Opportunities and Impacts Analysis

Since 2021, Thailand has been showing commitment alongside other countries in setting a target for Carbon Neutrality of 2050 and achieving Net Zero emissions by 2065. SCGP has operated with commitment to reducing GHG emissions at least 25% by 2030 compared with the base year of 2020 and achieve Net Zero GHG emissions by 2050, both Thailand and abroad companies.

The current global crisis is a challenge that requires collective efforts from all sectors to change our behaviors and activities, which are the root causes of global warming and climate change. SCGP, a business organization in the industrial sector that plays a significant role in greenhouse gas emissions, is committed to implementing various strategies to reduce emissions and increase carbon removal, by fostering collaboration with stakeholders throughout the value chain, to achieve its set goals.

Climate-related risks & opportunities and Financial Impacts are challenging the business execution, and affecting their profitability, competition, reputation and survival. SCGP has analyzed climate-related risks, including transition risk and physical risk, and opportunities aligned with TCFD Framework.

3.2 Risks & Opportunities and Impacts Analysis

Transition Risks and Business Impacts

Risk Type	Risk Description	Time Horizon	Business	Potential Financial Impact	Financial Impacts
Policy and Regulation	Strict carbon tax and regulatory compliance	S, M	Integrated Packaging Business and Fibrous Business	• Announced Pledges Scenario (APS): Compliance costs increase in the short term and continue rising in the long term • Net Zero Emission Scenario (NZE): Compliance costs increase in the short term and continue rising in the long term.	Revenue L
	Regulatory and forestry-permit challenges	L	Integrated Packaging Business and Fibrous Business	• Opportunity cost during permit processing period and during preparation for compliance with the EU Deforestation Regulation (EUDR)	Assets and liabilities, and revenue S
	Regulatory restrictions on single-use plastics	L	Integrated Packaging Business	• Operating expense for R&D and preparations for Extended Producer Responsibility (EPR)	Operating expense S
	Water pollution management: Strict compliance with water discharge regulations	S	Integrated Packaging Business and Fibrous Business	• Capital expenditure in the short term for wastewater treatment system enhancement	Capital expenditure S
Market	Higher raw material costs from plantation-space Limitations	S	Integrated Packaging Business and Fibrous Business	• Capital expenditure over short term, and over long term for plantation space expansion	Capital expenditure S

S Short term M Medium term L Long term

S <500 Million Baht M 501-1,000 Million Baht L > 1,000 Million Baht

3.2 Risks & Opportunities and Impacts Analysis

Transition Risks and Business Impacts

Risk Type	Risk Description	Time Horizon	Business	Potential Financial Impact	Financial Impacts
Market	Demand for low-carbon and recyclable Products	S, L	Integrated Packaging Business	• Capital expenditure in the short term, with revenue from sustainable products in the long term	Capital expenditure and revenue L
Energy Source	Energy efficiency	S	Integrated Packaging Business and Fibrous Business	• Capital expenditure in the short term, leading to cost reductions through improved efficiency	Capital expenditure and lower operating expense M
	Transition to renewable energy	S	Integrated Packaging Business and Fibrous Business	• Capital expenditure in the short term, leading to cost reductions through investments in renewable energy	Capital expenditure and lower operating expense M
Resource Efficiency	Advanced water recycling system	S, M	Integrated Packaging Business and Fibrous Business	• Capital expenditure in the short term and long term, leading to cost reductions through water usage reduction	Capital expenditure and lower operating expense S
	Investing in recycling systems for more efficient segregation	S	Recycling business	• Capital expenditure in the short term to enhance segregation efficiency in support of circular economy	Capital expenditure S

S Short term M Medium term L Long term

S <500 Million Baht M 501-1,000 Million Baht L > 1,000 Million Baht

3.2 Risks & Opportunities and Impacts Analysis

Transition Risks and Business Impacts

Risk Type	Risk Description	Time Horizon	Business	Potential Financial Impact	Financial Impacts
Resilience	Forestation partnerships and conservation for biodiversity protection	L	Fibrous Business	• Operating expense in the short term to enhance biodiversity	Operating expense S
	Sustainable plantation wood sourcing	S M	Fibrous Business	• Capital expenditure in the short term to ensure continuous wood sourcing from sustainable plantations.	Capital expenditure S
Products and Services	Innovative bio-based plastics as alternative to fossil-based plastics	S	Integrated Packaging Business	• Capital expenditure in the short term to enhance reputation and strengthen differentiation, leading to revenue generation.	Capital expenditure and revenue L

S Short term M Medium term L Long term

S <500 Million Baht M 501-1,000 Million Baht L > 1,000 Million Baht

3.2 Risks & Opportunities and Impacts Analysis

Physical Risks and Business Impacts

Risk Type	Risk Description	Time Horizon	Business	Potential Financial Impact	Financial Impacts
Acute	Supply chain affected by floods	M	Integrated Packaging Business and Fibrous Business	• Impact on revenue due to supply chain disruption	Revenue S
Chronic	Production affected by water shortage	S L	Integrated Packaging Business and Fibrous Business	• Capital expenditure and revenue decline due to production disruption	Capital expenditure and revenue S

S Short term M Medium term L Long term S <500 Million Baht M 501-1,000 Million Baht L > 1,000 Million Baht

3.2 Risks & Opportunities and Impacts Analysis

Opportunities and Business Benefits

Opportunity	Definition of Opportunities & Business Benefits
Energy Source	**Energy Efficiency** Improving energy efficiency helps reduce energy consumption and associated costs. By leveraging advanced technology to enhance energy efficiency, the company can optimize its processes to align with sustainability goals, lower greenhouse gas emissions, and increase profitability.
	Transition to Renewable Energy Shifting from fossil fuels to renewable energy ensures that the company progresses in line with its climate targets. Investments in renewable energy, such as solar and biomass energy, support efforts to achieve Net Zero emissions, reduce dependence on fossil fuels, minimize operational cost fluctuations, and strengthen its position as an environmentally responsible organization.
Resilience	**Forestation Partnerships and Conservation for Biodiversity Protection** Forestation programs help offset environmental impacts from its operations. Meanwhile, the company's conservation projects promote biodiversity and long-term ecological security. Partnerships with communities and non-governmental organizations further enhance its image as a sustainable organization. These efforts align with international ESG practices and regulations.
	Sustainable Plantation Wood Sourcing Timber sourcing from sustainable forests enables compliance with the FSC™ - Forest Stewardship Council™, reduce deforestation risks, and enhance supply chain security. In addition to ensuring a long-term supply of raw materials, sustainable forestry practices also strengthen the company's image as an eco-friendly enterprise.

Opportunity	Definition of Opportunities & Business Benefits
Markets	**Demand for Low-carbon and Recyclable Products** Consumers' growing demand for eco-friendly products and strict regulations have created opportunities for the company to offer recyclable, reusable, or compostable packaging. These products not only align with market demand but also have the potential to increase the company's revenue and market share. Companies that provide eco-friendly solutions gain a competitive edge. Additionally, such products reinforce the company's commitment to environmental sustainability, strengthen its reputation, and enhance long-term profitability.
Products and Services	**Innovative Bio-based Plastics as Alternative to Fossil-based Plastics** The development of materials from biological resources or recycled materials helps reduce reliance on traditional plastics. These new alternatives also meet consumers' demand for eco-friendly packaging. Moreover, such innovations enhance the company's image by demonstrating its commitment to environmental sustainability, regulatory compliance, and competitiveness in a rapidly changing market.
Resource Efficiency	**Advanced Water Recycling System** Water recycling reduces water withdrawal from natural sources. Also, it lowers the risk of water shortage and supports business continuity in areas prone to water scarcity or floods. Moreover, water recycling helps decrease the costs related to water management.
	Investing in Recycling Systems for More Efficient Segregation Investments in recycling infrastructure efficiently support circular economy by enabling the reuse of materials, reducing operational costs, and minimizing the need for new resources. Additionally, recycling aligns with evolving regulatory trends that emphasize a sustainable future.

3.3 Transition Risks Scenario Analysis

Scenario Analysis

SCGP updated climate-related scenarios based on the World Energy Outlook 2022. The Announced Pledges Scenario (APS) and the Net Zero Emissions by 2050 Scenario (NZE) have been modeled.;

1. The Announced Pledges Scenario (APS) takes account of all climate commitments made by governments including Nationally Determined Contributions (NDCs). Under this scenario, global average temperatures will reach 1.7°C above pre-industrial levels by 2100.

2. Net Zero Emission Scenario (NZE) has a 50% chance of constraining climate global warming at 1.50°C by reaching Net Zero Emissions by 2050, and is based on the WEO Net Zero by 2050 scenario.

Carbon Price

USD / ton CO_2e	Scenario	2030	2040	2050
Carbon taxes	APS	18	70	100
	NZE	30	140	200
Emission Trading System (ETS)	APS	25	70	100
	NZE	50	140	200

- We assume Thailand's carbon taxes based on the study published by Thailand Greenhouse Gas Management Organization (TGO), World Economic Outlook published by IEA, and discussion with the officials in TGO.
- EU carbon prices are based on International Energy Agency (IEA) on both APS and NZE scenarios.

		IEA APS 2030	IEA NZE 2030	IEA APS 2050	IEA NZE 2050
World population	Million	8,501		9,692	
Southeast Asia	Million	726		792	
Urbanisation rate		60%		68%	
Southeast Asia		56%		66%	
World GDP growth		3.3% (2021-2030)		2.6% (2030-2030)	
Southeast Asia		5.0% (2021-2030)		3.3% (2030-2030)	
Crude oil prices	$/barrel	63.5	35	60.4	24.0
Natural gas prices	$/MBtu, Japan	9.1	6.0	7.4	5.1
Steam coal	$/t, Japan	74.4	59.0	59.5	46.0
Fossil fuels in primary energy mix		70%	62%	36%	18%
Energy and environmental policies		Policies promoting production and use of alternative fuels and technologies such as hydrogen, biogas, biomethane and CCUS across sectors. Faster deployment of large-scale near zero emissions plants in energy intensive industries. Energy demand in	No new unabated coal power plants approved for development. Nearly 50% of electricity from low-emissions sources, and over 40% is from wind and solar PV. Phase out of unabated coal in advanced economies. 8% of emissions from cement production captured and stored.	Policies to support increasing deployment of CCUS and hydrogen in various industry and fuel transformation sub-sectors.	Nearly 90% of Electricity generation from renewables, and almost 70% is from solar PV and wind. Phase out of all unabated coal for electricity generation. More than 90% of heavy industrial production is low emissions. 95% of emissions from cement production captured and stored

3.3 Transition Risks Scenario Analysis

Scenario Analysis

For APS scenario, we assume Thailand will implement carbon tax in year 2027 with the initial price of USD 2/ton CO_2e, USD 5/ton $CO2_e$ in 2028 and gradually increase to USD 18/ton CO_2e in 2029-2030 and also start USD 25/ton CO_2e in 2029 for ETS. And NZE scenario, we assume the initial carbon tax prices of USD 2/ton CO_2e in 2027, USD 5/ton $CO2_e$ in 2028, USD 18/ton CO_2e in 2029 and gradually increase to USD 30/ton CO_2e in 2030 and also start USD 25/ton CO_2e in 2028 and increase to USD 50/ton CO_2e in 2029 for ETS.

Carbon Cost (million baht)	2025	2026	2027	2028	2029	2030
APS	0	0	158	684	2,385	2,146
NZE	0	0	158	904	2,665	3,583

Remark:

1. Rates 34 THB/USD in 2027-2028 and 33.5 THB/USD in 2029-2030
2. In 2028 include Vietnam-ETS
3. Carbon Cost from carbon tax, ETS

List of Mitigation Options;

1. Increasing Renewable Energy usage such as biomass, Solar power, Green Hydrogen
2. Provide a power purchase agreement for renewable electricity such as RE100
3. Increasing energy efficiency by improving or replacing with best available technology

3.4 Physical Risks Scenario Analysis

Scenario Analysis

Climate change is a volatile challenge that has a direct impact on physical hazards such as floods, increased storm severity or cyclones, increased variability of water supplies, droughts, fires, higher temperatures, and so on. SCGP analyzes impacts using scenario analysis, a baseline for the existing year, the middle term in 2030, and the long term in 2050 for a considered method with tools to enhance strategic risk reduction.

SCGP conducts analyses against geographical locations where SCGP, supplier and major clients operate which include SCGP's plants 4 Midstream in Thailand, Vietnam, Philippines and Indonesia, 2 Critical Upstream and Downstream assessment with 3 scenarios are used for evaluating physical risk hazards as follows:

- SSP1-2.6 stays below 2.0°C warming relative to 1850-1900 (median) with implied net zero emissions in the second half of the century.
- SSP3-7.0 is a medium to high reference scenario resulting from no additional climate policy under the SSP3 socioeconomic development narrative. SSP3-7.0 has particularly high non-CO2 emissions, including high aerosols emissions.
- SSP5-8.5 is a high reference scenario with no additional climate policy. Emission levels as high as SSP5-8.5 are not obtained by Integrated Assessment Models (IAMs) under any of the SSPs other than the fossil fueled SSP5 socioeconomic development pathway

SCGP evaluated physical impact on 3 different natural hazard variables, which are Water Scarcity (Drought) ,Floods and Extreme Heat. Which are align with Baseline risk likelihood for relevant natural hazards were evaluated based on the review of an online tool (ThinkHazard) developed by the World Bank/Global Facility for Disaster Reduction and Recovery (GFDRR). The natural hazards are classified based on the following factors. Aqueduct developed by WRI and The Climate Change Knowledge Portal (CCKP) by World Bank.

ThinkHazard! GFDRR Global Facility for Disaster Reduction and Recovery AQUEDUCT Climate Change Knowledge Portal For Development Practitioners and Policy Makers

3.4 Physical Risks Scenario Analysis

Scenario Analysis

Acute Risk

- Damage to infrastructure and equipment
- Reduced efficiency of equipment
- Disruption of supply chain

Flooding

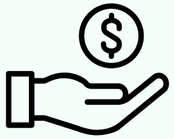
- Capital costs
- Replacement costs
- Operating costs
- Maintenance costs

Cost of Sales

Attributes

Impacts

Profit and loss



Chronic Risk

- Increase insurance costs
- Reduced ability for employees to work efficiently
- Gradual loss of land due to permanent inundation

Drought

Extremely heat

- Impact to services and products
- Decreased services provided
- decreased product volume
- disruptions in production process

Revenue/Margin

3.4 Physical Risks Scenario Analysis

Scenario Analysis

Shared Socioeconomic Pathways (SSPs)

SSP 1 Sustanability

SSP 2 MIDDLE OF THE ROAD

SSP 3 Reginal rivalry

SSP 4 INEQUALITY

SSP 5 FOSSIL - FUELED DEVELOPMENT

Representative Concentration Pathways (RCP)

RCP 8.5

RCP 7.0

RCP 6.0

RCP 4.5

RCP 3.4

RCP 2.6

RCP 1.9

SSP5 - 8.5

SSP3 - 7.0

SSP1 - 2.6

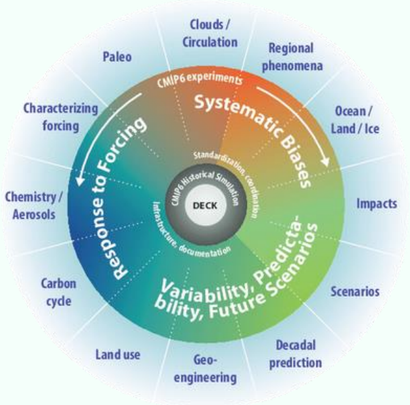
Climate
2,100 Forcing Level
(Watt per square meter)

SOURCE: CMIP 6

TIER 1

TIER 2

CMIP 6



Coupled Model Intercomparison Project

3.4 Physical Risks Scenario Analysis

Scenario Analysis

Climate Risk Country Profiles

CCKP's Climate Risk Country Profiles present a high-level assessment of physical climate risks for a country, providing insight for decision-makers into the potential for increasing, expanding, and emerging risks across space and time, and for different climate futures. Projected climate data is derived from CMIP5,and CMIP6 the Coupled Model Intercomparison Project, Phase 5-6. The CMIP efforts are overseen by the World Climate Research Program, which supports the coordination for the production of global and regional climate model compilations that advance scientific understanding of the multi-scale dynamic interactions between the natural and social systems affecting climate. The CMIP Collection used to inform each profile is listed by each country

Thailand

- Since the mid-20th century, there has been an increase in annual precipitation.
- By the 2090s, there will be an increase of 0.95°C–3.23°C above the baseline.
- Proposed temperature increases are strongest in middle.
- Floods are affecting the world's ten most affected countries. Drought and cyclone impacts.
- The number of people affected will be over 2 million by 2035–2044, and coastal flooding could affect 2.4 million by 2070–2100.
- Projections: Due to rising temperatures, the agriculture sector could be significantly affected by a changing climate.
- The combination of rising seas and sinking land, as well as the potential impact of cyclone-induced storm surges on critical public and private infrastructure,
- The aftermath of 2011's devastating floods The studies show that post-flood, higher-income groups received more government compensation than lower-income groups.

- Philippines
- The trend since the mid-20th century has seen an increase in temperature by 0.6°–2.9°C by the 2090s, which is 1°C less than the global average.
- Projections: Of the 16 climate models assessed, 15 projected at least some increase in precipitation.
- The region has the highest disaster risk levels in the world, particularly due to its vulnerability to tropical cyclones, flooding, and landslides.
- The number of tropical cyclones making landfall also has greater intensity.
- Rising sea levels could flood up to one million people by 2070–2100, but investing in adaptation could potentially significantly reduce this number.
- Flooding and droughts could impact agricultural land. towards decreased productivity.
- The progress in effective adaptation and disaster risk reduction has slowed down.

Vietnam

- Vietnam is similar to the global average, between 1.0°C and 3.4°C by 2080–2099.
- Average temperatures likely impact human health, livelihoods, and ecosystems.
- The current climate models' poor performance in simulating the El Niño Southern Oscillation (ENSO).
- Vietnam's low-lying coastal and river delta regions have a very high vulnerability to rising sea levels. By 2070–2100, coastal flooding will affect 6–12 million people.
- Fluvial flooding is projected to be in the range of 3–9 million people by 2035–2044.
- We project losses in agricultural productivity for key food and cash crops.
- The increase in heat stress on the Vietnamese population will lead to negative health outcomes.
- Vietnam faces disaster, poverty, and inequality across multiple regions and sectors.

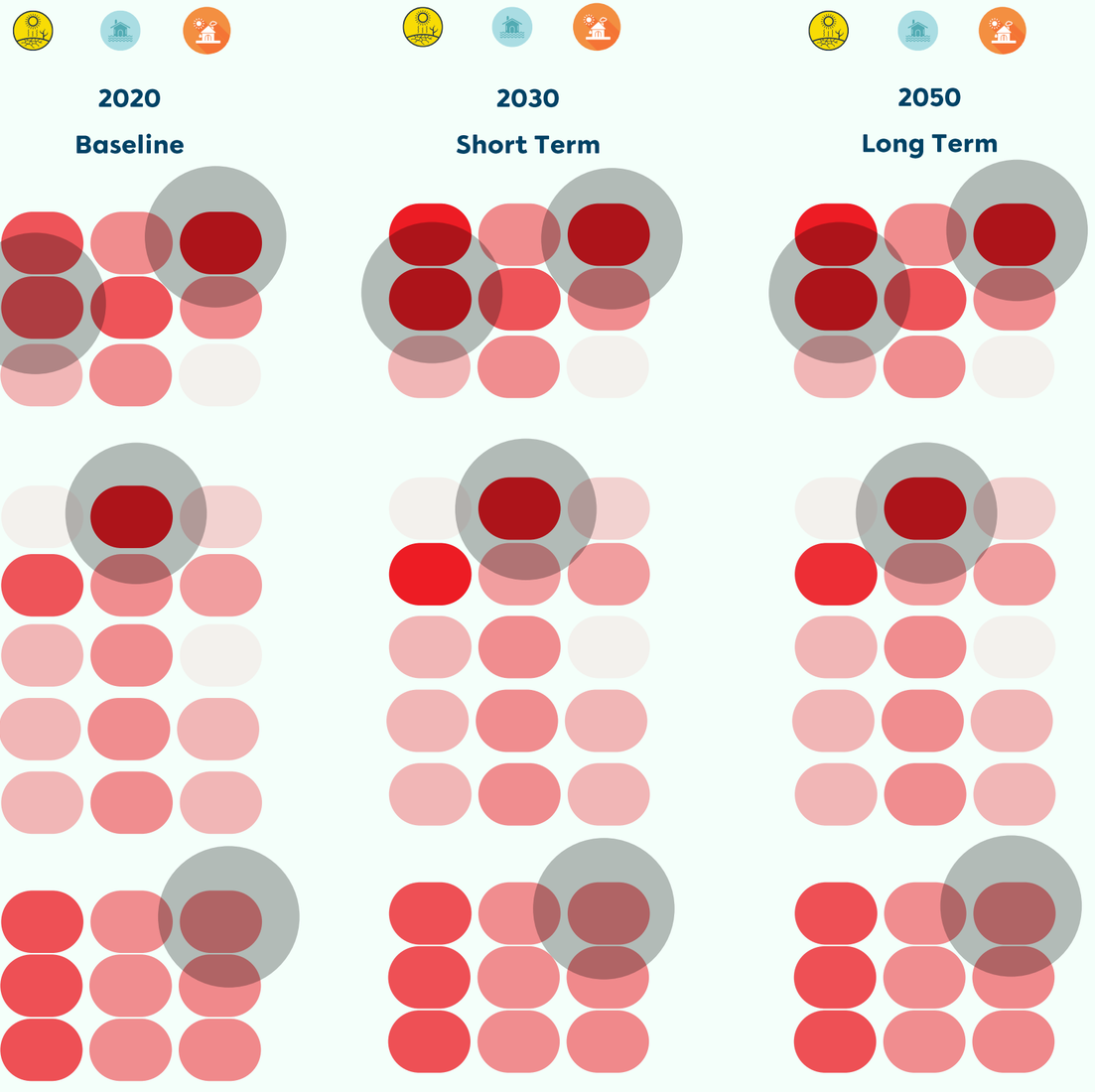
Indonesia

- Indonesia anticipates warming between 0.8°C and 1.4°C by the 2050s.
- With an increase in average annual rainfall, and. increase in droughts in western Indonesia by the second half of the 21st century.
- Climate risk, including flooding and extreme heat, ranks Indonesia in the top third of countries. An extreme river flood could grow by 1.4 million by 2035–2044.
- Sea-level rise, ranked fifth in the world, is likely to expose people to permanent flooding by the period 2070–2100 and could reach over 4.2 million people.
- Rice productions are likely to impact from higher temperatures an agricultural production, Indonesia faces multiple threats to its food security.
- There are impacts on water availability, disaster , urban impact, especially in coastal zones, and health and nutrition, which can lead to poverty and inequality.
- According to the ND-GAIN Country Index, there is a reduction in the overall national-level risk of experiencing significant loss and damage.

3.4 Physical Risks Scenario Analysis

Scenario Analysis

Drought | Flooding | Extreme heat



UP STREAM

- The Siam Forestry Co., Ltd. (Kampangphet)
- Phoenix Pulp & Paper PCL.
- Thai Paper Co., Ltd. (Wangsala)

MID STREAM

- PT. Dayasa Aria Prima
- United Pulp and Paper Co., Inc.
- Vina Kraft Paper Co., Ltd.
- Siam Kraft industry Co., Ltd (Kanchanaburi)
- Thai Cane Paper Public Co., Ltd (Prachinburi)

DOWN STREAM

- Thai Containers Group Co., Ltd. (Nawanakorn)
- Thai Containers Group Co., Ltd. (Samut Prakan)
- Thai Paper Co., Ltd. (Fest Hub)

AQUEDUCT | WORLD BANK GROUP | Climate Change Knowledge Portal
For Development Practitioners and Policy Makers

Risk Score L M H

SCGP has previously gathered information on droughts and floods. These could have an effect on business in the Khon Kaen province area immediately impacted by the Mekong dam project. We consequently monitor and develop a strategy to be ready in case of drought in the area, that was developed several years ago.

3.4 Physical Risks Scenario Analysis

Scenario Analysis

Drought Flooding Extreme heat

Value chain of our comprehensive production process.

UP STREAM

- The Siam Forestry Co., Ltd. (Kampangphet)
- Phoenix Pulp & Paper PCL.
- Thai Paper Co., Ltd. (Wangsala)

MID STREAM

Supply chain ← Own operations → Product use phase

- Siam Kraft industry Co., Ltd (Kanchanaburi)
- Thai Cane Paper Public Co., Ltd (Prachinburi)
- PT. Dayasa Aria Prima
- United Pulp and Paper Co., Inc.
- Vina Kraft Paper Co., Ltd.

DOWN STREAM

- Thai Paper Co., Ltd. (Wangsala)
- Thai Containers Group Co., Ltd. (Nawanakorn)
- Thai Containers Group Co., Ltd. (Samut Prakan)

3.4 Physical Risks Scenario Analysis

	Drought	Flooding	Extreme heat
Dependency-related risks	Water shortage for use	Cannot operate due to flooding	Unable to maintain continuous production due to an unsuitable working environment
Physical Risk Scenario	Drought Scenario	Flooding Scenario	Extremely heat Scenario
	Case 1. Water available shortage 10%-50% of Lower Balance Curve (LBC) water available	Case 1. (+5%) 15 day maximum rainfall	Case 1. (+0.5 - 1.5) celsius 30 Days/year
	Case 2. Regulation pricing change + 2.45 Baht / Cu.m.	Case 2. (+10%) 15 day maximum rainfall	Case 2. (+1.5 - 2.5) celsius 30 Days/year
		Case 3. (+20%) 15 day maximum rainfall	Case 3. (+2.5 - 3.5) celsius 30 Days/year
Impact-related risks	Lower Production and some products cannot be manufactured	No Production and Machine Breakage	Production has decreased due to unfavorable working conditions

Financial impact

Drought		Flooding		Extreme heat	
Finance materiality	Impact materiality	Finance materiality	Impact materiality	Finance materiality	Impact materiality
Case 1 : 156 MB	-	-	-	-	-
Case 2 : 20 MB	-	-	-	-	-
		236 MB	-	-	-

Result Case : Zero

Investments for risks reductions and mitigations

Drought

- Reduce water withdrawal intensity (per ton of production) by 10% by 2030, compared with the base year of 2022
- Installing water-recycling systems
- Recycling wastewater, after treatment, to reduce water withdrawal from natural sources.
- Conducting area-based water risk assessments in collaboration with stakeholders and relevant authorities.
- Production reallocation to another facility; Kanchanaburi

Flooding

- Install a flood protection system for the factory, valued at approximately 10 million baht.
- Reallocated production to other facilities, including Ratchaburi and Fajar.
- Activated the Business Continuity Plan (BCP).

Extreme heat

- Adjusted the Work-from-Home (WFH) system.
- Enhanced employee health check-up benefits.
- Modified work plans and transportation arrangements during periods of high heat risk.
- Improved the spare parts monitoring system for heat-sensitive machinery.

4 RISK MANAGEMENT

4.1 Climate-Related Risk Management Framework and Processes

SCGP implements an Enterprise Risk Management Framework in accordance with the COSO ERM Framework and ISO 31000 to effectively reduce the likelihood and/or the impact of ESG-related risks that may arise. SCGP integrates the risk management framework into critical operations encompassing Strategic Risks, Operational Risks and Investment Risks. The risk management process can be found in the Risk Management Manual which comprise of 4 steps:

1. Identify business and climate-related risks and opportunities consist of existing risks and emerging risks. The company uses multiple approaches, such as megatrend literature study and stakeholder engagement analysis, to identify and express climate change issues that may threaten the achievement of business objectives.
2. Assess the severity of risks by using Risk Map to measure the likelihood and impact and prioritize risks to be managed. To assess the climate-related risks, SCGP leverages climate change subject-matter expertise judgement to ensure emerging and longer-term climate-related risks are assessed and prioritized appropriately.
3. Establish risk responses, Key Risk Indicators and Key Performance Indicators – both leading and lagging – to anticipate and mitigate risks in accordance with the risk management goals and business objectives.
4. Report the performance of risk mitigation to the Risk Management Committee prior to the Audit Committee on a quarterly basis by considering Immediate Risks, Intermediate Risks and Strategic Risks such as IT Risks.

4.1 Climate-Related Risk Management Framework and Processes

SCGP realizes that a corporate culture is an essential enabler for the success of risk management. As a result, the organizational culture of risk management has been encouraged through the following activities:

1. Assigning top executives to communicate the significance of risk management and be role models in risk management. This includes establishing practical guidelines on common risk language, risk appetite, and common risk assessment systems.
2. Assigning role and responsibilities of risk owners.
3. Embedding risk management agenda in key meetings of each subsidiary.
4. Encouraging experience sharing across departments and subsidiaries to continually communicate the benefits of risk management.
5. Assigning Risk Champions and Risk Coordinators to attend risk management training and workshop regularly, so that risk management tools can be applied appropriately.
6. Incorporating risk management into the new hire training course and developing an e-Learning course for all employees to access and go through the risk management.

To integrate climate-related risks into the risk governance and culture, SCGP embeds ESG in the entity's culture and core values as well as increases awareness of climate-related risks within the company. One of the approaches for enhancing awareness is including climate-related risks or climate change issues in Risk Management Committee meeting to identify, monitor and review quarterly. In addition, the risk management function is the driver that responsible for coordinating and consolidating the enterprise risk management activities encompassing with climate change issues and support risk owners to address the climate-related risks that may impact to business objectives, such as the risks associated with climate change regulation.

4.2 Climate Risk Management

1. Transition Risk

SCGP is committed to achieving Net Zero emissions by 2050 and set a new target to increase its greenhouse gas emission reduction from 20% to 25% by 2030, aligned with Science Based Target (SBT). From transition risks assessment, the impact of policy and regulation risks, market risk and reputation risks may increase in the future. SCGP set climate-related committee to monitor risks and performance, national climate policy and regulation such as carbon tax and fee and CBAM. SCGP has participated with governance and public sector such as Thailand Greenhouse Gas Management Organization (TGO), Thailand Carbon Neutral Network (TCNN), The United Nations Global Compact (UNGC) and etc. to support for driving progress toward low carbon economy.

SCGP sets strategy towards the goal of achieving Net Zero Emission by dividing it into two main parts, reducing GHG emissions to the maximum extent and removing GHG to the maximum extent with various measures.

REDUCING GHG EMISSIONS

- Improving energy efficiency by upgrading or changing to the best available technology at the time.
- Increasing the use of renewable energy sources and clean energy sources, such as biomass and biogas.
- Developing low-carbon products in line with a circular economy.

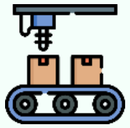
GHG REMOVAL

- Collaborate with national and international organizations to study Carbon Capture and Storage (CCUS) technology and to increase its maturity
- Support and participate in the conservation and restoration of forests and ecosystems to increase biodiversity and provide additional carbon sequestration areas.

Economic tools are utilized, such as Internal Carbon Pricing (ICP) as 25 USD/ton CO_2e, to encourage the reduction of GHG emissions, including raises awareness on energy conservation and climate resilience among employees and stakeholders through value chain.

4.2 Climate Risk Management

1. Transition Risk



Energy Efficiency

By using the best available technologies and AI + Machine learning to enhance processing efficiency

Energy Transition

By increasing the proportion of biomass and renewable energy

Low Carbon Product

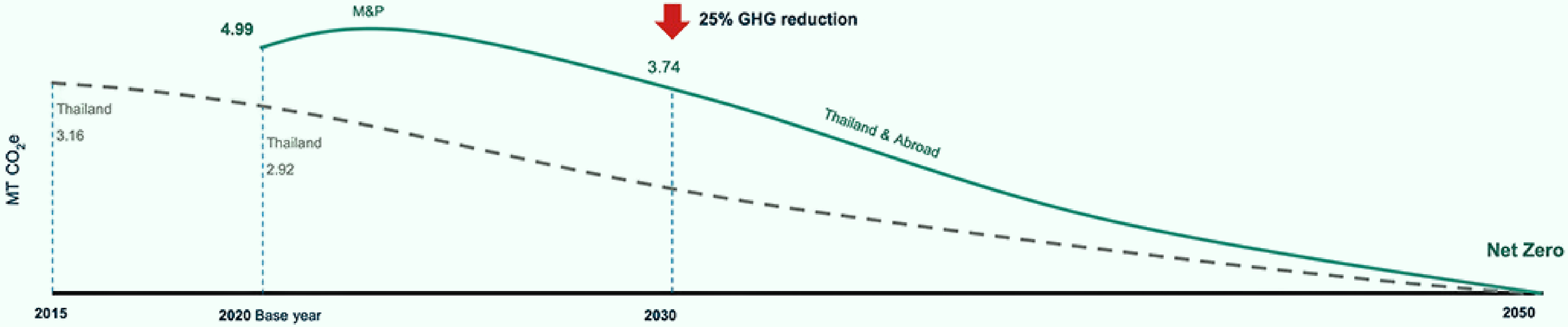
Develop product aligned with circular economy

Supply Chain Decarbonization

Engage and collaborate with key suppliers to reduce scope3 GHG emission

CO_2 Removal

- Natural Climate Solutions
- CCUS technology



In 2021 SCGP revised its base year GHG emission to include aboard operation facilities 2.07 million ton CO_2e resulting the total GHG emission of both Thailand and aboard to be 4.99 million ton CO_2e.

4.2 Climate Risk Management

1. Transition Risk

SCGP GHG ROADMAP

4.2 Climate Risk Management

1. Transition Risk - Show Case

UPSTREAM

Encourages Businesses in Packaging Value Chain to Transform for Greenhouse Gas Reduction

SCGP organized Sustainable Synergy for Decarbonization seminar on 21 August 2024. The event brought together 299 specialists from the public and private sectors, environmental experts, customers and contractors from Thailand and abroad, analysts, opinion leaders, and media representatives for the exchange of ideas and development of guidelines for reducing greenhouse gas emissions, creating a sustainable value chain, and addressing global climate challenges. And concentrated on building a sustainable value chain, especially for SMEs facing resource, knowledge, and funding challenges in adapting to ESG principles. The panel discussed guidelines, opportunities to access Green Loans, and the importance of collaboration to enhance operational efficiency and sustainability.

Collaborative Push toward a Low Carbon Society

SCGP has adapted EV forklifts since 2023, as part of its transition started shifting away from diesel/LNG-fueled vehicles. As of 2023, 59% of forklifts utilized by SCGP's Warehouse and Raw Material Group are EV. The company aims to increase the percentage to 81 by 2025. Moreover, SCGP has deployed seven EV trailers. In collaboration with
SCGJWD Logistics, plans to raise the number of electric trucks for the transportation of ready-to-use paper packaging by 80 between 2025 and 2027.

OPERATION

Energy Transition towards Renewable Energy

SCGP has continuously invested in modern technology and innovative practices to increase renewable energy consumption such as solar energy, biomass and biogas at its manufacturing facilities. This initiative aligns with its plan to shift from high-emission fossil fuels to renewable energy sources. Currently, we can use renewable energy up to 31.4% and reduce greenhouse gas emissions 868,152 tCO2e/year

Energy Efficiency Enhancement

SCGP has continuously invested in modern technology and innovative practices to improve energy efficiency such as turbo vacuum, Process Steam Optimization with AI and machine learning at its manufacturing facilities. All of project can reduce energy consumption 464,000 GJ/year, reduce 76,000 tCO_2e/year with saving cost 220 million baht.

Carbon Removal

In 2024, SCGP planted 66,985 trees on company-owned and concession land, bringing the cumulative total since 2020 to 2,350,269 trees. Additionally, Siam Forestry Company Limited in collaboration with CERT+ has used satellites and AI in calculating technology to calculate the carbon dioxide sequestered in its economic forests. In 2024, SCGP received certification for 66,621 rai of plantation land, which has the capacity to sequester 270,828 tons of carbon dioxide equivalent. This certification was issued by SGS (Thailand) Limited.

DOWNSTREAM

Develop and Promote low-carbon products

SCGP has developed innovating low carbon products, services and solutions based on circular economy across value chain. SCGP has been pursuing development and design of products under SCG "Green Choice" label with is given to product that meet our stated criteria for safety, environment-friendliness, less resource use, increase ratio of recycle materials and reduce GHG emission by a total 80 products and currently, 161 of SCGP's products have received Carbon Footprint of Products (CFP) and 38 of SCGP's products have received Carbon Footprint Reduction (CFR) certifications from the Thailand Greenhouse Gas Management Organization (Public Organization) or TGO. All of these we have revenue from sale 78,693 million baht.

Additional, SCGP has developed its own carbon footprint label or Private Declaration Label, to reflect the GHG emissions of its packaging. The company has also created "carbon footprint software" and issued GHG-emission certifications to assist its customers in their sustainability effort.

Climate Change Knowledge for Customers

SCGP organizes the "Climate Change & Net Zero Pathway" seminar for interested customers, providing valuable insights on climate-change as well as guidelines for the collecting and reporting enterprise and product level carbon footprint data. These seminars aim to demonstrate social responsibility, create business opportunities, and mitigate long-term risks. In 2024, the seminar was conducted 6 times, attracting a total of 107 participants.

4.2 Climate Risk Management

2. Physical Risk

SCGP has monitored the water usage situation in business via connected digitalization with essential information from various country sources, such as the Royal Irrigation Department, the Meteorological Department, Pollution Control Department, etc. following disaster reduction measures by the United Nations Office for Disaster Risk Reduction: UNDRR, with the Sendai Framework 2015–2030, focuses on the adoption of measures that address the three dimensions of disaster risk (exposure to hazards, vulnerability and capacity, and the hazard's characteristics) in order to prevent the creation of new risks, reduce existing risks, and increase resilience.

Water is an essential resource for SCGP's business operations. Regarding the use of water resources with the most value and most significant benefit, SCGP has applied the **3R principle** to improve the production process to **reduce** the amount of water, **reuse**, and **recycle** the water used in the production process, including the restoration of the natural water resources. To discharge water to public sources, SCGP strictly complies with laws & regulations to prevent any impact on the environment or communities.

In addition, SCGP implements the risk trigger point method, which can be described as the degree of risk that determines the decision to take action. When the risk of suffering an impact exceeds an acceptable level, events will require advance notice. To manage risk reduction Setting a goal to estimate any possible harm and evaluate the actual damage after the occurrence finishes. Priority could be focused on reducing the loss of people and property impact on business

4.2 Climate Risk Management

2. Physical Risk

Water is an essential resource for SCGP's operations. As a consequence, SCGP implemented the 3R principle to improve the manufacturing process with the goal to reduce the amount of water consumed, reuse, and recycle the water used in the manufacturing process, in addition to regenerate natural water resources. Climate change conditions, such as unseasonal and inconsistent rainfall patterns, no rains occurring in the headwater area, and decrease of water volume in dams, have a significant effect on water management today. Furthermore, growing population needs for water consumption could result in water scarcity, affecting the manufacturing process and nearby communities.

SCGP committed to leveraging water management knowledge via the Integrated Water Management Committee, which consists of participants from all businesses, to establish a strategy to address water-related hazards and improve water efficiency. Water-related concerns are monitored, collaborated with the government and industrial sectors, digital technology is implemented, and innovation is generated for improved water usage efficiency in the manufacturing process and reuse the treated water. The following are water management strategies:

1. Water-related risk mitigation through integrated water resources management
2. Increase water usage efficiency in production processes and products
3. Treat the effluent to meet quality standards, monitor, measure the effluent and its quality, report on the effluent issues, incident investigation, corrective action, and reduce effluent
4. Bring the recycled water after treatment to be used
5. Capability building of the person who is involved in water management
6. Rehabilitate the water sources’ ecosystems and support water to communities and agriculture

4.2 Climate Risk Management

2. Physical Risk

1 **Water Management Collaborations**

2 **SCGP Water Stress Monitoring**

3 **Early Warning System (EWS)**

4 **Business Continuity Management (BCM)**

5 **Community Engagement**

6 **Disaster Management Participated**

Ordinarily, the country's water management involves allocating water resources to consumers in order to mitigate conflicts within various regions. For water management purposes, Thailand divides itself into 22 river basins. SCGP has worked collaboratively with civil society entities in water resource administration, providing insightful perspectives that align well with community needs. The company serves as an exemplar within the industrial sector for implementing projects aimed at reducing water consumption at manufacturing facilities. Additionally,

SCGP has undertaken several other initiatives, such as groundwater management, which enables the replenishment of aquifer systems and subsequent reuse of this water source. At the end of the previous year, SCGP implemented an innovative water monitoring system that integrated data from government agencies, enabling systematic water resource management. This platform, referred to as the Water Monitoring Dashboard, facilitates advanced awareness of water volumes, thereby allowing for effective area management and preparedness in the event of flood situations. For instance, the Navanakorn factory continuously monitors water levels from the Chao Phraya River station as an early warning system to identify abnormally high water discharge, potentially requiring the release of excess water. In such scenarios, advance warning enables the factory to implement appropriate preparedness and response measures. Concurrently, SCGP employs the Business Continuity Management System (BCMS) plan to ensure operational continuity in serving customers, stakeholders, and surrounding communities during contingencies. Preparatory measures include clearing waterways and canals to facilitate unimpeded water flow, thereby mitigating the risk of flooding in residential areas.

SCGP has supported employee volunteers in flooding-affected regions by establishing the SCGP Emergency Response Team (S.E.R.T.), which deploys to affected areas to assist distressed populations in collaboration with government authorities. It shown that SCGP adopts a systematic approach to water resource management, and over the past several years, this strategy has effectively prevented operational disruptions to the company's business activities while concurrently promoting sustainability for local communities, society, and the environment.

Water Management Committee

4.2 Climate Risk Management

2. Physical Risk

SCGP Manages Water Resources Through Inclusive Collaboration to Improve Planning and efficiency.

SCGP is committed to managing water resources through a strategy that encourages participation from all sectors. By working closely with local stakeholders in various river basins, the company supports make water planning and management more effective.

One important part of this approach is SCGP's involvement in local "Water Committees"—community-based groups that help plan and manage water resources in their areas. SCGP has encouraged its employees to take part in these committees in three key river basins: the Mae Klong, Chi, and Bangprakong basins.

In each of these areas, SCGP has supported projects that benefit local communities and society, such as creating water storage systems for use during the summer season, preparing water pathways to safely manage dam releases, and encouraging farmers to form groups to manage water use in their fields.

SCGP believes that working directly with local communities is essential to improving water security and supporting long-term community well-being.

4.3 Highlight Activities

1 INTERNAL CARBON PRICING (ICP)

For new technologies and advancements in carbon capture and storage, research and development are still ongoing. Leading institutions and organizations around the world are exploring ways to make the technology practical and feasible. The SCGP is keeping a close eye on the progress and trying to actively participate in the developments, in order to bring appropriate innovations to the organization.

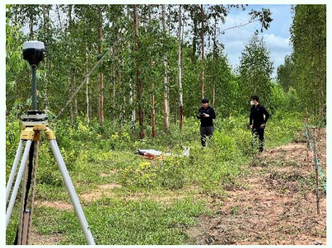
However, supporting investment in new projects to reduce greenhouse gas emissions or to mitigate carbon sequestration is important. Using economic tools, such as Internal Carbon Pricing (ICP), the SCGP sets an internal carbon price for the years 2022-2024 with a maximum value of 25 US dollars per ton of carbon dioxide equivalent in order to accelerate support for various projects.

Year	Detail	Investment (Million Baht)	GHG emissions reduction (tCO_2e/year)
2021	Solar cell Projects	166	5,541
2022	Solar cell Projects	240	7,547
2023	Solar cell Projects & Modified Boiler	373	68,597
2024	Solar cell Projects & Modified Boiler	660	184,568

Remark: Modified boiler to increase biomass fuel usage instead of fossil fuel

2 NATURAL CLIMATE SOLUTION

In 2024, SCGP received certification for 66,621 rai of plantation land, which has the capacity to sequester 270,828 tons of carbon dioxide equivalent. This certification was issued by SGS (Thailand) Limited.



3 SUSTAINABILITY LINK LOAN

In 2021, SCGP signed credit support linked to long-term sustainability operations (Sustainability Linked Loan or SLL) totaling 5,000 million baht for four years with Bank of Ayudhya PCL. The interest rate structure is linked to Sustainability Performance Targets or SPT, whereby the bank adjusts lower down interest rates each year if SCGP achieves the three specified set targets:

1. Reduction in total greenhouse gas emissions
2. Reduction of total water withdrawal
3. Increased sales revenue from “SCG Green Choice” products and services

4 GREEN LOAN

The impact of the Green Loan by categories renewable energy projects for period of 1 January 2023 – 30 September 2024.

Project	Allocation date	Amount (Million Baht)	Finance : Refinance Proportion
Solar PV	Jan 23 – Sep 24	322	75% : 25%
Biomass Boiler	Jan 23 – Sep 24	37	100% : 0%
	Total	**359**	

Solar PV	**Biomass boilers**
Installing solar PV to reduce electricity purchase and cleaning service solar cell with drone	Increasing biomass usage by modifying and replacing boilers.
Impact indicators	**Impact indicators**
GHG emissions reduced: **9,709** tCO_2	GHG emissions reduced: **-** tCO_2
Renewable energy generation: **15,570** MWh	This project is under construction.

4.3 Highlight Activities

5 INVESTMENT TO REDUCE GHG EMISSIONS

in 2024, SCGP invested and implemented in innovation and R&D to reduce GHG emissions and decrease energy consumption totaling 991 million baht.

Detail	GHG Reduction (ton CO_2e)	Investment (million THB)
Biomass/Biogas	82,227	82
Improve energy efficiency	68,118	478
Solar Cell	9,834	431
Total	**153,659**	**991**

6 ENERGY AUDIT

SCGP has energy audit activities as follow;

1. Conducting a thorough analysis of energy usage in a building or facility
2. Identifying areas where energy efficiency can be improved
3. Inspecting equipment and systems to ensure they are operating efficiently
4. Collecting data on energy consumption and costs
5. Developing recommendations for energy-saving measures
6. Implementing energy-saving measures such as upgrading equipment or improving insulation
7. Monitoring and evaluating the impact of the energy-saving measures over time

7 CLIMATE-RELATED TRAINING AND SHARING ESG KNOWLEDGE

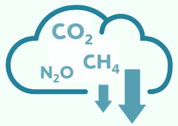
SCGP emphasizes the importance of increasing knowledge and understanding of ESG among stakeholders, especially in the topics of GHG reductions, Energy consumption reduction, Water management, Waste management, Sustainable procurement and etc. . For internal stakeholders, SCGP has developed the OCAP system, which is a self-learning system and provides training courses to develop knowledge and understanding of ESG for employees. For external stakeholders, SCGP organizes training courses for both suppliers and customers to increase knowledge and share example of sustainable execution activities.

5 METRICS &TARGETS

5.1 GHG Emission Reduction and Energy Consumption Target and Performance

SCGP increased its challenge to help control the global temperature from rising beyond 2 degrees Celsius by promoting science-based initiatives such as the Science-based Targets Initiatives (SBTi) to reduce greenhouse gas emissions, covering both direct emissions (Scope 1) and indirect emissions (Scope 2) based on the baseline year of 2020. Moreover SCGP has already collected GHG Scope 3 of all subsidiaries and plan to cooperate with stakeholders to reduce GHG emissions.

GHG Emissions and Energy Target



12.5% GHG emissions Reduction by 2025[1]

25% GHG emissions Reduction by 2030

Net Zero emissions by 2050

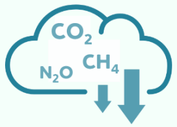
15% Energy Consumption Intensity Reduction by 2030

Remark:
1. 2025 targets are internal targets
2. All of target compared with base year 2020

GHG emissions Performance

Topic	Unit	Performance				
		2020	2021	2022	2023	2024
GHG Scope 1 and 2 (Market based) Emissions	ton CO_2e	4,990,348	4,872,474	4,357,603	4,015,834	4,117,063
GHG Scope 1 Emissions	ton CO_2e	4,486,157	4,365,669	3,778,126	3,447,684	3,478,086
GHG Scope 2 Emissions (Market based)	ton CO_2e	504,191	506,806	581,477	568,150	638,997
GHG Scope 2 Emissions (Location based)	ton CO_2e	520,732	508,118	631,788	586,057	673,520
GHG Scope 3 Emissions	ton CO_2e	-	-	1,459,010	2,096,246	2,800,423
CO_2 emissions from biomass/biogenic	ton CO_2e	-	1,399,131	1,540,860	1,786,776	2,054,168
Carbon Sequestration in Economic tree plantation	ton CO2e	-	-	-	152,181	270,228

GHG Emissions and Energy Performance 2024



17.5%

GHG emission reduction

compared with base year 2020

15.2%

Energy Consumption Intensity Reduction

compared with base year 2020

Energy Consumption Performance

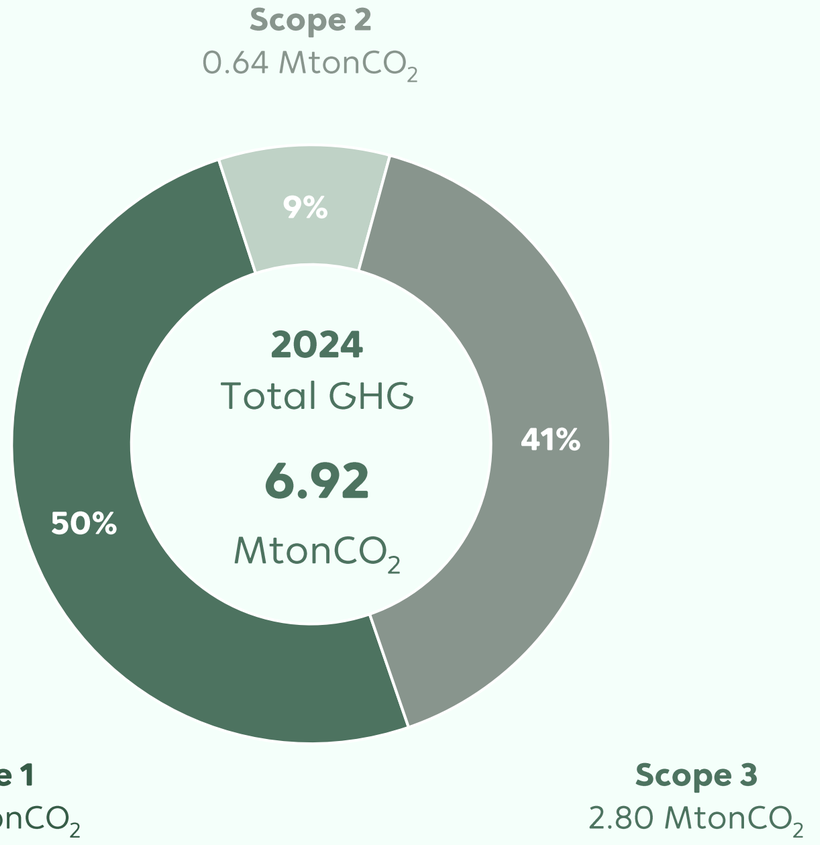
Topic	Unit	Performance				
		2020	2021	2022	2023	2024
Total Energy Consumption	Petajoules	67.3	64.7	60.4	59.1	62.1
Renewable Energy Consumption	Petajoules	11.6	13.5	14.7	16.9	19.5
Non-Renewable Energy Consumptions	Petajoules	55.7	51.2	45.7	42.2	42.6
Energy Consumption Intensity Reduction compared with the base year of 2020	%	0	6.42	9.73	11.4	15.2

In 2024, GHG emissions and Energy consumption performance are verified by SGS (Thailand) Limited.

5.1 GHG Emission Reduction and Energy Consumption Target and Performance

Category	GHG Scope 3 (ton CO2e)
1. Purchased Goods and Services	1,419,020
2. Capital Goods	53,830
3. Fuel-and Energy	407,527
4. Upstream Transportation and Distribution	344,322
5. Waste Generated in Operations	26,502
6. Business Travel	996
7. Employee Commuting	26,824
8. Upstream Leased Assets	Not Relevant
9. Downstream Transportation and Distribution	67,851
10. Processing of Sold Products	405,334
11. Use of Sold Products	Not Relevant
12. End-of-Life Treatment of Sold Products	28,941
13. Downstream Leased Assets	107
14. Franchises	Not Relevant
15. Investments	19,169
Total	**2,800,423**

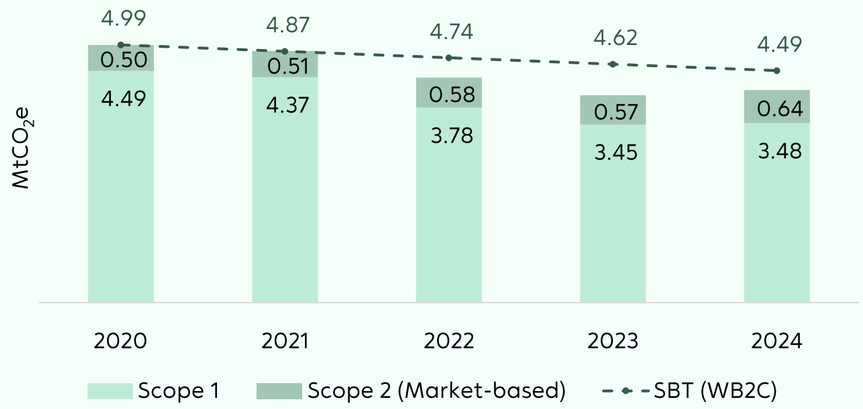
GHG Scope 3 (Thailand & Abroad) : 15 Category



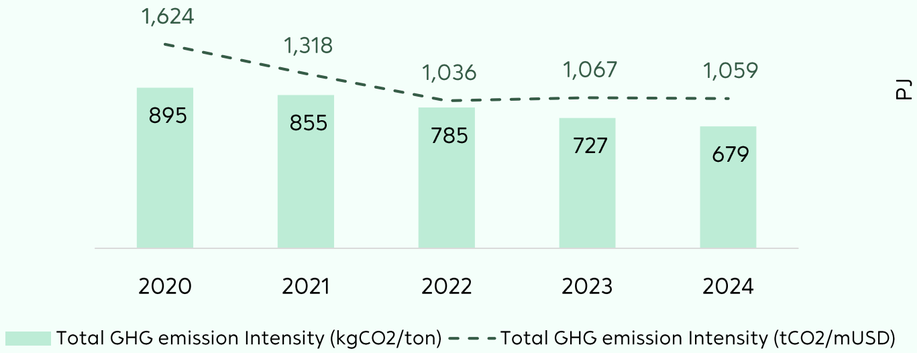
Note :
In 2024, the data show an increase of 554,894 tCO_2 from the new M&P

5.1 GHG Emission Reduction and Energy Consumption Target and Performance

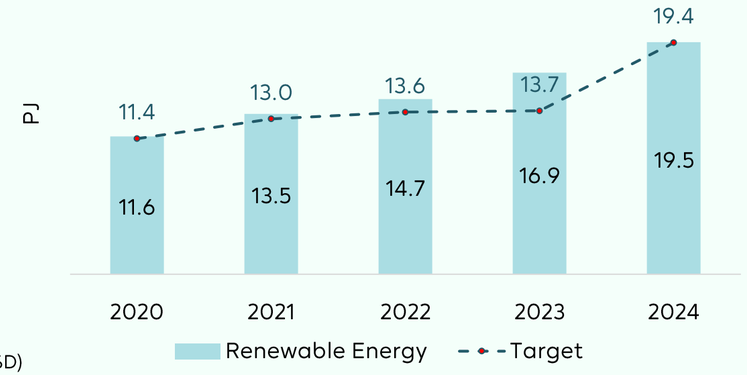
Total GHG emissions



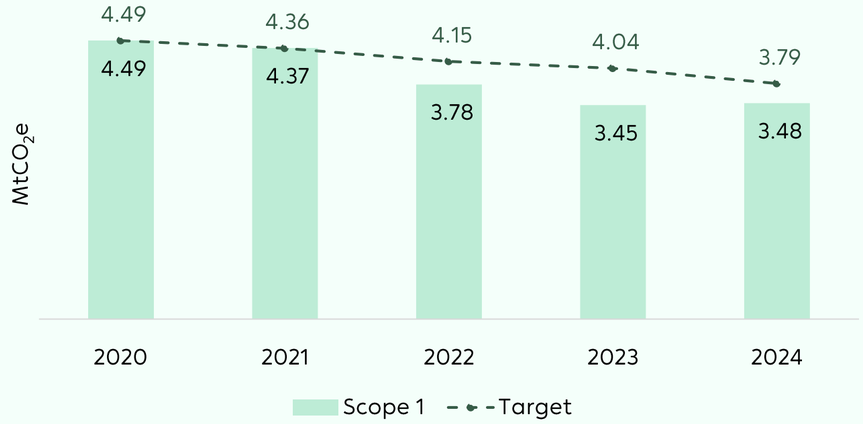
Total GHG emissions intensity (Scope 1 and 2)



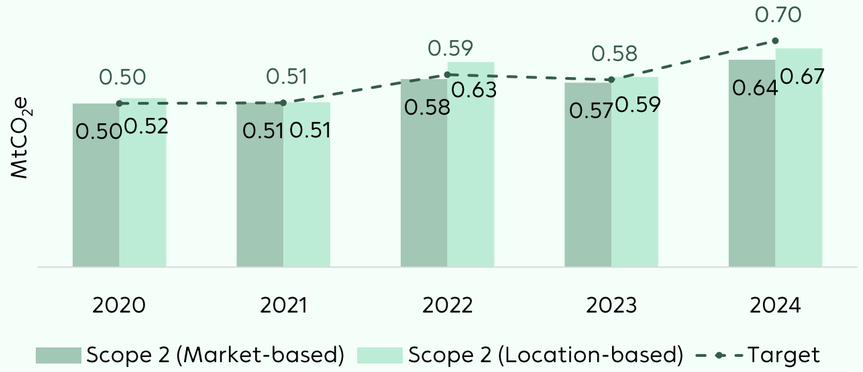
Renewable Energy Consumption



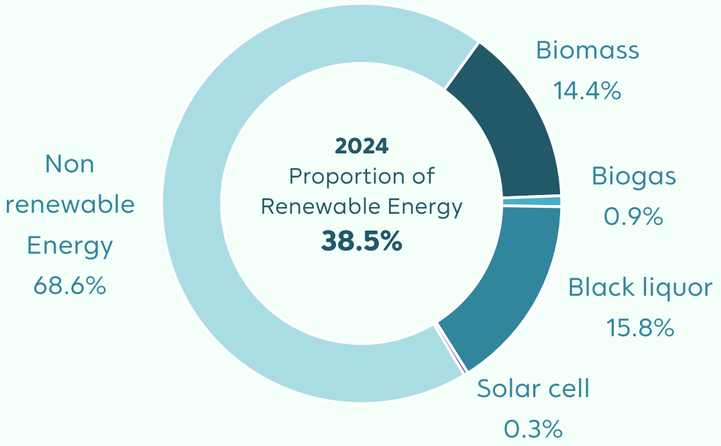
GHG emissions Scope 1



GHG emissions Scope 2 (Market-based vs Location-based)



Renewable Energy



5.2 Other Climate-related Target and Performance

Water Management

Reduce Water Withdrawal 35% by 2025 compared with Business As Usual (BAU) at the base year of 2014

Circular Economy

The volume of Recyclable, Reusable, or Compostable Packaging equals 100% of total volume of packaging by 2030

Zero waste from the production process in Thailand is sent to landfill

Zero waste from the production process in Thailand is sent to incinerator without energy recovery

Product Stewardship

Sale revenue of SCG Green Choice products, services, and solutions is 66.7% of the total sales revenue by 2030

Targets	35.0%	100%	66.7%
Performance 2024	27.3%	99.7%	59%

Reduce Water Withdrawal 27.3% compared with Business As Usual (BAU) at the base year of 2014

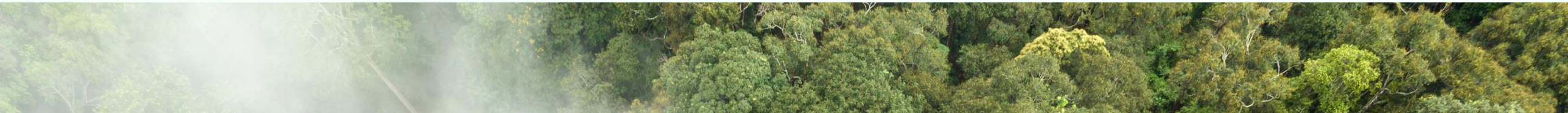
Proportion of recycle water was 15.7%

The volume of Recyclable, Reusable, or Compostable Packaging equals 99.7% of total volume of packaging

Zero waste to landfill (Thailand)

Zero waste to incinerator without energy recovery (Thailand)

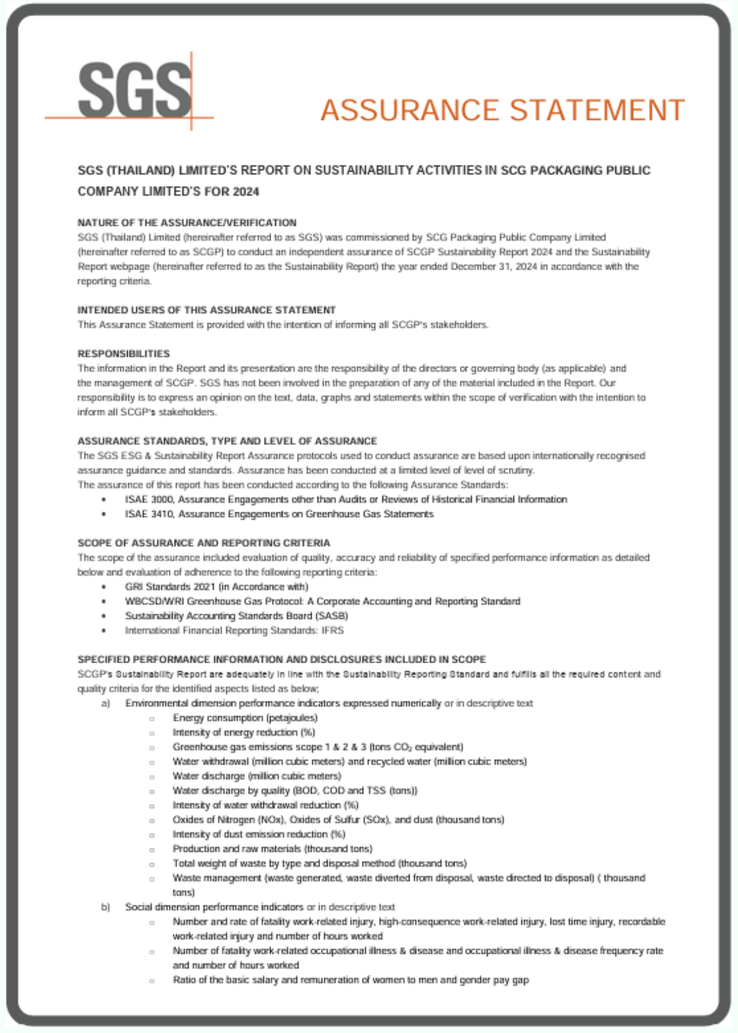
Sale revenue of SCG Green Choice products, services, and solutions is 59% of the total sales revenue



6 APPENDIX

6.1 GHG Scope 1 & 2 & 3 Assurance Statement

The GHG scope 1 & 2 & 3 data (exclude category 2 Capital Goods) and Energy consumption data publicly in Sustainability Report 2024 (the same data in TCFD Report 2025) is verified by SGS (Thailand) Limited.
Link : https://sustainability.scgpackaging.com/storage/downloads/assurance/scgp-assurance-statement-sdreport2024-th.pdf



SGS

ASSURANCE STATEMENT

SGS (THAILAND) LIMITED'S REPORT ON SUSTAINABILITY ACTIVITIES IN SCG PACKAGING PUBLIC COMPANY LIMITED'S FOR 2024

NATURE OF THE ASSURANCE/VERIFICATION
SGS (Thailand) Limited (hereinafter referred to as SGS) was commissioned by SCG Packaging Public Company Limited (hereinafter referred to as SCGP) to conduct an independent assurance of SCGP Sustainability Report 2024 and the Sustainability Report webpage (hereinafter referred to as the Sustainability Report) the year ended December 31, 2024 in accordance with the reporting criteria.

INTENDED USERS OF THIS ASSURANCE STATEMENT
This Assurance Statement is provided with the intention of informing all SCGP's stakeholders.

RESPONSIBILITIES
The information in the Report and its presentation are the responsibility of the directors or governing body (as applicable) and the management of SCGP. SGS has not been involved in the preparation of any of the material included in the Report. Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all SCGP's stakeholders.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE
The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognised assurance guidance and standards. Assurance has been conducted at a limited level of level of scrutiny.
The assurance of this report has been conducted according to the following Assurance Standards:

- ISAE 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information
- ISAE 3410, Assurance Engagements on Greenhouse Gas Statements

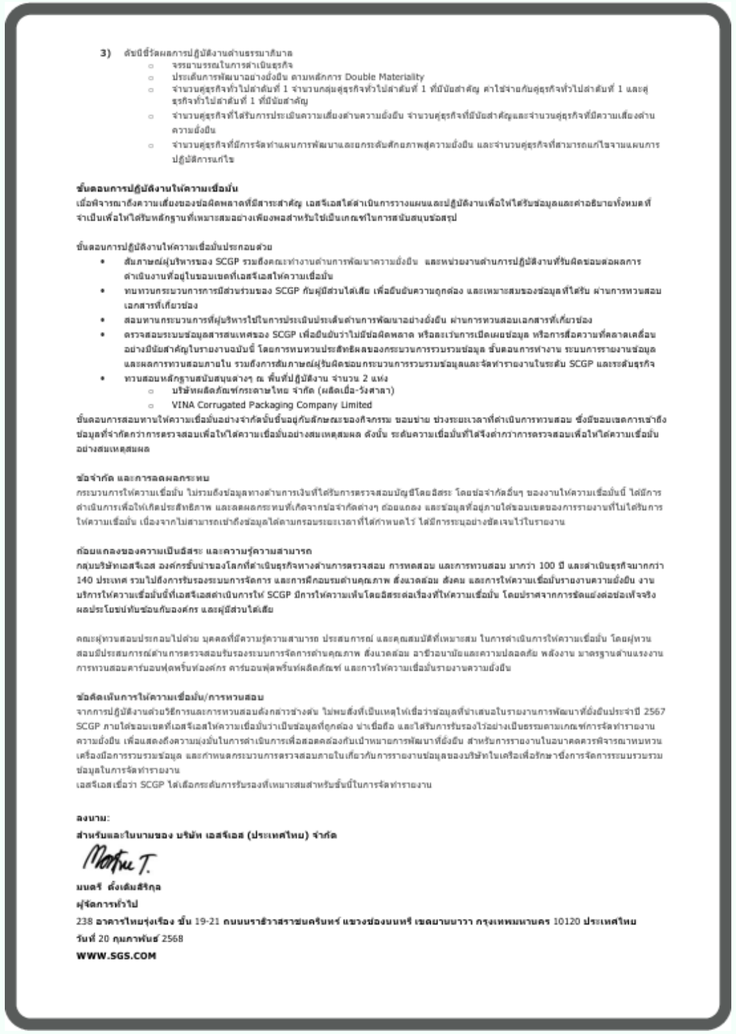
SCOPE OF ASSURANCE AND REPORTING CRITERIA
The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

- GRI Standards 2021 (in Accordance with)
- WBCSD/WRI Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard
- Sustainability Accounting Standards Board (SASB)
- International Financial Reporting Standards: IFRS

SPECIFIED PERFORMANCE INFORMATION AND DISCLOSURES INCLUDED IN SCOPE
SCGP's Sustainability Report are adequately in line with the Sustainability Reporting Standard and fulfills all the required content and quality criteria for the identified aspects listed as below;

a) Environmental dimension performance indicators expressed numerically or in descriptive text
   - Energy consumption (petajoules)
   - Intensity of energy reduction (%)
   - Greenhouse gas emissions scope 1 & 2 & 3 (tons CO_2 equivalent)
   - Water withdrawal (million cubic meters) and recycled water (million cubic meters)
   - Water discharge (million cubic meters)
   - Water discharge by quality (BOD, COD and TSS (tons))
   - Intensity of water withdrawal reduction (%)
   - Oxides of Nitrogen (NOx), Oxides of Sulfur (SOx), and dust (thousand tons)
   - Intensity of dust emission reduction (%)
   - Production and raw materials (thousand tons)
   - Total weight of waste by type and disposal method (thousand tons)
   - Waste management (waste generated, waste diverted from disposal, waste directed to disposal) (thousand tons)

b) Social dimension performance indicators or in descriptive text
   - Number and rate of fatality work-related injury, high-consequence work-related injury, lost time injury, recordable work-related injury and number of hours worked
   - Number of fatality work-related occupational illness & disease and occupational illness & disease frequency rate and number of hours worked
   - Ratio of the basic salary and remuneration of women to men and gender pay gap



3) ดัชนีชี้วัดผลการปฏิบัติงานด้านธรรมาภิบาล
   - จรรยาบรรณในการดำเนินธุรกิจ
   - ประเด็นการพัฒนาอย่างยั่งยืน ตามหลักการ Double Materiality
   - จำนวนคู่ธุรกิจทั่วไปลำดับที่ 1 จำนวนกลุ่มคู่ธุรกิจทั่วไปลำดับที่ 1 ที่มีนัยสำคัญ คำใช้จ่ายกับคู่ธุรกิจทั่วไปลำดับที่ 1 และคู่ธุรกิจทั่วไปลำดับที่ 1 ที่มีนัยสำคัญ
   - จำนวนคู่ธุรกิจที่ได้รับการประเมินความเสี่ยงด้านความยั่งยืน จำนวนคู่ธุรกิจที่มีนัยสำคัญและจำนวนคู่ธุรกิจที่มีความเสี่ยงด้านความยั่งยืน
   - จำนวนคู่ธุรกิจที่มีการจัดทำแผนการพัฒนาและยกระดับศักยภาพสู่ความยั่งยืน และจำนวนคู่ธุรกิจที่สามารถแก้ไขจากแผนการปฏิบัติการแก้ไข

ขั้นตอนการปฏิบัติงานให้ความเชื่อมั่น
เมื่อพิจารณาถึงความเสี่ยงของข้อผิดพลาดที่มีสาระสำคัญ เอสจีเอสได้ดำเนินการวางแผนและปฏิบัติงานเพื่อให้ได้รับข้อมูลและคำอธิบายทั้งหมดที่จำเป็นเพื่อให้ได้รับหลักฐานที่เหมาะสมอย่างเพียงพอสำหรับใช้เป็นเกณฑ์ในการสรุปสนุนข้อสรุป

ขั้นตอนการปฏิบัติงานให้ความเชื่อมั่นประกอบด้วย
- สัมภาษณ์ผู้บริหารของ SCGP รวมถึงคณะทำงานด้านการพัฒนาความยั่งยืน และหน่วยงานด้านการปฏิบัติงานที่รับผิดชอบต่อผลการดำเนินงานที่อยู่ในขอบเขตที่เอสจีเอสให้ความเชื่อมั่น
- ทบทวนกระบวนการการมีส่วนร่วมของ SCGP กับผู้มีส่วนได้เสีย เพื่อยืนยันความถูกต้อง และเหมาะสมของข้อมูลที่ได้รับ ผ่านการทวนสอบเอกสารที่เกี่ยวข้อง
- สอบทานกระบวนการที่ผู้บริหารใช้ในการประเมินประเด็นด้านการพัฒนาอย่างยั่งยืน ผ่านการทวนสอบเอกสารที่เกี่ยวข้อง
- ตรวจสอบระบบข้อมูลสารสนเทศของ SCGP เพื่อยืนยันว่าไม่มีข้อผิดพลาด หรือสะท้อนการเบี่ยงเบนข้อมูล หรือการสื่อความที่ผลาดเคลื่อนอย่างมีนัยสำคัญในรายงานฉบับนี้ โดยการทบทวนประสิทธิผลของกระบวนการรวบรวมข้อมูล ขั้นตอนการทำงาน ระบบการรายงานข้อมูล และผลการทวนสอบภายใน รวมถึงการสัมภาษณ์ผู้รับผิดชอบกระบวนการรวบรวมข้อมูลและจัดทำรายงานในระดับ SCGP และระดับธุรกิจ
- ทวนสอบหลักฐานยืนสนุนต่างๆ ณ พื้นที่ปฏิบัติงาน จำนวน 2 แห่ง
   - บริษัทผลิตภัณฑ์กระดาษไทย จำกัด (มหาชน) (สถิตเมือ-วิงศาลา)
   - VINA Corrugated Packaging Company Limited

ขั้นตอนการสอบทานให้ความเชื่อมั่นอย่างจำกัดขึ้นขึ้นอยู่กับลักษณะของกิจกรรม ขอบข่าย ช่วงระยะเวลาที่ดำเนินการทวนสอบ ซึ่งมีขอบเขตการเข้าถึงข้อมูลที่จำกัดกว่าการตรวจสอบเพื่อให้ความเชื่อมั่นอย่างสมเหตุสมผล ดังนั้น ระดับความเชื่อมั่นที่ได้จึงต่ำกว่าการตรวจสอบเพื่อให้ได้ความเชื่อมั่นอย่างสมเหตุสมผล

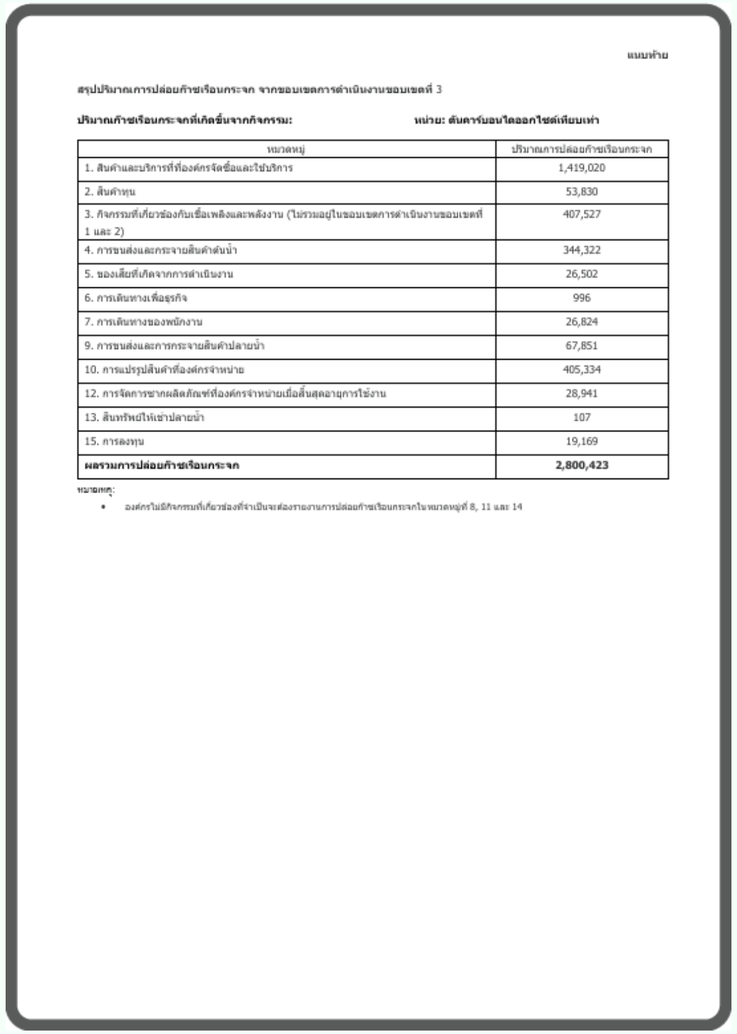
ข้อจำกัด และการสอดผลกระทบ
กระบวนการให้ความเชื่อมั่น ไม่รวมถึงข้อมูลทางด้านการเงินที่ได้รับการตรวจสอบบัญชีโดยอิสระ โดยข้อจำกัดอื่นๆ ของงานให้ความเชื่อมั่นนี้ ได้มีการดำเนินการเพื่อให้เกิดประสิทธิภาพ และลดผลกระทบที่เกิดจากข้อจำกัดต่างๆ ดังกล่าวแล้ว และข้อมูลที่อยู่ภายใต้ขอบเขตของการรายงานที่ไม่ได้รับการให้ความเชื่อมั่น เนื่องจากไม่สามารถเข้าถึงข้อมูลได้ตามกรอบระยะเวลาที่ได้กำหนดไว้ ได้มีการระบุอย่างชัดเจนไว้ในรายงาน

ข้อยกเว้นของความเป็นอิสระ และความรู้ความสามารถ
กลุ่มบริษัทเอสจีเอส องค์กรชั้นนำของโลกที่ดำเนินธุรกิจทางด้านการตรวจสอบ การทดสอบ และการทวนสอบ มากว่า 100 ปี และดำเนินธุรกิจมากกว่า 140 ประเทศ รวมไปถึงการรับรองระบบการจัดการ และการฝึกอบรมด้านคุณภาพ สิ่งแวดล้อม สังคม และการให้ความเชื่อมั่นรายงานความยั่งยืน งานบริการให้ความเชื่อมั่นนี้ที่เอสจีเอสดำเนินการให้ SCGP มีการให้ความเห็นโดยอิสระเกี่ยวกับข้อความเชื่อมั่น โดยนำศาสตร์การจัดแย่งต่อข้อเท็จจริง ผลประโยชน์ทับซ้อนกับองค์กร และผู้มีส่วนได้เสีย

คณะผู้ทวนสอบประกอบไปด้วย บุคลากรที่มีความรู้ความสามารถ ประสบการณ์ และคุณสมบัติที่เหมาะสม ในการดำเนินการให้ความเชื่อมั่น โดยผู้ทวนสอบมีประสบการณ์ด้านการตรวจสอบรับรองระบบการจัดการด้านคุณภาพ สิ่งแวดล้อม อาชีวอนามัยและความปลอดภัย พลังงาน มาตรฐานด้านแรงงาน การทวนสอบความยั่งยืนที่องค์กร ความยั่งยืนสำหรับผลิตภัณฑ์ และการให้ความเชื่อมั่นรายงานความยั่งยืน

ข้อค้นพบในการให้ความเชื่อมั่น/การทวนสอบ
จากการปฏิบัติงานด้วยวิธีการและการทวนสอบดังกล่าวข้างต้น ไม่พบสิ่งที่เป็นเหตุให้เชื่อว่าข้อมูลที่นำเสนอในรายงานการพัฒนาที่ยั่งยืนประจำปี 2567 SCGP ภายใต้ขอบเขตที่เอสจีเอสให้ความเชื่อมั่นว่าเป็นข้อมูลที่ถูกต้อง น่าเชื่อถือ และได้รับการรับรองไว้อย่างเป็นธรรมตามเกณฑ์การจัดทำรายงานความยั่งยืน เพื่อแสดงถึงความมุ่งมั่นในการดำเนินการเพื่อสอดคล้องกับเป้าหมายการพัฒนาที่ยั่งยืน สำหรับการรายงานในอนาคตควรพิจารณาเพิ่มหวนเครื่องมือการรวบรวมข้อมูล และกำหนดกระบวนการตรวจสอบภายในเกี่ยวกับการรายงานข้อมูลของบริษัทในเครือเพื่อให้มาซึ่งการจัดการระบบรวบรวมข้อมูลในการจัดทำรายงาน
เอสจีเอสเชื่อว่า SCGP ได้เลือกระดับการรับรองที่เหมาะสมสำหรับขั้นนี้ในการจัดทำรายงาน

ลงนาม:
สำหรับและในนามของ บริษัท เอสจีเอส (ประเทศไทย) จำกัด
มนตรี ตั้งเต็มสิริกุล
ผู้จัดการทั่วไป
238 อาคารไทยรุ่งเรือง ชั้น 19-21 ถนนพระรามที่ 4 แขวงช่องนนทรี เขตยานนาวา กรุงเทพมหานคร 10120 ประเทศไทย
วันที่ 20 กุมภาพันธ์ 2568
WWW.SGS.COM



แนบท้าย

สรุปปริมาณการปล่อยก๊าซเรือนกระจก จากขอบเขตการดำเนินงานขอบเขตที่ 3

ปริมาณก๊าซเรือนกระจกที่เกิดขึ้นจากกิจกรรม: **หน่วย: ตันคาร์บอนไดออกไซด์เทียบเท่า**

หมวดหมู่	ปริมาณการปล่อยก๊าซเรือนกระจก
1. สินค้าและบริการที่องค์กรจัดซื้อและใช้บริการ	1,419,020
2. สินค้าทุน	53,830
3. กิจกรรมที่เกี่ยวข้องกับเชื้อเพลิงและพลังงาน (ไม่รวมอยู่ในขอบเขตการดำเนินงานขอบเขตที่ 1 และ 2)	407,527
4. การขนส่งและกระจายสินค้าต้นน้ำ	344,322
5. ของเสียที่เกิดจากการดำเนินงาน	26,502
6. การเดินทางเพื่อธุรกิจ	996
7. การเดินทางของพนักงาน	26,824
9. การขนส่งและการกระจายสินค้าปลายน้ำ	67,851
10. การแปรรูปสินค้าที่องค์กรจำหน่าย	405,334
12. การจัดการซากผลิตภัณฑ์ที่องค์กรจำหน่ายเมื่อสิ้นสุดอายุการใช้งาน	28,941
13. สินทรัพย์ให้เช่าปลายน้ำ	107
15. การลงทุน	19,169
ผลรวมการปล่อยก๊าซเรือนกระจก	**2,800,423**

หมายเหตุ:
- องค์กรไม่มีกิจกรรมที่เกี่ยวข้องที่จำเป็นจะต้องรายงานการปล่อยก๊าซเรือนกระจกในหมวดหมู่ที่ 8, 11 และ 14

6.2 SCGP Responsible Climate Lobbying

No.	Framework Indicator	SCGP Actions
POLICY & COMMITMENT		
1	Make a public commitment to align all of its climate change lobbying with the goal of restricting global temperature rise to 1.5^{0}C above pre-industrial levels	SCGP commits to achieving Net Zero emissions by 2050 and reducing GHG emissions by at least 25% by 2030 compared with the base year of 2020 in all operations. SCGP also commits to conducting business in consideration of reducing environmental impact and setting ambitious targets to support environmental conservation, Climate change adaptation, and implementation in line with Thailand' NDC and Paris Agreement targets towards net zero greenhouse gas emissions by 2050, including climate change lobbying. Our commitment has been clarified and communicated to internal and external stakeholders included in SCGP Environment and Climate Policy
2	Apply the scope of this commitment to all of its subsidiaries and business areas, and all operational jurisdictions	Climate change-related policies, strategies and actions covers all operations and activities of SCGP, including those of its business partners in the value chain. From design, procurement, procurement, production of products, services and solutions, distribution and logistics, as well as managing waste and products after use. This also covers business partners tier 1 and non-tier 1. and service providers, both directly and indirectly including other important business partners such associate companies (non-managed operations), joint venture partners, outsourcing partners, new project, modification project, due diligence of mergers and partnership of SCGP both Thailand and abroad.
3	Publicly commit to taking steps to ensure that the associations, alliances and coalitions of which it is a member conduct their climate change lobbying in line with the goal of restricting global temperature rise to 1.5^{0}C above pre-industrial levels	SCGP has collaborated with the Thai Pulp and Paper Industry Association to develop GHG reduction roadmap for Thailand pulp and paper industry, in order to support and promote Thailand's policy in achieving Carbon Neutrality by 2050 and Net zero by 2065. This collaboration demonstrates SCGP's commitment to being involved in addressing environmental issues and supporting the sustainable development of the country.

6.2 SCGP Responsible Climate Lobbying

No.	Framework Indicator	SCGP Actions
POLICY & COMMITMENT		
4	Assign responsibility at board level for oversight of its climate change lobbying approach and activities	The Board of Directors and top executives promote the fostering of corporate governance and SCGP Code of Conduct knowledge and awareness and encourage the use of GRC (Governance, Risk and Compliance) principles in understanding the targets of assignments, in fostering risk awareness and conducting risk assessments, and in complying with relevant rules to ensure strict adherence among all personnel. According to the SCGP Code of Conduct, SCGP maintains political neutrality and does not support or make contributions, financial or otherwise, to any particular political party, political coalition, person with political influence, or political candidate on a local, regional or national level, either directly or indirectly.
5	Assign responsibility at senior management level for day-to-day implementation of its climate change lobbying policies and practices	The SCGP Environment, Social and Governance (ESG) Committee is the highest-level body overseeing climate change support. The committee comprises the CEO as a member and all executives from all business units. The Energy and Climate Change Committee, chaired by director of PP business, is a sub-committee responsible for monitoring climate change management operations to align with climate-related targets and considering collaboration to drive climate change activities with stakeholders.
6	Establish an annual monitoring and review process to ensure that all of its direct and indirect climate change lobbying activities across all geographies are consistent with the goal of restricting global temperature rise to 1.5^0C above pre-industrial levels	The ESG committee regularly monitors and reviews process on quarterly basis to assess whether our direct and indirect climate change activities and trade associations' public policy engagements across all SCGP's operations are aligned with Thailand's NDC and the Paris Agreement as included in SCGP environmental and climate policy. SCGP confirms that association management within each trade association and organization which we are affiliated with. There is continued oversight of associate's support in line with the Paris Agreement and in line with our position. SCGP ensures that our commitment to responsible and innovative advocacy is shared by the associations to which we are members.

6.2 SCGP Responsible Climate Lobbying

No.	Framework Indicator	SCGP Actions
POLICY & COMMITMENT		
7	Establish a process for engaging with stakeholders related to setting and reviewing its climate change lobbying policies, positions and activities	SCGP has established a process for engaging with stakeholders regularly, including government agencies, civil society sector, opinion leaders, industry peers, and members of trade associations and organizations, in setting up and reviewing our climate change policies, positions, and activities through regular meeting, seminar, public hearing and then report the results to the ESG committee.
8	Establish a clear framework for addressing misalignments between the climate change lobbying positions adopted by the associations, alliances and coalitions of which it is a member and the goal of restricting global temperature rise to 1.5^0C above preindustrial levels	SCGP established roadmap toward Net Zero by 2050 which aligns with the goal of restricting global temperature rise to 1.5ºC above pre-industrial levels. SCGP has established a clear framework in place and regular review for addressing misalignments between the climate change positions adopted by the associations, alliances, and coalitions of which we are members. If misalignments are significant issues, SCGP will report to the ESG committee and conduct extensive discussions with the association's committees, and signal our engagement reconsideration in order to achieve a more successful alignment or demand that the association not take a position. In addition, SCGP will also assess the association's performance and the value of its membership before deciding if exiting the organization is appropriate.
9	Publish a detailed annual review covering the company's assessment and actions related to the 1.5^0Calignment of: (a) its own climate change lobbying activities; (b) the climate change lobbying activities of the associations, alliances, coalitions or thinktanks of which it is a member or to which it provides support	SCGP conducts regular reviews of both climate change lobbying activities and activities carried out by our associations, alliances, coalitions or think tanks. It must be consistent with the Paris Agreement. In 2023, SCGP has no climate-related lobbying activities. Purpose of participation of other organizations is to support sustainable development operations Particularly urgent are initiatives to build collaborative networks, such as climate change adaptation and the transition to a low-carbon economy. circular economy and health and safety To achieve concrete results

6.2 SCGP Responsible Climate Lobbying

No.	Framework Indicator	SCGP Actions
POLICY & COMMITMENT		
10	Recognize the existence of and report on action to address any misalignments between its climate change lobbying and/or the climate change lobbying activities of its trade associations, coalitions, alliances or funded thinktanks and the goal of limiting global temperature rise to 1.5^{0}C above pre-industrial levels	SCGP has identified misalignments between our climate change lobbying and/or the climate change lobbying activities of the trade associations, coalitions or funded thinktanks, Thailand's NDC and the Paris Agreement.
11	Create or participate in coalitions that have the specific purpose of lobbying in support of the goal of restricting global temperature rise to 1.5^{0}C above pre-industrial levels	Our large contribution is to drive Sustainable Business growth following ESG and principles of Circular Economy. The 2 main contributions are for Sustainable Business and Circular Economy such as GCNT, the Chambers of Commerce and related, the Federation of Thai Industries (F.T.I.), the Technical Association of the Pulp and Paper Industry (TAPPI), the Asian Corrugated Case Association (ACCA) including the Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE) and Sustainable Packaging Coalition. Both largest contributions are conforming to Paris Agreement and our Net Zero pathway.

6.2 SCGP Responsible Climate Lobbying

No.	Framework Indicator	SCGP Actions
POLICY & COMMITMENT		
12	Publicly disclose, for all geographies, its membership of, support for and involvement in all associations, alliances and coalitions engaged in climate change-related lobbying	SCGP Contribution to Organization information normally is disclosed via our website (https://sustainability.scgpackaging.com/en/governance/corporate-governance). Our large contribution in 2022 to drive Sustainable Business growth following ESG and principles of Circular Economy. Both largest contributions are conforming to Paris Agreement and our Net Zero pathway. 1. Collaboration for Sustainable Business, SCGP is committed to conducting business for sustainable growth following the ESG framework. Engagement with our stakeholders through partnership and collaboration across sectors—government agencies, businesses, and civil societies is a key factor. SCGP has joined the Global Compact Network Association of Thailand (GCNT), The Chambers of Commerce and related, The Federation of Thai Industries (F.T.I), the Technical Association of the Pulp and Paper Industry (TAPPI), and the Asian Corrugated Case Association (ACCA), Water User Organizations and River Basin Committee. The main purposes are for collaboration and elevation for Sustainable Industry development with digitalization, technology, innovation acceleration, and enhancement of competitiveness of the industry including Climate Resilience and Paris Agreement Alignment. SCGP applies standards, tools, and knowledge of them as a model and shares that knowledge with our stakeholders. 2. Collaboration in Driving Circular Economy, SCGP adheres to creating innovative packaging for consumers and a sustainable World by following circular economy principles for reducing the probable impacts. To be able to do that we are seeking and being partners with external organizations, both public and private sectors. For the circular Economy, SCGP has joined the Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE), The Federation of Thai Industries for collaboration and elevation of a recycling-oriented society, including supporting pilot projects related to circular economy principles. Moreover, SCGP employees are the committee members of the organization. Also, SCGP has joined Sustainable Packaging Coalition for collaboration and enhancement for creating sustainable packaging. These collaborations will help in GHG emission reduction. We are already joined TCNN in 2022 as a Climate Action Initiator and Climate Action Leading Organization member, declaration of intention to reduce GHG emissions and towards Net Zero by 2050, target and plan clearly which are aligned with the Paris Agreement and support Thailand's commitment, including collaborating for developing projects and a carbon offset market.

6.2 SCGP Responsible Climate Lobbying

<table>
<tr><th>No.</th><th>Framework Indicator</th><th>SCGP Actions</th></tr>
<tr><td colspan="3">POLICY & COMMITMENT</td></tr>
<tr><td>13</td><td>Publicly disclose, for each of these organizations: (a) how much it pays to them on an annual basis; (b) those organizations where it sits on the board or plays an active role in committees or other activities related to climate change</td><td>Contributions to Each Organization:
No. 1-7 were contributions to Sustainable Business, 2,108,568 THB
No. 8 were contributions to Circular Economy, 100,000 THB

<table><tr><th>Organizations</th><th>2024 Contribution (THB)</th></tr><tr><td>1. The World Business Council for Sustainable Development (WBCSD)</td><td>523,672</td></tr><tr><td>2. GLOBAL COMPACT NETWORK ASSOCIATION OF THAILAND</td><td>625,000</td></tr><tr><td>3. THE THAI CHAMBER OF COMMERCE</td><td>72,600</td></tr><tr><td>4. THE FEDERATION OF THAI INDUSTRIES (F.T.I)</td><td>410,705</td></tr><tr><td>5. CDP WORLDWIDE</td><td>247,283</td></tr><tr><td>6. ASIAN CORRUGATED CASE ASSOCIATION (ACCA)</td><td>77,728</td></tr><tr><td>7. The Thai Pulp and Paper Industries Association</td><td>151,580</td></tr><tr><td>8. THAILAND INSTITUTE OF PACKAGING AND RECYCLING MANAGEMENT FOR SUSTAINABLE ENVIRONMENT (TIPMSE)</td><td>100,000</td></tr><tr><td>Total</td><td>2,208,568</td></tr></table></td></tr>
<tr><td>14</td><td>Publicly disclose its overall assessment of the influence that its climate lobbying has had on (a) supporting ambitious public climate change policy; (b) the company’s ability to deliver its own corporate transition strategy</td><td>SCGP is committed to supporting various organizations with a vision and mission in creating sustainable growth whether it is with ESG principles or Circular Economy principles, as well as towards net zero emissions according to the intentions of the global community. Being TCNN's Climate Action Initiator and Climate Leader Organization Member influenced SCGP to declare our intention to reduce GHG emissions and towards Net Zero by 2050. This effect our annual target and transition strategy. On the other hand, other contributions will lead to reduce GHG emissions such as TIPMSE, F.T.I., and Sustainable Packaging Coalition.</td></tr>
</table>


SCGP
EVOLVE THE WAY OF LIFE
www.SCGPackaging.com