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**EVOLVING SUSTAINABLE
PACKAGING SOLUTIONS**

GOVERNANCE

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Corporate Governance

SCG Packaging Public Company Limited (SCGP) integrates the principles of corporate governance to its business strategies by applying the Corporate Governance Code (CG Code) for Listed Companies 2017 to generate benefits and sustainable value for its organization.

The Corporate Governance and Nomination Committee of SCGP has the duty to consistently define the company's corporate governance scope and policies and propose them to the Board of Directors; monitor the performance of the Board of Directors and the Management Committee to ensure compliance with the company's corporate governance policies; consider and prepare director development plans in support of committees' knowledge and skill enhancement with the aim to ensure directors understand their roles and duties, businesses, economy, technology, as well as laws and regulations related to the company and its subsidiaries; and review the remuneration for the Board of Directors and committees in comparison with rates used by other leading listed companies in the same industry so as to retain leadership and provide proper career incentives. The review takes into account Key Performance Indicator (KPI).

The Audit Committee has the duty to conduct audits as assurances that the company has put in place risk management and Environmental, Social, Governance (ESG) processes. Reporting directly to **the Board of Directors**, these two committees also participate in the process to make key strategic decisions on sustainability-related risks and opportunities.

The board of directors has undergone an assessment using the Board Skills Matrix to ensure comprehensive coverage of specialized knowledge and essential competencies necessary for executing the medium-term (5-year) business strategy. This assessment underscores the significance of expanding business operations into international markets and fostering growth on a global scale. Furthermore, it highlights a commitment to leadership in ESG (Environmental, Social, and Governance) and innovation, with clearly defined criteria for expertise and specialized knowledge in alignment with the Board Skills Matrix.

At SCGP, there are two keys **administrative panels** related to sustainability-related risks and opportunities. The first, **the ESG Committee**, has the duty to establish and supervise policies for compliance with UN Sustainable Development Goals (UN-SDGs); ensure ESG guidelines align with stakeholder expectations so as to set good ESG examples at both regional and international levels; promote, communicate and foster ESG mindset among staff and business partners in pursuit of ESG goals; and integrate ESG materiality into business strategies to create value and sustainability for SCGP and the public. The second, **the Risk Management Committee**, is mainly responsible for reporting risks and risk management to the Audit Committee.

The ESG Committee and the Risk Management Committee work together in managing material sustainability-related risks and opportunities, including:

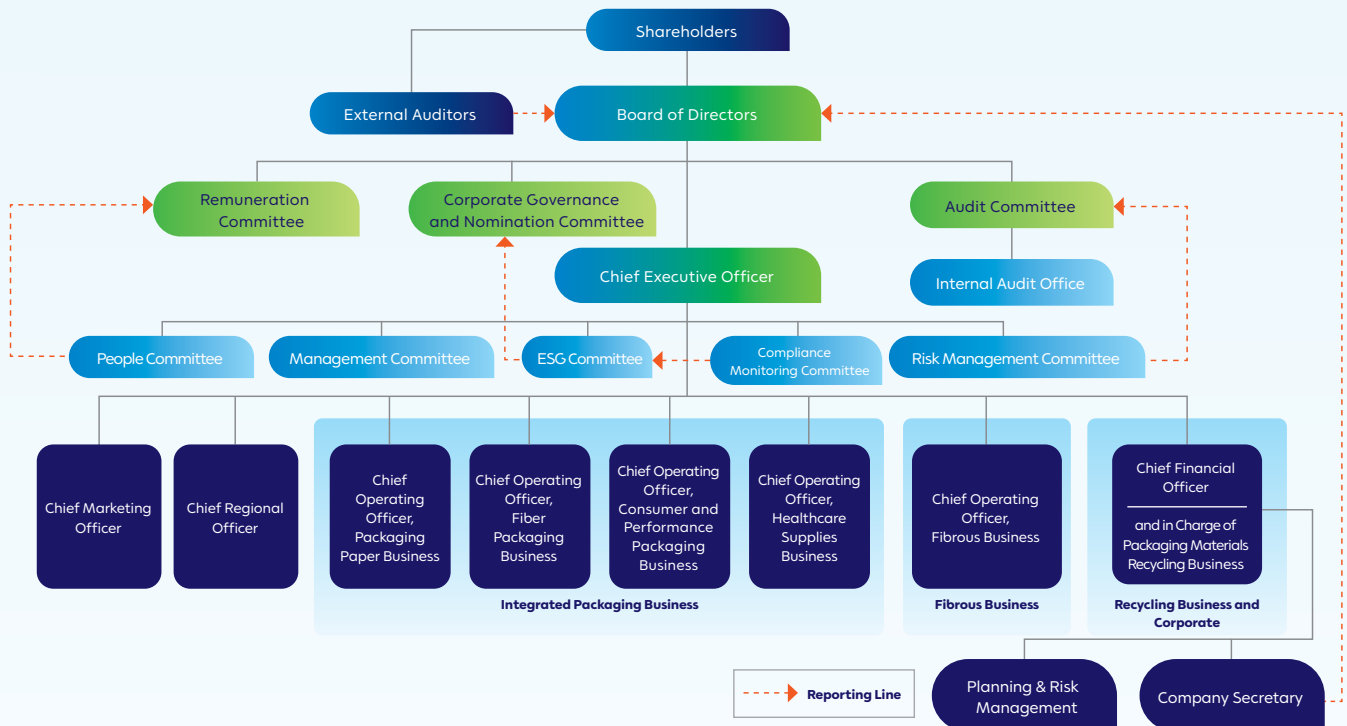
1. Strategy and Risk Management
2. Implementation efforts toward of greenhouse gas emission reduction
3. Business operations based on the Circular Economy approach
4. Customer and consumer-centric business operations

In carrying out their duties, the aforementioned committees and work groups receive support from other panels namely the Energy & Climate Change Committee, the Water Management Committee, the Waste Management Committee, the Nature Positive Committee, and the Odor Management Committee. Together, these committees propose solutions to address material topics related to sustainability-related risks and opportunities, ensuring that their proposals align with Net Zero Initiatives, the Circular Economy and Customer Centricity & Stakeholder Engagement goals. They convene meetings and report results to both **the Corporate Governance and Nomination Committee and the Audit Committee**.

SCGP Governance Structure and Principles

SCGP has established a corporate governance structure as a part of a robust governance system to enhance management efficiency and in support of check and balance. The company has also implemented policies that clearly define the division of power, duties, decision-making processes, and procedures to ensure that the company's operations across all sectors adhere to corporate governance principles, function efficiently, and align with the established goals. The Board of Directors plays a key role in reinforcing and upholding corporate governance.

SCGP Corporate Governance Structure has been effective since 29 October 2024 in accordance with a resolution passed by the Board of Directors at its meeting No. 255 (7/2024)



Note: The Meeting of the Board of Directors held on November 26, 2024, passed a resolution to establish one additional sub-committee, namely the Risk Oversight Committee, effective from January 1, 2025, onwards. This sub-committee is therefore not included in the Corporate Governance Structure information as of December 31, 2024.

This governance structure is designed to ensure clarity in reporting and responsibilities, with clear reporting lines for each committee and business unit to enable efficient oversight and strategic support.

The Board of Directors regularly receives reports from various committees to stay informed of material governance, compliance, and risk issues, with the Chief Executive Officer (CEO) reporting comprehensive updates on the organization's performance and strategic initiatives. This approach enables SCGP to align its operations efficiently and transparently with the governance framework across its organization.

SCGP Meetings of Sustainability-Related Committees in 2024

Throughout 2024, the committees responsible for sustainable business operations convened to address relevant issues, set objectives, develop operational plans, and monitor progress reports. Their meetings covered policies related to Environmental, Social, and Governance (ESG) as follows:



Board of Directors Meeting

1. Board of Directors	<ul style="list-style-type: none"> • 8 meetings / year • Key issues <ul style="list-style-type: none"> - Lead sustainable value creation and manage SCGP's business. - Define objectives and operational plans, and policies for enhanced competitiveness. - Strengthen Board effectiveness through structure and performance evaluation. - Recruit and develop top executives and manage succession plans. - Foster innovation and responsible business practices. - Ensure efficient risk management and internal controls. - Guarantee financial integrity and transparent disclosures. - Engage and communicate efficiently with shareholders.
2. Audit Committee	<ul style="list-style-type: none"> • 6 meetings / year • Key issues <ul style="list-style-type: none"> - Oversee risk management, regulatory compliance, and internal control. - Audit financial reporting system and data disclosures. - Audit connected transactions and conflict of interest. - Audit the efficiency of internal control and audit systems. - Audit compliance with ESG policies and efficiency of ESG performance. - Select and nominate auditor and approve the Internal Audit Office's plans.
3. Corporate Governance and Nomination Committee	<ul style="list-style-type: none"> • 4 meetings / year • Key issues <ul style="list-style-type: none"> - Define corporate governance policies and monitor performance. - Supervise Board structure and composition, ensuring independence and diversity. - Establish guidelines for recruiting and selecting SCGP directors. - Review directors' remuneration and facilitate development plans.
4. Remuneration Committee	<ul style="list-style-type: none"> • 7 meetings / year • Key issues <ul style="list-style-type: none"> - Propose remuneration guidelines and benefits for executives. - Evaluate top executives' performance and recommend remuneration. - Establish succession plans for the CEO and top executives.

Management Team Meeting

5. ESG Committee	<ul style="list-style-type: none"> • 4 meetings / year • Key issues <ul style="list-style-type: none"> - Establish and supervise policies for compliance with UN Sustainable Development Goals (UN-SDGs). - Ensure ESG guidelines align with stakeholder expectations. - Integrate material ESG topics into business strategies for sustainability.
6. Risk Management Committee	<ul style="list-style-type: none"> • 4 meetings / year • Key issues <ul style="list-style-type: none"> - Define the risk management structure and responsibilities. - Identify and review risk management strategies and practices. - Monitor overall risk profile across the organization.

Message from the CEO

SCGP is committed to the principles of good governance, transparency, and accountability. The company defines corporate governance policies and strategies based on requirements, laws and ESG framework.



SCGP is determined to be region's total packaging solution provider by offering a diverse range of innovative products and services while maintaining sustainable business practices, serving the needs of customers and consumers across the world. In 2024, 99.7% of our packaging is reusable, recyclable or compostable. SCGP designs packaging with much dedication, collaborating closely with customers to develop sustainable packaging. The company sets its sight on making all its packaging reusable, recyclable, or compostable within 2030 in the hopes of well balancing its business growth and its sustainable value for society and the environment.

In environmental dimension, SCGP is actively pursues its goal of achieving net zero emissions by 2050. In 2024, SCGP successfully reduced greenhouse gas emissions by 17.5% from the baseline year through the increased the proportion of renewable energy used to 31.4%. The application of AI to enhance production and energy efficiency also helped reducing energy consumption by 8.76%. Moreover, the company continues its tree-planting efforts for carbon absorption and has already planted 2,350,269 to date. SCGP has continuously sought Carbon Footprint of Product (CFP)

certifications and has obtained carbon footprint certification from a total of 16 paper printing and packaging process, with a total of 161 items. Additionally, SCGP has reviewed its air pollution targets and managed water management based on the 3R principles (Reduce, Reuse, Recycle), enhancing production processes to reduce water usage while also reusing or recycling water. As a result, the water withdrawal intensity (per ton of production) was reduced by 3.12%. In addition, SCGP has already set waste management targets for its operations in Thailand and is in the process of reviewing targets for overseas operations, considering their different context.

In social dimension, SCGP strives to create value for employees, business partners, communities and all other groups of stakeholders. The company places a strong emphasis on work safety among staff and business partners. Respecting human rights, SCGP advocates diversity, equity and inclusion. The increased welfare reflects the company's corporate culture which values equity, promotes employee's well-being and fosters strong employee engagement. SCGP is also committed to community development, as evidenced by numerous initiatives including SCGP Plant the Trees to Beat the Heat, Bring Paper Home Project, and SCGP Zero Waste Community Project, which aims at developing "low-carbon society." Furthermore, SCGP has supported occupational skill development via the Community Enterprise Promotion Project on top of implementing Scholarships for Future initiative in support of education.

In corporate governance dimension, SCGP is committed to the principles of good governance, transparency, and accountability. The company defines corporate governance policies and

strategies based on requirements, laws and good ESG practices in Thailand and abroad with the aims of promoting transparent and fair operations and winning stakeholders' acceptance. Moreover, the company fostered cooperation across the packaging industry's value chain, which covers manufacturers, SMEs, the government sector and financial institutions, so as to drive supply chain decarbonization via the Sustainable Synergy for Decarbonization seminar. On product stewardship, SCGP has established product development guidelines that encourages the creation of low-carbon products.

Driven by its commitment and constant work development, SCGP has achieved higher ESG ratings across environmental, social, and governance dimensions. In 2024, SCGP was ranked in the Top 1% of the Dow Jones Sustainability Index (DJSI) for the second consecutive year in the packaging industry based on assessment by S&P Global. SCGP has also been upgraded to Platinum in EcoVadis ESG Rating and ranked A in MSCI ESG Ratings by Morgan Stanley Capital International. In Thailand, SCGP received the highest AAA level in SET ESG Ratings from the Stock Exchange of Thailand (SET). All these accolades underline SCGP's commitment to continuously operating sustainable businesses.



(Mr. Wichan Jitpukdee)
Chief Executive Officer &
Chairman of the ESG Committee

Insights from Management Leaders: Governance and Sustainability Oversight

Executives and employees in all departments are deeply involved in the sustainability of the organization. Executives participate in determining policies, roles, duties, and responsibilities in pursuit of shared goals, collaborating and supporting one another in sustainability-focused business operations.



Ms. Sumana Techaphatikun
Chairwoman of Supply Chain
Management Group, SCGP

Sourcing and Supply Management Director
SCG Packaging Public Company Limited



Dr. Kanlaya Rattanyu

Advance Data Science Manager
Technology Digital and Productivity
SCG Packaging Public Company Limited

"In procurement and supply chain management, we emphasize ethical practices and operational transparency by managing risks throughout the supply chain based on SCGP's Code of Conduct and Sustainable Procurement Framework to ensure compliance with the principles of good corporate governance. We focus on raising awareness and promoting strict compliance with laws. Sustainability principles are also integrated into procurement processes, such as sourcing environmentally friendly products and reducing greenhouse gas emissions. Each year, our procurement department evaluates the ESG risks of our suppliers and vendors. Based on the evaluations, some are classified into Critical Suppliers and High Potential Sustainability (ESG) Risks groups. Efforts are focused on mitigating risks in both categories to enable sustainable business collaboration alongside fair procurement practices.

Additionally, we place an emphasis on greenhouse gas (GHG) emission reduction, which requires cooperation from all sectors. Our efforts are done not just internally but also externally through collaboration with business partners. In 2024, we focused on reducing greenhouse gas emission through our joint efforts with strategic suppliers and business partners. We have categorized our partners based on their GHG emission impact, measured in carbon dioxide equivalent units, and their readiness to jointly reduce emissions. The overarching goal is to achieve a 25% reduction by 2030 and reach net zero by 2050.

To underscore our commitment, we organized the "Sustainable Synergy for Decarbonization" seminar as a forum to promote cooperation from manufacturers, SMEs, and financial institutions and to exchange ideas on reducing GHG emissions. The challenge lies with the diversity of our business partners. It takes time to educate and follow up with our diverse partners. But SCGP always strives to support, encourage, and collaborate to achieve success and pave the way for mutual sustainable growth."

"SCGP has endlessly pursued further development so as to enhance customer experiences, improve operational efficiency, reduce costs, reduce greenhouse gas (GHG) emission, and foster sustainability in all dimensions. Artificial Intelligence (AI) is now integrated into its business operations across its entire value chain, including resource management for energy efficiency. AI helps analyze both energy production (Turbine and Boiler) and energy consumption at factories, paving the way for the reduction of expenses and environmental impacts.

Machine Learning is deployed so that we understand more about machine behaviors and enable AI to calculate various variables to maximize production and energy efficiency, using fuel in the most efficient manner.

When setting and adjusting machinery variables, multiple comparison options are necessary. Because manual calculations and analyses are time-consuming, they cannot be done frequently enough to keep pace with the changing situation. In other words, they cannot respond to real-time changes. However, AI can rapidly calculate and analyze, automatically adjusting to real-time data. Implementing AI has already saved our company nearly 300 million baht per year. This demonstrates the efficiency and effectiveness of AI in energy management.

SCGP first used AI for maintenance work before expanding it to various other areas. We are proud of our AI applications. The speed of AI implementation usually depends on the quality of data collection. Thanks to SCGP employees' systematic and diligent data collection over the years, we can now apply AI across various tasks."



Mr. Teerachai Chavapongpanit
Chairman of the Climate Change & Energy Committee, SCGP

Energy Director
Siam Kraft Industry Co., Ltd.

“Currently, SCGP places the utmost importance on addressing global warming, actively raising awareness and taking continuous action across all levels of employees and business units.

SCGP has recently raised its production capacity. However, with the dedication of all parties involved, it has been possible to successfully reduce greenhouse gas emissions by 17.5% compared with the base year of 2020. Furthermore, there is a firm commitment to further reduce greenhouse gas emissions by 25% by 2030.

In terms of energy, the first approach SCGP has adopted is Energy Transition, replacing fossil fuels with biomass energy and biogas derived from wastewater treatment processes in our factories. Additionally, we have also increased the use of solar energy. Currently, we have a production capacity of 63 megawatts peak. The second approach focuses on enhancing energy efficiency.

Failure to reduce greenhouse gas emissions would affect business competitiveness, as Europe and other developed countries impose stringent environmental product standards. But that’s not all. Beyond the business perspective, we all have loved ones and therefore we should work together to ensure there will still be good environment and livable planet for future generations.”



Mr. Mahasan Thieravarut
Chairman of the Nature Positive Committee, SCGP

Managing Director
Siam Forestry Co., Ltd.

“SCGP operates an integrated wood business, encompassing the development of eucalyptus species, the promotion of fast-growing tree plantations, and the procurement of wood and biomass fuel for the pulp and paper industry. Under its Medium-Term Plan (MTP), SCGP has set a target to increase the proportion of wood sourced from its own plantations to 32% by 2029. This initiative aims to meet the growing demand for wood while adhering to the FSC™ - Forest Stewardship Council™, which promotes sustainable forest management, good governance and a commitment to sustainable development across economic, social, and environmental dimensions.

In addition to expanding the economic forests area, SCGP also plans to increase forest conservation areas. Its goal is to ensure that the size of conservation forests accounts for 10% of its economic forests or increases by at least 3,000 rai per year. A variety of activities are being carried out and will continue to be undertaken to restore and enhance biodiversity in these areas, while also engaging local communities. Efforts include planting indigenous tree species, creating wildlife habitat, monitoring soil and water quality, and surveying plant, animal, and insect diversity. The conservation forest areas are now being registered under the Thailand Voluntary Emission Reduction Program (T-VER) to obtain carbon credit certification in the future.”

BUSINESS OVERVIEW

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About This Report

SCG Packaging Public Company Limited or SCGP has published the sustainability report on a yearly basis since 2019 to disseminate its sustainability performance in the Environmental (E), Social (S), and Governance (G) dimensions, ESG. This report, **SCGP Sustainability Report 2024**, aims to present transparent and accountable information to all internal and external stakeholders, covering the period from January 1 to December 31, 2024.

This report reflects SCGP's vision, ethics, and sustainability strategy, focused on energy efficiency, cost management, and the management of sustainability-related risks and opportunities including physical risks, transition risks and opportunities.

Notable Changes and Developments in 2024

Details are provided under the Subject: "Notable Changes and Developments in 2024" on page 29-67 of Sustainability Report 2024, Section 3 : Double Materiality.

Scope of the Report

This report shows SCGP's sustainability performance across three main business units: **Integrated Packaging Business, Fibrous Business, and Recycling Business and Corporate**. Data presented herein are deemed by SCGP and its management as relevant and important to all groups of stakeholders. The report covers Environmental, Social, and Governance (ESG) activities by subsidiaries in Thailand and abroad that are under the operational control of SCGP, excluding newly established companies and companies involved in mergers or acquisitions for less than one year or other exceptions (See Notes in the report). There have been changes to the data reported in the **Sustainability Report 2023** as follows:

- On page 10, ESG Metrics and Targets expanded to enhance clarity and alignment with international standards. These include: Energy management and Climate Resilience - "Reduce energy consumption intensity (per ton of production) by 15% by 2030 compared to the base year of 2020", Water Management - "Reduce water withdrawal intensity (per ton of production) by 10% by 2030 compared with the base year of 2022" and Air Quality Management - "Reduce dust emissions intensity (per ton of production) by 10% by 2030 compared with the base year of 2020". These new metrics and targets will be used to track environmental performance in place of traditional target, including: "Reduce energy consumption by 13% by 2025 compared with Business As Usual (BAU) at the base year of 2007" and "Reduce water withdrawal by 35% by 2025 compared with Business As Usual (BAU) at the base year of 2014".
- On page 27, Whistleblowing changes: The Number of Complains Under Investigation Classification of Complains, from 1 to 2 in 2022 and from 3 to 5 in 2023.
- On page 39, Environmental Performance in indirect greenhouse gas emissions (Scope 3), in 2023 was included a report on greenhouse gas emissions in Category 2: Capital goods 36,550 tons of carbon dioxide equivalent, resulting in a total Scope 3 greenhouse gas emissions in 2023 of 2,096,246 tons of carbon dioxide equivalent and assured by SCG (Thailand) Co., Ltd.
- On page 44, Social Performance in High Consequence Work-Related Injury Rate of Contractor (Cases per 1,000,000 hours worked), in 2023 change from 0.057 to 0.052.
- On page 45, Social Performance in Female share of total workforce (%), in 2022 change from 21.9 to 23.2.
- On page 52, Economic & Governance Performance under the subject of Employee compensation comprising salary, wage, welfare and regular contributions (Million Baht) changed from 14,002 to 14,179 in 2023 and Taxes to government and local government authorities such as income tax, local maintenance tax, property tax and other specific taxes (Million Baht) changed from 1,715 to 1,694 in 2022 and 2,069 to 2,053 in 2023.

The reporting approach aligns with the Global Reporting Initiative (GRI) Standards 2021, the modified GRI Topics Standards shown on pages 108-111. Additionally, this includes action following the Sustainability Accounting Standards Board (SASB) applicable for Containers and Packaging sector as shown on pages 112-113.

Sustainability Management System

In 2024, SCGP and its subsidiaries within the scope of this report have been certified with the following management standards:



ISO 9001-Quality Management System

90%



ISO 14001-Environmental Management System

81%



OHSAS/TIS 18001/
ISO 45001-Occupational Health and Safety System

69%



FSC™ - Forest Stewardship Council™

98%

SCGP's Subsidiaries and Associates	FSC™ License Code
SCG Packaging Public Company Limited	
Fiber Packaging Product Group (Thailand & abroad)	FSC-C135609
Packaging Paper Product Group (Thailand & abroad)	
Siam Nippon Industrial Paper Company Limited	
Thai Paper Company Limited	FSC-C014429
The Siam Forestry Company Limited	FSC-C105470 FSC-C133879 FSC-C012207
Phoenix Pulp & Paper Public Company Limited	FSC-C015565
Interpress Printers Sdn. Bhd., (Malaysia)	FSC-C127941
Go-Pak Paper Products Vietnam Company Limited	FSC-C208875

Report Assurance

The economic performance data in this report are retrieved from the accounting data system, which is also used for the SCGP annual report, and have been audited by an external certified public accountant. The ESG performance data have been verified for accuracy and compliance with GRI Standards by an external audit firm, namely SGS (Thailand) Limited, as detailed on pages 105-107.



Sustainability Reporting Approach




This report presents a concise overview and data of SCGP's sustainability approach and ESG performance throughout 2024, in line with our commitments and goals.

Stakeholders of SCGP can access other data sets of interest on our website, as follows:

1. Oversight of Sustainable Development, which includes:
 - Policies and guidelines for sustainability
 - Operational structure for sustainability
 - Business value chain
 - Analysis and stakeholder engagement in the business value chain
 - Issues in sustainable development
2. Strategies for preventing and addressing key human rights issues
3. Task Force on Climate-related Financial Disclosures (TCFD) Report 2024
4. Certification of management systems

This report and previous editions can be downloaded from the SCGP website or accessed for further information at:

-  SCG Packaging Public Company Limited
1 Siam Cement Road, Bangsue, Bangkok, 10800
-  Tel : +66 2586 3333
-  Email : scgpackaging@scg.com
-  Website : <https://sustainability.scgpackaging.com/en/downloads/sd-reports>



Feedback to data disclosures and presentation of this report can be sent via the following QR Code

SCGP Business Overview

SCGP envisions becoming the region's leading total packaging solutions provider. To achieve this, it offers a diverse range of innovative products and services while adhering to sustainable business practices. Its vision aligns with its mission to proactively drive sustainability and pioneer the implementation of circular economy principles. Guided by the ESG framework, these principles are seamlessly integrated into the company's operations across all the countries where it has a business presence. The ultimate goal is to foster sustainable growth for all stakeholders and enhance overall well-being.

SCGP comprises three main businesses: Integrated Packaging Business, Fibrous Business and Recycling Business and Corporate.

Main Businesses



Integrated Packaging Business

SCGP offers fiber packaging, packaging paper, and consumer and performance packaging. The company produces and sells corrugated containers, retail display packaging, recycled grocery and industrial bags for fiber packaging, flexible packaging, rigid packaging and medical supplies and labware.



Fibrous Business

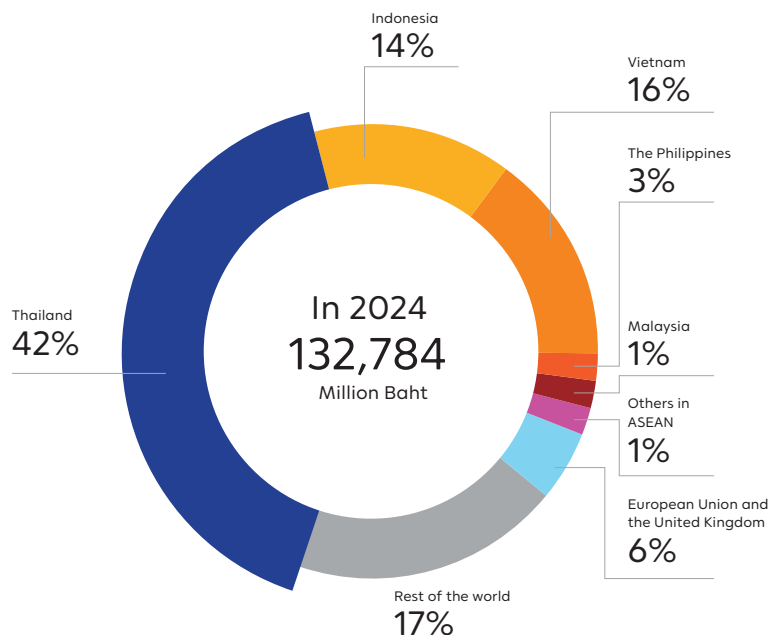
SCGP offers foodservice packaging, and pulp and paper products comprising mainly printing and writing paper, pulp, plantation and bio-solutions.



Recycling Business and Corporate

The recycling business focuses on sourcing and distributing recycled raw materials in Europe and the United States, with the corporate office overseeing other investments and training seminars.

Revenue from sales by end destinations

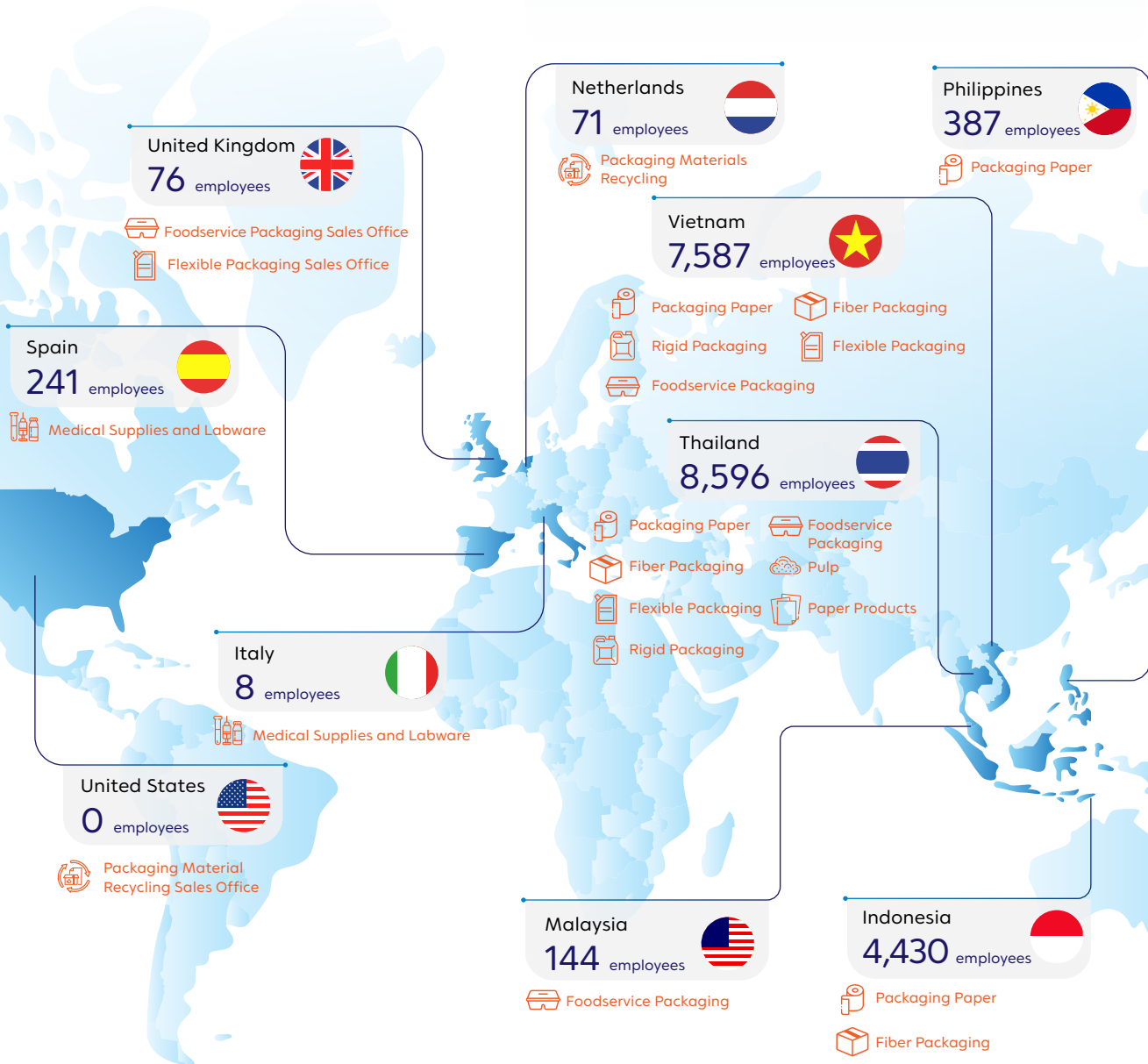


Total employees

SCGP hires **21,540** employees in the following countries:

EBITDA **16,127** Million Baht

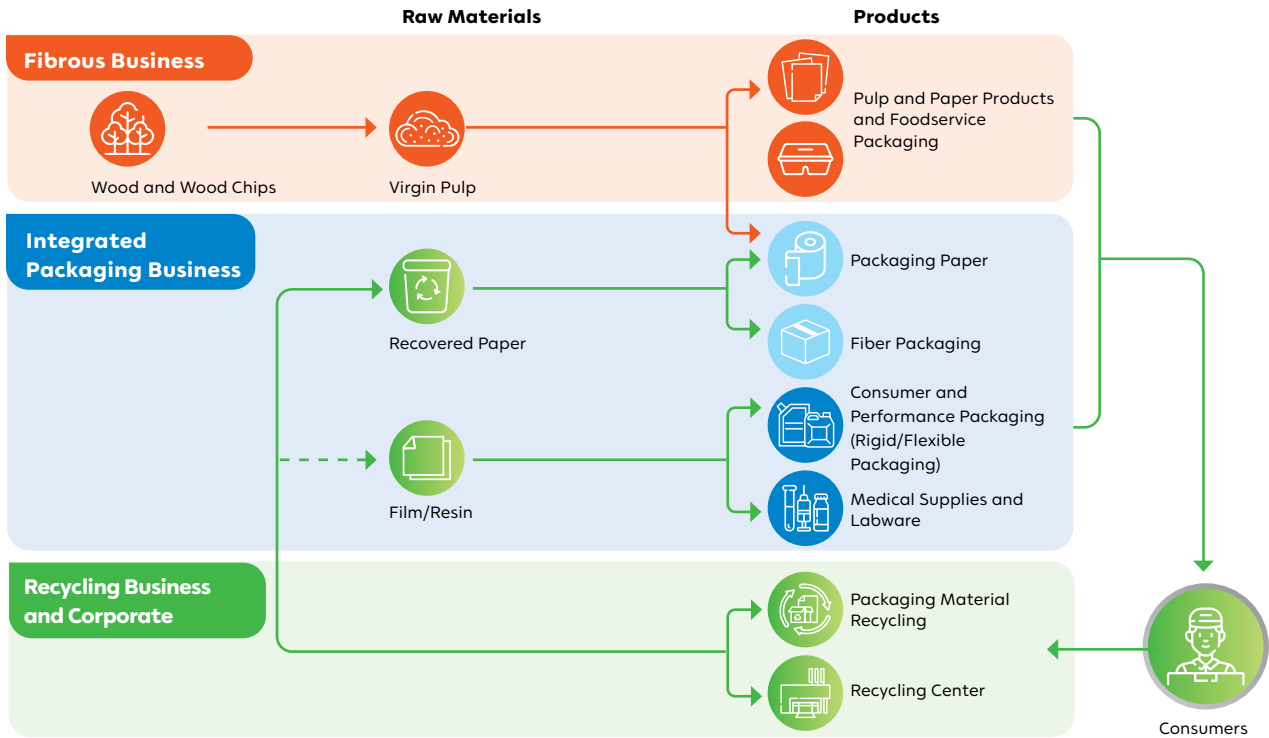
Number of business operations: **73**
in **10** countries (**67** plants, **6** sales offices)



Icon	Business Segment	Plants	Sales Offices	Countries
	Pulp and Paper/ Foodservice Packaging	8	1	4
	Packaging Paper	8	4	4
	Fiber Packaging	32	3	3
	Consumer and Performance Packaging / Medical Supplies and Labware	18	4	5
	Packaging Materials Recycling	1	1	2
	Recycling Center	99	4	4

Integrated Packaging Business

SCGP places great emphasis on operations throughout the entire value chain of packaging. The diagram below illustrates the value chain of our comprehensive production process.



Packaging Solutions

SCGP offers a diverse range of products and services, covering customer needs throughout the value chain. We provide innovative solutions that promote sustainable business operations, as shown in the diagram.



Assessment Results and Recognition Awards

SCGP has been continuously honored and recognized for its sustainability and governance performances as follows:

SCGP was ranked AAA, the highest level, in **SET ESG Ratings** evaluated by the Stock Exchange of Thailand. SCGP received 92 points in 2024, reflecting its commitment to sustainable business operations.



S&P Global: SCGP ranks the global leading companies as Top 1% in S&P Global Sustainability Yearbook 2025 in the Containers & Packaging Industry.



EcoVadis: SCGP has participated in the EcoVadis ESG assess since 2021. In 2024, SCGP was upgraded to Platinum level for scoring 81 out of possible 100 points placing it in the Top 1% in Manufacture of corrugated paper and paperboard and of containers of paper and paperboard.



SCGP has been evaluated for its sustainability in **CDP (Carbon Disclosure Project)**, which assesses company's environmental performance and promotes corporate transparency. In 2024, SCGP was scored A- in Climate Change category. SCGP also received evaluation in Forests category, earning B level, and Water Security category, earning B, for the first time.



SCGP was upgraded to A in the Containers & Packaging category based on **MSCI (Morgan Stanley Capital International)** ratings, which conduct evaluations as assurances that evaluated companies have operated based on the ESG principles.



FTSE Russell, SCGP has been selected as a top-ranking company in the FTSE4Good Index Series, achieving a score of 4.1/5.0. This reflects its strong performance in Environmental, Social, and Governance (ESG) practices.



Ranked as a low-risk company by **Morningstar Sustainalytics**, a global sustainability rating agency specializing in ESG analysis and operational risk assessment.



SCGP received **Best Innovative Company Awards** in the category of **SET Awards of Honor in SET Awards 2024**, organized by the Stock Exchange of Thailand. This award reflects SCGP's excellence in creating and developing valuable innovation that has advanced the industry from 2022-2024. This year, SCGP was recognized for the development of "New Hybrid Eucalyptus hybrid clones for sustainability." Through advanced molecular biology techniques, the research creates the hybrid clones that can boost yields by 40%. The new varieties are fast-growing, resistant to diseases, pests, sunlight, and heat, and suitable for cultivation in areas with limited rainfall, contributing to sustainable value creation throughout the value chain.



Awarded the prestigious recognition as a **Climate Action Leading Organization (CALO) – Excellence Level** for two consecutive years from Thailand Carbon Neutral Network (TCNN), demonstrating SCGP's leadership and commitment to greenhouse gas emission reduction.



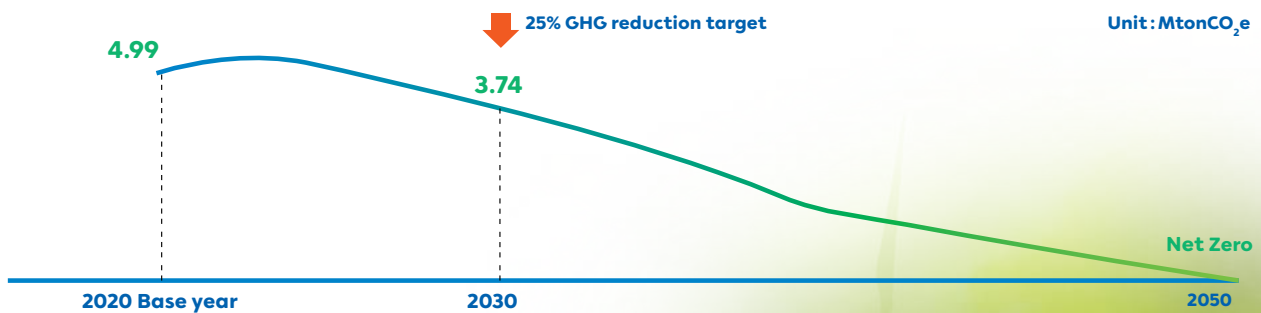
In 2024, SCGP earned an award of sustainability disclosure or Sustainability Disclosure Recognition from the **Thaipat Institute** for two consecutive years. This accolade reflects the company's commitment to transparent disclosure of sustainability data, ESG-focused business operations, and compliance with international standards.



Duy Tan Plastics Manufacturing Corporation (Duy Tan), a subsidiary of SCGP and a leading manufacturer of rigid plastic packaging and houseware in Vietnam, has been honored with the **Top 50 Corporate Sustainability Awards 2024 by Nhip Cau Dau Tu Magazine**. The company received this recognition in the category of "Optimize the Use of Sustainable Materials" for its commitment to sustainability across multiple dimensions.



SCGP Net Zero Roadmap 2050



SCGP's business operations involve greenhouse gas emissions in several processes, thus facing risks related to increasingly stringent environmental regulations such as those governing carbon tax, Emission Trading Scheme (ETS), and Carbon Border Adjustment Mechanism (CBAM) that aims at promoting low carbon footprint products. Such risks may affect the company's competitiveness, especially in markets that attach importance to eco-friendly products such as Europe and America.

SCGP places significant importance and is committed to achieving its greenhouse gas reduction targets, both in the near and long term. The company has formulated clear strategies as well as fostered collaboration with stakeholders to ensure sustainable growth and proper adaptation to climate change.



Near-Term Targets

1. Reducing greenhouse gas emissions by 25% by 2030 compared with the base year of 2020 for direct emissions (Scope 1) and indirect emissions from energy use (Scope 2).
2. Reducing energy consumption by 13% by 2025, compared with Business As Usual (BAU) at the base year of 2007.
3. Reducing energy intensity (per ton of production) by 15% by 2030, compared with the base year of 2020. The energy intensity target has recently been added to reaffirm the company's continuous commitment to reducing energy consumption.

Long-Term Targets

Achieve the goal of net-zero greenhouse gas emissions by 2050.

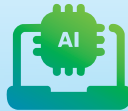


Strategies



Energy Transition:

SCGP is committed to continuously increasing the proportion of renewable energy in its energy mix by expanding projects that use solar energy, biomass energy and biogas energy to reduce dependence on fossil fuels.



Enhanced Energy Efficiency:

SCGP invests in the best available technology and machinery, including the adoption of AI and machine learning, to maximize energy efficiency across the manufacturing process.



Sustainable Forestry and Biodiversity:

SCGP recognizes the essential role of forests as carbon sinks. It therefore does not engage in deforestation. Additionally, through sustainable forestry practices and partnerships, the company supports forest conservation and biodiversity under its Natural Climate Solution (NCS) strategy.



Innovation and Collaboration:

SCGP works closely with stakeholders across the value chain, from suppliers to customers, to foster sustainable practices. The company invests in Research and Development (R&D) for the creation of eco-friendly products, aiming to reduce the carbon footprint of its offerings and drive industry-wide transformation.

Monitoring and Reporting



SCGP transparently and regularly reports its performance in accordance with the widely recognized World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI) GHG Emissions Protocol and the International Council of Forest and Paper Associations' (ICFPA) calculation guidelines. This ensures the monitoring and reporting of progress based on scientifically proven methods.

ESG Investments and Initiatives in 2024

SCGP is advancing its sustainability initiatives in 2024 through strategic investments and the implementation of ESG projects. The company has focused on developing packaging innovations while fostering collaboration across its value chain to drive sustainable growth. Committed to environmental preservation, SCGP aims to achieve a low-carbon society. These efforts are designed to enhance competitiveness and ensure long-term sustainable growth. The company has allocated 678 million baht in environmental capital investment.

Strategies



Net Zero Initiatives

SCGP is driving Net Zero initiatives by transitioning to renewable energy sources, enhancing energy efficiency with AI and Machine Learning, and integrating sustainable business practices throughout its value chain to reduce Scope 3 greenhouse gas emissions.



Circular Economy

SCGP is committed to engineer packaging products through co-creation with customers, aspiring to achieve 100% recyclable, reusable, or compostable packaging by 2030.



Customer Centricity & Stakeholder Engagement

SCGP prioritizes customers, consumers, communities, employees, and the value chain by integrating their needs into product development and sustainable solutions, including leading the development of Carbon Footprint of Product (CFP). Additionally, the company supports community development through the SCGP Zero Waste Community Project.

ESG Capital Investments in 2024

1. Net Zero Initiatives

o Transition to Renewable Energy

SCGP invested in projects that aimed at reducing Scope 1 and Scope 2 greenhouse gas emissions via the use of renewable energy such as solar energy and biomass energy, derived from by-products the production process, including bark and black liquor and biogas from wastewater treatment system.



o Enhanced Energy Efficiency

Energy efficiency projects were key parts of SCGP's strategies. Under these initiatives, the company invested in new machines as well as modifications in production systems, and leveraged both AI and Machine Learning for data analytics for the ultimate goal of maximizing energy efficiency and lowering operational expenses.

2. Circular Economy

o Sustainable Products and Services

SCGP continuously applied the principles of circular economy to its product design and development, from raw material selection to sustainable packaging designs such as recyclable and compostable packaging, which reduces environmental impacts. To curb greenhouse gas emissions, the company also involved in the Extended Producer Responsibility (EPR) project as well as policy advocacy for collecting and recycling used packaging in support of circular economy.

o Biodiversity and ecosystems

SCGP conducted R&D for new eucalyptus varieties to enhance productivity. Moreover, the company continuously invested in tree plantations and check-dam constructions for communities on top of designating some of its forest areas as biodiversity conservation forest areas in accordance with internationally recognized standards of Taskforce on Nature-related Financial Disclosures (TNFD) to minimize environmental impact and support ecosystem restoration.

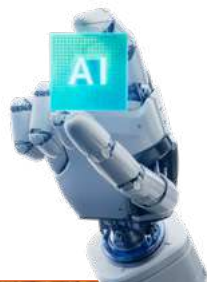
o Water Management

The company has invested in a closed-loop water circulation system to enhance water use efficiency, prioritizing water management based on the 3R principles: Reduce, Reuse, and Recycle.

3. Customer Centricity & Stakeholder Engagement

o Developing a Platform for Customers and Business Partners

SCGP has developed carbon footprint software to collect product carbon footprint data, integrating Artificial Intelligence (AI) and machine learning to enhance services for both consumers and customers. This includes features such as a chatbot for real-time order tracking.



o Employees' Health & Safety

SCGP attached importance to its employees' health and safety. Thus, it allocated budget for upgrading safety standard to the highest level, as well as constantly improving SAFEsave digital platform to facilitate health & safety operations and reduce mistakes or redundancy in data collection. Additionally, the company continuously invested in educating, counseling and training its employees about both physical and mental healthcare, including via iStrong that aimed at raising health, well-being and safety standards at all factories.

Key Performance Highlights in 2024

SCGP conducted its businesses based on Environmental, Social and Governance (ESG) principles with key performance highlights are as follows:

Environmental

Energy Management and Climate Resilience

GHG emissions reduction of

0.87

million tons of carbon dioxide equivalent compared with the base year of 2020



or

17.5%

reduction compared with the base year of 2020



Reduce the energy intensity (per ton of production) by

15.2

compared with the base year of 2020



Proportion of Renewable Energy Usage

31.4%

Carbon Sequestration from Economic Tree Plantation

0.27 million tons of carbon dioxide equivalent



Water Management

Reduced Water Withdrawal

28.9

million cubic meters or

27.3%

compared with Business As Usual (BAU) at the base year of 2014



Proportion of Recycled Water

15.7%

Reduce the water withdrawal intensity (per ton of production) by

3.12%

compared with the base year of 2022



Waste Management

Waste from production processes in Thailand to landfill

0 ton

Biodiversity and Ecosystem



NO

Gross Deforestation

Biodiversity conservation

10.6%

of certified area based on FSC™ standards

Environmental-related Expenses and Investments

1,521 million baht



Social

Health and Safety

Total number of work-related and transportation-related fatalities of employees and contractors

3 cases



Lost Time Injury Frequency Rate (LTIFR): employees: contractors

0.306 : 0.313 cases

per 1,000,000 hours worked

Occupational Illness and Disease Frequency Rate among employees In Thailand operations

0.289

per 1,000,000 hours worked

Human Rights

Human rights violations

0 case

Proportion of female employees in all management positions

23.3%



Employee Care and Human Capital Development

Total employee engagement score in Thailand and abroad is **4.12** out of **5.0**

Employees in Thailand assessed for competency and Individual Development Plan (IDP) on the Learning Management System (LMS)



100%

Community Engagement and Development

Scaling up SCGP Zero Waste Community Project **183** communities (100% of Ban Pong district)



Community satisfaction index **97%**



Contribution for social and community development **32** million baht

Governance

Employees passed Ethics & Human Rights learning and testing and Ethics e-Testing

100%

ZERO

Complaints related to violations of the Code of Conduct, Anti-Corruption Policies, and Personal Data Protection

Product Stewardship

Sales revenue from SCG Green Choice products, services and solutions account for

59%

of the total sales revenue



SCGP's subsidiaries achieve **100%** complying with the requirements of REACH Regulation (Annex XVII and Substances of Very High Concern (SVHC) for Authorization)

ZERO

Complaints regarding non-compliance with the laws and product safety



Sustainable Value Towards Suppliers

Green Procurement Value

4,997 million baht **30** products



100%

Proportion of procurement value from suppliers with a commitment to comply with SCGP Supplier Code of Conduct

100%

Proportion of procurement value from suppliers passed the annual Environmental, Social, and Governance (ESG) risk assessment

Customer and Consumer Centricity

Customer experience score

89%

Investment and Expense in Research & Development and Innovation

810 million baht



Circular Economy

Recyclable, Reusable, or Compostable Packaging from the volume of total products **99.7%**



ESG Metrics and Targets

Materiality Issues and Corresponding SDGs

Materiality Issues	Corresponding SDGs	SCGP Targets
1. Climate Resilience	   	<ul style="list-style-type: none"> Achieve Net Zero emissions of GHG by 2050 Reduce scope 1 & 2 greenhouse gas emissions by 25% by 2030, compared with the base year of 2020 Reduce energy consumption by 13% by 2025, compared with business as usual (BAU) at the base year of 2007 Reduce energy intensity (per ton of production) by 15% by 2030, compared with the base year of 2020
2. Biodiversity and Ecosystems		<ul style="list-style-type: none"> Biodiversity conservation certified by FSC™ standards at least 10% of certified area No gross deforestation
3. Water Management	    	<ul style="list-style-type: none"> Reduce water withdrawal by 35% by 2025, compared with business as usual (BAU) at the base year of 2014 Reduce water withdrawal intensity (per ton of production) by 10% by 2030, compared with the base year of 2022
4. Industrial Waste Management	 	<ul style="list-style-type: none"> Zero waste to landfill in Thailand operations Zero waste disposal by incineration without energy recovery in Thailand operations by 2025
5. Air Quality Management	 	<ul style="list-style-type: none"> Reduce dust emissions intensity (per ton of production) by 10% by 2030, compared with the base year of 2020 No official odor complaint
6. Health and Safety	 	<ul style="list-style-type: none"> Zero work-related and transportation-related fatalities of employees and contractors Zero Lost Time Injury Frequency Rate (LTIFR) of employees (per 1,000,000 hours worked) Zero Lost Time Injury Frequency Rate (LTIFR) of contractors (per 1,000,000 hours worked) Zero Occupational Illness and Disease Frequency Rate among employees In Thailand operations (per 1,000,000 hours worked)
7. Employee Care and Human Capital Development	  	<ul style="list-style-type: none"> Total employee engagement score for employees in Thailand and abroad 4.2 (out of 5.0) 100% Employees in Thailand received a performance assessment and complete employee development plan on the Learning Management System (LMS) every year

Materiality Issues

Corresponding SDGs

SCGP Targets

8. Human Rights	    	<ul style="list-style-type: none"> • Zero case of human rights violations • 100% of employees complete Ethics e-Testing on human rights • 24% of female employees in all management positions by 2030
9. Community Engagement and Development	     	<ul style="list-style-type: none"> • Community satisfaction index 90% • Scale up SCGP Zero Waste Community Project to 183 communities (Ban Pong district) by 2030 • SCGP Open House 12 times, with 1,000 participants per year
10. Corporate Governance	  	<ul style="list-style-type: none"> • Zero violation of the Anti-Corruption Policy • 100% of employees learn and complete Ethics e-Testing
11. Information Technology Security and Cybersecurity	 	<ul style="list-style-type: none"> • Information systems operate continuously at no less than 99.5% availability or no more than 1.83 days of shutdown per year • No complaint on customer data breach
12. Sustainable Products and Services	   	<ul style="list-style-type: none"> • Sales revenue from SCG Green Choice products, services, and solutions 66.7% of total sales revenue by 2030 • Sales revenue from SCG Green Choice products, services, and solutions that provide direct benefits to customers 33.3% of the total sales revenue by 2030 • 100% of SCGP's subsidiaries must comply with the requirements of REACH Regulation (Annex XVII Substances of Very High Concern (SVHC) for Authorization) • No complaint on non-compliance with the laws and product safety
13. Circular Economy	   	<ul style="list-style-type: none"> • SCGP is committed to engineer packaging products through co-creation with customers, aspiring to achieve 100% recyclable, reusable, or compostable packaging by 2030
14. Customer & Consumer Centricity		<ul style="list-style-type: none"> • Customer experience score 85%
15. Sustainable Value Towards Suppliers	  	<ul style="list-style-type: none"> • 100% of suppliers in procurement value committed to comply with the SCGP Supplier Code of Conduct • 100% of suppliers in procurement value passed the annual Environmental, Social, and Governance (ESG) risk assessment • 100% of the operation contractors are certified by SCG Contractor Certification (SCS) • 100% of transportation contractors are certified as main logistics partners

SCGP Contribution to Sustainability-related Organizations

SCGP pursues collaborations with networks and allies at national, regional and global levels to generate sustainable value for the public, while upholding good governance, transparency, and strict compliance with both business ethics and SCGP Code of Conduct.



SCGP welcomes the Department of Industrial Works to visit and observe progress in the odor detection and monitoring system in industrial plants, known as “E-Nose”, January 2024.



Attending the ttb | Business Green Transition Forum 2024, sharing insights on “Moving Towards Green Business: Driving Sustainable Growth” July 2024.



Participating in the “420 Years of Dutch-Thai Trade Relations” hosted by the Embassy of the Netherlands in Thailand, September 2024.



Soonthorn Yongvibulsiri (ESG and Sustainability Director SCGP) Sharing insights and organizational experiences in ESG at the ‘Global Compact Network Thailand,’ ‘Sustainability for Business Forum,’ ‘Social Value Thailand Forum,’ and ‘ASEAN Hong Kong, China SMEs Going ESG’ in 2024.

SCGP had not provided financial support to any political party, political group, or political candidate. Instead, SCGP focused on supporting non-profit and trade associations as parts of its commitment to fostering sustainability. In 2024, SCGP provided funding to various non-profit organizations, with the top eight contributions collectively amounting to a total of 2.2 million baht, as follows:



Global Compact Network Thailand

A non-profit organization whose work aligns with the principles of the United Nations Global Compact (UNGC) and addresses areas such as human rights, labor, environmental issues, and anti-corruption.



World Business Council on Sustainable Development (WBCSD)

A non-profit organization advocating projects for environmental and social sustainability, especially those related to forest products.



Federation of Thai Industries (FTI)

A private-sector organization that serves as a central platform for strengthening and enhancing the competitiveness of Thailand's industrial sector. It aims to enable Thai industries to compete on a global scale, contributing to the sustainable development of the country's economy, society, and environment.



CDP Worldwide

A non-profit organization that provides standards and tools for measuring and managing environmental impacts.



Thai Pulp and Paper Industries Association

A trade association that plays vital role in Thailand's economic development by facilitating collaboration and knowledge sharing among the pulp and paper industry members at both national and international levels in support of sustainable development.



Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE)

A non-profit organization supporting a recycling-oriented society and pilot projects related to circular economy principles.



Asian Corrugated Case Association (ACCA)

A trade association that promotes international cooperation and knowledge exchange in corrugating technology.



Thai Chamber of Commerce

A trade association focused on enhancing competitiveness and driving sustainable growth in global markets.

DOUBLE MATERIALITY

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- Sustainable Value Towards Suppliers
- Sustainable Products and Services



Sustainability Approaches

Process of Materiality Assessment and Prioritization

1 Collect and Identify Sustainability Issues

Analyze sustainability issues throughout the value chain, encompassing activities from raw material procurement, production, transportation and distribution, the use of products and services, and analysis of significant changes.

2 Prioritize Material Issues

Identify the actual and potential impacts of materiality issues by various workgroups under the supervision of the ESG Committee.

3 Review and Validate

Assess impacts on economy, environment, society, and others aspects base on the principles enterprise risk management. Additionally, evaluate and prioritize issues based on their significance to SCGP and their importance to stakeholders. This process involves the participation of the Chief Executive Officer and executives for mutual approval and sign-off.

4 Communicate Material Issues to Stakeholders

Communicate key issues to stakeholders in a transparent and inclusive manner to ensure that all parties receive accurate and complete information. This also facilitates the exchange of opinions between SCGP and stakeholders, fostering understanding and collaboration.

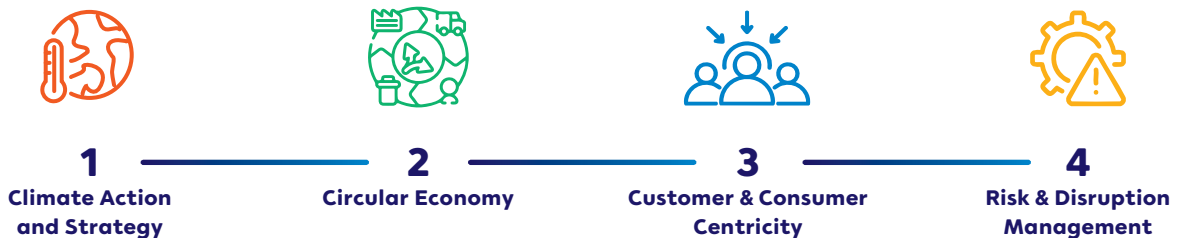
Double Materiality Matrix Management

SCGP recognizes and establish a double materiality matrix to define strategies and goals that effectively cover related action plans. Material sustainability issues are reviewed at least once a year according to the Global Reporting Initiative (GRI) standards to address the rapid changes of today. The assessment of sustainability issues considers both financial and non-financial impacts, including internal impacts on the company’s performance and external impacts on the environment, society, and governance. Additionally, It also includes the analysis of risks, opportunities, and contributing factors such as regulations, market trends, customers’ needs, carbon footprint, water usage, waste management, labor conditions, human rights, and business ethics.

MATERIALITY ISSUES 2024 (GRI 3-2)



Utilizing the Double Materiality method, the review concluded that SCGP identified four material sustainability issues in 2024 which are as follows:



Associated with these issues are the following risks, opportunities and management approaches.

Material Issues	Risks	Opportunities	Management
1. Climate Action	<ol style="list-style-type: none"> Changes in policy and regulatory measures related to greenhouse gas emissions control, including mechanisms such as carbon taxes, Carbon Border Adjustment Mechanisms (CBAM), and stricter targets like the Science Based Targets Initiative (SBTi). Financial risks, arise from fuel price volatility, limited energy sources, and investments in new technologies that increases costs. Rising consumers expectations for a low- carbon economy. Natural disasters such as floods, droughts, and epidemics that may disrupt business operations, impacting resource usage or rehabilitation efforts. 	<ol style="list-style-type: none"> Investing in Research And Development (R&D) for Carbon Capture, Utilization and Storage (CCUS) technologies, alongside renewable energy. Designing products and services based on circular economy principles and enhancing the use of recyclable materials. Implementing Internal Carbon Pricing (ICP) for investment considerations. Collaborating with the government, private sector, and international organizations to monitor situations, continuously assess risks, and develop response plans, including business continuity management plan in the events of disasters. 	<ol style="list-style-type: none"> Reducing greenhouse gas emissions through three measures: <ul style="list-style-type: none"> Improving energy efficiency by using the best available technology. Increasing the use of renewable and clean energy. Developing low- carbon products based on circular economy principles. Absorbing and sequestering greenhouse gases with through the following initiatives: <ul style="list-style-type: none"> Supporting and participating in forest protection and ecological rehabilitation to enhance biodiversity and establish carbon sink. Studying Carbon Capture, Utilization, and Storage (CCUS) technologies and supporting ecosystem restoration.
2. Circular Economy	<ol style="list-style-type: none"> Scarcity of resources driven by environmental and climate change. Consumer demand for reducing reliance on natural resources and increasing utilization recyclable materials. Strict government regulations on waste management aimed at promoting a circular economy. Regulatory challenges associated with EPR (Extended Producer Responsibility), which requires manufacturers to be responsible for their products throughout the life cycle. 	<ol style="list-style-type: none"> Leveraging waste and diverse raw materials from various industries. Collaborating with customers to recycle waste into new products in accordance with circular economy principles. 	<ol style="list-style-type: none"> Adopting circular economy principles to maximize the efficiency of success limited resources like water, energy, and raw materials. Designing products to be recyclable, and promoting initiatives focused on waste reduction.



Material Issues	Risks	Opportunities	Management
3. Customer & Consumer Centricity	<ol style="list-style-type: none"> 1. Evolving consumer behaviors and increasing demand for diverse, specific, and practical solutions for everyday life. 2. The need for consumers to access to products and services information more conveniently and quickly. 	<ol style="list-style-type: none"> 1. Delivering innovative, sustainable products, services, and solutions to customers. 2. Expanding electronic channels to enhance customer convenience in making payments and tracking order status. 3. Implementing systems for data collection and customer data management to improve service delivery efficiency and speed. 	<ol style="list-style-type: none"> 1. Analyzing and monitoring customer experience by understanding their problems, needs, purchasing behaviors, and the use of products and services through customer engagement across all areas of the company. 2. Actively engaging customers across all business sectors to foster customer satisfaction and loyalty. 3. Utilizing customer feedback mechanisms to continuously enhance products and services.
4. Risk & Disruption Management	<p>SCGP identified and assessed material risks in 2024 based on a comprehensive risk management framework, which includes:</p> <ol style="list-style-type: none"> 1. Strategic Risks 2. Operational Risks 3. Financial Risks 4. Compliance Risks 5. Emerging Risks 6. Investment Risks associated Shareholders investments. 	<p>Managing of risks and disruptions systematically based on international standards, integrating rise management into business operations while maintaining an appropriate risk appetite and ensuring business continuity.</p>	<ol style="list-style-type: none"> 1. Managing risks according to the Committee of Sponsoring Organization (COSO) guidelines and ISO 31000 to effectively minimize risks and their potential impacts. 2. Analyzing and prioritizing risks using tools such as WRI AQUEDUCT, satellite images, and Risk Maps. 3. Continuously managing business risks in alignment with the Business Continuity Management (BCM) framework for sustainability, which aligns with the United Nations Office for Disaster Risk Reduction (UNDRR). 4. Drawing up a solid business continuity plan to effectively address potential disruption.



Climate Resilience



SCGP's Commitment to Climate Action: Journey toward Net Zero Emissions

"GHG emission reduction" is a global mission mutually declared at the 26th United Nations Climate Change conference (COP26). SCGP is committed to reducing of greenhouse gas (GHG) emissions and addressing the climate crisis, with the determination to contribute positively to society. SCGP efforts are comprehensive, encompassing operational processes, supply chain, innovation, product development, and participation in environmental ecosystems.

The Net Zero Emission long-term goal reflects SCGP's commitment to achieving net zero emissions of GHGs by 2050. Its medium-term goal is to reduce GHG emissions by 25% by 2030. Rooted in climate science, these goals align with the Paris Agreement and the industrial sector's serious commitment to climate action.

Targets

- Reduce scope 1 & 2 greenhouse gas emissions by 25% by 2030, compared with the base year of 2020
- Achieve Net Zero emissions of GHG by 2050
- Reduce energy consumption by 13% by 2025, compared with Business As Usual (BAU) at the base year of 2007
- Reduce energy intensity (per ton of production) by 15% by 2030, compared with the base year of 2020

Performance in 2024

17.5%

8.76%

15.2%

Strategies

- Enhance and modify equipment, while integrating AI to improve manufacturing and energy efficiency.
- Increase the proportion of renewable energy sources, such as solar, biomass and biogas, in the company's total energy consumption.
- Collaborate with all sectors on Research And Development (R&D) to create advanced technologies for carbon capture and GHG reduction.
- Support Nature Climate Solutions, including forest conservation and forest ecosystem rehabilitation.
- Promote economic mechanisms for risk management and opportunities to invest in green projects.
- Raise awareness of energy conservation and adaptation to climate change among employees and contractors.

SCGP's Net Zero Roadmap: Plan for Sustainable Future

SCGP is well-prepared to address global climate-change challenges, thanks to its Net Zero Roadmap. The key components in this roadmap include renewable energy, enhanced resource efficiency, and sustainable innovations. The continuous implementation of the roadmap is achieved through collaboration, advanced technology, and transparency.

Targets

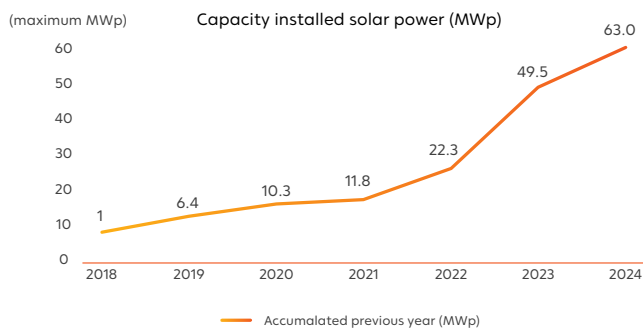
- Reduce scope 1 & 2 greenhouse gas emissions by 25% by 2030, compared with the base year of 2020.
- Achieve Net Zero emissions by 2050.
- Reduce energy intensity (per ton of production) by 15% by 2030, compared with the base year of 2020.

Strategies

- Transition to clean and renewable energy sources.
- Increase energy efficiency through AI and machine learning.
- Manage forests sustainably under the Natural Climate Solution (NCS), with over 2.35 million trees (as of 2024) planted as of 2024.
- Foster innovations and collaboration across SCGP's value chain, while transparently reporting its performance in accordance with international standards such as the GHG Protocol.

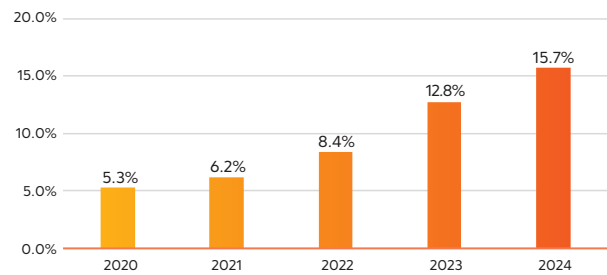
Energy Efficiency Enhancement and Expansion of Alternative Energy Usage

- Energy Transition towards Renewable Energy:** SCGP has continuously invested in modern technology and innovative practices to improve energy efficiency at its manufacturing facilities. This initiative aligns with its plan to shift from high-emission fossil fuels to renewable energy sources.
 - Solar Energy:** Since 2018, SCGP has prioritized clean energy from solar power. To date, its solar system has capacity of 63 megawatt peak. In 2024, the company continued to expand its solar energy infrastructure further via solar roofs and solar farms. This expansion included installations at Siam Kraft Industry Co., Ltd. (in Kanchanaburi and Ratchaburi), Orient Containers Co., Ltd. (at Samut Sakhon Plant and Omnoi Plant), Thai Containers Group Co., Ltd. (at Navanakorn Plant, Ratchaburi Plant, and Chonburi Plant), Tawana Container Co., Ltd. and Vexcel Pack Co., Ltd. collectively adding an additional capacity of 13.5 megawatt peak. This effort contributes to a reduction of GHG emissions by 9,834 tons of carbon dioxide equivalent per year.

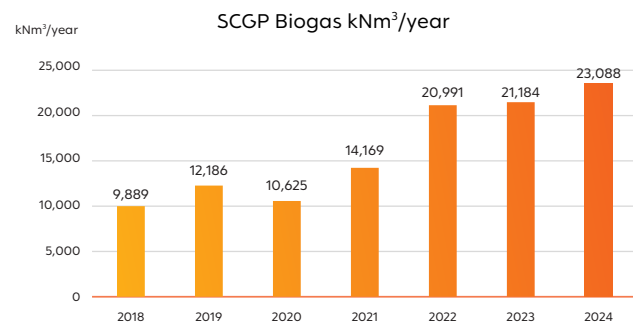


- Biomass Energy:** SCGP has been actively researching the utilization of biomass energy as a substitute for fossil fuels, both Thailand and abroad. In 2024, SCGP began converting agricultural waste such as sugarcane leaves, coconut fiber, and palm shells into biomass energy. The company also improved its boiler system by upgrading the gear motor to enhance the fuel feeding rate, allowing for more efficient and continuous use of biomass fuel. Additionally, SCGP studied the properties of each type of biomass fuel to assess its suitability for use and to mitigate potential issues with machinery, such as fouling and slagging within the boiler. As a result, SCGP successfully increased the proportion of biomass fuel in its total energy consumption from 12.7% to 15.7%, which led to a reduction in coal use and decreased GHG emissions by 845,840 tons of carbon dioxide equivalent.

% Biomass by heat



- Anaerobic Wastewater Treatment (Biogas):** This treatment method utilizes microorganisms to decompose organic matters in wastewater in the absence of oxygen, generating methane as a by-product. This Methane can then be used to fuel boilers, replacing fossil fuels. In 2024, SCGP enhanced its anaerobic wastewater treatment system at its factories in Thailand and Indonesia, resulting in energy savings of 24,294 gigajoules per year and reduction of GHG emissions by 12,478 tons of carbon dioxide equivalent annually.



Enhancement of Energy Efficiency in Manufacturing Process

SCGP is committed to improving energy efficiency. In 2024, the company developed various innovations including:

- Turbo Vacuum:** This innovation enhances paper production efficiency by using a Turbo Vacuum pump to remove water from the paper pulp, in contrast to Liquid Ring Vacuum Pump, which consumes more electricity. The Turbo Vacuum Pump operates at higher speed allowing it to suction air while consuming less electricity. In 2024, this improvement led to a reduction in electricity consumption of 38,207 gigajoules and reduce greenhouse gas emissions by 13,900 tons of carbon dioxide equivalent per year. The application of Turbo Vacuum Pump has been to several factories in Thailand and abroad, including United Pulp and Paper Co., Inc. in the Philippines, Vina Kraft Paper Co., Ltd. in Vietnam and Thai Cane Paper Public Company Limited in Thailand.

- **Real-time Performance Monitoring & Control Platform (RMC):** This innovation system has significantly reduced steam energy consumption in the paper production process. By monitoring the production process in real-time, RMC's machine learning feature analyzes steam energy efficiency during each subprocess. These analyses help identify problems and prioritize issues that need to be addressed, enabling relevant staff to continuously optimize energy efficiency. As a result, the company has reduced steam energy consumption by 246,781 tons of steam per year and electricity consumption by 12,775 megawatt-hours per year, equivalent to a reduction in GHG emissions by 68,000 tons of carbon dioxide equivalent, in addition to lowering energy costs by 233 million baht annually."
- **Process Steam Optimization:** In its the paper production process, SCGP employs extraction steam turbines to separate some steam for the paper dryer and some for electricity generation. By enhancing its steam turbines with AI and machine learning, SCGP can calculate and adjust steam pressure to align with the requirements of each type of paper produced, as different paper types requires different pressure values. This optimization allows the company to generate more steam for electricity without compromising production quality. Process



Production process of Phoenix Pulp & Paper Public Company Limited (Photo by Phiphatphong Prakopkaeo).

steam optimization has been implemented in several facilities, including, Siam Kraft Industry Co., Ltd. (Kanchanaburi) and Thai Cane Paper Public Company Limited (Prachin Buri). These efforts have resulted in annual cost saving of 15.5 million baht, energy consumption reduction of 38,633 gigajoules, and a decrease of 3,740 tons of carbon dioxide equivalent in GHG emissions.

Collaboration with Suppliers on Low Carbon Society

SCGP recognizes the importance of collaborating with suppliers to achieve net-zero emissions. To encourage GHG emission reduction across its supply chain and to minimize Scope 3 indirect emissions, the company works with suppliers to develop eco-friendly products and services while compiling GHG emission data for raw materials to ensure accurate emission reporting.

- SCGP provide guidance to suppliers regarding GHG emission calculation and carbon footprint assessments while enhancing their understanding of the company's ESG policy and practices.
- SCGP organized the "Sustainable Synergy for Decarbonization" seminar aimed at promoting eco-friendly practices among its suppliers, focusing on the selection of sustainable raw materials and transportation modes. This event was designed to enhance suppliers' sustainability capabilities attracted 299 participants.
- SCGP collaborates with logistics service providers to improve transportation efficiency, by opting for rail transportation over road transport where possible and exploring new alternatives, such as the use of alternative fuels.

Nature Climate Solution (NCS)

SCGP has continuously implemented Nature Climate Solutions in its effort to combat climate change. Recognizing that forest resources are critical to the pulp and paper production industry, the company emphasizes responsible usage and prohibits deforestation within its fibrous supply chain. SCGP's virgin pulp is certified based on FSC™ - Forest Stewardship Council™. assuring that the raw materials used in the production process are sourced from no-deforestation zones.

• Total Number of Planted Trees

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.



Planting in company-owned areas, 2024.



Collaboration with business partners to reduce greenhouse gas emissions, 2024.

Circular Economy and Industrial Waste Management



SCGP is dedicated to sustainability, guiding its business operations by the principles of circular economy while prioritizing environmental considerations. To optimize resource management, the company emphasizes waste reduction at the source through repurposing and invests in research and development to create innovative sustainable packaging solutions. Additionally, SCGP collaborates with partners, customers, and other stakeholders to devise initiatives that promote sustainable resource utilization for the future.

Targets	Performance in 2024
Circular Economy <ul style="list-style-type: none"> SCGP is committed to engineer packaging products through co-creation with customers, aspiring to achieve 100% recyclable, reusable, or compostable packaging by 2030 	99.7%
Industrial Waste Management <ul style="list-style-type: none"> Zero waste to landfill in Thailand operations Zero waste disposal by incineration without energy recovery in Thailand operations by 2025 	0 ton 0.22 tons

Strategies : 5 Circular Economy Business Models

- Implementing measures to reduce or eliminate waste at the source, along with establishing indicators for ongoing evaluation and measurement of the results.
- Managing industrial waste in accordance with of the 3R principles (**Reduce, Reuse, Recycle**) and the circular economy framework, addressing both hazardous and non-hazardous waste, while adhering to the requirements set forth by governmental and global standard organizations.
- Integrating the circular economy principles into product and service development by conducting research and innovation aimed at maximizing the value of primary materials. This approach focuses on designing products and services that facilitate efficient material reuse, **Recovery & Recycling, and Circular Supply Chain** to minimize waste and promote the use of bio-based or renewable materials that can be reused within a standardized production process.
- Conducting research and innovation to extend the lifespan of products and components, with a particular focus on **Product Life Extension** innovations that enhance product durability, reduce waste disposal, and decrease the demand for new materials.
- Utilizing a resource-sharing platform to optimize resource efficiency by collaborating with customers, partners, and stakeholders throughout the supply chain to ensure effective resource management.
- Transforming business models towards the concept of **Products as a Service**, emphasize a transition from selling goods to providing in order to minimize sustainable packaging solutions tailored to different customer needs in order to minimize resource usage.
- Engaging in national and international networks to advance efforts towards common goals grounded in based on the circular economy principle.

Reduction of Waste in the Production Process

- Reduction of Hazardous Chemicals in Printing Ink:** The vibrancy and aesthetics of packaging are major considerations for customers. However, printing ink pigments contain varying level of copper compounds. At SCGP's Innovation and Product Development Center, the research team, in collaboration with the production team at Thai Containers Group SCGP, has explored methods for separating copper compounds from wastewater that has undergone post-production treatment (chemical precipitation). As a result, the production process now employs printing inks with reduced copper content, which are used in the production process to reduce the overall amount of hazardous waste. The initiative has been implemented across all SCGP container manufacturing plants.
- Value-Added Management of Fiber Sludge from Filtration:** The fiber sludge extracted in the wastewater treatment process is repurposed as a raw material in paper production without compromising paper quality. In 2024, 10,660 tons of fiber sludge from filtration was successfully utilized.
- Utilization of Starch Waste as Soil Amendment:** SCGP's packaging box manufacturing plants now use tapioca starch as an adhesive in the production process. Treated water from the production process still contains starch sludge, which is a natural by-product and is analyzed as non-hazardous. This starch waste is sent to Siam Forestry Co., Ltd., a subsidiary of SCGP, to be used as soil amendment instead of being disposed. In 2024, over 160 tons of starch waste was converted into soil amendment.

Collaboration in Sustainable Packaging Development

- SCGP has developed Idea paper packaging products that are more eco-friendly, using recycled materials, reducing the use of chemical dyes and non-degradable coatings, and lowering carbon dioxide emissions by up to 10,000 kilograms per year.
- Green Carton, an environmentally corrugated cardboard packaging, decreases paper materials usage while maintaining quality and strength. For example, Green Carton's G4 model can reduce paper consumption by over 15%. In addition to conserving resources, Green Carton packaging also contributes to lower energy consumption during production and transportation.



Green Carton – Sustainable corrugated packaging by SCGP.

- In the production of Rigid Packaging, Post-Consumer Recycled Resin (PCR) is integrated into the raw material mix for achieving 100% environmentally friendly packaging.
- For flexible plastic packaging, the focus is on developing mono-material flexible packaging designed to enhance recyclability while maintaining product quality and strength.
- The company has introduced sustainable barrier plastic packaging for pet food, utilizing high-performance barrier material to serve as a recyclable alternative to metal cans, and it is 100% recyclable.
- Fest Redi Pak Food Packaging: An innovative peelable pulp tray design for refrigeration, heating, and ready-to-eat applications. Made from natural materials, it biodegrades within 60 days. Developed in collaboration with Reo's Deli, a producer of ready-to-eat meals. The Fest Redi Pak has won the "Best Socially Beneficial Innovation" award at the "7 Innovation Awards 2024" hosted by CP ALL PLC., reflecting SCGP's commitment to creating innovations that benefit both environment and society.



Fest Redi Pak Received the "Best Socially Beneficial Innovation" Award at the "7 Innovation Awards 2024".

- Fest Fresh Pak Food Packaging: An innovative, recyclable paper tray, designed for chilled fresh meat, increase the use of renewable materials by at least 80%. Developed by Fest by SCGP in collaboration with S-Pure brand, a subsidiary of Betagro, this package ensures appropriate oxygen barrier properties, that preserve the freshness of raw meat, similar to traditional plastic trays. Made from FSC™-certified eucalyptus pulp, the durable packaging can maintain food freshness for up to 7 days.
- Heat-sealable Paper Ready Pack: Made from heat-sealable paper materials, this product is 100% recyclable and biodegradable. It is produced using the VOC-free EB Offset Printing System technology, which emits less carbon compared to traditional gravure printing, while ensuring high product quality.
- ANTI MOS Packaging: Designed for baby diapers to prevent odor leakage, the product has been recognized for its recycling quality by CEFLEX, a global recycling organization. Made from PE-EVOH film, the packaging is strong, durable, hygienic, and safe – fulfilling both environmental sustainability and customer demands. SCGP has successfully addressed the challenge of creating this packaging using existing machinery, thereby minimizing to reduce environmental impact. Prepack Thailand Co., Ltd. earned the Silver Award at the 5th Thailand Plastics Awards 2024 during the A-PLAS 2024 event for this innovative solution.



Packaging designed for baby diapers to prevent odor leakage.

New Materials and Products from Waste

- Processing Fly Ash and Bottom Ash:** This initiative focuses on developing products from fly ash and bottom ash generated from boilers to create eco-friendly bricks including PROBLOCK-ECO Bricks, Miracle Block, and temporary and permanent partition barriers. In 2024, these innovations contributed to a reduction approximately 5,210 tons of waste requiring disposal.



Barrier, Problock, and Miracle Block products made from fly ash and bottom ash.

- Recycled Plastic Pellets:** Utilizing advanced technology plastic scraps from the waste reject generated during paper recycling process are separated and melted into recycled pellets, which are then used as raw materials in product manufacturing. This process significantly to reduce waste disposal through incineration and decrease greenhouse gas emissions. Recycled plastic pellets are produced in SCGP's operations in Indonesia and Thailand.
- Paper Recycling Project** promotes the recycling of used paper by establishing drop points in collaboration with partners effectively closing the recycling loop. In 2024, this project successfully recycled over 101 tons of paper through several initiatives, including:
 - SCGP participated in the "WeCYCLE" project, organized by WHA Corporation Public Company Limited in partnership with the Industrial Estate Authority of Thailand and other organizations. This initiative focuses on waste management and creating added value from recyclable materials.



SCGP CEO participates in the 'WeCYCLE' project, organized by WHA, December 2024.

- Collaborating with partners, SCGP set up Recycling Drop Points at various locations such as Uniqlo outlets, BDMS, Sindhorn Village @Vela, Tha Maharaj, Kronos, BITEC, The Mall Group, EM District, Chewathai, and Loxley to collect unused paper, boxes, and cardboard for recycling into new materials. This initiative benefits society and reinforces commitment of the participating organizations to sustainable waste management.
- Teaming up with MCOT Public Company Limited in the "Old Paper for New" project, SCGP encourages MCOT employees to addresses environmental issues through the "MCOT Cares Paper-Cycle" program. This initiative involves collecting used paper from employees and converting it into "new reams of paper" for organizational use. In 2024, SCGP managed the recycling of this used paper to ensure efficient resource circulation.
- SCGP also collaborated with Thai Beverage Recycle Co., Ltd. (TBR) by signing a memorandum of understanding (MoU) on "Systematic Collection of Used Paper Packaging for Recycling". This initiative aims to promote environmental sustainability, ensuring that all used paper packaging collected from TBR's operations is fully reintegrated into the production process.



SCGP partners with Thai Beverage Recycle to collect used paper for the recycling process, March 2024.



Vela Sindhorn Village Langsuan collaborates with SCGP to set up paper recycling stations starting on World Environment Day, June 2024.

Collaboration on Circular Economy

SCGP recognized that fostering sustainable change requires systematic collaboration. Therefore, SCGP is partnering with various organizations to uphold the principles of the circular economy. Below are some of the several projects implemented in 2024.

- **PackBack Project, Package Recycling for a Sustainable Future:** SCGP has joined forces with the Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE) to promote the Extended Producer Responsibility (EPR) policy in Thailand.
- **The “Peel-Clean-Collect” Activity:** SCGP works with Doi Kham Food Products Co., Ltd., in encouraging the proper recycling of beverage cartons.
- **The “Check, Remove, and Discard” Activity:** SCGP is working alongside Sanofi Co., Ltd. on the “Sanofi Planet Care Upcycling Program” which aims to give new life to used insulin pens. This initiative encourages diabetic patients to return their used insulin pens for recycling into plastic pellets using Advanced Recycling technology, ensuring that the process is appropriate and hygienic. This project refolds the ongoing collaboration between SCGC and SCGP in promoting a circular economy by reintegrating used plastic materials back into the production cycle. A pilot program has been implemented in six leading hospitals – King Chulalongkorn Memorial Hospital, the Thai Red Cross Society, Ramathibodi Hospital, Siriraj Hospital, BMA General Hospital (Klang Hospital), Srinagarind Hospital, and Maharaj Nakorn Chiang Mai Hospital.

Standard Implementation and Certifications

- Vexcel Pack Co., Ltd., a subsidiary of SCGP, has received certification from the Association of Plastic Recyclers (APR) for its development of multi-layer barrier polypropylene packaging. This biodegradable and recyclable product prevents oxygen permeability and extends the shelf life of food. APR is the only non-profit organization in North America designed to enhance plastic recycling processes, and this certification bolsters the company’s credibility in the US market.



VEXCEL by SCGP certified by the Association of Plastic Recyclers, August 2024.

- Prepack Thailand Co., Ltd., a manufacturer of flexible plastic packaging for the food industry, utilized recycled plastic pellets sourced from producers accredited by the International Sustainability and Carbon Certification (ISCC). This certification is awarded to organizations that demonstrate effective carbon management and sustainable development throughout their supply chain. This certificate ensures that the standards are upheld at every stage of the production process from sourcing certified raw materials to inspection, storage, quantity control, sales, and delivery.
- Prepack Thailand Co., Ltd., holds a Class A certification from RecyClass for its mono-material plastic packaging, specifically the R1-PE mono-layer pouch or PE flexible pouch. RecyClass is an organization that evaluates the recyclability and traceability of recycled materials used in for plastic packaging through stringent testing processes. With this certification, Prepack Thailand Co., Ltd., gains the trust of customers and consumers, both domestically and internationally. Their packaging products are recognized as environmentally friendly, versatile, and aligned with consumer expectations that prioritize sustainability prioritizing the environment.



Mono-material flexible packaging designed to enhance recyclability.

Environmental Stewardship



Biodiversity and Ecosystems

The conservation of biodiversity and ecosystems is a key sustainability goal for SCGP, emphasizing the achievement of “Net Positive Impact” (NPI), “No Net Loss” (NNL), and “No Gross Deforestation” across all company operations in alignment with the Sustainable Development Goals. In its commitment to the Nature

Positive approach, SCGP aims to halt and reverse biodiversity loss by 2030 using a 2020 baseline, with a goal of full recovery by 2050. To facilitate effective implementation, SCGP aligns its efforts with the guidelines established by the Taskforce on Nature-related Financial Disclosures (TNFD). Its parent company, SCG, is registered as an Early Adopter of TNFD. Consequently, SCGP will include nature-related financial disclosures as part of its corporate reporting for the financial year 2024 alongside SCG. Furthermore, SCGP is dedicated to the continuous conservation of forests and biodiversity through sustainable forest management, adhering to the **Forest Stewardship Council™ (FSC™) standards**. The company also focuses on forest carbon sinks according to Thailand’s greenhouse gas emission reduction standards, all in pursuit of a “Nature Positive” impact.

Targets	Performance in 2024
Biodiversity and Ecosystems <ul style="list-style-type: none"> Biodiversity conservation certified by FSC™ standards, at least 10% of certified area No Gross Deforestation 	10.6% (5,351 rai) No Gross Deforestation
Air Quality Management <ul style="list-style-type: none"> Reduce dust emissions intensity (per ton of production) by 10% by 2030, compared with the base year of 2020 No official odor complaint 	16.7% 4 cases
Water Management <ul style="list-style-type: none"> Reduce water withdrawal by 35% by 2025, compared with Business As Usual (BAU) at the base year of 2014 Reduce water withdrawal intensity (per ton of production) by 10% by 2030, compared with the base year of 2022 	27.3% 3.12%

Strategies

- Implementing sustainable biodiversity management practices by utilizing international metrics and positioning SCGP as a model for biodiversity conservation with initiatives that can be expanded to additional areas.
- Engaging communities and stakeholders to enhance their understanding of biodiversity conservation and the participatory utilization of community forests based on community forest principles.

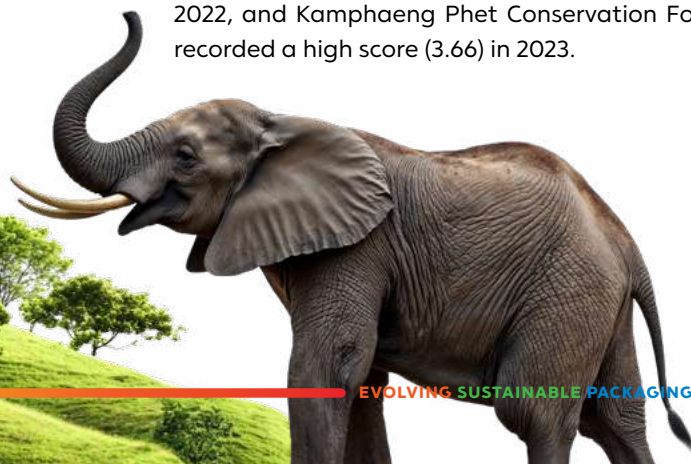
Management Practices

- FSC™ Management Committee:** Establishing policies, objectives, and targets for sustainable forest management, in alignment with FSC™ standards.
- Generation of Net Positive Impact (NPI):** Aiming to create positive impacts on biodiversity in every operational stage using a Nature Positive with the goal of halting nature loss and rehabilitating its the environment by 2030, using 2020 as the base year, and achieving full recovery in 2050.
- Nature Positive Committee:** Supporting the Nature Positive target by forming the Nature Positive Committee in 2024 and assigning it to collaborate with the ESG Committee.
- Collaborative Ecosystem Conservation:** Encouraging participation of communities and organizations in ecological conservation.
- Forest Expansion for Carbon Sinks:** Expanding forest areas in accordance with Thailand Voluntary Emission Reduction (T-VER) standards to enhance biodiversity and increase carbon sinks.

- No Gross Deforestation was achieved in line with the SCGP's goal, thereby enhancing biodiversity and expanding conservation areas and carbon sinks to support greenhouse gas emission reduction targets.
- In 2024, a total of 50,399 rai of land under SCGP's management received certification based on FSC™ standards. Out of this total, 31,807 rai consisted of SCGP's economic forests, while 18,592 rai belonged to SCGP's farmer members. These efforts support SCGP's commitment to "Net Positive Impact" and "No Gross Deforestation,"
- In 2024 SCGP allocated 10.6% of its FSC™-certified land, totaling 5,351 rai, for biodiversity conservation areas. Of these conservation areas, 3,257 rai are owned by SCGP, while 2,094 rai are managed by farmer members.
- SCGP successfully obtained FSC™ certification for an additional 11,372 rai of its economic forests in 2024 compared to previous year.
- SCGP sourced pulp and wood from responsible suppliers who are 100% certified under FSC™-CW/COC, and FSC-C133879.
- All wood harvested from SCGP's economic forest is 100% certified according to the FSC™-FM/COC and FSC-C012207 standards.
- SCGP's operation received 100% certification under FSC™-FM (SLIMF), FSC-C105470.
- In 2024, SCGP sourced a total of 2.50 million tons of wood in an environmentally responsible manner ensuring that its operations had no adverse impact on biodiversity-rich areas or ecologically significant systems at both the national and global levels.
- SCGP collaborates with experts and local communities to continuously survey and research biodiversity and ecosystem conservation. SCGP has employed the CERT+ geological-information program and Satellite x AI technology to assess carbon capture, calculate the volume of carbon absorbed by trees, and monitor forest conditions for effective output management. These practices have been certified by the Thailand Greenhouse Gas Management Organization (Public Organization) - TGO, which contributes to the development of sustainable standards and initiatives.
- SCGP utilized an E-plantation system for data collection in economic forest management. This system helps to assess risks, calculate costs, and monitor economic forests development. E-plantation provides SCGP with access to historical data, allowing for effective analysis of forest management.
- SCGP has successfully developed "new hybrid eucalyptus varieties for sustainability" through a controlled pollination program that combines pollens from different eucalyptus species with advanced biomolecular techniques for precise DNA-level selection. To ensure the genetic stability tissue cultures specific growth formulas were employed each variety with identity of the plants confirmed via DNA analysis. These new hybrid eucalyptus varieties are fast-growing and exhibit resistance to both drought and pests. Moreover, the new hybrid eucalyptus varieties developed by SCGP provide a 40% higher yield compared to the original strains. This achievement earned SCGP the Best Innovative Company Awards at the SET Awards 2024, advancing sustainable value throughout the value chain.
- Fes by SCGP has joined the Program for the Endorsement of Forest Certification (PEFC) to promote sustainable forest management. In Thailand, this initiative is supported by the certifying Thailand Forest Certification Council (TFCC), which operates under the Institute of Agro-Based Industries (IAI) within the Federation of Thai Industries (FTI). Both TFCC and IAI are recognized as National Governing Bodies (NGB) by PEFC International based on internationally recognized sustainable forest standards, similar to FSC™.

Biodiversity Surveys in Biodiversity Conservation Areas

SCGP conducted biodiversity surveys to assess plant and wildlife species in one community forest and two conserved forests. The sites survey included the Baan Huay Saphan Samakkee Community Forest and Khao Cha-ang Conservation Forest in Kanchanaburi, as well as the Kamphaeng Phet Conservation Forest in Kamphaeng Phet. The surveys employed the Shannon-Wiener Index to estimate flora and fauna diversity. Findings indicate that in 2021, Baan Huay Saphan Samakkee Community Forest was in the middle range (2.88), whereas Khao Cha-ang Conservation Forest achieved a high score (3.56) as of 2022, and Kamphaeng Phet Conservation Forest also recorded a high score (3.66) in 2023.



Research Collaborations for Biodiversity Conservation

SCGP collaborated with various partners and organizations in support of biodiversity:

- **FSC™ - Forest Stewardship Council™:** FSC™ sets the standard for responsible forest management. The forest management certification guarantees customers that our forestry operations, and the timber and other forest products derived from forests through the supply chain, meet the world's most stringent environmental, economic, and social standards for responsible forest management indicating sustainable and legal wood sourcing.
- **Forestry Research Center of Kasetsart University's Faculty of Forestry:** This research center carries out surveys and long-term research on biodiversity, ecosystem, and biodiversity management.
- **Thai Forest Ecological Research Network of Kasetsart University's Faculty of Forestry:** This research network monitors and reports findings from studies on long-term forest conservation, biodiversity, and ecosystem conservation, while also providing expert advice.
- **Forest Resource Management Office of the Royal Forest Department:** This bureau undertakes activities aimed at conserving natural resources in target areas.

Air Quality Management

SCGP is committing to reducing air pollutants and odors at their sources through effective management of production processes, ensuring the protection of employee health, surrounding communities, and the environment. The management strategy incorporates advanced technologies to ensure compliance with both national and international regulatory standards. SCGP is dedicated to providing communities with good air quality and an enhanced quality of life.

Strategies

- Establishing air pollution emission targets aligned with global standards for comparable industries while ensuring compliance with legal requirements.
- Utilizing state-of-the-art technologies to optimize air pollutant and odor management, which includes initiatives to regulate emissions, control pollutants at their sources, and consistently monitor air quality.
- Engaging communities and stakeholders regularly discusses and initiatives related to air pollution management.

Management Practices

SCGP implemented various technologies and measures to minimize air pollutant emissions from its manufacturing processes, including:

- **Air Treatment Technology:** Employing effective air pollutant control technologies such as filtration systems, biochemical treatment processes, and measurements that comply with specified standards.
- **Monitoring and Control:** Continuously monitoring air quality within factories and surrounding areas using machine learning technology capable of measure particulate matter (PM) and other health-impacting pollutants that impact health.
- **Development and Training:** Educating employees on pollution control and the effective of use new technologies to ensure they work with safety and environmental responsibility.



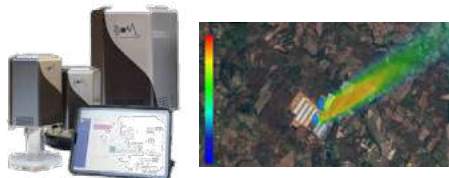
Odor Control

SCGP places significant importance on odor control, as odors from manufacturing operations may impact communities and the health of those exposed. To effectively control odors, SCGP implements the following measures:

- **Odor Control Technology:** Utilizing a modern wet scrubber system to effectively eliminate unpleasant odors from the production process.
- **Odor Detection and Assessment:** Regularly analyzing and monitoring odor levels within factories and surrounding areas to ensure compliance with legal limits of emitted odors.
- **Production Process Improvement:** Improving manufacturing efficiency to reduce direct emissions of odors and air pollutants.

Expansion of the Detect Odor & Monitoring (DOM) System

- SCGP has developed an AI-powered Detect Odor & Monitoring (DOM) system, a comprehensive technology designed to measure and track odors with high precision. This innovation earned the 2020 Innovation Award in the Product and Service Design category and has been continuously refined through machine learning. For of its excellence, the DOM system earned SCGP the SET Awards 2023 in the Business Excellence category for Best Innovative Company. Furthermore, as of 2024, SCGP has successfully implemented DOM technology across 28 facilities in Thailand and 4 facilities in Vietnam.



Detect Odor & Monitoring (DOM) system – a comprehensive odor detection and monitoring technology.

- SCGP has consistently improved its AI models to enhance the DOM system's efficiency and accuracy in odor identification, targeting a 90% accuracy rate.
- SCGP has collaborated with various industries including Thailand's rubber industry and Vietnam's petrochemical industry in expanding DOM to more than 40 customers outside SCG Group.
- In 2024 the DOM system received certification based on European Union's CE Marking standards for safety and health.
- SCGP plans to enhance its odor control initiatives by leveraging data from the DOM system for community odor management. This collaboration aims to reduce odors at their sources and conduct various odor surveys to improve AI-driven cooperation for greater efficiency. Additionally, it seeks to minimize the use of chemicals in odor control, thereby promoting a more sustainable approach.

- The DOM system is capable of identifying odors by type and displaying real-time data, including intensity, via dashboards to facilitate efficient response to odor related issues. The DOM settings can be configured to align with the odors typically associated with each factory type, making it adaptable for various types of industrial plants. As a result, SCGP's implementation of the DOM system within to the industrial sector benefits beneficial both operators and surrounding community.

Measures to Reduce the Impact of PM2.5 Dust Particles

- **Within Factories**
Enhance air pollution control efficiency by inspecting and upgrading machinery such as Dust Collectors and Electrostatic Precipitators (ESP), to improve air emission quality. Increase the frequency of air emission monitoring and implement dust reduction measures across the value chain. Ensure transparency by publicly disclosing air quality monitoring results. Additionally, monitor transportation trucks to ensure they are properly sealed and clean prior to leaving the factory.
- **Community Collaboration**
Support the collection and distribution of sugarcane leaves from farmers for use as biomass fuel, thereby reducing open-air burning. Promote the reuse of agricultural waste to create value-added materials in production.
- **Employee and Partner Health Monitoring**
Monitor air quality in workplace environments to assess risks and implement protective measures for employees and business partners. Encourage the use of personal protective equipment (PPE) and provide health check-ups in high-risk areas. Foster a culture of workplace safety and well-being to mitigate PM2.5 exposure.

Compliance with Laws and Standards

SCGP is committed to adhering to national and international standards, regarding air and odor pollution.

- **Compliance with Thai laws:** Thailand's environmental laws govern air and odor pollution control, imposing restrictions on the release of air pollutants, including dust, SO_x, and NO_x, as well as odors resulting from manufacturing operations
- **Compliance with International Standards:** SCGP maintain air quality in accordance with international standards, such as ISO 14001 which pertains to environmental management systems.

Audit and Reporting

SCGP conducts regular audits and reports on air and odor pollution to ensure compliance with environmental standards. The processes include:

- **Internal Audit:** The Odor Pollution Management Committee at SCGP is responsible for ensuring compliance with relevant laws and standards.
- **Reporting to Stakeholders:** Results from air and odor pollution monitoring are transparently reported to stakeholders, including customers, local communities and relevant authorities.
- **Legally-Required Reporting:** Compliance with air and odor pollution-related laws is communicated to the appropriate authorities.

Community Engagement

SCGP recognizes the importance of collaborating with neighboring communities in the prevention or reduction of air and odor pollution by:

- **Meetings with Communities:** Organizing activities to engage with communities by sharing information about the company's air pollutants and odors, while actively listen to the opinions and concerns of the communities.
- **Collaborative Projects:** Supporting community involvement in environmental initiatives aimed at reducing air and odor pollution, such as plantation for better air quality.
- **Emergency Response Plan (ERP):** If an incident that may exacerbate air and odor pollution occurs, SCGP will take actions based on its emergency response plan which has already been prepared to handle the situation and minimize impacts on communities.

Water Management

Water is essential to SCGP's business operations. Given the risks posed by droughts and floods to its manufacturing processes, SCGP has implemented an integrated water management system. This system includes monitoring water conditions in collaboration with external agencies, and utilizing technology to assess water-related risks. It adhere to the 3Rs principles (Reduce, Reuse, Recycle) and incorporate ecological rehabilitation efforts for water sources.

SCGP is committed to achieving comprehensive and sustainable water management, to reduce environmental impacts and support ecosystems and local communities, the company employed efficient strategies and technologies to manage water resources effectively.

Strategies

- Integrate water management practices to mitigate water-related risks.
- Optimize water usage efficiency in production processes and products.
- Treat effluent to meet quality standards, investigate incidents, identify causes, and minimize water discharge.
- Recycle treated wastewater to conserve valuable water resources.
- Restore and support water ecosystems, while promoting sustainable water use in agricultural communities.
- Develop employee expertise in water management to enhance integration and efficiency.

Management Practices

- **Water-Usage Reduction based on 3Rs (Reduce, Reuse, Recycle):** SCGP applies the 3Rs to its water management approach by focusing on reducing water within consumption, reusing and recycling water in its manufacturing processes. This strategy helps decrease dependence on external water sources and improve overall water efficiency.
- **Integrated Water Management:** SCGP has established a Water Management Committee tasked with developing and implementing strategies for water risk management to enhance water efficiency in production processes and products.
- **Oversight and Monitoring:** SCGP closely monitors its water efficiency through key performance indicators (KPIs), with senior executives actively overseeing and participating in the process. This ensures establishment of appropriate water usage targets and effective governance of water consumption each year.
- **Wastewater Treatment and Recycling:** SCGP adheres to stringent wastewater treatment standards, employing advanced technology to ensure that the quality of treated wastewater meets prescribes criteria and is suitable for reuse in production processes. This, approach helps reduce reliance on external water sources.
- **Water Risks:** SCGP utilized advanced tools such as WRI AQUEDUCT, satellite images and Early Warning System (EWS) to assess water-related risks including such as water shortages, floods, and droughts.
- **Community Engagement:** SCGP is dedicated to rehabilitating the ecosystems of water sources and providing water supplies for local communities and agricultural needs.

Water Usage Reduction

SCGP invests in new technologies to minimize water consumption and enhance water efficiency based on the principles of the 3Rs (Reduce, Reuse, Recycle).

- SCGP has designed and installed a heat exchanger system to recycle wastewater from pulp-making machines. The system utilizes excess heat from the production process to increase the temperature of the wastewater, allowing the treated water to be reused as hot water in the pulp washing process. This initiative reduces water consumption in the pulp production process by 0.22 million cubic meters per year.
- SCGP has implemented pumps to direct excess water from the pulp transportation process via pipelines to the paper production plant for reuse, successfully reducing its water consumption by 0.55 million cubic meters annually.
- To facilitate water recycling, SCGP employs SaveAll and PETAX filtration systems for water used in production processes.



Technology to reduce water consumption and enhance efficiency based on the 3R principles.

Returning Water to Nature

- SCGP treats wastewater in accordance with applicable standards to ensure water discharged from its facilities returns to nature without harming water sources.
- In 2024, SCGP sponsored the construction of 1,263 check dams, bringing the total number of check dams built with its support to 4,662. Phoenix Pulp & Paper Public Company Limited contributed to this initiative by supporting the construction of over 100 check dams, which includes backing the “Soil Cement Trench Weirs” project, in Khon Kaen. This initiative involved creating small semi-permanent weirs in the Nam Phong and Ubol Ratana districts of Khon Kaen to facilitate water retention for agricultural use. In 2024, the project successfully constructed four weirs.



SCGP supports the construction of a cement check-dam in Khon Kaen Province, 2024.

Water Risk Reduction

- SCGP employs an Early Warning System (EWS) to enhance its water risk management efforts. By integrating satellite imagery and data from WRI Aqueduct, the Geo-Informatics and Space Technology Development Agency (GISTDA), the Royal Irrigation Department, the Meteorological Department and the Pollution Control Department through Power BI, the system provides a dashboard for real-time monitoring of water conditions. It can analyze rainfall, temperature, and water quality, while also issuing early warnings for flood or drought. Beyond supporting SCGP's water risk management, this system also plays a crucial role in fostering collaborations with communities and government agencies for efficient preparedness regarding water risks, promoting sustainable use of water resources, and mitigation of risks faced by both businesses and communities in accordance with the United Nations Office for Disaster Risk Reduction (UNDRR) and Sendai Framework.

Building Collaborations on Water Management

SCGP prioritizes collaborations with both public and private sectors to develop of water management plans and assess water risks that may impact its manufacturing operations. In 2024, the company participated in the following projects:

- **Industrial-Sector Water Management Efficiency Enhancement for Mae Klong River Basin Project**
 - Thai Cane Paper Public Company Limited (Kanchanaburi) has participated in the Industrial-Sector Water Management Efficiency Enhancement for Mae Klong River Basin Project, initiated by the Federation of Thai Industries' Water and Environment Institute for Sustainability. The plant aims to serve as a model factory, in striving for the common objective of reducing the industrial sector and increasing its water efficiency by 15%. The first phase of the project run from May to December 2024. SCGP has contributed its knowledge in 3R-based water management, exchanging them with work panels and other participating industrial operators.



Thai Cane Paper Public Company Limited (Kanchanaburi) joined the Industrial-Sector Water Management Efficiency Enhancement for Mae Klong River Basin Project, 2024.

- SCGP is an active member of water user organizations in river basins where its business operations are located, supporting efforts in water management, as well as the maintenance, rehabilitation, and sustainable conservation of water resources. SCGP's membership activities include participation in the Tha Chin River Basin through four companies, the Mae Klong River Basin through six companies, the Bang Pakong River Basin through two companies, the Eastern Seaboard River Basin through two companies, and the Chi River Basin through four companies. Additionally, SCGP is representative on the Mae Klong River Basin Committee and the Bang Pakong River Basin Committee foster drive integrated, efficient, and sustainable water management.



SCGP participates in water management initiatives within the Tha Chin, Mae Klong, and Bang Pakong River Basins, 2024.

International Standard Certification and Environmental Performance Assessment

SCGP is dedicated to complying with both national and international regulations, laws, and standards to effectively manage environmental conservation issues, including the mitigation of impacts from greenhouse gases, waste, water pollution, air pollution, and odors. With this commitment, SCGP promotes water, energy, and resource efficiency, as well as biodiversity. To ensure robust environmental quality and safety management and guidelines are well in place, SCGP has obtained certifications for its factories under international standards such as the Environmental Management System (ISO 14001).

Additionally, SCGP has implemented the Environmental Performance Assessment Program (EPAP), which features an internal assessment component. This assessment framework was developed in collaboration with ERM Thailand, a reputable international environmental sustainability consulting firm. The framework covers five main components: governance, supply chain management, operation, product & service and stakeholder management & communication. In 2024, SCGP conducted EPAP self-declaration assessments for 32 of its companies in Thailand, representing 100% of its Thailand-based companies required to report on environmental management. SCGP also plans to extend the assessment to cover its overseas subsidiaries.



SCGP has implemented the Environmental Performance Assessment Program (EPAP), 2024.

Customer Centricity & Stakeholder Engagement



Targets	Performance in 2024
Human Rights <ul style="list-style-type: none"> Zero case of human rights violations 100% of employees complete Ethics e-Testing on human rights 24% of female employees in all management positions by 2030 	<p>0</p> <p>100%</p> <p>23.3</p>
Employee Care and Human Capital Development <ul style="list-style-type: none"> Total employee engagement score for employees in Thailand and abroad 4.20 (out of 5.00) 100% Employees in Thailand received a performance assessment and complete employee development plan on the Learning Management System (LMS) every year 	<p>4.12</p> <p>100%</p>
Customer & Consumer Centricity <ul style="list-style-type: none"> Customer experience score 85% 	<p>89%</p>
Health and Safety <ul style="list-style-type: none"> Zero work-related and transportation-related fatalities of employees and contractors Zero Lost Time Injury Frequency Rate (LTIFR) of employees (per 1,000,000 hours worked) Zero Lost Time Injury Frequency Rate (LTIFR) of contractors (per 1,000,000 hours worked) Zero Occupational Illness and Disease Frequency Rate among employees In Thailand operation (per 1,000,000 hours worked) 	<p>3 cases</p> <p>0.306</p> <p>0.313</p> <p>0.289</p>
Community Engagement and Development <ul style="list-style-type: none"> Community satisfaction index 90% Scale up SCGP Zero Waste Community Project to 183 communities (Ban Pong district) by 2030 SCGP Open House 12 times, with 1,000 participants per year 	<p>97%</p> <p>183 communities</p> <p>32 times/ 1,279 participants</p>

Human Rights

SCGP has established manufacturing bases in five countries: Thailand, Vietnam, Indonesia, the Philippines, and Malaysia. As the company expands operations, including mergers & acquisitions, the risks related to human rights also increase. In response, SCGP is firmly committed to adhering to international human rights standards, notably the Universal Declaration of Human Rights (UDHR) and the United Nations Global Compact (UNG), as well as guidelines set forth by the International Labour Organization (ILO) and the Organisation for Economic Co-operation and Development (OECD). To prevent human rights violations across all business activities, the company has developed a Human Rights Policy and Guidelines. These policies and guidelines also apply to suppliers, contractors, and joint ventures throughout its business value chain.

Strategies

- Integrating human rights actions and manage diversity, equity and inclusion as essential components of its business practices across both domestic and global value chains.
- Enhance and develop participation projects that extend the principles of human rights respect to all stakeholders throughout the value chain and within society.
- Set a model and share experiences regarding human rights with other organizations to foster broader industry-wide improvements.

Salient Human Rights Issues in 2024

- **Health and Safety:** SCGP places significant emphasis on the health and safety of its employees and contractors, as well as impacts on its business operations and stakeholders. All Companies, under the SCGP umbrella continuously monitor and assess occupational health and safety risks, ensuring that all operational staff are well protected and capable of working safely.

Human Rights Programs and Initiatives

- **Training for Executives:** SCGP's executives received specialized training in human rights, focusing on exemplary practices, non-discrimination, equal and fair treatment, and the prevention of human-rights violations at workplaces. This training underscores the organization's commitment to fostering a respectful and just working environment.
- **Migrant Labor Care:** SCGP developed foreign labor by promoting the use of local languages in its platforms, including those for receiving feedback and complaints from employees. Additionally, the company ensures that all employees have equal access to its well-being support service.
- **No Gender Constraint:** SCGP established S.E.R.T. (SCGP Emergency Response Team) to conduct with internal and external relief operations, and provided equal opportunities for women to join S.E.R.T., participate in its operations, and showcase their capabilities.



Training drill of the S.E.R.T team.



Promoting a safety culture with employee participation (Photo by Suphattha Khunnawutiset).



Encouraging employee engagement in safety culture (Photo by Sittisak Wongjampa).



Health and Safety

Recognizing health and safety as a key aspect of enterprise materiality, SCGP is committed to becoming an injury and illness free organization. The Occupational Health and Safety Committee oversees this adaptive by employing a systematic approach to safety and well-being management, aligned with the SCG Safety Framework, which is implemented across all of SCGP's operations, both in Thailand and abroad.

SCGP fosters a culture where safety is not only an integral part of the corporate environment but also a way of life, acknowledging that people are its most valuable resource. To enhance the efficiency of its occupational health and safety management, SCGP leverages modern technologies, including automated truck scale systems to reduce manual labor, increase transparency in weighing raw materials, chemicals, and products entering and leaving factories, and surveillance cameras for real-time monitoring to ensure temperature surveillance and prevent fire hazards caused by raw material storage. These measures contribute to a safer and more efficient working environment for all employees.



Automated truck scale systems to minimize manual labor and improve transparency in the weighing process, Siam Kraft Industry Co., Ltd.



Strategies

- Encourage employees at all levels and contractors to become safety leaders, raising safety awareness, and promoting behavior change towards a robust safety culture.
- Commit to upgrading the Occupational Health and Safety Management system compliance to align with both local and international standards striving for excellence in Occupational Health and Safety.
- Develop digital technology that facilitates Occupational Health and Safety operations, making implementation easier and improving overall efficiency.

Promoting a Safety Culture

- **Safety Leadership**
 - In 2024, SCGP launched the "Felt Leadership in Action" program for all managerial employees across its companies. This initiative aims to enhance their knowledge, understanding, and ability to demonstrate Visible Safety Leadership through 10 key characteristics essential for fostering a strong safety culture in the workplace for both employees and contractors.

- SCGP has been actively advancing its safety culture based on the Bradley Curve Model to promote safety awareness and proactive behaviors among operational staff. In 2024, SCGP’s safety performance reached the Independent Stage, or “Care for Self”, where employees assumed responsibility for their own safety by exercising caution and maintaining a safe work environment. Looking ahead to 2025, SCGP aims to elevate its safety culture to the Interdependent Stage, or “Care for All”, under the concept of “Everyone Can Create Safety Everywhere, Every Time.” This approach emphasizes the importance of creating a work environment where employees actively look out for each other’s safety. To support this transition, SCGP’s executives will continue to communicate and reinforce this safety mindset across all levels of the organization.
- **Safety Climate Assessment:** SCGP conducted safety surveys among employees and contractors both in Thailand and abroad during 2023, utilizing the results to analyze and enhance its safety management plans.



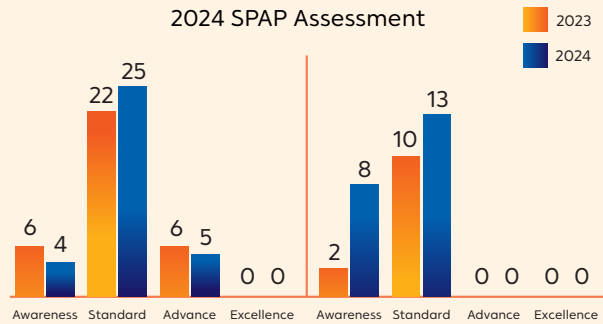
“Transitioning from ‘Care for Self’ to ‘Care for All’ is crucial for strengthening workplace safety. Rather than prioritizing only personal safety, let’s cultivate a culture of collective responsibility. Support and remind one another, stay vigilant and communicate openly to ensure a safer environment for everyone.”

Mr. Wichan Jitpukdee (Chief Executive Officer)

Enhancing Occupational Health and Safety Management

SCG Safety Framework: SCG Safety Framework: SCGP is committed to continuously improving its occupational health and safety management across all operations, both in Thailand and abroad, in alignment with the SCG Safety Framework. This initiative supports the company’s goal of achieving a zero-injury and illness-free workplace. To reinforce this commitment, SCGP has implemented self-declarations across its domestic and international operations through the Safety Performance Assessment Program (SPAP), ensuring compliance with safety standards and driving ongoing improvements.

- In 2024, assessments revealed that SCGP’s performance had progressed beyond the Awareness level, successfully reaching the Standard, Advanced, and Excellence stages in safety management.



- SCGP prioritizes the safety not only its employees but also its partners and contractors. The company’s contractor safety management is overseen by the Contractor Safety Management Committee, which is responsible for planning and training initiatives. SCGP actively encourages its business partners to engage in safety programs, fostering collaboration to create achieving an injury and illness free workplace. To acknowledge and celebrate outstanding safety performance, SCGP categorized its awards into three levels: Platinum, Gold, and Silver. In 2024, a total of 88 contractors participated in the evaluation process, with 60 awarded and an impressive 95.5% achieving certification under the SCG Safety Contractor Certification System (SCS).

Contractor Safety Recognition

a total of **88** contractors participated in the evaluation process, with **60** awarded

- Platinum **17** contractors
- Gold **19** contractors
- Silver **13** contractors
- Bronze **11** contractors



- **Safety Promotion Contest:** SCGP organize the 'SCGP Safety Award 2024' competition for its group plants, aimed at recognizing and honoring excellence in safety practices. The awards are categorized into four levels: Platinum, Gold, Silver, and Bronze.

SCGP Safety Award 2024

	Platinum	4	plants
	Gold	1	plants
	Silver	2	plants
	Bronze	4	plants

- **Process Safety Management:** SCGP prioritizes safety management throughout the production process by establishing rigorous standards for process hazard analysis and mechanical integrity. Additionally, the company invest in training and educating relevant personnel to prevent high-severity safety incidents that could lead to significant harm to life, property, and disrupt production processes.
- **Health Management:** In addition to safety, SCGP emphasizes health management for its employees, aiming for "zero work-related illnesses and diseases." The company collects a variety of data, including health risk assessments, to develop risk management measures. Plans for industrial hygiene inspections and measurements are also established along with health surveillance programs aligned with exposure risk factors. Data analysis is conducted to identify trends in abnormalities causing work-related illnesses and diseases thereby, paving the way for the enhancing the quality of life for operational staff. In 2024, Siam Kraft Industry Company Limited (Ban Pong plant) collaborated with a team of occupational medicine lecturers and resident doctors in conducting a walkthrough survey. This initiative aimed at designing an appropriate medical monitoring strategy that suited the healthcare of employees at the target workplace.



Siam Kraft Industry Co., Ltd. partnered with occupational medicine lecturers and resident doctors to conduct a walkthrough survey, 2024.

Transportation and Vehicle Safety Management: SCGP promotes behavioral change through the implementation of Operational Discipline (OD) and Fatigue Management initiatives. Criteria are set to reduce accidents caused by fatigue during operations. For instance, drivers are mandated to have a minimum of 10 hours of rest before driving and are required to take a 30-minute break after every 4 hours of driving. The goal is to achieve "zero road accidents."

SAFEsave: Simplifying Safety for a Secure Workplace

SCGP has introduced the SAFEsave platform to enhance health and safety operations, ensuring seamless, efficient, and user-friendly implementation. This platform simplifies complex workflows and minimizes data errors for operational staff. In 2024, new modules were integrated, including Safety & Health Risk Assessment, e-Work Permit, and Generative AI for Safety Knowledge, further strengthening workplace safety management.



S.E.R.T. for Emergency Response Preparedness (ERP)

Established in 2012, the SCGP Emergency Response Team is dedicated to responding to emergencies both within and outside of SCGP, emphasizing support for employees and the surrounding communities. S.E.R.T. comprises volunteer employees who have extensive physical and mental training based on the International Search and Rescue Advisory Group (INSARAG) standards. Equipped with resuscitation and rescue skills that meet goal practices the team also has, plus the capabilities to rehabilitate affected areas. S.E.R.T. has actively reached out to victims of numerous major incidents across Thailand, including floods in the southern region of Thailand, Ubon Ratchathani and Chiang Rai. Its operations often include public-private collaborations, showcasing a commitment to community support and emergency preparedness.



S.E.R.T. has undergone rigorous physical and mental training.

Recognition and Achievements

- **Safety Performance Review:** SCGP conducts regular assessments and reports of safety performance to raise awareness and encourage all stakeholders to achieve higher standards. Awards are given to teams that excel in adhering to health and safety standards, serving as role models for other employees within the organization.

Employee Care and Human Capital Development

SCGP recognizes that its people are vital for achieving sustainable business growth. Consequently, the company prioritizes continuous skill development and knowledge enhancement to adapt to evolving industry demands. Emphasizing the concept of Lifelong Learning, SCGP offers employees a digital self-learning platform and supports personalized growth through Individual Development Plans (IDP) tailored to their career aspirations and needs. SCGP values every employee's voice, ensuring that career progression and self-development pathways align with personal goals, thus allowing them to shape their careers while maintaining a healthy work-life balance. Additionally, SCGP actively promotes ESG awareness at all organizational levels, integrating sustainability principles into daily operations to drive long-term success.

Strategies

- Preparing and enhancing employee capabilities to support and promote operations within an increasingly diverse business environment.
- Creating meaningful work for employees by encouraging employee participation in setting work goals and defining the value they can deliver to the company, which ultimately benefits customers.
- Developing employees through a knowledge management platform that facilitates quick and easy learning, enable employees to encourage actively in expanding their various expertise across domain.
- Providing fair and comprehensive employee care to foster organizational commitment, including the design of appropriate welfare programs, that support mental health and well-being.


Employee Development

Enhancing Employees' Learning Potential

- SCGP is dedicated to continuous development of its employees' potential through the **SCGP Learning Framework**. This framework ensures that employees are well-equipped to adapt to evolving industry challenges and customer needs by focusing on both functional and leadership skills. The program employs diverse learning methods tailored the specific roles and responsibilities of employees at every level.
- By leveraging the **70-20-10 learning model**, employees can develop their skills anytime and anywhere through the Learning Platform, fostering flexible and effective learning experiences. This model emphasizes experiential learning, social collaboration, and formal education, aligning individual development goals with organizational capabilities. Additionally, Knowledge Management (KM) enhances these efforts

by promoting cross-functional collaboration to share best practices and lessons learned, ensuring that knowledge remains accessible across teams and generations. This integrated approach supports the organization's objectives of operational efficiency and sustainable growth.

Boost-up Plus Program

- SCGP actively encourages employees to take ownership of their development through the Boost-Up Plus Program.  This initiative promotes self-directed learning by enabling employees to explore topics of personal interest that can enhance both hard and soft skills. Through this program, SCGP empowers its workforce to pursue continuous growth and improvement, benefiting both individual career trajectories and the organization as a whole.

Career Growth Visualization

- To support long-term career development, SCGP has developed a Career Growth Visualization tool that clearly outlines potential career paths for employees. This tool specifies various fields such as manufacturing, marketing or sale helping employees understand their opportunities for advancement. Supervisors support Career Growth Visualization by facilitating Performance Dialogue and Career Path discussions. These interactions enable employees to analyze their current skills and identify the competencies required for future roles. Through this structured approach, SCGP is committed to cultivating a workforce that is prepared to face challenges while fostering sustainable growth at both individual and organizational levels.

Employee Caring

Employees' Well-being

- SCGP is committed to enhancing the well-being of employees and their families through targeted health promotion programs focused on three key areas: physical health, mental health, and financial health. The company organizes various activities to promote employees' well-being, including sports events, recreational activities, and the Little Club, which allows employees' children to participate in the company sponsored activities. Additionally, SCGP offers mental health consultations through its iSTRONG services, alongside internal activities to improve physical health and training courses to enhance financial health are also provided. SCGP believes that fostering good health in all dimensions will enable employees to achieve sustainable self-development in both their personal lives and professional careers.

- SCGP has set appropriate wages and remuneration benchmarks based on the cost of living, taking into account labor market standards and global databases that consider, including job level, responsibilities, and annual performance.

Employee Work Environment

- SCGP fosters an inclusive and supportive workplace where employees can collaborate seamlessly, regardless of gender, beliefs, or ethnicity. By embracing diversity, SCGP cultivates a positive work atmosphere that encourages mutual respect, teamwork, and equal opportunities for all.



Gathering employee perspectives through the Employee Engagement Survey (Photo by Panya Dankhntod).

Employee Engagement Survey

- SCGP regularly conducts an annual Employee Engagement Survey to monitor engagement levels and utilize the findings to enhance employee care across various dimensions, including work, learning and development, internal relationships, and physical and mental well-being. This year, the company has placed particular emphasis on the role of leaders in driving employee engagement and fostering stronger connections within the workforce. In collaboration with Gallup, SCGP also conducts surveys on organizational engagement using the Q12 Inner Drive Model to further promote employee engagement. Currently, the company's engagement score exceeds Global overall score. Furthermore, the company added mechanisms to foster and maintain employee engagement by encouraging supervisors to formulate and execute work plans in collaboration with relevant employees. Effective monitoring systems are also in place to track the progress of these plans. Additionally, the People Committee plays a crucial role in driving and supporting various initiative and activities aimed at ensuring that employees work happily and efficiently while achieving the company's objectives.

Customer and Consumer Centricity

- SCGP is committed to enhancing its Customer Relationship Management (CRM) system to enable seamless communication, ensure efficient product and service delivery, and increase customer convenience. These enhancements aim to elevate the overall customer experience by promoting, greater responsiveness, accessibility, and satisfaction.

Strategies

- Collaborate with business customer groups to co-create customer-oriented B2B2C services.
- Partner in co-creation with consumer customer groups to develop effective B2C services.

Management Practices

- **Enhanced Accessibility and Transparency:** SCGP has implemented channels for continuous customer feedback, which are utilized to refine services. The company is also developing digital tools to promote transparency in supply chain practices, fostering customer confidence and satisfaction.
- **Real-time Order and Payment Tracking System:** SCGP is expanding its order management system by importantly, features that provide updated sustainability data for each product addressing the needs of customers interested in sustainability information.

Implementation of Quick Respond & Real Time System

SCGP is dedicated to improving service efficiency through digitalization and automation. In 2024, the company launched several initiatives aimed at optimizing its operations.

- **Development of Smart Service Delivery Platforms**
 - Advancing the Order Management Platform for Fiber-based Packaging Products (e-Ordering System – Phase 3): SCGP continues to refine its e-Ordering system by integrating centralized planning support to enhance order management and streamline operations.
 - Enhancing Customer Relations with AI-Powered Chatbots: To improve Customer Relationship Management (CRM), SCGP has developed chatbots that:
 - Connect with internal systems to provide real-time updated on manufacturing and processing.
 - Interact directly with customers by offering order status updates, notifications, and relevant information to enhance service efficiency.
 - Launching the Export Order Tracking (EOT) System: The EOT system provides instant order status updates upon customer requests, streamlining data transmissions, reducing redundant tasks, and increasing overall convenience.

- Implementing AI for Automated Purchase Order Processing: SCGP has introduced AI technology to summarize and process orders in near real-time, significantly improving response times. This AI system manages orders from 159 customers, covering both packaging paper and fiber-based packaging, thereby eliminating the need for manual input by staff.
- Integrating B2C & E-Commerce Order Systems for Real-Time Inventory Tracking: This integration facilitates for seamless collaboration between customer service and logistics teams by managing shipping preparations and enabling the automatic submission of purchase orders to factories, thereby enhancing overall operational efficiency.
- **Development of automation system and service standards**
 - **Automated Email Notifications for Order Status Updates:** Customers ordering fiber-based packaging receive automated email updates on their order status, ensuring timely and transparent communication.
 - **Pending Order Management and New Product Code Integration:** The system automatically clears pending orders and uploads new product codes for the Packaging Paper Business, streamlining order processing and facilitating up-to-date inventory management.
 - **Customer Service Center Dashboard:** A centralized dashboard is implemented to manages customer service tasks and order transactions, enhancing efficiency and organization within the team.
 - **SCGP's Duplicate Invoice Printing System:** This system enables the reprinting of duplicate invoices, improving document management and reducing manual workload, thereby optimizing operational procedures.

To enhance real-time services, SCGP aims to leverage insights for analyzing and tracking order status to achieve higher service efficiency by 2025. For instance, AI will be integrated to support analytics for customer insights, enabling the company to plan product and service delivery that better meets customer needs. The company will develop a multi-language AI translation program to facilitate the automatic upload of purchase orders in various countries. Moreover, SCGP plan to centralize order data and establish automated replenishment systems for efficient inventory management of fiber-based

packaging products. The analysis of this data optimizing sales performance by balancing domestic and export sales for maximum profitability. Furthermore, the company will implement for the smooth logistics and customer service management (LMS & LMCC) through its online ordering system which will include order & delivery tracking as well as proactive truck management to enhance overall operations.

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.



Climate change knowledge sharing with customers, August 2024

SCGP places a strong emphasis on the security of personal data belonging to its customers and relevant stakeholders, strictly adhering to the Personal Data Protection Act B.E. 2562 (2019). In 2024, SCGP successfully maintained compliance with no reported complaints or data breaches involving personal information.

As a result of these rigorous measures, SCGP's customer experience rating improved, rising from 87% to 89%, according to a 2024 survey conducted by an independent research firm.



Supporting local economic development
(Photo by Prapapun Meedungjun).

Community Engagement and Development

SCGP is dedicated to responsible business practices and sustainable community development. To achieve this, SCGP actively collaborates with local communities in its operational areas, implementing sustainability initiatives that focus on environmental restoration, local economic growth, and the reduction of social inequalities, thereby enhancing overall quality of life.

Strategies

- Leverage specialized expertise to support and uplift society.
- Engage employees and all stakeholders in generating sustainable value for community.
- Innovate to address community needs, tackle social challenges, develop model communities, and expand within the network of communities.

Environment-related Targets for Communities

1. In 2025, SCGP plans to plant **31,000** trees to promote environmental restoration.
2. In 2025, the company will implement a paper recycling program for **310** tons of used paper.
3. In 2025, SCGP will develop low-carbon communities by implementing a dedicated monitoring system to measure and reduce greenhouse gas emissions in neighboring communities.
4. By 2030, SCGP aims to construct a total of **10,000** check-dams to enhance sustainable water management.



Management Practices

- **Fostering Collaborations with Stakeholders in Communities:** SCGP expands its initiatives actively by listening to the voices of local communities with the goal of so as to developing model communities that prioritized on environmental conservation and jobs creation.
- **Sustainability Initiatives:** SCGP invests in community sustainability projects, including crisis and disaster preparedness initiatives, as well as social investments in public health and education, fostering positive relationships within the community.
- **Sustainable Resource Use and Biodiversity Conservation:** SCGP promotes activities aimed at rehabilitating the environment, encouraging community engagement in biodiversity conservation and sustainable land use.

Key Performance on Forest and Water Conservation at Community Level

SCGP implements the “**SCGP Conserving Environments from the Mountain through the Sea Project**” which aims to conserve natural resources through tree-planting and achieve sustainable management of water resources. In 2024, SCGP built 4,662 dams as part of its goal to construct 10,000 check-dams by 2030. This project is vital for effective water resource management, flood prevention, and landslide reduction, aligning with SCGP’s ESG 4Plus strategy, that emphasizes environmental sustainability.

Additionally, SCGP expanded carbon-sink forests by planting 301,326 trees between 2019 and 2024. In 2024 alone, the company planted 62,767 trees, which is estimated to sequester approximately 2,863 tons of sequestered carbon dioxide equivalent.



SCGP employees participated in building a check-dam
(Photo by Atchanon Nabangchang).

Waste-free Community Project based on Circular Economy Principles

The “SCGP Zero Waste Community Project,” a flagship community initiative launched in 2019, has successfully expanded it to 183 model communities in the Ban Pong district of Ratchaburi by 2024. The company also plans to introduce this project to other districts of Ratchaburi, where SCGP’s manufacturing facilities are based, and upgrade the project’s implementation in Ban Pong district into “Low-Carbon Community Project”.

SCGP takes pride in this project as it has significantly improved waste management practices within targeted communities, which previously relied predominantly on landfills. This initiative not only promotes eco-friendly practices but also creates income opportunities for locals, helping them recognize the value of resources and maximize resource efficiency in accordance with Circular Economy principles.



SCGP Zero Waste Community Project.



LeafCane Harvester Tank Innovation Project

SCGP encourages its employees to actively contribute, their expertise towards, to efforts to developing innovative solutions that support the community in waste reduction and upcycling.

In response to the sugarcane farmers' desire to eliminates agriculture fires, which are often used to clear agricultural waste such as rice and sugarcane leaves, thereby raising concerns about smog. SCGP enlisted its employees with engineering backgrounds to provide guidance to the community. As a result of this collaboration, an innovative "LeafCane Harvester Tank" was developed. This machine can chop, collect and bundle sugarcane leaves for sale to SCGP and other organizations interested in biomass energy production. This innovation has nearly eradicated the reduced agricultural fires in the Khao Khlung subdistrict of Ban Pong district, Ratchaburi province representing a remarkable environmental achievement.



Innovative Solution: LeafCane Harvester Tank.

Collaborative Emergency Preparedness Drills

SCGP, through its S.E.R.T. (SCGP Emergency Response Team), prioritizes the execution of joint emergency response drills with local communities. These drills are designed to bolster community resilience and preparedness for emergencies. Such collaborations not only improves rescue operations but also strengthen community relationships, enhances SCGP's reputation, and instills a sense of pride among employees for their contributions to promoting public safety.






Flood relief efforts in Chiang Rai Province, 2024.


Stakeholders Engagement



Stakeholder Analysis and Engagement in the Business Value Chain


SCGP categorizes its stakeholders into nine groups, acknowledging that their collective interests may impact or be impacted by the company's operations at different levels. To foster meaningful engagement, SCGP assesses stakeholders' needs and expectations before implementing consistent communication strategies across various channels, integrating examples of ongoing interactions with each group. In 2024, SCGP conducted a comprehensive analysis of stakeholders' expectations, with key insights summarized as follows:


Stakeholder Group	Key Concerns & Expectations	Engagement Approach	Example of Outcomes	Key Response	Page
1. Shareholders/ Investors/ Business Partners/ Creditors 	<ul style="list-style-type: none"> • SCGP's plan/strategies to achieve both long-term, and short-term goals • Operating results, development directions and business growth • Corporate governance practice and transparency of management • Disclosure of information on business performances • An optimum value of the dividend • Receive opinions/suggestions to improve operations 	<ul style="list-style-type: none"> • Annual General Meeting of shareholders (AGM) • Announcement of quarterly business performance • Annual Report and Sustainability Report • Analyst conference (quarterly) • Investor Relations (IR) for communication of operating results/action plans with investors around the world • Hotline phone and e-mail, managed by IR • Website • Annual plant visits and CSR activities 	<ul style="list-style-type: none"> • Disclosure of essential and necessary information on SCGP's operating performances • Conduct business with transparency and accountability • Listen to opinions and suggestions for business operation development 	<ul style="list-style-type: none"> • Annual Report 2024 (AR) • Sustainability Report 2024 (SR) 	
2. Employees 	<ul style="list-style-type: none"> • Reskilling, upskilling, and potential development in line with business changes • Business directions and guidelines for adaptation • Employee care 	<ul style="list-style-type: none"> • Ensure regular communications through internal news • Hold annual meeting between employees and executives • Prepare employee engagement Plan of each department to encourage employee's commitment to the organization • Conduct yearly employee engagement surveys • Conduct formal and informal employee opinion surveys • Inform employees about relevant news and business movements through various internal communication channels, including e-mail, Line Group, Employee Connect application • Provide information to raise awareness on healthcare through multiple internal communication channels, including e-mail, Line Group, Employee Connect application 	<ul style="list-style-type: none"> • Recognize employees' problems and expectations • Understand employees' needs and facilitate them to work happily and efficiently • Disclose operational information to keep employees informed of SCGP business operations • Promote a collaborative culture with other stakeholders 	<ul style="list-style-type: none"> • ESG Highlight Performance • Risks and Opportunities in ESG • ESG Metrics and Targets • Health and Safety • Human rights • Employee Caring & Human Capital Development • Corporate governance • Risk & crisis management • Information Technology Security & Cybersecurity 	<ul style="list-style-type: none"> SR 22-23 SR 69-77 SR 24-25 SR 48-50 SR 47-48 SR 51-52 SR 62-63 SR 45, 48-50 SR 63

Stakeholder Group	Key Concerns & Expectations	Engagement Approach	Example of Outcomes	Key Response	Page
3. Customers 	<ul style="list-style-type: none"> • Provide integrated services and solutions that meet the needs of customers in a complete cycle • Supply quality products and services that meet customer needs and are environmentally friendly • Provide online channels as a response to customer behavior 	<ul style="list-style-type: none"> • Develop sustainable products, services, and solutions and consider environmental, health, and safety impacts at every step of the process • Provide 24/7 channels for customers to give feedback or complaints about products and services • Co-develop products with customers and create collaborative projects that enhance social responsibility • Conduct a customer experience survey • Conduct brand reputation survey • Listen to customer needs through Facebook, websites, and customer visits and use the knowledge to develop products/services 	<ul style="list-style-type: none"> • Recognize and understand customer needs to deliver products and services that meet their specific needs • Co-develop products with business customers, including promoting cooperation among B2B customers to develop more sustainable products • Create channels for customers to give feedback on the products, request advice for solving their problems, and lodge complaints 	<ul style="list-style-type: none"> • ESG Highlight Performance • ESG risks and opportunities • ESG KPIs and targets • High-Tech Innovation coupled with Low Carbon • Circular Economy Across Supply Chain • Corporate Governance • Product Stewardship • Customer Relationship Management 	<ul style="list-style-type: none"> SR 22-23 SR 69-77 SR 24-25 SR 36-39, 66-67 SR 36-39 SR 62-63 SR 23, 60, 64-65 SR 52-53

Stakeholder Group	Key Concerns & Expectations	Engagement Approach	Example of Outcomes	Key Response	Page
4. Suppliers/ Contractors 	<ul style="list-style-type: none"> • Provide knowledge as a mentor to raise transportation safety for growing along with SCGP • Offer operational knowledge support rooted in the Environmental, Social and Governance (ESG) to enhance the business partners' capability to reduce operational and reputational risks • Establishing operational standards for business partners and customers, including the adoption of digital and online technologies to enhance efficiency. 	<ul style="list-style-type: none"> • Visit suppliers/contractors' places regularly for exchanging ideas and listening to their suggestions or recommendations for improvement • Cultivate consciousness, raise awareness and promote working behavior to build a safety culture • Organize seminars to share knowledge and new trends that may affect contractors'/suppliers' operations • Enhance the performance of transportation contractors through assessment and development under the annual Sustainability Program • Establish measures for business partners, including the application of digital and online technology to ensure safety 	<ul style="list-style-type: none"> • Promote and maintain a safe and working environment for contractors in production and transportation • Create value for business partners and suppliers through supporting and elevating the operations of business partners in order to develop knowledge and achieve maximum efficiency • Develop collaborative projects for business growth and expansion • Encourage business partners to comply with the relevant laws pertaining to environment, health, and safety 	<ul style="list-style-type: none"> • ESG Highlight Performance • Risks and Opportunities in ESG • ESG Metrics and Targets • Health & safety • Human Rights • Corporate governance • Sustainable Value Towards Suppliers 	<ul style="list-style-type: none"> SR 22-23 SR 69-77 SR 24-25 SR 48-50 SR 47-48 SR 62-63 SR 64-65, 78-79

Stakeholder Group	Key Concerns & Expectations	Engagement Approach	Example of Outcomes	Key Response	Page
5. Communities 	<ul style="list-style-type: none"> Ensure that the business operations do not affect the community and environment Use SCGP's expertise to develop and improve the quality of life of the community Enhance income generation by increasing sales channels, developing the marketing plan, and providing packaging 	<ul style="list-style-type: none"> Visit the community to listen to villagers' opinions, suggestions, and needs through Community – Relations activities Conduct community satisfaction survey annually Act as a mentor to give advice and help develop communities in various dimensions, using the expertise of the organization Collaborate with communities, experts, government, and related sectors to create a positive social impact Communicate through social media, such as Line, Facebook, and X Create Open house activities for the community visit to obtain their opinions 	<ul style="list-style-type: none"> Be a part of communities, respect their rights, and preserve the surrounding environment Improve the quality of life and contribute to the communities and society where SCGP operates, both in Thailand and abroad Listen to the community's opinions Develop cooperative projects that make use of communities' potential for the benefit of society 	<ul style="list-style-type: none"> ESG Highlight Performance Risks and Opportunities in ESG ESG Metrics and Targets Circular Economy Across Supply Chain Biodiversity and Ecosystems Water Management Industrial Waste Management Air Quality Management Human Rights Community Engagement and Development Risk and Crisis Management 	<ul style="list-style-type: none"> SR 22-23 SR 69-77 SR 24-25 SR 36-39 SR 40-42 SR 44-46 SR 36-38 SR 42-44 SR 47-48 SR 54-55 SR 29-32, 45, 48-50
6. Government agencies 	<ul style="list-style-type: none"> Be a role model of corporate governance for other organizations in terms of operational transparency and excellence Collaborate with public sectors and present guidelines for Sustainability Make business disclosure with transparency and accountability Conduct business by heeding the impact on the environment and communities Participate in a collaborative project to achieve the Sustainable Development Goals (SDGs) 	<ul style="list-style-type: none"> Listen to opinions and suggestions from the government sector Voice opinions and suggestions regarding rules, regulations, and guidelines set out by the government sector Participate with the public sectors and share the best practices to disseminate to the public Elect a committee or working group and collaborate with public sectors in proposing regulatory rules Pay a visit to government agencies to obtain opinions and suggestions Disseminate information on the business operations through articles, media, academic forums, exhibitions, and seminars 	<ul style="list-style-type: none"> Conduct proper and appropriate business activities by strictly complying with applicable laws and regulations Cooperate with government agencies in terms of academic matters and support for activities 	<ul style="list-style-type: none"> ESG Highlight Performance Risks and Opportunities in ESG ESG Metrics and Targets Circular Economy Across Supply Chain Water Management Community Engagement and Development Risk and Crisis Management 	<ul style="list-style-type: none"> SR 22-23 SR 69-77 SR 24-25 SR 36-39 SR 44-46 SR 54-55 SR 29-32, 45, 48-50

Stakeholder Group	Key Concerns & Expectations	Engagement Approach	Example of Outcomes	Key Response	Page
7. Mass Media 	<ul style="list-style-type: none"> Become a large corporation model that focuses on conducting business according to sustainable development framework in three aspects, economic, social, and environment And do it thoughtfully and continuously, achieving clearly tangible and intangible outcomes 	<ul style="list-style-type: none"> Disseminate business information in various aspects regularly, such as business performance and business press conference Organize media visits or social activities occasionally Support the media activities that are beneficial to society and align with SCGP's business principle when reasonable Have media dialogue to receive suggestions, opinions, or improvements to develop and design communication activities to match the needs and benefits of people who receive information 	<ul style="list-style-type: none"> Communicate corporate news through in-depth media interviews and an online survey (empathize media) to provide news content –preparation responding to different media needs Create an online communication channel to disseminate correct, complete, and up-to-date information, including facilitating the media Build engagement and good relationships with the mass media 	<ul style="list-style-type: none"> Sustainability Report 2024 	
8. Civil Society/ Academics/ Thought Leaders 	<ul style="list-style-type: none"> Become a model and mentor of other small and medium enterprises for sharing lesson learned and best practices on sustainability Join forces with large corporations to make significant changes for sustainability Cooperate with government agencies and present practical guidelines for Sustainability 	<ul style="list-style-type: none"> Listen to opinions and suggestions from civil society, academics, and thought leaders to develop business operations Cooperate in projects promoting social sustainability Build engagement and share good practices for civil society/ academics/thought leaders to apply Provide information on the business operations through articles, media, meetings, exhibitions, academic work, and seminars 	<ul style="list-style-type: none"> Make complete and transparent information disclosure Listen to comments and suggestions from civil society Seek opportunities to build partnerships to drive and drive issues related to sustainability Raise awareness and build understanding on sustainable development issues for the society Utilize knowledge from experts to support collaborative projects 	<ul style="list-style-type: none"> ESG Highlight Performance Risks and Opportunities in ESG ESG Metrics and Targets Collaborative Network Aspiring Towards Sustainability SCGP is committed to Net Zero Circular Economy Across Supply Chain Biodiversity and Ecosystems Water Management Community Engagement and Development 	<ul style="list-style-type: none"> SR 22-23 SR 69-77 SR 24-25 SR 26-27 SR 18-20, 33-35, 78-79 SR 36-39 SR 40-42 SR 44-46 SR 54-55

Stakeholder Group	Key Concerns & Expectations	Engagement Approach	Example of Outcomes	Key Response	Page
<p>9. Competitors/ Business Associates</p> 	<ul style="list-style-type: none"> • Conduct Business under the framework of fair competition, with business ethics and transparency • Do not take advantage of competitors by unlawful means • Do not damage the reputation of competitors by making malicious accusations • Do not seek any trade secret information through dishonest or inappropriate means • Do not conduct any action that fringes the intellectual property of competitors • Support and promote free trade 	<ul style="list-style-type: none"> • Contribute as a committee or working group along with central organizations such as the Federation of Thai Industries or other associations • Hold seminars to share knowledge on new trends that may affect business operations • Pay a visit to build relationships for exchanging ideas and listening to suggestions for improvements 	<ul style="list-style-type: none"> • Conduct the business under the framework of fair competition and related laws • Disclose essential and necessary information on SCGP's operating performances • Conduct business with transparency and accountability • Listen to comments/ suggestions to develop the business operation • Identify opportunities to build cooperation for pushing business-related issues to the consideration of the government sector 	<ul style="list-style-type: none"> • Sustainability Report 2024 	



Corporate Governance



SCGP is committed to conducting its businesses in an efficient, transparent, accountable, and fair manner. Thus, the company promotes a governance culture aimed at building activities trust among all stakeholders with a strong focus on the SCGP Code of Conduct and the Anti-Corruption Policy. Additionally, SCGP prioritizes collaboration with suppliers to ensure compliance with its sustainable governance practices.

Targets	Performance in 2024
Corporate Governance <ul style="list-style-type: none"> Zero violations of the Anti-Corruption Policy 100% of employees learn and complete Ethics e-Testing 	<p>0 violation 100%</p>
Information Technology Security and Cybersecurity <ul style="list-style-type: none"> Information systems operate continuously at no less than 99.5% availability or no more than 1.83 days of shutdown per year No complaints on customer data breach 	<p>99.5% 0 complaint</p>
Sustainable Value Towards Suppliers <ul style="list-style-type: none"> 100% of suppliers in procurement value committed to comply with the SCGP Supplier Code of Conduct 100% of suppliers in procurement value passed the annual Environmental, Social, and Governance (ESG) risk assessment 100% of operation contractors are certified by SCG Contractor Safety Certification System (SCS) 100% of transportation contractors certified as main logistics partners 	<p>100% 100% 95.5% 100%</p>
Sustainable Products and Services <ul style="list-style-type: none"> Sales revenue from SCG Green Choice products, services, and solutions \geq 66.7% of the total sales revenue by 2030 Sales revenue from SCG Green Choice products, services, and solutions that provide direct benefits to customers \geq 33.3% of the total sales revenue by 2030 100% of SCGP's subsidiaries must comply with the requirements of REACH Regulation (Annex XVII and Substances of Very High Concern (SVHC) for Authorization) No complaints on non-compliance with laws and product safety 	<p>59% 2% 100% 0 case</p>

Corporate Governance

Strategies

- Communicate with and support employees and suppliers to ensure understanding, awareness and stringent compliance with SCGP's corporate governance, the SCGP Code of Conduct, and the SCG Supplier Code of Conduct.
- Assess and monitor risks related to anti-corruption through a preventative system, that includes ethics testing, risk management, three levels of internal control by the unit, and an accessible complaint system for stakeholders.

Ethics Education and Testing for Employees

SCGP has implemented Ethics e-Testing for 10 consecutive years, achieving a 100% participation rate among all Thai employees who study and pass the annual Ethics test. The aim of Ethics e-Testing is to ensure employees' understanding of and compliance with the SCGP Code of Conduct. In 2024, the company expanded Ethics e-Testing to include overseas employees in selected countries. Additionally, the SCGP Code of Conduct is now available in Indonesian and Vietnamese to support SCGP's overseas business expansion.

Whistleblowing

SCGP has established a whistleblowing system that is accessible to both employees and external individuals for reporting misconduct. In 2024, SCGP received 12 complaints, which were categorized as follows:

Complaints	Total Number of Complaints			
	2021	2022	2023	2024
Total Complaints ⁽¹⁾	8	6	15	12
Carried-Forward Complaints from the Previous Year	0	1	2	5
Investigated and Completed Complaints	7	5	12	10
Complaints Under Investigation	1	2	5	7
Classification of Complaints				
1. Unethical or Improper Conduct	1	0	0	0
1.1 Conflict of interest ⁽²⁾	0	0	0	1
1.2 Corruption	0	0	0	0
1.3 Violation of Human Rights	0	0	0	0
1.3.1 Sexual Harassment	0	0	1	0
1.3.2 Non-Sexual Harassment	0	0	0	0
1.3.3 Discrimination	0	0	0	0
1.4 Antitrust	0	0	0	0
1.5 Personal Data Protection	0	0	0	0
1.6 Use of Insider Information	0	0	0	0
1.7 Others	0	0	0	0
2. Non-compliance with Company Regulations	2	1	4	5
3. Unsubstantiated Complaints	4	4	5	4

Remarks

⁽¹⁾ There was no public legal case during 2020-2024.

⁽²⁾ This is inclusive of Conflict of Interest with business partners.

Information Technology Security and Cybersecurity

Data Security and Cybersecurity in 2024

SCGP has continuously enhanced its cybersecurity action plan to support data security management and personal data protection requirements, demonstrating its capabilities to mitigate evolving cyber threats.

Strategies

- Integrate information and cybersecurity risks into the organization's overall risk management, continuously adjusting operational strategies to promptly and effectively address emerging cyber threats.
- Establish IT security management processes that align with information technology security policies.
- Enhance employee awareness and understanding at all levels through training, ensuring appropriate responses to cyber threats.
- Assess the business partners to ensure compliance with required security standards.

Training and Testing of Cyberthreat Response Plans in 2024

SCGP has completed its e-Policy testing, conducting emergency response drills that simulate phishing attacks and other forms of cyberattacks. The company has also organized cybersecurity training and testing to ensure readiness and resilience against potential cyber threats.

Certifications

• ISO/IEC 27001 Certification

SCGP continuously improved its Information Security Management System and has been certified in accordance with ISO/IEC 27001:2022 (the latest version), a globally recognized information security management standard from the British Standards Institution (BSI).

Sustainable Value Towards Suppliers

Recognizing the significant impact of climate change, SCGP is committed to managing and reducing greenhouse gas (GHG) emissions; fostering robust relationships with business partners and stakeholders to establish a sustainable supply chain; collaborating with suppliers to reduce Scope 3 GHG emission; and promoting both economic growth and environmental stewardship.

Strategies

- Select and assess potential suppliers based on their commitment to sustainable operations.
- Evaluate risks and categorize suppliers to devise strategies and plan business development in alignment with associated ESG risks.
- Conduct assessments to ensure that suppliers meet established compliance requirements.
- Develop and enhance suppliers capabilities towards sustainability.
- Raise awareness and build employees' skills in efficient procurement and purchasing practices.



Transitioned to EV forklifts, Siam Kraft Industry Co., Ltd.

Sustainability Management

1. Compliance with Sustainability Requirements

SCGP is resolute in ensuring all that suppliers adhere to the Supplier Code of Conduct. To provide assurance to all stakeholder groups, the company continuously raise awareness among employees at all levels, both in Thailand and abroad, so they understand and comply with ethics standards, the SCGP Code of Conduct and the Anti-Corruption Policy. Furthermore, SCGP encourages its suppliers to promote corporate governance in alignment with its policy.

In its commitment to respecting human rights, SCGP has implemented a Diversity Management Policy. The company has educated its suppliers about workplace diversity and encouraged them to uphold practices of equality and inclusion in their operations. A total of 19 suppliers have actively participated in the company's initiatives in this area.

Additionally, SCGP motivated its local suppliers to enhance their operational efficiency. Specifically, regarding to diversity, the company has advocated for the hiring of women and persons with disabilities among suppliers in contract work and service group. As a result, the number of female and disabled workers has increased by 630.

2. Collaborative Push toward a Low Carbon Society

SCGP emphasizes the importance of collaborations with suppliers who are dedicated to sustainability. The company actively communicates and shares information regarding GHG emissions and strategic plans with its suppliers. Carbon Footprint of Product (CFP) and Carbon Footprint for Organization (CFO) are considered for the calculation of SCGP's GHG Scope 3 emissions. This also provides assurances that suppliers' operations align with SCGP's sustainability targets.

• Transition to Electric Vehicles (EV)

In partnership with its suppliers, 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.

• Collaborations on GHG Emission Reduction

- SCGP hosted the Sustainable Synergy for Decarbonization forum to foster collaborations among manufacturers, SMEs, and financial institutions within the packaging industry's value chain. This forum provided platform for participants to exchange insights, tackle challenges and establish operational guidelines on GHG emission reduction and sustainable practices based on ESG principles. Attracting an applicable, Sustainable Synergy for Decarbonization, sought to create learning environment, enhance competitiveness, and reinforce commitments to sustainability. Two key suppliers Wise Logistics Public Company Limited and Chok Yuen Yong Industry Company Limited have taken significant strides in decarbonization:

Wise Logistics Public Company Limited has developed new transportation routes to deploy low sulfur-fueled boats and has begun the installation of solar cells to power operations and EVs.

Chok Yuen Yong Industry Company Limited, which specializing in tapioca production has efficiently recycled its wastewater to produce biogas generating electricity for its plant. Moreover, the company has installed a 5 MW solar farm, which contribute to 20% of its total electricity consumption. Chok Yuen Yong aims to transition to 100% renewable energy for its operations and plan to invest in systems that will enhance its biogas production capacity as well as to implement floating solar cells.

- SCG hosted the ESG Symposium 2024 on September 30, 2024 at the Queen Sirikit's National Convention Center inviting its major suppliers to CEO Forum, a key session of the event. The invitations were intended to foster discussions on recommendations and collaboration guidelines for transforming Thailand into a low carbon society.
- SCGP is committed to reducing GHG emissions in collaboration with its suppliers. The company has categorized its suppliers into three groups: Strategic Suppliers, High-Impact Suppliers and Transactional Suppliers, based on their GHG emission and readiness to reduce GHG. SCGP concentrated on operations involving high-carbon products, specifically pulp and tapioca starch, identifying 12 strategic suppliers within the category. The suppliers have already begun their journey towards decarbonization, and SCGP primarily requests Carbon Footprint of Products

(CFP) data to calculate the Emission Factor pertinent to its product and operations. Together, SCGP and these strategic suppliers are committed to achieving GHG emission reductions.

In the high-impact suppliers category, there are 11 suppliers who intend to develop a GHG Scope 3 plan but currently have limited knowledge. Recognizing this road, SCGP aims to educate them on climate change and GHG emission reduction within the supply chain by providing essential information and guidelines. This information, sharing not only strengthens SCGP's relationships with but also collaboration to mitigate climate-change impacts.

- Capability Building:** SCGP is committed to enhancing the capabilities of its suppliers, particularly local one. SCGP encourage by these suppliers formulate their own development plans and support them through training and knowledge sharing initiatives. Additionally, SCGP recognize and reward suppliers for maintaining safe practices.

3. Employee Training

- SCGP builds awareness of sustainable procurement and GHG management among procurement staff, empowering them to play a crucial role in driving SCGP's strategies to continuously improve procurement efficiency. All procurement staff must undergo annual training on the Procurement Framework and GHG Scope 3.
- SCGP conducts refresher training in GHG for 112 procurement employees to enhance their understanding of climate change management and carbon footprint of products.
- In alignment with the Ministry of Industry's Announcement on the Management of Waste or Unused Materials BE 2566 (2023), which came into effect in November 2023, SCGP organized a training session for relevant suppliers on 25 June 2024 to assist them in achieving compliance. A total of 29 waste management service providers attended this training session.



A training session on industrial waste regulations and management best practices was organized by SCGP, June 2024.

Sustainable Products and Services

SCGP is committed to meeting consumer needs by developing eco-friendly products, services, and solutions, and by reducing greenhouse gas emissions through comprehensive life cycle impact assessments. To achieve these objectives, the company has established the following goals:

- **Increasing Sustainable Packaging Innovations:** SCGP aims to introduce more sustainable products and services, focusing on recyclable, reusable, or compostable packaging that adheres to Circular Economy principles.
- **Continuous Research and Development (R&D) for Sustainable Packaging:** SCGP consistently invests in environmentally friendly packaging innovations to support its goal of becoming a leader in sustainable packaging solutions.

Strategies

- **Promote innovative approaches:** SCGP emphasizes the development of products, services, and solutions that align with consumer needs, enhance well-being, and address climate change, as well as environmental and health impacts. Utilizing circular economy principles, the company seeks to create business opportunities while prioritizing sustainability.
- **Evaluate environmental impact and safety:** The company considers environmental impact and safety products, services, and solutions throughout their life cycle and promoting certified and green-labeled products aligned with sustainability guidelines.
- **Foster Business Process Development:** SCGP is dedicated to advancing business processes across the value chain to international standards, thereby raising awareness among stakeholders about the use of environmentally friendly products use.

- In collaboration with Jorakay Corporation Company Limited, SCGP launched “Jorakay Green Pack” an innovative eco-friendly tile adhesive packaging. This packaging is produced from recycled extensible kraft paper, with 70% of its content made of recycled materials. The thickness of the Polyethylene (PE) has been reduced by over 60% resulting in a reduction of lowering carbon emissions during the production process by up to 49%.
- **Eco-fiber in glassine paper:** Glassine paper plays a critical role in the packaging industry, primarily serving as backing paper for stickers. Its key characteristics include smoothness, glossiness, transparency, suitability for silicone coating, ease of peel-off, strength, moisture resistance, cleanliness, and prevention of barcode reading errors. Traditionally, the production of glassine paper relies solely on virgin pulp. However, SCGP has successfully researched and developed a method to incorporate eco-fiber pulp at a 10% ratio, significantly enhancing the sustainability of this product.



Eco-fiber in glassine paper.

- “Clixpak” is an innovative beverage can packaging solution designed for easy handling with one hand. Made from recycled paper, this strong multi-unit holder not only features aesthetically pleasing printed patterns but is also fully recyclable after use. Leveraging SCGP’s expertise in paper manufacturing and packaging design, Clixpak is sturdily constructed to withstand weight, even though it is made from just a single sheet of paper.



‘Clixpak’ is a recyclable and sustainable can packaging solution.



- Prepack Thailand Co., Ltd. has developed “Paper Ready Pack” from heat-sealable paper materials. That are 100% recyclable and compostable. This eco-friendly packaging solution utilizes innovative technology, such as the VOC-free EB Offset Printing System, which aids in reducing carbon emissions while ensuring high-quality printing output.



Paper Ready Pack – Heat-sealable paper packaging.

Certified Green Products, Services, and Solutions in 2024



97

products with a Carbon Footprint of Circular Economy Products Label



161

products with a Carbon Footprint of Product Label



38

products with a Carbon Footprint Reduction Label



80

products with the Green Choice Label



19

products with the Green Label, Type 1 Environmental Label



5

products with Circular Mark

Promoting Carbon Footprint of Product (CFP) Registration

The Carbon Footprint of Product (CFP) reflects SCGP’s sustainability efforts, by estimating carbon emission throughout the life cycle of its products and services. This metric enables SCGP to effectively manage GHG emissions in alignment with environmental standards.

Currently, 161 of SCGP’s products have received Carbon Footprint of Products (CFP) certifications from the Thailand Greenhouse Gas Management Organization (Public Organization) or TGO. Each certified product displays its GHG emission data, categorized as follows:



- Number of products certified using the Cradle-to-Grave method such as copy paper and food grade packaging (Fest): **19**



- Number of products certified using the Cradle-to-Gate method including pulp and paper, paper packaging and performance packaging (both rigid and flexible): **126**



- Number of certified production, printing and molding processes covering all groups of fiber-based packaging products: **16**



SCGP-issued Private Declaration Label certifying the carbon footprint of products.

SCGP is committed to disclosing the carbon footprint of 100% of its fiber-based products by 2025.

This initiative will enable SCGP customers to easily incorporate CFP into their total GHG emissions calculations. Moreover, 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. Through these initiatives, SCGP is reinforcing its commitment to sustainability and empowering its customers to make informed decisions that contribute to a low carbon society.

STRATEGY & RISK MANAGEMENT

Strategy

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- Sustainability-related Risks and Opportunities, SROs
- Physical Risks
- Transition Risks
- Opportunities

Strategies for Managing

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Sustainability-related Risks and Opportunities

- Sustainability-related Risks
- Sustainability-related Opportunities

SCGP Encourages Businesses in Packaging

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Value Chain to Transform for Greenhouse Gas Reduction



Strategy

This Sustainability Report 2024, a voluntary report by SCGP, presents additional data disclosures under financial reporting frameworks related to risks and opportunities. The frameworks are based on the International Financial Reporting Standards (IFRS), which include two international disclosure standards related to sustainability as follows:

IFRS S1: General Requirements for Disclosure of Sustainability-related Financial Information; and

IFRS S2: Climate-related Disclosure

IFRS S1 and IFRS S2 cover four key topics:

1. Governance
2. Strategy
3. Risk Management
4. Metrics and Targets

IFRS S1 and **IFRS S2** are crucial tools that help listed companies, investors, investment analysts, and entrepreneurs better understand the guidelines for disclosing financial information on sustainability-related risks and opportunities as well as climate change-related risks and opportunities. The greater understanding paves the way for SCGP's sustainable growth and drives its investments in low-carbon businesses, which support the company's pursuit of achieving the Net Zero goal by 2050.

Sustainability-related Risks and Opportunities, SROs

SCGP identified and assessed material risks in 2024 based on risk management framework, which covered strategic risks, operational risks, financial risks, compliance risks related to sustainability rules and regulations, as well as emerging risks that may affect the company's goals and strategies, as well as investments of securities holders. SCGP has drawn up and implemented its risk management plans. Results were as follows:

1. Strategic Risks

- Global packaging demand softness risks
- Merger and Partnership (M&P) integration risks
- Risks from environmental pollution and transition to circular economy
- Talent development for expansion risks

2. Operational Risks

- Health and safety risks
- Cyber security risks
- Risks from cost management in supply chains
- Human rights risks
- Risks of climate change posed by greenhouse gas emission
- Risks from flood and drought

3. Financial Risks

- Interest rate risks
- Exchange rate risks

4. Compliance Risks

- Risks from licenses and intellectual properties expiration

5. Emerging Risks

- Risk from geopolitical conflicts
- Risk from global supply chain's change, which leads to intensifying competition in the region

6. Investment Risks Associated Shareholders Investments

- Risks from the shareholding proportion of the major shareholder of more than 50%

SCGP has prescribed the management of sustainability-related risks and opportunities, including those related to climate change-related risks and opportunities, and has integrated it into its overall corporate strategy for the purpose of driving its transformation into a sustainability leader. Preparations have been made for risk prevention and resilience to ensure SCGP's risks are kept at an acceptable level as well as to provide confidence to stakeholders.

SCGP has identified and assessed physical risks, transition risks, opportunities, and its adaptation and mitigation plan on a regularly basis, at least once a year, as well as in response to significant changes.






Types of Risks and Opportunities

- 1. Physical Risks:** They can be divided into two types namely acute risk and chronic risk.
- 2. Transition Risks:** They can be divided into four types namely policy & regulations risk, technology risk, market risk, and reputation risk.
- 3. Opportunities:** They can be divided into five types namely resource efficiency opportunities, energy source opportunities, products and services opportunities, market opportunities, and resilience opportunities.

Time Horizon: It is categorized into three types: 2024-2025 (Short-Term, 1-2 years), 2030 (Medium-Term, 3-5 years), and 2050 (Long-Term, more than 5 years).







Financial Impacts: It has four types: assets and liabilities; operating expense and R&D; capital expenditure; and revenue.

Physical Risks

























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







Transition Risks

Risk Type	Risk Description	Time Horizon	Business	Potential Financial Impacts	Financial Impacts
Policy & Regulations 	Strict carbon tax and regulatory compliance	 	Integrated Packaging Business and Fibrous Business	<ul style="list-style-type: none"> 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
Policy & Regulations 	Regulatory and forestry-permit challenges		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
Market 	Higher raw material costs from plantation-space limitations		Integrated Packaging Business and Fibrous Business	Capital expenditure over short term, and over long term for plantation space expansion	Capital expenditure
Policy & Regulations 	Regulatory restrictions on single-use plastics		Integrated Packaging Business	Operating expense for R&D and preparations for Extended Producer Responsibility (EPR)	Operating expense
Policy & Regulations 	Water pollution management: Strict compliance with water discharge regulations		Integrated Packaging Business and Fibrous Business	Capital expenditure in the short term for wastewater treatment system enhancement	Capital expenditure

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

Sustainability-related Opportunities

Risk Type	Risk Description	Time Horizon	Business	Potential Financial Impacts	Financial Impacts
Market 	Demand for low-carbon and recyclable products		Integrated Packaging Business	Capital expenditure in the short term, with revenue from sustainable products in the long term	Capital expenditure and revenue 
Energy Source 	Energy efficiency		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 
Energy Source 	Transition to renewable energy		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 
Resource Efficiency 	Advanced water recycling system		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 
Resilience 	Forestation partnerships and conservation for biodiversity protection		Fibrous Business	Operating expense in the short term to enhance biodiversity	Operating expense 
Resilience 	Sustainable plantation wood sourcing		Fibrous Business	Capital expenditure in the short term to ensure continuous wood sourcing from sustainable plantations.	Capital expenditure 
Resource Efficiency 	Investing in recycling systems for more efficient segregation		Recycling business	Capital expenditure in the short term to enhance segregation efficiency in support of circular economy	Capital expenditure 
Products and Services 	Innovative bio-based plastics as alternative to fossil-based plastics		Integrated Packaging Business	Capital expenditure in the short term to enhance reputation and strengthen differentiation, leading to revenue generation.	Capital expenditure and revenue 

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

Physical Risks

1. Supply Chain Affected by Floods



Floods affect transportation systems as well as procurement readiness, decreasing operational efficiency, causing production delays, and increasing both raw material and logistics costs. Floods may even lead to temporary factory shutdowns, directly affecting revenue and business continuity.

2. Production Affected by Water Shortage



Intensifying competition for water resources due to water scarcity impacts production capacity. In the Integrated Packaging Business and Fibrous Business, water is a critical production resource. Restrictions on water usage may limit production volumes or even halt operations. Long-term water shortages can significantly affect both production costs and profitability, with higher risks in areas already prone to water scarcity. Therefore, proactive water management is crucial to ensuring operational continuity.

Transition Risks

1. Strict Carbon Tax and Regulatory Compliance



Governments in many countries are considering increasing carbon taxes and enforcing stricter regulations to reduce greenhouse gas emissions. Compliance with these policies increases operational costs, particularly in industries with high-emission production processes. In response, the company adjusts its strategies to reduce emissions and modify production processes. Failure to comply may result in higher costs and reduced competitiveness. These regulatory changes drive investments in renewable energy and low-carbon technologies.

2. Regulatory and Forestry-permit Challenges



Stricter new forest conservation laws make it more complicated and time-consuming to obtain permits for sourcing forest resources. The company has prepared to address these challenges by improving its permit application process, making it faster and fully in line with the new regulatory requirements. For example, the enhanced process increases the efficiency of coordination with relevant authorities. It also integrates a digital permit tracking system to lower the risk of delays as well as to maintain production efficiency. In preparation for new regulations such as the EU Deforestation Regulation (EUDR) in Europe, the company has conducted thorough supply chain audits and developed sustainable sourcing processes. Additionally, the company has established a team of experts to study and prepare for potential future legal requirements. Also, the company has invested in technologies that ensure transparency in the production process, such as a raw material traceability system.

3. Higher Raw Material Costs from Plantation-space Limitations



The growing population has pushed up demand for land for housing, as well as changes in land use, such as converting agricultural areas into industrial zones or urban towns. Therefore, spaces for plantations have reduced and the cost of raw materials has risen. The company faces higher operational costs, as a result of rising raw material prices, and challenges from supply chain disruptions and fluctuations in production.

4. Regulatory Restrictions on Single-use Plastics



Regulators are now formulating measures to ban or impose high tax rates on single-use plastics with the aim to reduce environmental impacts. The company must develop new products in response to these measures, thus shouldering higher R&D and operational costs. Any enterprise failing to adapt to regulatory changes risk facing punishments, fines, or loss of customers. These regulatory changes underline the need to develop recyclable packaging. Rapid adaptation and compliance with the new regulations will provide the company with a competitive edge.

5. Water Pollution Management: Strict Compliance with Water Discharge Regulations



Strict compliance with wastewater discharge regulations is crucial for the company to avoid fines and reputational damage. Since untreated water discharge can harm local ecosystems and hurt its relationships with the community, the company has invested in advanced wastewater treatment system to mitigate this risk. Effective water management also strengthens stakeholder trust.



Opportunities

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

Strategies for Managing Sustainability-related Risks and Opportunities

SCGP integrates its Sustainability-related Risks and Opportunities Management Strategy into its core strategies to drive organizational-wide efforts towards its goal of becoming a sustainability leader. Implementations are made based on Inclusive Green Growth principles. SCGP has identified the following as sustainability-related risks:

Sustainability-related Risks

1. Supply Chain Affected by Floods

Type: Acute physical risk 

Time Horizon: Medium term 

Potential Impacts


- **High GHG Emission Scenario:** Floods disrupt supply chain and push up logistics costs.
- **Net Zero Scenario:** The frequency of floods may reduce thanks to climate action, although the risk remains.



Financial Impact  Impact on revenue due to supply-chain disruption by 2030.

Mitigation Strategy

- Invest in relevant infrastructure such as systems for flood prevention and water recycling.
- Expand supply chain to reduce region-based risks.


2. Production Affected by Water Shortage

Type: Chronic physical risk 

Time Horizon: Short and long term  

Potential Impacts

- **High GHG Emission Scenario:** Severe water shortage affects production especially in water-scarce areas.
- **Net Zero Scenario:** Better response with the help of advanced water management system.

Financial Impacts  Capital expenditure by 2024 and in 2025, with impact on revenue by 2030.

Mitigation Strategy

- Recycling wastewater, after treatment, to reduce water withdrawal from natural sources.
- Conducting area-based water risk assessments in collaboration with stakeholders and relevant authorities.





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

Net Zero Scenario refers to a situation with zero greenhouse gas emissions.

Announced Pledges Scenario refers to a situation with GHG emission pledges.


3. Strict Carbon Tax and Regulatory Compliance

Type: Policy & regulations risk 

Time Horizon: Medium and long term  

Potential Impacts

- **Announced Pledges Scenario (APS):** Thailand's carbon tax rate may be 3 USD/ton carbon dioxide (2025-2027) and 18 USD/ton carbon dioxide (2028-2030).
- **Net Zero Emission Scenario (NZE):** Carbon tax rate may rise to 18 USD/ton carbon dioxide (2025-2027) and 45 USD/ton carbon dioxide (2028-2030).

Financial Impacts  Announced Pledges Scenario (APS): revenue impact in 2025 and in 2030 / Net Zero Emission Scenario (NZE): revenue impact in 2025 and revenue impact in 2030.

Mitigation Strategy

- Implementing internal carbon pricing system and investing in renewable energy.


4. Regulatory and Forestry-permit Challenges

Type: Policy & regulations risk 

Time Horizon: Long term 

Potential Impacts

- **Current Situation:** Strict regulations cause raw-material procurement delays and push up costs.
- **EU Deforestation Regulation (EUDR):** Preparations for the new regulation.


Financial Impacts  Possible revenue loss by 2030: If permits are granted two months later than planned scheduled, SCGP may lose selling opportunities. If SCGP's products fail to comply with EU Deforestation Regulation (EUDR), the company will have to shoulder the direct lost export revenue by 2030.

Mitigation Strategy

- Fostering collaborations with regulators and embracing sustainable forest practices.
- Creating an effective traceability system under the EU Deforestation Regulation (EUDR) to ensure the effective tracking and compliance with deforestation-related regulations, an assurance of adherence to and the promotion of sustainable practices throughout the supply chain.


5. Higher Raw Material Costs from Plantation-space Limitations

Type: Market type 

Time Horizon: Short term 

Potential Impacts

- **Current Situation:** The cost of raw materials increases moderately due to market adjustments. If there are no policies for land concessions, the currently available land will be insufficient to meet future demand.

Financial Impacts  Short-term capital expenditure, and long-term capital expenditure for the expansion of plantation spaces.

Mitigation Strategy

- Designing resource-efficient packaging.
- Diversifying raw material sources for security.

6. Regulatory Restrictions on Single-use Plastics

Type: Policy & regulations risk 

Time Horizon: Long term 

Potential Impacts

- **Current Situation:** The urgent push for the ban on single-use plastics pushes up regulatory compliance costs.

Financial Impacts  R&D expenditure by 2023.

Mitigation Strategy: Increasing Research and Development (R&D) for alternative packaging, and joining Extended Producer Responsibility (EPR) program.


7. Water Pollution Management: Strict Compliance with Water Discharge Regulations

Type: Policy & regulations risk 

Time Horizon: Short term 

Potential Impacts

- **Current situation:** Strict compliance will reduce the amount of fines and damage to reputation.

Financial Impacts  Capital expenditure for the improvement of wastewater treatment system efficiency over short term.

Mitigation Strategy: Improving wastewater treatment system efficiency.

Net Zero Scenario refers to a situation with zero greenhouse gas emissions.

Announced Pledges Scenario refers to a situation with GHG emission pledges.

Sustainability-related Opportunities

8. Demand for Low-carbon and Recyclable Products

Type: Market opportunity 🌐

Time Horizon: Short and long term Ⓢ Ⓛ

Potential Impacts

- Demand for eco-friendly products rises significantly.

Financial Impacts Ⓛ Capital expenditure in the short term, with revenue from sustainable products in the long term.

Mitigation Strategy

- Investing in the development of low-carbon and recyclable products.
- Allocating resources to R&D.

9. Energy Efficiency

Type: Energy Efficiency opportunity ⚡

Time Horizon: Short term Ⓢ

Potential Impacts

- **Net Zero Scenario:** The industry's higher efficiency helps lower emissions of pollutants as well as costs.

Financial Impacts Ⓜ Capital expenditure in the short term, leading to cost reductions through improved efficiency.

Mitigation Strategy

- Increasing energy efficiency and appropriately improving processes to reduce both greenhouse gas emissions and operational costs.

10. Transition to Renewable Energy

Type: Energy source opportunity ⚡

Time horizon: Short term Ⓢ

Potential Impacts

- **Net Zero Scenario:** Widespread use of renewable energy such as solar and biomass energy

Financial Impacts Ⓜ Capital expenditure in the short term, leading to cost reductions through investments in renewable energy.

Mitigation Strategy: Investing in renewable-energy infrastructure, such as solar and biomass energy systems, to lower costs and environmental impacts in the long run.

11. Advanced Water Recycling

Type: Resource efficiency 🌐

Time Horizon: Short and medium term Ⓢ Ⓜ

Potential Impacts

- Water recycling saves water.

Financial Impacts Ⓢ Capital expenditure in the short term and long term, leading to cost reductions through water usage reduction.

Mitigation Strategy

- Installing water-recycling systems.




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

Net Zero Scenario refers to a situation with zero greenhouse gas emissions.

Announced Pledges Scenario refers to a situation with GHG emission pledges.

12. Forestation Partnerships and Conservation for Biodiversity Protection

Type: Resilience 

Time Horizon: Long term 

Potential Impacts


- Fostering stable ecosystem.

Financial Impacts  Operating expense in the short term to enhance biodiversity.

Mitigation Strategy

- Implementing conservation projects for long-term biodiversity and ecological security in the Khao Cha-ang Conserved Forest, Kanchanaburi, the Ban Huai Saphan Samakkee Community Forest, Kanchanaburi, and the Kamphaeng Phet Conserved Forest in Kamphaeng Phet.

13. Sustainable Plantation Wood Sourcing

Type: Resilience opportunity 

Time Horizon: Short and medium term 

Potential Impacts

- Increased access to certified wood strengthens supply chain stability.


Financial Impacts  Capital expenditure in the short term to ensure continuous wood sourcing from sustainable plantations.

Mitigation Strategy

- Adopting sustainable forestry practices.


14. Investing in Recycling Systems for more Efficient Segregation

Type: Resource Efficiency opportunity 

Time Horizon: Short term 

Potential Impacts

- Use of circular materials reduces the costs of raw materials.

Financial Impacts  Capital expenditure in the short term to enhance segregation efficiency in support of circular economy.

Mitigation Strategy

- Expanding recycling projects and increasing circular economy infrastructure.


15. Innovative Bio-based Plastics as Alternative to Fossil-based Plastics

Type: Products and Services opportunity 

Time Horizon: Short term 

Potential Impacts

- Products made of bio-based materials increase competitiveness.

Financial Impacts  Capital expenditure in the short term to enhance reputation and strengthen differentiation, leading to revenue generation.

Mitigation Strategy

- Investing in Bio-based Plastics packaging and presenting it as alternative to Fossil-based Plastics.



Net Zero Scenario refers to a situation with zero greenhouse gas emissions.

Announced Pledges Scenario refers to a situation with GHG emission pledges.

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



SCGP organized the sustainable synergy for decarbonization seminar, August 2024.

ESG Symposium 2024: Inspiring Collaborations towards Net Zero Goal

SCG Packaging Public Company Limited (SCGP), the sustainable packaging leader, organized Sustainable Synergy for Decarbonization seminar on 21 August 2024 at the Eastin Grand Hotel Phayathai. 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.

Speakers at the seminar were: Mr. Wichan Jitpukdee, CEO of SCGP; Mr. Yuttana Jiamtragan, chairman of the Circular Economy and Environment Steering Committee of the Thai Chamber of Commerce and the Board of Trade of Thailand; Mr. Rongphet Bunchuaidee, deputy executive director of the Thailand Greenhouse Gas Management Organization (Public Organization); Mr. Suttipong Limsila, head of corporate strategy of Kao Industrial (Thailand) Company Limited; Mr. Saichon Anukol, plant and biogas manager of Chok Yuen Yong Industry Company Limited; Mr. Thanee Mekintarakul, business director of WICE Logistics Public Company Limited; and Mr. Chandee Sirichoom head of sales, supply chain and factoring, Bank of Ayudhya Public Company Limited.

The seminar focused on fostering collaboration throughout SCGP's value chain. Its forums therefore were divided into two main sessions. The first session emphasized business adaptation to global carbon reduction targets, particularly the European Union's Carbon Border Adjustment Mechanism (CBAM). The speakers highlighted the importance of preparedness, incentivization, and government support needed encourage private sector investments in Environmental, Social, and Governance (ESG) initiatives.

The second session 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.

Challenges and Opportunities: Transition to Sustainability

Rapid changes in the global business landscape and increasing pressures from technology and environmental concerns are becoming more significant. Businesses must adapt to maintain their competitiveness, particularly in complying with new environmental regulations worldwide.

The 2015 Paris Agreement set a target for net-zero greenhouse gas emissions to limit global temperature rise to no more than 1.5 degrees Celsius. Achieving this goal requires cooperation from all sectors, ranging from carbon reduction, and carbon neutrality, to ultimately net-zero emissions. Government policies related to this goal must consider both suitability and feasibility, incorporating opinions from affected stakeholders.

The panelists highlighted several key challenges, such as the complexity of calculating Carbon Footprints of Products (CFP) and Carbon Footprint of Organization (CFO), the need for personnel development, and concerns about increased operational costs in the initial phase. However, participants also saw opportunities for innovation development, technology adoption, and collaboration to reduce long-term costs and enhance competitiveness. Financial institutions, meanwhile, noticed opportunities in providing services and green loans to businesses seeking to invest in carbon reduction initiatives.

Fostering Collaboration Towards Net Zero Goal

This is a global challenge that requires collaboration from all sectors, including governments, businesses, financial institutions, and the general public, to ensure effective and sustainable progress. It starts with raising awareness and understanding of the impacts of climate change to foster a sense of urgency and sincere commitment to adopting environmentally friendly behaviors. Businesses must integrate sustainability into their strategies, develop low-carbon products, expand green markets, and create tangible benefits for consumers. Financial institutions should also support sustainable projects by providing funding for long-term environmentally friendly initiatives. This collective effort will help reduce greenhouse gas emissions systematically and sustainably.

SCGP, on its part, has planned to systematically reduce greenhouse gas emissions. Guided by the plan, it focuses on reducing Scope 1, 2, and 3 emissions, renewable-energy usage, AI adoption for enhanced production efficiency, development of environmentally friendly products, as well as collaborations with customers,

contractors, and other stakeholders across the business chain, including financial institutions, to drive, promote, and implement GHG emission reduction measures. Such approaches will also ultimately contribute to the country's competitiveness.

The Future of Sustainability: Collaborating for a Better World

The ESG Symposium 2024 marks a significant step in fostering collaboration and raising awareness about the importance of reducing greenhouse gas emissions. SCGP is determined to lead the creation of a sustainable value chain and partner with all sectors to build a sustainable future for everyone. Therefore, the company has compiled a White Paper for the year 2024 for submission to the prime minister. Titled **"Enterprises' Challenge of Managing Greenhouse Gas Emissions,"** this report is an updated version of the company's 2023 proposal. Key issues in the report include access to technology and funding resources, the complexity of knowledge, the intricacies of carbon taxes and CBAM measures, and concerns that implementing CFP will increase operating costs. Building an ecosystem for collaboration across the value chain requires establishing collaborative groups that will make communities recognize the importance of these efforts. The proposed collaboration timeframe is divided into two phases:

Short-term (1-2 years): Improving regulations to increase SME participation in sustainability activities; and **Medium-term (3-5 years):** Encouraging businesses within the same communities or value chain to collaborate, share services, and pool resources to reduce costs and Scope 3 emissions, with continuous support and contributions from relevant government agencies, the Thailand Greenhouse Gas Management Organization (Public Organization), and industries within the same value chain.



SCGP invites businesses in the packaging value chain to transform and reduce greenhouse gas emissions, August 2024.

METRICS AND TARGET

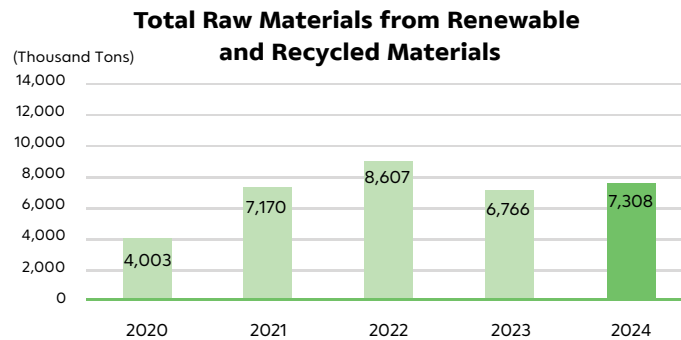
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Environmental Performance

Production and Raw Materials

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Production (Thousand Tons) *	3,359	5,700	5,548	5,526	6,061		RT-CP-000.A
Total Raw Materials (Thousand Tons) ^{ENO.1}	6,405	7,219	8,649	6,828	7,443	GRI 301-1	
Recycled Materials (Thousand Tons) ^{ENO.1}	4,003	4,420	3,916	3,649	5,723	GRI 301-2	RT-CP-410a.1
Percentage of Raw Materials from Recycled Materials ^{ENO.1}	N/A	N/A	N/A	N/A	76.9	GRI 301-2	RT-CP-410a.1
Renewable Materials (Thousand Tons) ^{ENO.1}	N/A	2,750	4,691	3,117	7,304	GRI 301-1	RT-CP-410a.1
Percentage of Raw Materials from Renewable Materials ^{ENO.1}	N/A	N/A	N/A	N/A	98.1		RT-CP-410a.1
Percentage of Raw Materials from Renewable and Recycled Materials ^{ENO.1}	N/A	N/A	N/A	N/A	98.1		



Greenhouse Gas Emissions and Sequestration

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Scope 1 and 2 GHG emissions (Tons CO ₂ equivalent) ^{ENI,*}	4,990,348	4,872,474	4,357,603	4,015,834	4,117,063		
Scope 1 GHG emissions (Tons CO ₂ equivalent) ^{ENI,*}	4,486,157	4,365,669	3,778,126	3,447,684	3,478,086	GRI 305-1	RT-CP-110a.1
Biogenic CO ₂ emissions / CO ₂ emissions from biomass (Tons CO ₂ equivalent) ^{ENI}	N/A	1,399,131	1,540,860	1,786,776	2,054,168	GRI 305-1	
Scope 2 GHG emissions (Tons CO ₂ equivalent) ^{ENI,*}	504,191	506,806	579,477	568,150	638,997	GRI 305-2	
- Market Based (Tons CO ₂ equivalent)	504,191	506,806	579,477	568,150	638,997		
- Location Based (Tons CO ₂ equivalent)	520,732	508,118	631,788	586,057	673,520		
Scope 3 GHG emissions (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	1,459,010	2,096,246	2,800,423	GRI 305-3	
Category 1: Purchased goods and services (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	556,430	859,465	1,419,020		
Category 2: Capital goods (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	0	36,550	53,830		
Category 3: Fuel and energy related activities (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	427,544	441,172	407,527		
Category 4: Upstream transportation & distribution (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	354,632	384,560	344,322		
Category 5: Waste generated in operations (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	0	17,883	26,502		
Category 6: Business travel (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	653	831	996		
Category 7: Employee commuting (Tons CO ₂ equivalent) ^{ENI,*}	N/A	N/A	533	247	26,824		

* Within SGS (Thailand) limited assurance scope (page 105-107)

GHG emissions and removals monitoring and reporting cover companies and subsidiaries within the boundary of sustainability reporting (page 101-103)

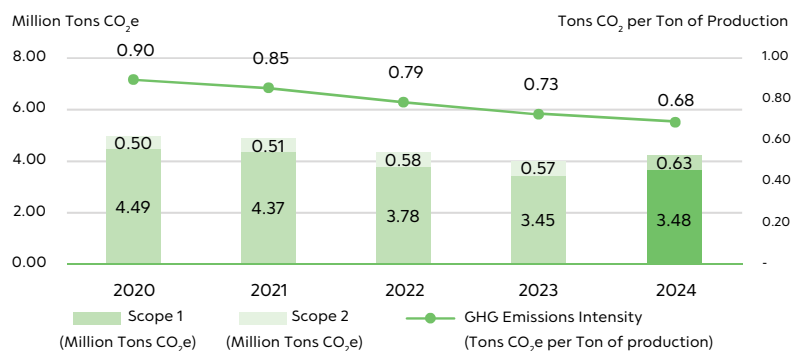
Greenhouse Gas Emissions and Sequestration

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Category 8: Upstream leased assets (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	0	0	0		
Category 9: Downstream transportation & distribution (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	83,180	66,206	67,851		
Category 10: Processing of sold products (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	0	219,533	405,334		
Category 11: Use of sold products (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	0	0	0		
Category 12: End-of-life treatment of sold products (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	17,035	37,463	28,941		
Category 13: Downstream leased assets (Ton CO ₂ equivalent) ^{EN1,*}	N/A	N/A	0	0	107		
Category 14: Franchises (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	0	0	0		
Category 15: Investments (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	19,002	32,336	19,169		
Scope 1 and 2 GHG Intensity (Tons CO ₂ equivalent per Ton of Production)	0.90	0.85	0.81	0.73	0.68	GRI 305-4	
Scope 1 GHG Intensity (Tons CO ₂ equivalent per Ton of Production)	0.80	0.77	0.68	0.62	0.57	GRI 305-4	
Scope 2 GHG Intensity (Tons CO ₂ equivalent per Ton of Production)	0.09	0.09	0.10	0.10	0.11	GRI 305-4	
Scope 1 and Scope 2 GHG emissions reduction compared with the base year of 2020 (Tons CO ₂ equivalent) ^{EN1}	428,281	117,874	632,745	994,515	873,285	GRI 305-5	
Scope 1 and Scope 2 GHG emissions reduction compared with the base year of 2020 (%)	0	2.36	12.7	19.5	17.5	GRI 305-5	
- GHG Emissions Reduction from activities within organization (Tons CO ₂ equivalent)	N/A	N/A	632,745	994,515	873,285		
- GHG Emissions Reduction from carbon offset activities (Tons CO ₂ equivalent)	N/A	N/A	0	0	0		
Carbon Sequestration in Economic forest (Tons CO ₂ equivalent) ^{EN1,*}	N/A	N/A	N/A	152,181	270,228	GRI 305-5	

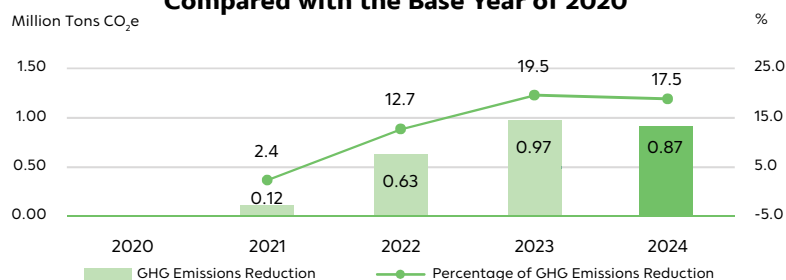
* Within SGS (Thailand) limited assurance scope (page 105-107)

GHG emissions and removals monitoring and reporting cover companies and subsidiaries within the boundary of sustainability reporting (page 101-103)

Greenhouse Gas Emissions



GHG Emissions Reduction Compared with the Base Year of 2020

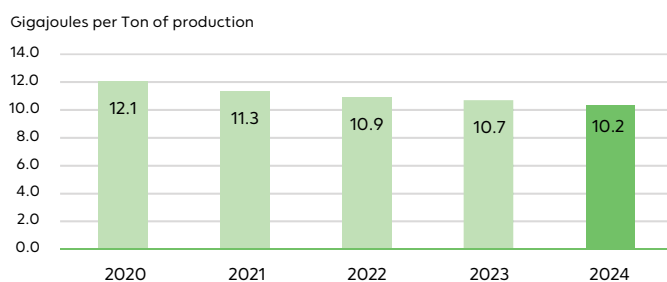


Energy Consumption

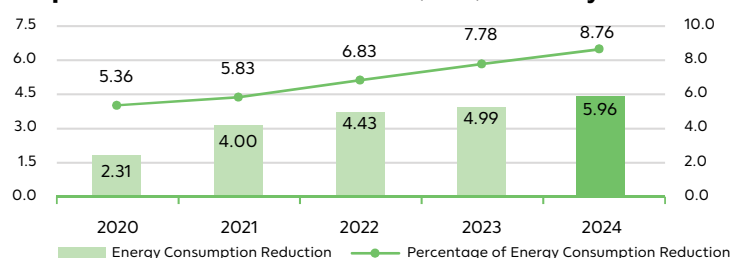
Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Fuel Consumption from Non-Renewable Sources (Petajoules) ^{EN2,*}	36.2	47.5	41.5	38.1	38.3	GRI 302-1	
Fuel Consumption from Renewable Sources (Petajoules) ^{EN2,*}	28.5	13.4	14.6	16.8	19.3	GRI 302-1	RT-CP-130a.1.
Heating and Steam Consumption (Petajoules) ^{EN2,*}	1.70	1.47	1.43	1.47	1.20	GRI 302-1	RT-CP-130a.1.
Electricity Consumption (Petajoules)	1.37	2.66	3.48	3.31	3.52	GRI 302-1	RT-CP-130a.1.
Electricity Sold to grid (Petajoules)	0.45	0.35	0.26	0.25	0.25	GRI 302-1	
Energy Consumption outside of the organization (Petajoules)	0.00	0.00	0.40	0.34	0.00	GRI 302-2	
Total Energy Consumption within the organization (Petajoules) ^{EN2,*}	67.3	64.7	60.4	59.1	62.1	GRI 302-1	RT-CP-130a.1.
Total Energy Consumption Intensity (Gigajoules per Ton of Production)	12.1	11.3	10.9	10.7	10.2	GRI 302-3	
Energy Consumption Reduction compared with business as usual (BAU) at base year of 2007 (Petajoules)	2.31	4.00	4.43	4.99	5.96	GRI 302-4	
Energy Consumption Reduction compared with business as usual (BAU) at base year of 2007 (%)	5.36	5.83	6.83	7.78	8.76	GRI 302-4	
Reduce Energy Consumption Intensity compared with the base year of 2020 (%)	0	6.42	9.73	11.4	15.2	GRI 302-4	
Proportion of electricity purchased directly through the grid electricity (%)	1.47	3.12	4.12	4.15	4.64	GRI 302-1	RT-CP-130a.1.

* Within SGS (Thailand) limited assurance scope (page 105-107)

Total Energy Consumption Intensity



Energy Consumption Reduction compared with Business As Usual (BAU) at base year of 2007



Air Emissions

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Oxides of Nitrogen (Thousand Tons) ^{EN5,*}	2.99	3.83	3.81	4.09	4.00	GRI 305-7	RT-CP-120a.1.
Oxides of Sulfur (Thousand Tons) ^{EN5,*}	2.57	3.80	3.67	4.30	3.00	GRI 305-7	RT-CP-120a.1.
Particulate Matter (Thousand Tons) ^{EN5,*}	0.31	0.95	0.90	0.75	0.90	GRI 305-7	RT-CP-120a.1.

* Within SGS (Thailand) limited assurance scope (page 105-107)

Water Withdrawal and Effluent Quality

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Total water withdrawal (Million Cubic Meter) ^{EN3,*}	54.8	78.8	72.8	71.6	76.9	GRI 303-3	RT-CP-140a.1.
Water withdrawal from freshwater (TDS ≤ 1,000 mg/L) (Million Cubic Meter) ^{EN3,*}							
- Surface Water	17.1	34.2	32.0	34.0	35.9	GRI 303-3	RT-CP-140a.1.
- Groundwater	30.6	39.8	36.5	33.4	36.0	GRI 303-3	RT-CP-140a.1.
- Seawater	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Tap water or Third-party	0.42	4.80	4.30	4.11	4.98	GRI 303-3	RT-CP-140a.1.
Water withdrawal from other water (TDS > 1,000 mg/L) (Million Cubic Meter) ^{EN3,*}							
- Surface Water	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Groundwater	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Seawater	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Tap water or Third-party	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
Water withdrawal from freshwater (TDS ≤ 1,000 mg/L) in water stress area (Million Cubic Meter) ^{EN3,*}							
- Surface Water	0.00	0.00	0.00	0.00	17.80	GRI 303-3	RT-CP-140a.1.
- Groundwater	0.00	0.00	0.00	0.00	31.00	GRI 303-3	RT-CP-140a.1.
- Seawater	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Tap water or Third-party	0.00	0.00	0.00	0.00	1.00	GRI 303-3	RT-CP-140a.1.
Water withdrawal from other water (TDS > 1,000 mg/L) in water stress area (Million Cubic Meter) ^{EN3,*}							
- Surface Water	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Groundwater	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Seawater	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
- Tap water or Third-party	0.00	0.00	0.00	0.00	0.00	GRI 303-3	RT-CP-140a.1.
Water Withdrawal Reduction compared with business as usual (BAU) at base year of 2014 (Million Cubic Meter)	11.1	28.1	28.4	29.8	28.9	GRI 303-3	RT-CP-140a.1.
Water Withdrawal Percentage Reduction compared with business as usual (BAU) at base year of 2014 (%)	16.8	26.3	28.0	28.6	27.3	GRI 303-3	RT-CP-140a.1.
Recycled Water (Million Cubic Meter) *	9.0	15.9	14.2	14.6	14.4		RT-CP-140a.2.
Portion of Recycled Water (%)	14.1	14.2	16.3	17.0	15.7		RT-CP-140a.2.

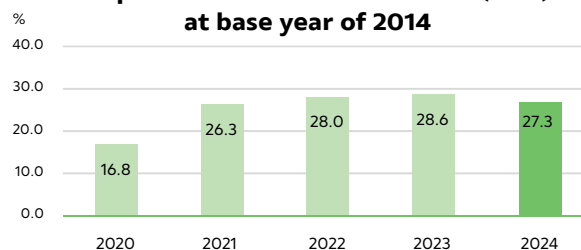
* Within SGS (Thailand) limited assurance scope (page 105-107)

Water Withdrawal and Effluent Quality

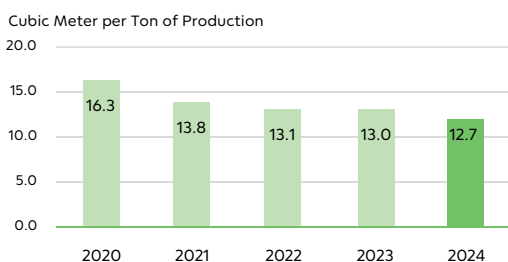
Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Water Withdrawal Intensity (Cubic Meter per Ton of Production)	16.3	13.8	13.1	13.0	12.7		RT-CP-140a.2.
Water Withdrawal Intensity percentage reduction compared with the base year of 2022	N/A	N/A	N/A	N/A	3.1		RT-CP-140a.2.
Water Withdrawal Target compared with business as usual (BAU) at base year of 2014 (Million Cubic Meter)	65.8	106.9	101.1	99.3	126.3		RT-CP-140a.2.
Water Withdrawal Intensity Target (Million Cubic Meter per Ton of Production)	19.6	18.8	18.2	18.0	19.0		RT-CP-140a.2.
Water discharged to any sources (Million Cubic Meter) ^{EN3,*}							
- Surface Water	30.8	58.1	58.3	58.6	60.0	GRI 303-4	
- Groundwater	1.16	0.00	0.00	0.00	0.03	GRI 303-4	
- Seawater	0.00	0.00	0.00	0.00	0.00	GRI 303-4	
- Third-party water (total)	4.69	3.94	3.06	1.81	0.70	GRI 303-4	
- Third-party water sent for use to other organizations	4.62	3.81	2.91	1.67	0.49	GRI 303-4	
Total Water Discharge (Million Cubic Meter) ^{EN3,*}	36.7	62.1	61.4	60.4	60.7	GRI 303-4	
- Water discharge by freshwater (TDS ≤ 1,000 mg/L) (Million Cubic Meter) ^{EN3,*}	4.3	19.1	14.6	21.7	19.1	GRI 303-4	
- Water discharge by other water (TDS > 1,000 mg/L) (Million Cubic Meter) ^{EN3,*}	32.4	42.9	46.8	38.8	41.6	GRI 303-4	
Water discharge in Water Stress Area							
- Water discharge by freshwater (TDS ≤ 1,000 mg/L) (Million Cubic Meter) ^{EN3,*}	0.00	0.00	0.00	0.00	3.5	GRI 303-4	
- Water discharge by other water (TDS > 1,000 mg/L) (Million Cubic Meter) ^{EN3,*}	0.00	0.00	0.00	0.00	41.6	GRI 303-4	
BOD loading (Tons) ^{EN3,*}	153	1,460	666	531	425		
COD loading (Tons) ^{EN3,*}	3,623	8,093	6,020	5,768	5,698		
TSS loading (Tons) ^{EN3,*}	505	1,155	999	777	688		

* Within SGS (Thailand) limited assurance scope (page 105-107)

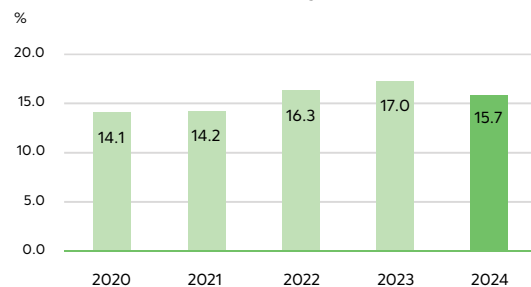
Water Withdrawal Reduction compared with Business As Usual (BAU) at base year of 2014



Water Withdrawal Intensity



Portion of Recycled Water

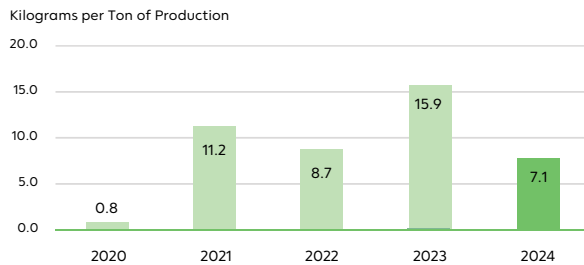


Industrial Waste Management

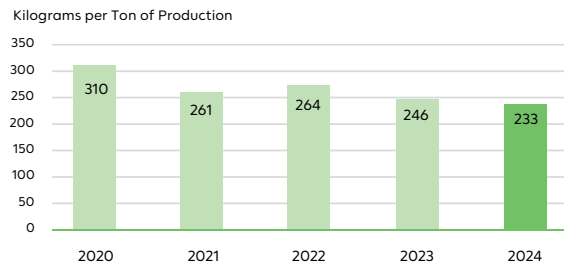
Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Hazardous Waste							
Hazardous Waste Generation during reporting year (Thousand Tons) ^{EN4,*}	2.66	64.0	48.4	87.7	43.1	GRI 306-3	RT-CP-150a.1.
Percentage of Recycled Hazardous waste (%) ^{EN4}	N/A	N/A	N/A	N/A	36.7		RT-CP-150a.1.
Hazardous Waste Generation Intensity (Kilograms per Ton of Production)	0.8	11.2	8.7	15.9	7.1		
Hazardous Waste Diverted from Disposal by Recovery Operations (Thousand Tons) ^{EN4}							
- Reuse / Recycling / Other Recovery Operations / Treatment	N/A	N/A	N/A	N/A	33.9	GRI 306-4	RT-CP-150a.1.
Hazardous Waste Directed to Disposal by Disposal Operations (Thousand Tons) ^{EN4}							
- Incinerated with energy recovery (Thousand Tons)	N/A	N/A	N/A	N/A	1.9	GRI 306-5	RT-CP-150a.1.
- Incinerated without Energy Recovery (Thousand Tons)	0.02	0.06	0.21	0.03	0.72	GRI 306-5	RT-CP-150a.1.
- Landfilled (Thousand Tons)	0.0	14.8	8.7	7.2	7.0	GRI 306-5	RT-CP-150a.1.
- Other disposal operations (Thousand Tons)	N/A	N/A	N/A	N/A	0.5	GRI 306-5	RT-CP-150a.1.
Hazardous Waste in the Storage at the end of reporting year (Thousand Tons) ^{EN4}	0.11	0.18	1.18	0.95	0.13		RT-CP-150a.1.
Non Hazardous Waste							
Non Hazardous Waste Generation (Thousand Tons) ^{EN4,*}	1,043	1,489	1,467	1,359	1,415	GRI 306-3	
Non Hazardous Waste Generation Intensity (Kilograms per Ton of Production)	310	261	264	246	233		
Non Hazardous Waste Diverted from Disposal by Recovery Operations (Thousand Tons) ^{EN4}							
- Reuse / Recycling / Other Recovery Operations / Treatment	N/A	N/A	N/A	N/A	993	GRI 306-4	
Non Hazardous Waste Directed to Disposal by Disposal Operations (Thousand Tons) ^{EN4}							
- Incinerated with energy recovery (Thousand Tons)	N/A	N/A	N/A	N/A	286	GRI 306-5	
- Incinerated without Energy Recovery (Thousand Tons)	0.0	36.1	36.0	32.4	33.2	GRI 306-5	
- Landfilled (Thousand Tons)	0.0	2.9	3.5	0.3	2.1	GRI 306-5	
- Other disposal operations (Thousand Tons)	N/A	N/A	N/A	N/A	0.4	GRI 306-5	
Non Hazardous Waste in the Storage at the end of reporting year (Thousand Tons) ^{EN4}	124	103	105	152	252		

* Within SGS (Thailand) limited assurance scope (page 105-107)

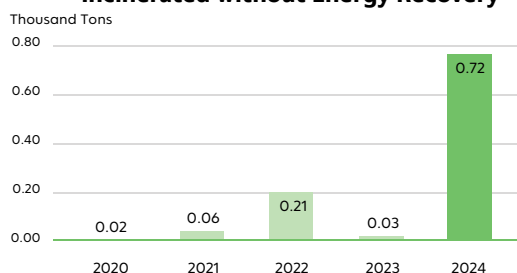
Hazardous Waste Generation Intensity



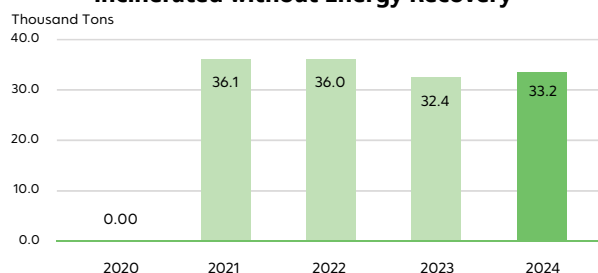
Non Hazardous Waste Generation Intensity



Hazardous waste management by Incinerated without Energy Recovery



Non Hazardous waste management by Incinerated without Energy Recovery



Waste diverted from disposal - Thailand and abroad, GRI 306-4*

Waste	2024 (Tons)				Total
	Inside SCGP		Outside SCGP		
	Within Factory	Inside SCGP	Inside SCG	Outside SCG	
Hazardous Waste					
Preparation for reuse	686.47	-	-	20,442.72	21,129.19
Recycling	-	-	953.48	11,480.58	12,434.06
Other recovery operations	-	-	-	336.21	336.21
Treatment	-	-	-	11.93	11.93
Total	686.47	-	953.48	32,271.44	33,911.39
Non Hazardous Waste					
Preparation for reuse	493.67	8,112.81	4,331.70	37,615.50	50,553.69
Recycling	75,127.81	454,186.52	27,860.45	385,631.05	942,805.82
Other recovery operations	-	-	-	28.06	28.06
Treatment	-	-	-	-	-
Total	75,621.48	462,299.34	32,192.15	423,274.61	993,387.57

Waste directed to disposal - Thailand and abroad, GRI 306-5*

Waste	2024 (Tons)				Total
	Inside SCGP		Outside SCGP		
	Within Factory	Inside SCGP	Inside SCG	Outside SCG	
Hazardous Waste					
Incineration (with energy recovery)	-	-	2.55	1,881.53	1,882.08
Incineration (without energy recovery)	-	-	-	721.07	721.07
Landfilling	-	-	-	6,964.94	6,964.94
Other disposal operations	-	-	-	475.24	475.24
Total	-	-	2.55	10,040.78	10,043.33
Non Hazardous Waste					
Incineration (with energy recovery)	185,388.47	4,559.81	276.41	95,399.52	285,624.18
Incineration (without energy recovery)	2,842.98	-	-	30,395.35	33,238.33
Landfilling	-	-	-	2,054.38	2,054.38
Other disposal operations	-	-	-	378.53	378.53
Total	188,231.45	4,559.81	276.41	128,227.78	321,295.42

* Within SGS (Thailand) limited assurance scope (page 105-107)

Environmental Expenditures and Benefits/Violations of Legal Obligations and Regulations

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Environmental Operating Expenses (Million Baht)	742	739	1,005	871	843		
Environmental Capital Expenditures/Investment (Million Baht)	330	512	310	345	678		
Tax Incentives linked to Environmental Investment (Million Baht) ^{EN6}	8	70	56	10	10		
Number of violations of legal obligations/regulations (Number of Cases) ^{EN7}	0	0	0	0	0	GRI 2-27	RT-CP-140a.3
Amount of fines/penalties related to the above (Baht) ^{EN7}	0	0	0	0	0	GRI 2-27	
Environmental liability accrued at year end (Baht) ^{EN7}	0	0	0	0	0	GRI 2-27	

EN0.1 Production and Raw Materials

1. In 2020, the reporting covered the total raw material volume and the volume of raw materials from recycled materials across all plants in Thailand and abroad.
2. In 2021, the reporting included the total production volume of all plants in Thailand and abroad.
3. In 2024, the reporting covered the total volume of all key raw materials, the volume of raw materials from recycled materials, and the volume of raw materials from renewable sources, such as wood chips, recycled paper scraps, virgin pulp, starch, and plastic pellets, across all factories in Thailand and abroad.
4. Reporting of the percentage of raw materials from recycled content, renewable resources, renewable and recycled content has been included since 2024.

EN1 Greenhouse Gases

Greenhouse Gases (GHG) mean the volume of greenhouse gas emissions from operations, calculated in accordance with the "Greenhouse Gas Reporting and Calculation Guidelines" by the WRI/WBCSD GHG Emissions Protocol and the calculation tools of the International Council of Forest and Paper Associations (ICFPA). The principles are as follows:

1. Reporting scopes

1.1 Direct Greenhouse Gas emissions (Scope 1)

These GHG emissions are generated from the production processes or activities that are under the company or factory's control and management. Examples of Scope 1 GHG emissions include from stationary combustion, mobile combustion, fugitive emissions, chemical reactions. However, Carbon dioxide emissions from biomass combustion, biogas, and lime mud combustion at lime kilns shall be reported separately from Scope 1, as the carbon contained in these materials originates from natural sources.

1.2 Indirect Greenhouse Gas Emissions (Scope 2)

These emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. These emissions are indirect because they happen at the facility that generates the energy, not at the company's own facilities. Market-based and location-based are two methods for calculating a company's Scope 2 emissions. SCGP reports both methods, which are in line with the GHG protocol, as follows:

- Location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid average emission factor data).
- Market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.

1.3 Indirect Greenhouse Gas Emissions (Scope 3)

These emissions are generated indirectly from other sources, including those arising from activities not specified in Scope 1 and Scope 2. The Scope 3 GHG emissions consist of 15 categories as follows:

- Category 1: Purchased Goods and Services
- Category 2: Capital Goods
- Category 3: Fuel- and Energy-Related Activities
- Category 4: Upstream Transportation and Distribution
- Category 5: Waste Generated in Operations (reporting to commence in 2023)
- Category 6: Business Travel
- Category 7: Employee Commuting
- Category 8: Upstream Leased Assets (Not significant or related to SCGP businesses)
- Category 9: Downstream Transportation and Distribution
- Category 10: Processing of Sold Products
- Category 11: Use of Sold Products (Not significant or related to SCGP businesses)
- Category 12: End-of-Life Treatment of Sold Products
- Category 13: Downstream Leased Assets (reporting commence in 2024)
- Category 14: Franchises (Not significant or related to SCGP businesses)
- Category 15: Investments

Note: In 2024, Scope 3 GHG emissions increased by 704,177 tCO₂e compared to 2023. This was primarily due to the inclusion of additional companies within the scope of the sustainability report, contributing 554,894 tCO₂e (see page 101-103 for details). Additionally, emissions rose by approximately 245,000 tCO₂e following the expanded reporting scope for chemicals under Category 1: Purchased Goods and Services.

1.4 Carbon Dioxide Emissions from Lime Mud Combustion at Lime Kilns and Biomass combustion are defined as Biogenic CO₂. These emissions are generated from the release of carbon dioxide during the combustion of biomass/biogenic fuels, such as biomass fuel, sludge from wastewater treatment systems, biogas, black liquor from pulp production, and lime mud combustion at lime kilns.

1.5 Carbon sequestration refers to the process of capturing carbon dioxide gas from the atmosphere and storing it in the form of biomass. For example, eucalyptus forest serve as a source of carbon sequestration, helping to absorb carbon dioxide from the atmosphere.

2. Reporting of Greenhouse Gas Volumes

2.1 Calculation of Scope 1 Greenhouse Gas Emissions will be reported from summation of GHG emissions from all combustion sources. The calculation for each type of fuel = volume of fuel consumed x fuel heating value x fuel emission factor referenced from the Thailand Greenhouse Gas Management Organization (Public Organization) (TGO) Other than TGO refer to "Intergovernmental Panel on Climate Change 2006", (IPCC).

2.2 Calculation of Indirect (Scope 2) Greenhouse Gas Emissions will be reported from the volume of purchased electricity, steam x greenhouse gas emission factor referenced from TGO, energy producer or supplier.

2.3 In 2023, SCGP has set a new target to reduce Scope 1 and Scope 2 greenhouse gas emissions by 25% by year 2030 compared to the base year of 2020 (4.99 million tons CO₂e), covering both Thailand and abroad businesses, and aims to achieve net-zero greenhouse gas emissions by 2050.

2.4 Greenhouse gas data from abroad companies has been included since 2020.

2.5 The margin of error in calculating greenhouse gas emissions shall not exceed 0.05% of the reported data.

3. Greenhouse Gas Types

This report will cover all 7 types of Greenhouse gases: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃ and calculated and presented in terms of carbon dioxide equivalents using the Global Warming Potential (GWP) values set by the IPCC.

EN2 Energy

The total energy consumption includes thermal energy, steam, all the electricity used in the company or factory areas, and the volume of electricity sold externally and to associated companies. For thermal energy, the report shows the fuel consumption from both renewable and non-renewable sources.

1. Thermal Energy Consumption is the volume of fuel or steam (estimated based on the purchased amount or the change in stock) × Low Heating Value (obtained from laboratory testing or from the supplier).
2. Electrical Energy Consumption is the volume of electricity purchased from external sources. This does not include electricity generated internally through fuel combustion, as this would be double-counting energy.
3. Renewable Fuel includes biomass fuels, sludge from wastewater treatment systems, black liquor from the pulp production process and biogas.
4. Non-Renewable Fuel includes fossil fuels and fuels from waste materials or by-products from production processes produced from fossil fuels, including waste reject and used oil.
5. Renewable Energy is clean energy derived from natural sources, including biomass energy (Biomass, Biogas, Sludge and Black Liquor), solar energy, wind energy, hydro energy, geothermal energy, used to replace dependency of fossil fuels.
6. Non-Renewable Energy is thermal energy derived from fossil fuels or purchased steam produced from fossil fuels.
7. Data from abroad companies has been included since 2020.

EN3 Water

1. Water Management (comprising the volume of water withdrawal, water treated before discharge into external water bodies, and recycled water) is a consideration for assessing the efficiency of water usage from various sources.
2. Water Withdrawal refers to the volume of water withdrawn from various raw water sources used in production processes, offices, maintenance, and utilities. The sources of raw water are divided into five categories: surface water, groundwater, sea water, tap water, and water produced alongside the production process. This information is obtained from accounting records or meter readings.
3. Water Source Quality refers to the quality of water from various sources, measured by Total Dissolved Solids (TDS) using standard methods. This is used to categorize the water source quality into two types:
 - Freshwater: TDS less than or equal to 1,000 milligrams per liter.
 - Other Water: TDS greater than 1,000 milligrams per liter.
4. Recycled Water refers to the volume of water reused in all factory activities after undergoing quality treatment processes, excluding water that has not been through quality improvement.
5. Effluent Quality refers to the quality of water discharged externally, such as BOD, COD, and total suspended solids, which are measured for concentration using standard methods along with the volume of effluent discharged into external water bodies.
6. Receiving Water Body Quality refers to the quality of various receiving water bodies, measured by Total Dissolved Solids (TDS) using standard methods. This is used to categorize the water body quality into two types:
 - Freshwater: TDS less than or equal to 1,000 milligrams per liter.
 - Other Water: TDS greater than 1,000 milligrams per liter.
7. Water Data from overseas companies has been included since 2021.
8. The latest version of the Aqueduct 4.0 tool is used for assessing water-related risks.

EN4 Industrial Waste

Waste management is a consideration for assessing the efficiency of production processes, improving product quality, and reducing the costs of manufacturing processes. SCGP has established guidelines for the collection and reporting of environmental data since 2013, to serve as a standard for data collection and reporting for companies within SCGP.

The volume of industrial waste refers to the amount of waste generated from production processes, excluding waste in the production process that can be recycled (Work in Process, WIP). Industrial Waste is categorized into two types: hazardous waste and non-hazardous waste, as defined by the Ministry of Industry's 2023 Decree on the Disposal of Industrial Wastes.

Quantification Report

1. Waste Generated refers to the volume of industrial waste at the point of origin, or before entering the waste storage building. The volume is obtained by weighing scale or estimation.
2. Waste Stock refers to the volume of industrial waste accumulated and not yet managed or stored in designated areas as of the end of the year. The volume is obtained by weighing scale or estimation.
3. Waste Managed refers to the volume of industrial waste handled both internally and externally (outside SCG). The volume is obtained from weighing scale only.
4. Onsite Waste Management (within SCGP) refers to waste management carried out by companies within the scope of SCGP's management (or SCGP subsidiaries).
5. Offsite Waste Management (outside SCGP) refers to waste management carried out by companies outside the scope of SCGP's management.
6. Reporting of waste management volumes from 2017-2020 was in accordance with GRI 306-2, 2016.
7. Reporting of waste management volumes from 2021 onwards was in accordance with GRI 306-4 and GRI 306-5, 2020.
8. Data from overseas companies has been included since 2021.
9. The amount and Percentage of hazardous waste generated to be recycled both in Thailand and abroad has been reported since 2024 in accordance with SASB (RT-CP-150a.1).
10. Reporting of hazardous and non-hazardous waste diverted from disposal by other recovery operations in Thailand and abroad (thousand tons) has been included since 2024 in accordance with GRI 306-4.
11. Reporting of hazardous and non-hazardous waste directed to disposal by other disposal operations in Thailand and abroad (thousand tons) has been included since 2024 in accordance with GRI 306-5.

Remark: Gigajoules per Ton of production the amount of hazardous waste directed to disposal by incineration without energy recovery in 2024 increased to 0.72 thousand tons due to the increased coverage of companies according to the sustainability report 2024 page 101-103.

EN5 Air Emissions

Air emissions refer to the volume of air pollutants, such as nitrogen oxides, sulfur oxides, and particulate matter deriving from combustions and present in production processes. The type of pollutant depends on the specific production processes of each operational unit. The results and methods of measurement are based on legal requirements, such as those set by the US EPA or equivalent standards.

1. Reporting Air Pollutant Volumes is done by calculating the concentration obtained from random emission testing (Spot Check) at the time of measurement under actual conditions. This is conducted by laboratories certified and registered with the Department of Industrial Works, Thailand. This includes the flow rate of the released flue gas and the operating hours of steam boilers. Additionally, the measurement of pollutant discharge from the stacks is carried out using Continuous Emission Monitoring Systems (CEMS).
 - Fiber-Based Packaging Business and Consumer and Performance Packaging Business conducts random emission testing of air pollutants discharged from stacks (Spot Check) under actual conditions at the time of measurement by laboratories certified and registered with the Department of Industrial Works, Thailand.
 - Packaging Paper Business, Food Packaging Paper and Pulp & Paper Packaging Business conducts continuous automatic measurement of air pollutant discharge from stacks using Continuous Emission Monitoring Systems (CEMS).
2. Data from overseas companies has been included since 2021.

EN6 Tax Incentives and Privileges from the Board of Investment (BOI) for Environmental Projects

EN7 Number / Amount of Fines or Settlements in case of Violations of Legal Binding Regulatory Obligations Exceeding 10,000 US Dollars

Social Performance

Health & Safety

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Workplace							
Work Hours (Hours) ^{51*}							
• Employee	22,869,683	36,498,929	37,481,036	38,387,881	58,856,191		
• Contractor	37,155,610	37,471,999	31,719,780	35,249,808	35,161,313	GRI 403-9	
Recordable Work-Related Injury (Cases) ^{51*}							
• Employee	23	67	53	52	63		
• Contractor	27	48	56	32	43	GRI 403-9	
Recordable Work-Related Injury Rate (Cases/ 1,000,000 hours worked) ^{51*}							
• Employee	1.006	1.836	1.414	1.355	1.070		
• Contractor	0.727	1.281	1.765	0.908	1.223	GRI 403-9	
Work-Related Fatalities (Cases) ^{51*}							
• Employee (male : female)	0 : 0	1 : 0	0 : 0	1 : 0	0 : 0		
• Contractor (male : female)	0 : 0	1 : 0	0 : 0	1 : 0	2 : 0	GRI 403-9	
Work-Related Fatality Rate (Cases/ 1,000,000 hours worked) ^{51*}							
• Employee	0.000	0.027	0.000	0.026	0.000		
• Contractor	0.000	0.027	0.000	0.028	0.057	GRI 403-9	
High Consequence Work-Related Injury excluding fatalities (Cases) ^{51*}							
• Employee	0	2	1	1	3		
• Contractor	1	2	2	2	4	GRI 403-9	
High Consequence Work-Related Injury Rate excluding Fatalities (Cases/ 1,000,000 hours worked) ^{51*}							
• Employee	0.000	0.055	0.027	0.026	0.051		
• Contractor	0.027	0.053	0.063	0.052	0.114	GRI 403-9	
Lost Time Injury Frequency Rate : LTIFR (Cases/ 1,000,000 hours worked) ^{51*}							
• Employee	0.087	0.822	0.267	0.417	0.306		
• Contractor	0.296	0.400	0.599	0.454	0.313		
Injury Severity Rate: ISR (Cases/ 1,000,000 hours worked) ⁵¹							
• Employee	0.831	7.644	2.241	5.340	9.922		
• Contractor	8.155	6.858	18.853	10.270	3.128		
Work-Related Occupational Illness and Disease Fatalities (Cases) ⁵¹							
• Employee*	0	0	0	0	0		
• Contractor	0	0	0	0	0	GRI 403-10	
Recordable Work-Related Occupational Illness & Disease (Cases) ⁵¹							
• Employee*	0	0	0	0	17		
• Contractor	0	0	0	0	0	GRI 403-10	
Occupational Illness & Disease Frequency Rate (Cases/ 1,000,000 hours worked) ⁵¹							
• Employee*	0.000	0.000	0.000	0.000	0.289		
• Contractor	0.000	0.000	0.000	0.000	0.000		
Transportation							
Transportation-related Fatalities (Cases) ^{51*}							
• Employee (male : female)	0 : 0	0 : 0	0 : 0	0 : 0	0 : 0		
• Direct Transportation Contractor (male : female)	0 : 0	0 : 0	0 : 0	0 : 0	1 : 0		
• Other Transportation Contractor (male : female)	0 : 0	0 : 0	0 : 0	1 : 0	0 : 0	GRI 403-9	
Workplace & Direct Transportation							
Work-related and Direct transportation-related Fatalities (Cases) ^{51*}							
• Employee (male : female)	0 : 0	1 : 0	0 : 0	1 : 0	0 : 0		
• Contractor (male : female)	0 : 0	1 : 0	0 : 0	1 : 0	3 : 0	GRI 403-9	

* Within SGS (Thailand) limited assurance scope (page 105-107)

Employee and Social Development

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Number of Employee (Persons) ⁵²	6,416	23,341	22,289	21,882	21,540	GRI 2-7	RT-CP-000.C
• By Gender (female : male : N/A) ⁵³	N/A	N/A	5,166 : 17,123	5,199 : 16,472 : 213	5,411 : 16,112 : 17		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	5,854 : 12,311 : 4,124	5,605 : 12,696 : 3,581	4,966 : 13,071 : 3,503		
Percentage of female in total workforce (%)	17.5	17.9	23.2	23.8	25.1	GRI 405-1	
Percentage of female in all management positions (%)	20.6	21.2	24.4	23.8	23.3	GRI 2-7	
Percentage of female in junior management positions (%)	23.0	23.5	23.5	24.8	21.9		
Percentage of female in top management positions (%)	7.7	8.1	8.9	14.0	10.3		
Percentage of female in management positions in revenue-generating functions (%) ⁵⁴	19.6	18.2	18.0	18.8	17.1		
Percentage of female in Science, Technology, Engineering and Mathematics positions (STEM-related positions) (%)	N/A	42.1	40.9	53.8	45.5		
Proportion of local senior management in overseas operations (%) ⁵⁵	8.0	7.0	7.0	15.2	18.6	GRI 202-2	
Average annual salary of Executive level (base salary only) (Baht/year) *							
• Female	0	0	0	0	0	GRI 405-2	
• Male	6,844,000	5,368,444	6,774,800	6,722,880	10,996,500	GRI 405-2	
Ratio of average annual salary of Female Executives to Male Executives (base salary only) *	0	0	0	0	0	GRI 405-2	
Average annual salary of Executive level (base salary + other cash incentives) (Baht/year) *							
• Female	N/A	0	0	0	0	GRI 405-2	
• Male	N/A	8,955,339	11,029,875	9,890,280	17,472,543	GRI 405-2	
Ratio of average annual salary of Female Executives to Male Executives (base salary + other cash incentives) *	N/A	0	0	0	0	GRI 405-2	
Average annual salary of Management Level (base salary only) (Baht/year) *							
• Female	2,331,000	2,208,303	2,233,090	2,226,940	2,193,814	GRI 405-2	
• Male	2,501,000	2,187,859	2,431,474	2,273,120	2,373,243	GRI 405-2	
Ratio of average annual salary of Female Managers to Male Managers (base salary only)*	0.932	1.009	0.918	0.959	0.924	GRI 405-2	
Average annual salary of Management Level (base salary + other cash incentives) (Baht/year)*							
• Female	3,143,000	2,942,157	3,176,664	3,305,560	3,002,184	GRI 405-2	
• Male	3,585,000	3,132,744	3,658,904	3,446,150	3,269,681	GRI 405-2	

* Within SGS (Thailand) limited assurance scope (page 105-107)

Employee and Social Development

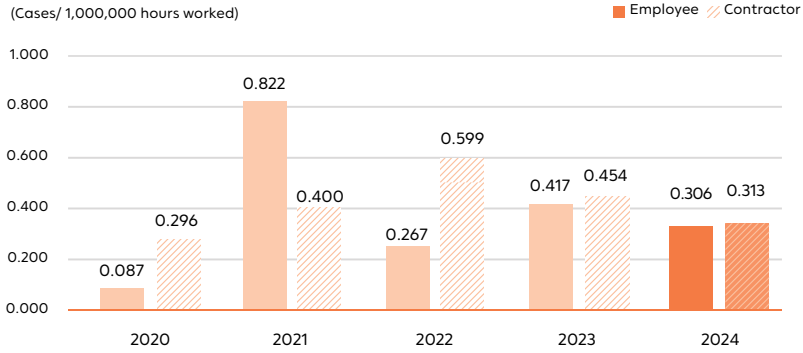
Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Ratio of average annual salary of Female Managers to Male Managers (base salary + other cash incentives) *	0.877	0.939	0.868	0.959	0.918	GRI 405-2	
Average annual salary of Non-management Level (base salary only) (Baht/year) *							
• Female	584,000	584,901	596,741	581,920	569,165	GRI 405-2	
• Male	478,000	476,272	493,696	478,220	472,460	GRI 405-2	
Ratio of average annual salary of female to male Non-Management Level employees (base salary only) *	1.222	1.228	1.209	1.217	1.205	GRI 405-2	
Average annual salary of Non-Management Level (base salary + other cash incentives) (Baht/year) *							
• Female	N/A	812,075	820,962	816,780	744,253	GRI 405-2	
• Male	N/A	773,453	778,892	746,540	711,270	GRI 405-2	
Ratio of average annual salary of female to male Non-Management Level employees (base salary + other cash incentives) *	N/A	1.024	1.054	1.067	1.046	GRI 405-2	
Employees with disabilities (Persons) ⁵⁶	N/A	76	87	89	84		
Percentage of Employees with disabilities in total workforce (%)	N/A	0.86	0.39	0.41	0.39	GRI 405-1	
Employees represented by an independent trade union or covered by collective bargaining agreements (%) ⁵⁷	100	100	100	100	100	GRI 2-30	
New hired employees (Persons)	133	723	1,259	990	1,387	GRI 401-1	
Percentage of new hired employees in total workforce (%)	2.1	5.0	5.6	4.5	6.4	GRI 401-1	
• By Gender (female : male)	N/A	N/A	47 : 53	49.6 : 50.4	30.5 : 69.5		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	81.5 : 20.3 : 0.2	74.8 : 24.8 : 0.3	75.7 : 23.6 : 0.7		
• By Employee level (Operation : Supervisory : Management)	N/A	N/A	N/A	86.7 : 13.1 : 0.2	83.9 : 14.6 : 1.5		
• By Region (ASEAN / Non-ASEAN)	N/A	N/A	100 : 0	100 : 0	98 : 2		
Internal hire : open positions filled by internal candidates (Persons)	N/A	N/A	688	416	1,360		
Percentage of Internal hire in total workforce (%)	N/A	N/A	4.76	1.90	6.31		
• By Gender (female : male)	N/A	N/A	30 : 70	31.0 : 69.0	33.3 : 66.7		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	11 : 73 : 16	16.3 : 62.0 : 21.6	14.6 : 61.0 : 24.4		
• By Employee level (Operation : Supervisory : Management)	N/A	N/A	N/A	35.6 : 54.8 : 9.6	45.1 : 41.3 : 13.6		
• By Region (ASEAN / Non-ASEAN)	N/A	N/A	N/A	100 : 0	100 : 0		

* Within SGS (Thailand) limited assurance scope (page 105-107)

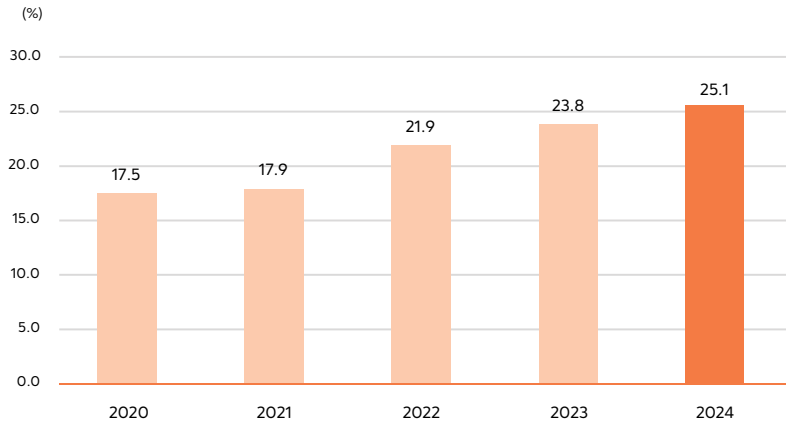
Employee and Social Development

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Average cost of hiring a new employee (Baht/Person)	N/A	41,781	62,842	24,684	45,457		
Voluntary employee turnover (Persons)	289	1,054	920	959	1,521	GRI 401-1	
Voluntary employee turnover rate (%)	4.5	7.2	4.1	4.4	7.1	GRI 401-1	
• By Gender (female : male)	N/A	N/A	40 : 60	29.8 : 70.2	30.9 : 69.1		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	49 : 48 : 3	47.4 : 48.0 : 4.6	50.0 : 44.4 : 5.6		
• By Employee level	N/A	N/A	N/A	81.5 : 17.9 : 0.5	87.4 : 11.4 : 1.2		
(Operation : Supervisory : Management)							
• By Region (ASEAN / Non-ASEAN)	N/A	N/A	100 : 0	99.9 : 0.1	99.4 : 0.6		
Total employee turnover (Persons)	475	1,115	1,300	1,326	1,912	GRI 401-1	
Total employee turnover rate (%)	7.4	7.6	5.8	6.1	8.9		
• By Gender (female : male)	N/A	N/A	50 : 50	48.5 : 51.5	30.1 : 69.9		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	47 : 42 : 11	41.2 : 39.7 : 19.1	44.2 : 39.2 : 16.6		
• By Employee level	N/A	N/A	N/A	81.9 : 18.5 : 1.6	84.9 : 13.3 : 1.8		
(Operation : Supervisory : Management)							
• By Region (ASEAN / Non-ASEAN)	N/A	N/A	100 : 0	99.9 : 0.1	98.8 : 1.2		
Employees taken maternity leave (Persons) ⁵⁸	34	42	90	103	102	GRI 401-3	
Employees returned to work after maternity leave (Persons)	34	39	87	102	89	GRI 401-3	
Employee engagement level ⁵⁹	80	76	76	4.1	4.12		
• By Gender (female : male)	N/A	N/A	N/A	4.09 : 4.11	4.09 : 4.13		
• By Age Group (Baby Boomer/Gen-X/Gen-Y/Gen-Z)	N/A	N/A	86 : 72 : 76 : 82	4.1 : 4.1 : 4.2 : 4.1	4.1 : 4.1 : 4.2 : 4.1		
• By Employee level	N/A	N/A	N/A	4.2 : 4.0 : 4.2	4.1 : 4.0 : 4.2		
(Operation : Supervisory : Management)							
• By Region (ASEAN/Non-ASEAN)	N/A	N/A	81 : 56	4.1 : 3.5	4.1 : 3.6		
Average employee annual training hours (Hours/Person/year)	24	12	15	14	17	GRI 404-1	
• By Gender (female : male)	N/A	N/A	16 : 15	14 : 14	23 : 15		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	N/A	13 : 14 : 12	14 : 17 : 19		
• By Employee level	N/A	N/A	9 : 35 : 31	8 : 37 : 40	13 : 25 : 55		
(Operation : Supervisory : Management)							
• By Region (ASEAN / Non-ASEAN)	N/A	N/A	N/A	14 : 0	17 : 0		
Average employee annual training hours for mandatory programs (Hours/Person/year)	N/A	N/A	6	10	8		
Average employee annual training hours for non-mandatory programs (Hours/Person/year)	N/A	N/A	9	4	9		
Percentage of employees trained on Human Rights Policies (%)	N/A	N/A	100	100	100	GRI 410-1	
Average employee annual training and development expenses (Baht/Person/year)	20,387	10,082	7,301	4,353	4,544		
• By Gender (female : male)	N/A	N/A	1,999 : 5,322	6,051 : 3,874	5,000 : 4,395		
• By Age Group (under 30 : 30-50 : over 50)	N/A	N/A	945 : 4,873 : 1,483	3,509 : 4,575 : 4,888	2,954 : 5,175 : 4,952		
• By Employee level	N/A	N/A	N/A	1,320 : 12,051 : 57,630	2,192 : 4,140 : 88,219		
(Operation : Supervisory : Management)							
• By Region (ASEAN / Non-ASEAN)	N/A	N/A	N/A	4,353 : 0	4,639 : 321		
Value of employee volunteering time spent for CSR activities (Million Baht)	4	2	15	19	26		
In-kind giving through products, services or projects/ partnerships (Million Baht)	7	29	7	4	4		
Administrative overheads related to CSR activities (Million Baht)	34	25	42	23	29		
Contribution expense for social and community development (Million Baht)	N/A	N/A	43	49	32	GRI 203-1	

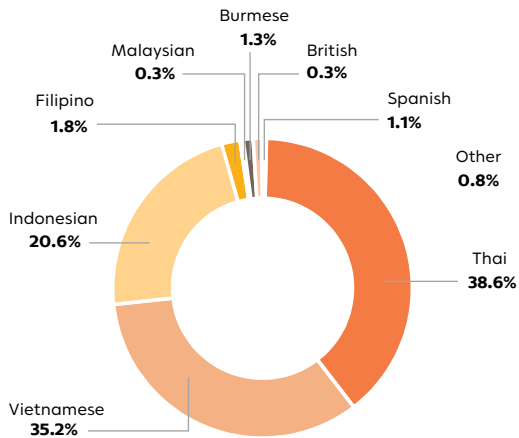
Lost Time Injury Frequency Rate : LTIFR



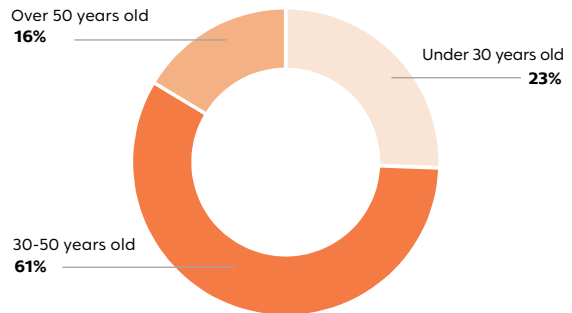
Percentage of female in total workforce



Percentage of Employees by Nationality



Percentage of Employees by Age



S1 Data on Number of Employees and Contractors

1. Employees are individuals who work for the company full-time according to an employment contract. Employees can be divided based on employee level: operational employees, supervisory and professional employees, management employees, probational employees and special contracted employees.
 - Operational Employees are employees who are assigned to perform tasks according to a predetermined plan or as instructed by their supervisors.
 - Supervisory and Professional Employees are employees who are appointed to specific roles with defined responsibilities. They must plan, control, execute, and improve all tasks in accordance with the company's policy, scope, and goal.
 - Management Employees are executives or high-level employees who are responsible for setting strategies or policy, delegating work, and ensuring subordinates can follow and carry out in line with these policies.
 - Probational Employees are employees hired on a trial basis before becoming permanent employees. The company clearly states the conditions for probation, and if the performance is unsatisfactory at the end of the probation period, the company may terminate the employment with compensation as per labor laws.
 - Special Contract Employees are employees hired for specific tasks that are irregular, occasional, seasonal, project-based, or as deemed appropriate by the company. The terms of employment are specified in the contract.
2. Contractors are individuals authorized to perform work or services or provide benefits to the company, other than the employees defined above. Contractors are divided into three categories:
 - 1) Under Supervision Contractors are contractors who perform work for the company where the work and/or workplace is controlled by the company.
 - 2) Direct Transportation Contractors are transportation contractors managed under the SCGP brand.
 - 3) Other Transportation Contractors are transportation contractors not managed under the SCGP brand.

The data of employees and contractors under SCGP's control are calculated in terms of working hours. For transportation contractors in SCGJWD Logistics Company Limited, the data are presented in terms of kilometers.

Additionally, SCGP also defines "Not Under Supervision Contractors" as those contractors who are not under the company's oversight. The company does not control their work methods or work locations such as outsourced work or services performed outside the company premises, like home-based work or work at the contractor's own location.

Calculation of Hours Worked

1. Data obtained from the time recording systems such as the clock-in systems, human resources databases, or accounting units.
2. Data from documents specifying hours worked, such as timesheets, records from accounting units which processing payroll, or units with evidence recording the number of hours worked, or work permit.
3. In cases where a company or factory does not have a time recording system, the following formula is used:

Total Hours Worked = (Total number of workers x Number of working day x Number of regular working hours per day) + Total overtime hours (if any).

Recording of Health and Safety Data

SCGP records health and safety data related to work, divided into six categories:

1. Fatality refers to injuries, occupational illnesses and diseases resulting in death, whether immediate or subsequent due to the accident.
2. Injury Frequency Rate (IFR) refers to the number of recordable work-related injuries per 1,000,000 hours worked.
3. Lost Time Injury Frequency Rate (LTIFR) refers to the number of work-related injuries resulting in lost working day per 1,000,000 hours worked.
Lost Time Injury refers to work-related injury and occupational illness & disease that cause the injured or patient being unable to perform normal duties on the next working day or shift, including cases where the inability to work occurs subsequently due to the accident.
4. Injury Severity Rate (ISR) refers to the number of lost workdays due to work-related injuries per 1,000,000 hours worked.
5. High-Consequence Work-Related Injury Rate refers to the number of severe work-related injuries, excluding fatalities, per 1,000,000 hours worked.
6. Occupational Illness & Disease Frequency Rate (OIFR) refers to the number of recordable occupational illness & disease per 1,000,000 hours worked.

A base of 1,000,000 hours worked is used for calculation to align with the organizational size and industry comparisons.

The collection and calculation of data on high-consequence work-related injury began in 2020.

In 2024, data on the number and rate of occupational illness and disease was disclosed. This includes both companies in Thailand and abroad. The performance of companies in Thailand in terms of the Occupational Illness and Disease Frequency Rate (OIFR) was reported as 0 for both employees and contractors. As for the OIFR in companies abroad, it was reported as 0.37 (0.49 for employees and 0 for contractors).

S2 Number of employees is reported within the Annual Report's scope.

S3 Identify employee gender as male: female: N/A.

S4 Revenue - generating functions, e.g., marketing, sales, production.

S5 Calculate from number of local management level in overseas operations over total number of management level (both in Thailand and abroad).

S6 Visual and physical impairment and movement disabilities or other disabilities e.g., hearing impairment, mental disability, communication disability.

S7 Employees joining trade unions or working with the company covered by the Welfare Committee.

S8 Under Thai laws, only female employees can take maternity leave.

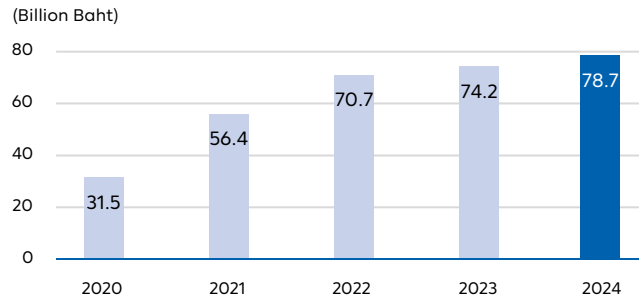
S9 Change in reporting format of employee engagement score in 2023.

Economic & Governance Performance

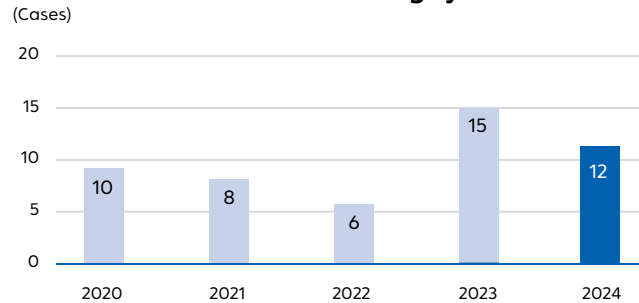
Economic & Governance Performance covers SCGP both Thailand and abroad

Performance	2020	2021	2022	2023	2024	GRI Standard	SASB
Sales revenue (Billion Baht)	92.81	124.22	146.07	129.40	132.78	GRI 201-1	
Net profit (Billion Baht)	6.46	8.29	5.80	5.25	3.70	GRI 201-1	
EBITDA (Billion Baht)	16.88	21.15	19.40	17.77	16.13	GRI 201-1	
Employee compensation: salary, wage, welfare and regular contributions (Million Baht)	10,603	11,687	13,542	14,181	14,627	GRI 201-1	
Dividend paid to SCGP shareholders (Million Baht) ^{EC1}	1,932	2,810	2,576	2,361	2,361	GRI 201-1	
Interest and financial expenses (Million Baht)	1,452	1,180	1,468	2,020	2,429	GRI 201-1	
Taxes to government and local government authorities such as income tax, local maintenance tax, property tax and other specific taxes (Million Baht)	1,756	1,933	1,694	2,053	1,983	GRI 201-1	
Privilege tax and others from investment promotion, and research and development (Million Baht)	244	293	159	201	271	GRI 201-4	
Investment for Research & Development and Innovation (Million Baht) ^{EC2}	529	958	522	998	810		
Revenue from Sales of SCG Green Choice Products and Services (Billion Baht)	31.5	56.4	70.7	74.2	78.7		RT-CP-410a.2
Percentage of Revenue from Sales of SCG Green Choice Products and Services (%)	33.9	45.4	48.4	57.3	59.3		
Top 8 Contributions to organizations (Baht) ^{EC3}	500,177	2,462,438	1,643,770	1,994,222	2,208,560		
Contributions to political activities (Baht) ^{EC4}	0	0	0	0	0	GRI 415-1	
Non-compliance cases through SCG Whistleblowing System (Cases)	10	8	6	15	12	GRI 205-3	
Suppliers assessed Environmental, Social and Governance (ESG) Risks (% of procurement spending) ^{EC5}	100	100	100	100	100	GRI 414-1	
Procurement Spending by Geography (% of procurement spending) ^{EC6}							
- Domestic	55	88	70	85	82	GRI 204-1	
- Regional	45	12	30	15	18	GRI 204-1	

Revenue from Sales of SCG Green Choice Products and Services



Non-compliance cases through SCG Whistleblowing System



EC1 Dividend to shareholders is the total dividend reference to the SCGP Annual Report- was paid in cash.

EC2 The report under the topic "Investment in Research and Development" also includes investment in innovation .

EC3 The first 8 Organizations contributed by SCGP are World Business Council on Sustainable Development (WBCSD), Global Compact Network Association, CDP Worldwide, Federation of Thai Industries, Thai Chamber of Commerce, Asian Corrugated Case Association, Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE).

EC4 SCGP remains political neutral with no financial support or any other kinds to any political parties, political groups or candidates in local, regional or national levels or persons with political influence or Lobbying or interest representation or similar and other categories (e.g. spending related to ballot measures or referendums).

EC5 The Environmental, Social and Governance (ESG) risk assessment for Suppliers began in 2018.

EC6 Consider geography based on seller data and trading currency.

Subsidiaries Included in Sustainability Report 2024

Performance data of Environmental Management, Health and Safety Management

Business / Company	Country	Principal Business / Products	Total Direct / Indirect Holding (Percent)	Production	Environment										Society		Sustainability Management system									
					Energy		Air emission				Water				Waste	Health & Safety		ISO 14001	ISO 9001	ISO 45001	FSC™					
					Thermal	Electricity	Dust	SOx	NOx	GHG	Water withdrawal	Recycle Water	BOD	COD		TSS	Safety					Occupational illness				
1 SCG Packaging Public Company Limited	Thailand	Office															✓	✓								
Subsidiaries																										
2 Thai Containers Group Co., Ltd. (Navanakorn)	Thailand	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Pathumthani)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Samutprakarn)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Ratchaburi)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Songkhla)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Chonburi)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Prachinburi)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Saraburi)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Kamphaeng Phet)	Thailand	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Containers Group Co., Ltd. (Bang Sue)	Thailand	Office																			✓	✓				
3 Thai Containers Khonkaen Co., Ltd.	Thailand	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4 Thai Containers Rayong Co., Ltd.	Thailand	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5 Tawana Container Co., Ltd.	Thailand	Fiber Packaging	50.40	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6 Orient Containers Co., Ltd.	Thailand	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7 Dyna Packs Co., Ltd. ⁽¹⁾	Thailand	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8 D-In Pack Co., Ltd. ⁽²⁾	Thailand	Fiber Packaging	70.00	✓	✓	✓	NR	NR	NR	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9 Vina Corrugated Packaging Company Limited	Vietnam	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
Vina Corrugated Packaging Company Limited (Ho Chi Minh City Branch) ⁽³⁾	Vietnam	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
Vina Corrugated Packaging Company Limited (Hai Duong Branch) ⁽⁴⁾	Vietnam	Fiber Packaging	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
Vina Corrugated Packaging Company Limited (Linh Trung Branch) ⁽⁵⁾	Vietnam	Fiber Packaging	70.00																		✓	✓				
10 Starprint Vietnam JSC	Vietnam	Fiber Packaging	70.00	Have been M&P since 2024 and data will be disclosed through a sustainability report in 2025																						
11 PT Primacorr Mandiri	Indonesia	Fiber Packaging	67.90	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12 PT Indoris Printingdo	Indonesia	Fiber Packaging	69.96	✓	✓	✓	NR	NR	NR	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13 PT Indocorr Packaging Cikarang	Indonesia	Fiber Packaging	69.99	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14 SCGP Solutions Co., Ltd. ⁽⁶⁾	Thailand	Holding Company	100.00																							
15 Precision Print Co., Ltd.	Thailand	Fiber Packaging	100.00	✓	✓	✓	NR	NR	NR	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
16 TCG Solutions Pte. Ltd. ⁽⁷⁾	Singapore	Holding Company	70.00																							
17 Bien Hoa Packaging Joint Stock Company	Vietnam	Fiber Packaging	65.88	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
18 PT Indonesia DIRTajaya Aneka Industri Box (IUG)	Indonesia	Fiber Packaging	60.55	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
PT Indonesia DIRTajaya Aneka Industri Box (IUM)	Indonesia	Fiber Packaging		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
19 PT Bahana Buana Box	Indonesia	Fiber Packaging	60.55	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
20 PT Rapi-pack Asritama	Indonesia	Fiber Packaging	60.55	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
21 Siam Kraft Industry Co., Ltd. (Kanchanaburi)	Thailand	Packaging Paper	100.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Siam Kraft Industry Co., Ltd (Ratchaburi)	Thailand	Packaging Paper		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Siam Kraft Industry Co., Ltd (Bang Sue)	Thailand	Office																								
22 Vina Kraft Paper Co., Ltd.	Vietnam	Packaging Paper	70.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
23 Thai Cane Paper Public Company Limited (Kanchanaburi)	Thailand	Packaging Paper	98.20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thai Cane Paper Public Company Limited (Prachin Buri)	Thailand	Packaging Paper		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24 United Pulp and Paper Co., Inc.	The Philippines	Packaging Paper	74.77	✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25 SCGP Solutions (Singapore) Pte. Ltd. ⁽⁸⁾	Singapore	Holding Company	100.00																							

Business / Company	Country	Principal Business / Products	Total Direct/ Indirect Holding (Percent)	Production	Environment										Society		Sustainability Management system				
					Energy		Air emission				Water				Health & Safety		ISO 14001	ISO 9001	ISO 45001	FSC™	
					Thermal	Electricity	Dust	SOx	NOx	GHG	Water withdrawal	Recycle Water	BOD	COD	TSS	Waste					Safety
26	PT Fajar Surya Wisesa Tbk.	Indonesia	Packaging Paper	99.71	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27	PT Dayasa Aria Prima	Indonesia	Packaging Paper	99.71	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28	SCG Paper Energy Co., Ltd.	Thailand	Energy And Utilities	100.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
29	SCGP-T Plastics Co., Ltd. ⁽²⁾	Thailand	Holding Company	51.00																	
30	Conimex Co., Ltd.	Thailand	Rigid Packaging	38.25	✓	✓	✓	NR	NR	NR	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	NR
31	SCGP Rigid Plastics Co., Ltd. ⁽²⁾	Thailand	Holding Company	100.00																	
32	Vexcel Pack Co., Ltd. ⁽⁵⁾	Thailand	Rigid Packaging	100.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	NR
33	TC Flexible Packaging Co., Ltd. ⁽²⁾	Thailand	Holding Company	52.50																	
34	Prepack Thailand Co., Ltd. (Samut Sakhon)	Thailand	Flexible Packaging	52.38	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	NR
	Prepack Thailand Co., Ltd. (Samut Songkhram)	Thailand	Flexible Packaging		✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	NR
	Prepack Thailand Co., Ltd. (Rayong)	Thailand	Flexible Packaging		✓	✓	✓	NR	NR	NR	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	NR
35	Tin Thanh Packing Joint Stock Company	Vietnam	Flexible Packaging	52.49	✓	✓	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	NR
36	Law Print & Packaging Management Limited (UK)	The United Kingdom	Flexible Packaging	100.00	Have been M&P since 2023 and data will be disclosed through a sustainability report in 2025																
37	Law Print & Packaging Management Limited (IE)	Ireland	Flexible Packaging	100.00	Have been M&P since 2023 and data will be disclosed through a sustainability report in 2025																
38	SCGP Rigid Packaging Solutions Pte. Ltd. ⁽²⁾	Singapore	Holding Company	100.00																	
39	Duy Tan Plastics Manufacturing Corporation Joint Stock Company	Vietnam	Rigid Packaging	70.00	✓	✓	✓	NR	NR	NR	✓	✓	✓	NR	NR	NR	✓	✓	✓	✓	NR
40	Duy Tan Long An Company Limited	Vietnam	Rigid Packaging	70.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	✓	NR	NR	✓	✓	✓	✓	NR
41	Duy Tan Precision Mold Company Limited	Vietnam	Rigid Packaging	70.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	✓	NR	NR	✓	✓	✓	✓	NR
42	Duy Tan Binh Duong Plastics Company Limited	Vietnam	Rigid Packaging	70.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	✓	NR	NR	✓	✓	✓	✓	NR
43	MATA Plastic Company Limited	Vietnam	Rigid Packaging	70.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	✓	NR	NR	✓	✓	✓	✓	NR
44	International Healthcare Packaging Co., Ltd. ⁽²⁾	Thailand	Holding Company	100.00																	
45	Deltalab Global, S.L. ⁽²⁾	Spain	Holding Company	89.06																	
46	Deltalab, S.L.	Spain	Medical Supplies and Labware	89.06																	
47	Keylab, S.L.U.	Spain	Medical Supplies and Labware	89.06	✓	NR	✓	ND	ND	ND	✓	ND	ND	ND	ND	ND	✓	✓	✓	✓	NR
48	Nirco, S.L.	Spain	Medical Supplies and Labware	89.06																	
49	Envases Farmaceuticos, S.A.	Spain	Medical Supplies and Labware	89.06	✓	NR	✓	ND	ND	ND	✓	ND	ND	ND	ND	ND	✓	✓	✓	✓	NR
50	Equilabo Scientific, S.L.U.	Spain	Medical Supplies and Labware	89.06																	
51	Bicappa Lab S.r.l.	Italy	Medical Supplies and Labware	75.70	Have been M&P since 2023 and data will be disclosed through a sustainability report in 2025																
52	VEM (THAILAND) CO., LTD.	Thailand	Medical Supplies and Labware	90.00	Have been M&P since 2024 and data will be disclosed through a sustainability report in 2025																
53	Phenix Pulp & Paper Public Company Limited	Thailand	Foodservice Packaging/Pulp and Paper Products	69.58	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
54	Thai Paper Co., Ltd. (Paper Production)	Thailand	Foodservice Packaging/Pulp and Paper Products	69.58	✓	✓	✓	NR	NR	NR	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓
	Thai Paper Co., Ltd. (Fest hub)	Thailand	Foodservice Packaging/Pulp and Paper Products		✓	✓	✓	NR	NR	NR	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓
	Thai Paper Co., Ltd. (Pulp Production-Banpong)	Thailand	Foodservice Packaging/Pulp and Paper Products		✓	✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	✓	✓	✓	✓	✓
	Thai Paper Co., Ltd. (Pulp Production-Wangsala)	Thailand	Foodservice Packaging/Pulp and Paper Products		✓	✓	✓	✓	✓	✓	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	✓
	Thai Paper Co., Ltd. (Bang Sue)	Thailand	Office														✓	✓			
55	Go-Pak UK Limited	The United Kingdom	Foodservice Packaging	100.00													✓	✓			
56	Go-Pak Vietnam Limited	Vietnam	Foodservice Packaging	100.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	NR
57	Go-Pak Paper Products Vietnam Company Limited	Vietnam	Foodservice Packaging	100.00	✓	✓	✓	NR	NR	NR	✓	✓	NR	✓	✓	✓	✓	✓	✓	✓	NR
58	Interpress Printers Sendirian Berhad	Malaysia	Foodservice Packaging	68.30	✓	✓	✓	NR	NR	NR	✓	✓	NR	NR	NR	NR	✓	✓	✓	✓	NR
59	The Siam Forestry Co., Ltd.	Thailand	Forestry Products	69.58	✓	✓	✓	NR	NR	NR	✓	NR	NR	NR	NR	NR	✓	✓	✓	✓	NR
60	Siam Panawes Co., Ltd.	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
61	Suanpa Rungsaris Co., Ltd.	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
62	Panas Nimit Co., Ltd.	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
63	Thai Panaboon Co., Ltd.	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
64	Thai Panaram Co., Ltd.	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
65	Thai Panadorn Co., Ltd.	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Business / Company	Country	Principal Business / Products	Total Direct / Indirect Holding (Percent)	Production	Environment											Society		Sustainability Management system									
					Energy		Air emission			Water			Waste	Health & Safety		ISO 14001	ISO 9001	ISO 45001	FSC™								
					Thermal	Electricity	Dust	SOx	NOx	GHG	Water withdrawal	Recycle Water		BOD	COD					TSS	Safety	Occupational illness					
66	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
67	Thailand	Forestry Products	69.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
68	The Netherlands	Holding Company	100.00	Have been M&P since 2022 and data will be disclosed through a sustainability report in 2025																							
69	The Netherlands	Packaging Materials Recycling	100.00																								
70	The Netherlands	Holding Company	100.00																								
71	The Netherlands	Packaging Materials Recycling	100.00																								
72	The Netherlands	Holding Company	100.00																								
73	The Netherlands	Packaging Materials Recycling	100.00																								
74	Portugal	Packaging Materials Recycling	100.00																								
75	Spain	Packaging Materials Recycling	100.00																								
76	The United Kingdom	Packaging Materials Recycling	100.00																								
77	Thailand	Holding Company	100.00																								
78	The United States of America	Packaging Materials Recycling	90.10																								
81	Thailand	Training and seminar	100.00																								
80	Thailand	Asset and Intellectual Property Management Service	100.00																								
81	The Philippines	Holding Company	74.77																								
Associates and Other subsidiaries																											
1	Thailand	Fiber Packaging	49.00																								
2	The Philippines	Holding Company	40.00																								
3	Thailand	Specialty Paper	31.31																								
4	Thailand	Energy And Utilities	17.40																								
5	France	Packaging Materials Recycling	45.00																								
6	Thailand	Foodservice Packaging / Pulp and Paper Products	28.48																								

Remarks NR = Non-Relevance Information (businesses are in operation but their data is irrelevant or significant)

ND = Not disclose this year

Office/Investment/Sales/Service where the collection of data is not necessary and non-production companies

Greenfield (less than 1 years) or newly acquired companies (less than 1 years) are not required to incorporate environmental, safety and occupational illness data into SCGP

⁽¹⁾ Dyna Packs Co., Ltd. and D-In Pack Co., Ltd. transferred the entire business to ORIENT on November 1, 2020 and registered the dissolution of the company with the Department of Business Development, Ministry of Commerce on December 22, 2020. It is currently in the process of liquidation.

⁽²⁾ Companies that operate the main businesses

⁽³⁾ Pheonix Utilities Co., Ltd. transferred the entire business to Phoenix Pulp & Paper Public Company Limited on October 1, 2021 and has deregistered with the Department of Business Development, Ministry of Commerce, on August 29, 2024

⁽⁴⁾ United Industrial Energy Corporation registered the termination of its business on April 24, 1999.

⁽⁵⁾ Visy Packaging (Thailand) Limited changed its name to Vexcel Pack Co., Ltd.

⁽⁶⁾ New Asia Industries Co., Ltd., Packamex (Vietnam) Co., Ltd., and AP Packaging (Hanoi) Co., Ltd. transferred all their business operations to Vina Corrugated Packaging Company Limited on May 1, 2024.

- At the Board of Directors' meeting held on February 13, 2018, approval was given for TCGS to cease operations and liquidation was completed on January 25, 2022.

- Sanilabo, S.L.U. has officially ceased business operations as of August 21, 2024.

- The Data reporting of SCG Packaging Public Company Limited includes the Headquarters office and organizations under SCGP

- There are 58 companies within the scope of ISO 14001 operations, with 47 actively complying, representing 81%.

- There are 58 companies within the scope of ISO 9001 operations, with 52 actively complying, representing 90%.

- There are 58 companies within the scope of ISO 45001 operations, with 40 actively complying, representing 69%.

- There are 44 companies within the scope of FSC™ operations, with 43 actively complying, representing 98%.

Supplementary Information



SCGP website link

[Sustainability Approaches](#)

[Policy](#)

[Sustainability Structure](#)

[Corporate Governance](#)

[Materiality](#)

[Stakeholder Engagement](#)

[Sustainability Value Chain](#)

[Human Rights Issues 2024](#)

[Award/Certificates](#)

[TCFD Report 2024](#)

On the words presented website





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 CO₂ 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

- c) Governance dimension performance indicators or in descriptive text
 - o Business ethics assessment
 - o Double materiality assessment
 - o Number of Tier-1 supplier, critical supplier in Tier-1, spend on critical supplier in Tier-1 and significant supplier in non Tier-1
 - o Number of supplier assessed assessment, critical supplier assessed and supplier assessed with substantial high ESG risks impact
 - o Number of suppliers in corrective action plan implementation and supplier assessed with substantial actual/potential negative impact supported in corrective action plan implementation

ASSURANCE METHODOLOGY

SGS's assurance engagements are carried out in accordance with assurance procedure.

The assurance comprised a combination of

- SCGP's Management interviews, including the Sustainable Development team with responsibility for performance in the areas within scope
- Interview with data owners &/or managers responsible for internal data collection and reporting databases
- Document review of relevant systems, policies, and procedures where available
- Understanding, analysing and sample testing the key data collection, aggregation, validation and reporting systems, processes, procedures, and controls
- Sampling evidence to confirm the reliability of the selected reporting standards, selected 2 Sites for onsite visit as below:
 - o Thai Paper Co., Ltd. (Pulp Production-Wangsala)
 - o VINA Corrugated Packaging Company Limited

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process. Note here any other specific limitations for the assurance engagement and actions taken to mitigate those limitation, some statements and data within the scope were not assured due to lack of accessible records during the timescale allowed for assurance, and these are clearly marked throughout the Report.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from SCGP, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with ISO 9001, ISO 14001, ISO 45001, ISO 50001, ISO 14064-1, ISO 14067, ISO 26000, WFP, SA 8000 and experience on the SRA Assurance service provisions.

ASSURANCE/VERIFICATION OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the specified performance information included in the scope of assurance is accurate, reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria. For future reporting, more descriptions of SCGP and subsidiaries' involvement with reconsidering data collection tool and establish mechanism for internal audit on the data performance and should maintain the system in place.

We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting.

Signed:

For and on behalf of SGS (Thailand) Limited



Montree Tangtermsirikul

General Manager

238 TRR Tower, 19th-21st Floor, Naradhiwas Rajanagarindra Road, Chong Nonsi, Yannawa, Bangkok 10120, Thailand

20 February 2025

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attached sheet

Summary of Scope 3 GHG Emissions Report 2024

The emission is described as below:

Unit: tonnes of CO₂e

Category	GHG emissions
1. Purchased goods & services	1,419,020
2. Capital goods	53,830
3. Fuel and energy-related activities	407,527
4. Upstream transportation & distribution	344,322
5. Waste generated in operations	26,502
6. Business travel	996
7. Employee commuting	26,824
9. Downstream transportation & distribution	67,851
10. Processing of sold products	405,334
12. End-of-life treatment of sold products	28,941
13. Downstream leased assets	107
15. Investment	19,169
Total emissions	2,800,423

Remark:

- Categories 8, 11 and 14 are not reported as GHG emissions because the organization's activities are not relevant to the context

Global Reporting Initiative (GRI) Index

Statement of use:	SCG Packaging Public Company Limited has reported in accordance with the GRI Standards for the reporting period 2024 (1 January 2024 – 31 December 2024)
GRI 1 used:	GRI 1: Foundation 2021
Applicable GRI Standards:	None

In the 'Ref' column, 'SR' refers to this SCGP Sustainability Report 2024, and 'AR' to the SCGP Annual Report 2024.

GRI STANDARD	DISCLOSURE	LOCATION	EXTERNAL ASSURANCE
GRI 2: General Disclosures 2021	2-1 Organizational details	SR 4, AR 137	
	2-2 Entities included in the organization's sustainability reporting	SR 101-103	
	2-3 Reporting period, frequency and contact point	SR 11-12	
	2-4 Restatements of information	SR 11-12	
	2-5 External assurance	SR 105-107, SCGP Website: ESG Homepage	
	2-6 Activities, value chain and other business relationship	SR 26-27, 36-39, 64-65, 78-79	
	2-7 Employees	SR 93	
	2-8 Workers who are not employees	SCGP Website: ESG Homepage	
	2-9 Governance structure and composition	AR 137-139	
	2-10 Nomination and selection of the highest governance body	AR 140-142	
	2-12 Role of the highest governance body in overseeing the management of impacts	SR 3-5, SCGP Website: ESG Homepage	
	2-13 Delegation of responsibility for managing impacts	SR 3-5, SCGP Website: ESG Homepage	
	2-14 Role of the highest governance body in sustainability reporting	SCGP Website: ESG Homepage	
	2-15 Conflicts of interest	AR 10-13	
	2-16 Communication of critical concerns	AR 10-17, SCGP Website: ESG Homepage	
	2-17 Collective knowledge of the highest governance body	AR 188-190	
	2-18 Evaluation of the performance of the highest governance body	AR 190	
	2-19 Remuneration policies	AR 16, SCGP Website: ESG Homepage	
	2-20 Process to determine remuneration	AR 16, SCGP Website: ESG Homepage	
	2-22 Statement on sustainable development strategy	SR 6-7, AR 8-9, SCGP Website: ESG Homepage	
2-23 Policy commitments	SR 24-25, 29-67, AR 119-135, SCGP Website: ESG Homepage		
2-24 Embedding policy commitments	SR 62-63, SCGP Website: ESG Homepage		
2-25 Processes to remediate negative impacts	SR 62-63, SCGP Website: ESG Homepage		
2-26 Mechanisms for seeking advice and raising concerns	SR 26-27, 52-53, 62-63		
2-27 Compliance with laws and regulations	SR 42-52, 88		
2-28 Membership associations	SR 26-27		
2-29 Approach to stakeholder engagement	SR 56-61		
2-30 Collective bargaining agreements	SCGP Website: ESG Homepage		

GRI STANDARD	DISCLOSURE	LOCATION	EXTERNAL ASSURANCE
GRI 3: Material Topics 2021	3-1 Process to determine material topics	SR 29, 56-61 SCGP Website: ESG Homepage	Yes
	3-2 List of material topics	SR 30	Yes
	3-3 Management of material topics	SR 31-32	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	SR 99	
	201-2 Financial implications and other risks and opportunities due to climate change	SR 70-77	
	201-3 Defined benefit plan obligations and other retirement plans	AR 177, SCGP Website: ESG Homepage	
	201-4 Financial assistance received from government	SR 99	
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	SCGP Website: ESG Homepage	
	202-2 Proportion of senior management hired from the local community	SR 93	
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	SR 95	
	203-2 Significant indirect economic impacts	SR 47-55	
GRI 204: Procurement	204-1: Proportion of spending on local suppliers	SR 99	
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	SCGP Website: ESG Homepage	
	205-2 Communication and training about anti-corruption policies and procedures	SR 62-63	
	205-3 Confirmed incidents of corruption and actions taken	SR 99	
GRI 206: Anti-competitive	206-1: Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	SCGP Website: ESG Homepage	
GRI 207: Tax 2019	207-1 Approach to tax	SCGP Website: ESG Homepage	
	207-2 Tax governance, control, and risk management	SCGP Website: ESG Homepage	
	207-3 Stakeholder engagement and management of concerns related to tax	SCGP Website: ESG Homepage	
	207-4 Country-by-country reporting	SCGP Website: ESG Homepage	
GRI 301: Materials 2016	301-1 Materials used by weight or volume	SR 81	
	301-2 Recycled input materials used	SR 81	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	SR 83, 90 SCGP Website: ESG Homepage	Yes
	302-2 Energy consumption outside of the organization	SR 83	
	302-3 Energy intensity	SR 83, 90	
	302-4 Reduction of energy consumption	SR 33, 83, 90	
	302-5 Reductions in energy requirements of products and services	SR 37, 66-67	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	SR 44-46, SCGP Website: ESG Homepage	
	303-2 Management of water discharge-related impacts	SR 44-46, SCGP Website: ESG Homepage	
	303-3 Water withdrawal	SR 84-85, 90	Yes
	303-4 Water discharge	SR 84-85, 90	Yes
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	SR 40-42, SCGP Website: ESG Homepage	
	304-2 Significant impacts of activities, products and services on biodiversity	SR 40-42, SCGP Website: ESG Homepage	
	304-3 Habitats protected or restored	SR 40-42	
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	SR 40-42, SCGP Website: ESG Homepage	

GRI STANDARD	DISCLOSURE	LOCATION	EXTERNAL ASSURANCE
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	SR 81-82, 88-89	Yes
	305-2 Energy indirect (Scope 2) GHG emissions	SR 81-82, 88-89	Yes
	305-3 Other indirect (Scope 3) GHG emissions	SR 81-82, 88-89	Yes
	305-4 GHG emissions intensity	SR 81-82, 88-89	
	305-5 Reduction of GHG emissions	SR 81-82, 88-89	Yes
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx)	SR 83, 91	Yes
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	SR 36-39, SCGP Website: ESG Homepage	
	306-2 Management of significant waste-related impacts	SR 36-39, SCGP Website: ESG Homepage	
	306-3 Waste generated	SR 86-87, 90-91	Yes
	306-4 Waste diverted from disposal	SR 86-87, 90-91	Yes
	306-5 Waste directed to disposal	SR 86-87, 90-91	Yes
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	SR 62, 64-65	
	308-2 Negative environmental impacts in the supply chain and actions taken	SR 62, 64-65	
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	SR 94-95	
	401-3 Parental leave	SR 95	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	SR 47-50	
	403-2 Hazard identification, risk assessment, and incident investigation	SR 47-50	
	403-3 Occupational health services	SR 47-50	
	403-4 Worker participation, consultation, and communication on occupational health and safety	SR 47-50 SCGP Website: ESG Homepage	
	403-5 Worker training on occupational health and safety	SR 47-50 SCGP Website: ESG Homepage	
	403-6 Promotion of worker health	SR 47-50	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	SR 47-50	
	403-8 Workers covered by an occupational health and safety management system	SR 47-50	
	403-9 Work-related injuries	SR 92, 97-98	Yes
	403-10 Work-related ill health	SR 92, 97-98	Yes
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	SR 95	
	404-2 Programs for upgrading employee skills and transition assistance programs	SR 51-52	
	404-3 Percentage of employees receiving regular performance and career development reviews	SR 47	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	SR 93-94, AR 138-139	
	405-2 Ratio of basic salary and remuneration of women	SR 93-94	Yes
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	SR 63 SCGP Website: ESG Homepage	
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	SR 62-63 SCGP Website: ESG Homepage	
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	SR 62-63 SCGP Website: ESG Homepage	

GRI STANDARD	DISCLOSURE	LOCATION	EXTERNAL ASSURANCE
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	SR 93-94 SCGP Website: ESG Homepage	
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	SR 93-94 SCGP Website: ESG Homepage	
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of Indigenous peoples	SR 93-94 SCGP Website: ESG Homepage	
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	SR 47, 54-55 SCGP Website: ESG Homepage	
	413-2 Operations with significant actual and potential negative impacts on local communities	SR 47, 54-55 SCGP Website: ESG Homepage	
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	SR 8, 62, 64-65 SCGP Website: ESG Homepage	
	414-2 Negative social impacts in the supply chain and actions taken	SR 8, 62, 64-65 SCGP Website: ESG Homepage	
GRI 415: Public Policy 2016	415-1 Political contributions	SR 99 SCGP Website: ESG Homepage	
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	SR 62, 66-67 SCGP Website: ESG Homepage	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	SR 62, 66-67 SCGP Website: ESG Homepage	
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	SR 37, 67 SCGP Website: ESG Homepage	
	417-2 Incidents of non-compliance concerning product and service information and labeling	SR 62	
	417-3 Incidents of non-compliance concerning marketing communications	SR 62	
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	SR 53, 62-63 SCGP Website: ESG Homepage	

Sustainability Accounting Standards Board Response (SASB)

SASB Content Index

Topic	Disclosure Code	Disclosure Title	Page	Disclosure or Additional Explanation	Unit
Greenhouse Gas Emissions	RT-CP-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	81		Metric tons (tCO ₂ e) Percentage (%)
	RT-CP-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	33-35		N/A
Air Quality	RT-CP-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N ₂ O), (2) SOx, (3) volatile organic compounds (VOCs), and (4) particulate matter (PM)	83		Metric tons (t)
Energy Management	RT-CP-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	22, 83		Gigajoules (GJ) Percentage (%)
Water Management	RT-CP-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	84		Thousand cubic meters (m ³) Percentage (%)
	RT-CP-140a.2	Description of water management risks and discussion of strategies and practices to mitigate those risks	84-85, 44-46, 70-77		Number
	RT-CP-140a.3	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	88	0 Case	Number
Waste Management	RT-CP-150a.1	Amount of hazardous waste generated, percentage recycled	86		Metric tons (t) Percentage (%)

SASB Content Index

Topic	Disclosure Code	Disclosure Title	Page	Disclosure or Additional Explanation	Unit
Product Safety	RT-CP-250a.1	Number of recalls issued, total units recalled	62	0 Case	Number
	RT-CP-250a.2	Discussion of process to identify and manage emerging materials and chemicals of concern	66-67		N/A
Product Lifecycle Management	RT-CP-410a.1	Percentage of raw materials from: (1) recycled content, (2) renewable resources, and (3) renewable and recycled content	81	(3) 98.1%	Percentage (%) by weigh
	RT-CP-410a.2	Revenue from products that are reusable, recyclable, and/or compostable	99	78,683 Million Baht (SCG Green Choice)	Reporting Currency
	RT-CP-410a.3	Discussion of strategies to reduce the environmental impact of packaging throughout its lifecycle	36-37 66-67		N/A
Supply Chain Management	RT-CP-430a.1	Total wood fiber procured, percentage from certified sources	41	2.50 Million tons 100% of FSC™-CW/ COC : FSC-C133881	Metric tons (t) Percentage (%)
	RT-CP-430a.2	Total aluminum purchased, percentage from certified sources		Not Applicable	Metric tons (t) Percentage (%)
Activity Metric	RT-CP-000.A	Amount of production, by substrate	81		Metric tons (t) Percentage (%)
	RT-CP-000.B	Percentage of production as: (1) paper/wood, (2) glass, (3) metal, and (4) plastic		Annual Report 2023 P. 42 (1) 81.7% (4) 12.5%	Percentage (%) by revenue
	RT-CP-000.C	Number of employees	93	21,540 Persons	Number

SCGP





SCG PACKAGING PUBLIC COMPANY LIMITED

1 SIAM CEMENT RD., BANGSUE, BANGKOK 10800, THAILAND

Tel: +66 2586 3333 Fax: +66 2586 3007

E-mail : SCGPackaging@scg.com | www.SCGPackaging.com