

NATURE REPORT 2024

| TASKFORCE ON NATURE-RELATED
FINANCIAL DISCLOSURES (TNFD)

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Message from President & CEO, SCG

Chairman of SCG Sustainable Development Committee



Thammasak Sethaudom

President & CEO, SCG

Chairman of SCG Sustainable Development Committee

In today's rapidly changing world, nature loss and climate change have emerged as defining challenges for businesses and societies alike. At SCG, we recognize that the stability of our operations and the well-being of communities we serve are deeply intertwined with the health of natural ecosystems.

From shifting rainfall patterns and declining biodiversity to the increasing frequency of extreme weather events, the impacts of nature degradation are no longer distant risks. They are immediate realities that threaten supply chains, raw material availability, and long-term business continuity.

In response to these growing challenges, SCG is proud to be an early adopter of the Taskforce on Nature-related Financial Disclosures (TNFD) framework. In this inaugural year of adoption, we are leveraging TNFD's LEAP approach to systematically assess our dependencies and impacts on nature, as well as the risks and opportunities that arise from these relationships.

Adopting the TNFD framework is not merely a reporting exercise. It is a strategic step toward integrating nature into our core decision making. It reflects our belief that a nature-positive future is not only desirable, but essential for sustainable growth. We are also align our actions with global ambitions under the Kunming-Montreal Global Biodiversity Framework (GBF), especially in supporting the goal of halting and reversing nature loss.

Looking ahead, we are committed to transforming insights from our TNFD aligned assessment into action. We are currently developing the SCG Nature Positive Roadmap, which will guide us in reducing our impacts and dependencies on nature, managing nature-related risks, and identifying opportunities to restore and regenerate ecosystems where we operate.

Through this journey, we aim to play a leading role in building a more resilient, inclusive, and nature-positive economy, in line with global expectations and our longstanding commitment to environmental stewardship.

By working collaboratively with our partners and stakeholders, we believe that advancing collective action for nature is a key to secure business resilience, enhance community prosperity, and safeguard the planet's ecological integrity.

About TNFD

The Taskforce on Nature-related Financial Disclosures (TNFD) is a global, market-led initiative that provides a standardized framework for organizations to identify, assess, manage, and disclose nature-related risks and opportunities. Its goal is to redirect financial flows toward outcomes that are nature-positive, climate-resilient, and socially inclusive.

Central to the TNFD framework is the LEAP approach, a structured assessment methodology that guides organizations through four key steps:

Locate - Nature mapping begins with the Locate phase, where the company carefully examines how their activities interact with the natural world. By analyzing operations, value chains, and geographical presence, companies gain a clear picture of where and how they touch the environment.

Evaluate - The company takes a deeper look at their connection to nature. They measure how much they depend on natural resources and ecosystem services, while also understanding their impact on these vital systems. This creates a rich foundation of data to inform strategic decisions.

Assess - The Assess phase transforms this knowledge into actionable insights. The company examines potential risks to their operations from environmental changes, while also discovering opportunities to create positive impacts. This dual perspective ensures both protection against threats and pursuit of sustainable value creation.

Prepare - The company channels their insights into concrete actions. They develop targeted strategies, create detailed roadmaps for implementation, and establish robust systems for monitoring progress. This phase also

emphasizes the importance of transparent reporting to stakeholders about environmental initiatives and outcomes.

This report presents the initial TNFD-aligned assessment using the LEAP approach as a guiding process. The structure of this report follows the TNFD recommended disclosure framework, which is organized around four thematic pillars:

Governance - The oversight and decision-making processes related to nature.

Strategy - How nature-related issues affect our strategy, business model, and financial planning.

Risk & Impact Management - How company identify, assess, and manage nature-related risks and opportunities.

Metrics & Targets - The indicators and goals company use to monitor and drive performance.



1.1 The board's oversight and responsibilities

1.2 Human rights

1 Governance

1.1 The board's oversight and responsibilities

SCG's sustainability governance is integrated into its core business strategy through the Sustainable Development Committee, which actively addresses and promotes initiatives across three dimensions: Social, Environmental, and Economic. This structure ensures that sustainability is not just a peripheral concern but a fundamental aspect of SCG's mission and operations.

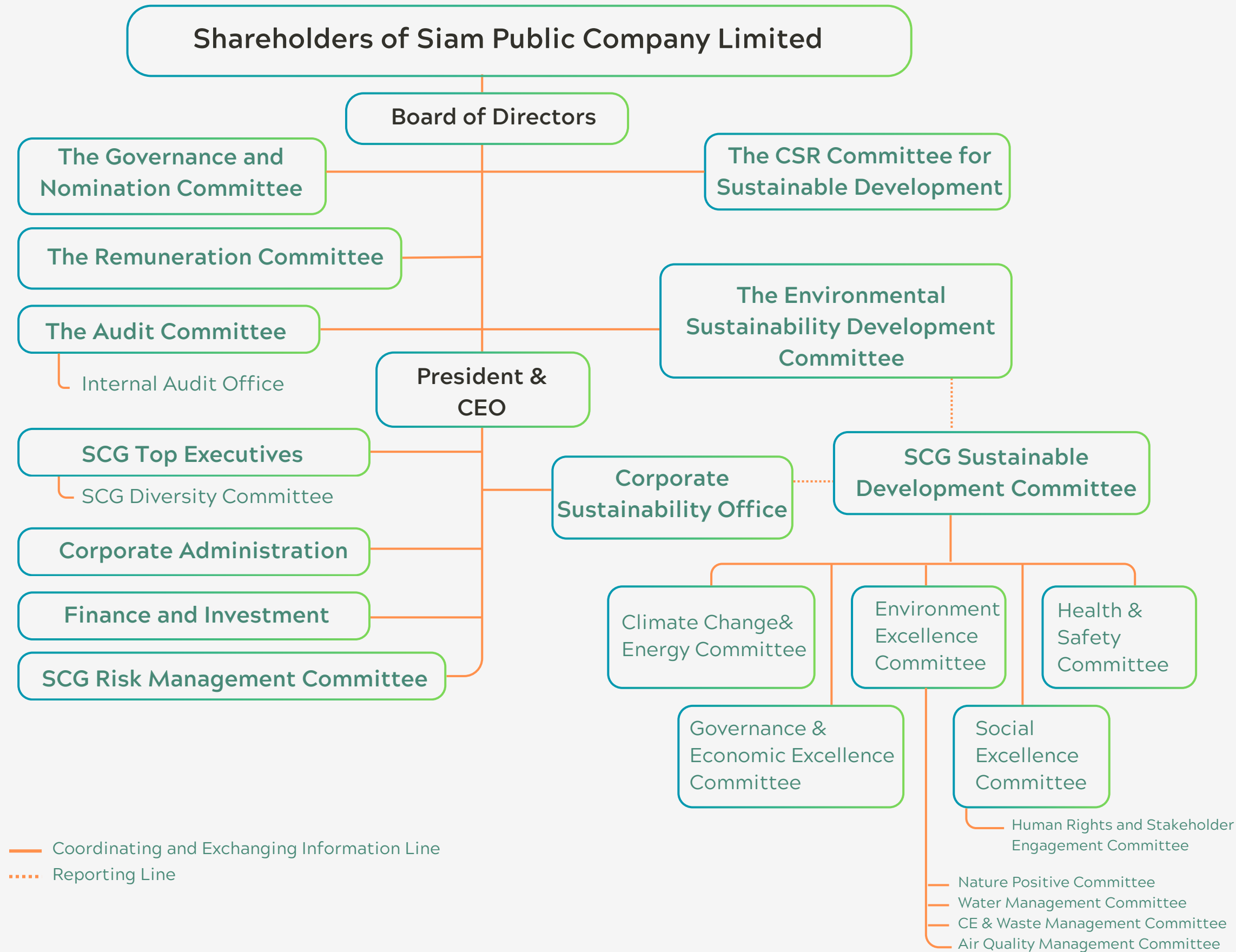
Several specialized committees support the sustainability framework, particularly the committees related to nature issues, including the Circular Economy Committee, the Climate Change and Energy Committee, and the Environment Excellence Committee. These committees oversee key environmental initiatives, including climate action, eco-efficiency, biodiversity protection, waste and water management, and air quality improvements, with all core committees and working groups convening quarterly.

In 2024, the “Nature Positive Committee” was established in order to strengthen SCG's natural resource stewardship, biodiversity restoration on land, freshwater, and ocean, and supporting a Net Positive Impact on ecological balance, both domestically and regionally. The roles and responsibilities of the Nature Positive Committee are to develop SCG Nature Positive Roadmap, which involved studying resource dependencies and impacts on nature across the value chain as well as identifying ways to make positive impacts on nature and cultivate a nature positive lifestyle among employees from family to organizational levels. As shown in Figure, the governance structure follows a clear reporting chain where the President & CEO reports to the Board of Directors, incorporating inputs from two key committees:

1. Risk Management Committee, which handles risk assessment and mitigation (with additional oversight from the Audit Committee).
2. Sustainable Development Committee, which leads ESG initiatives.

1.1 The board's oversight and responsibilities

1.2 Human rights



The Board of Directors consists of 15 members, of whom 11 have experience or skills in environmental issues. Those with related skills provide knowledge or advice for decision-making for nature-related issues. The board meets 8 times annually to strategically address business strategies, plans, risk management, and investment budgets, with a particular focus on climate change, biodiversity loss, and social inequality.

The details of the Board's and management's roles and responsibilities toward nature-related topics are shown in the Table

1.1 The board's oversight and responsibilities

1.2 Human rights

Nature-related governance roles and responsibilities

Board of Directors

- Review and address business strategies, plans, risk management, and investment budgets as well as oversee climate, nature loss and inequality issues
- Oversee the sustainability reporting processes from the SCG Sustainable Development Committee
- Oversee the use of internal/external audits via the Audit Committee
- Provides autonomous supervision and evaluates both organizational performance and executive leadership effectiveness on nature-related targets
- Oversee risks and opportunities over the near-term and long-term business landscape and its impacts including nature-related risk and opportunities

President & CEO

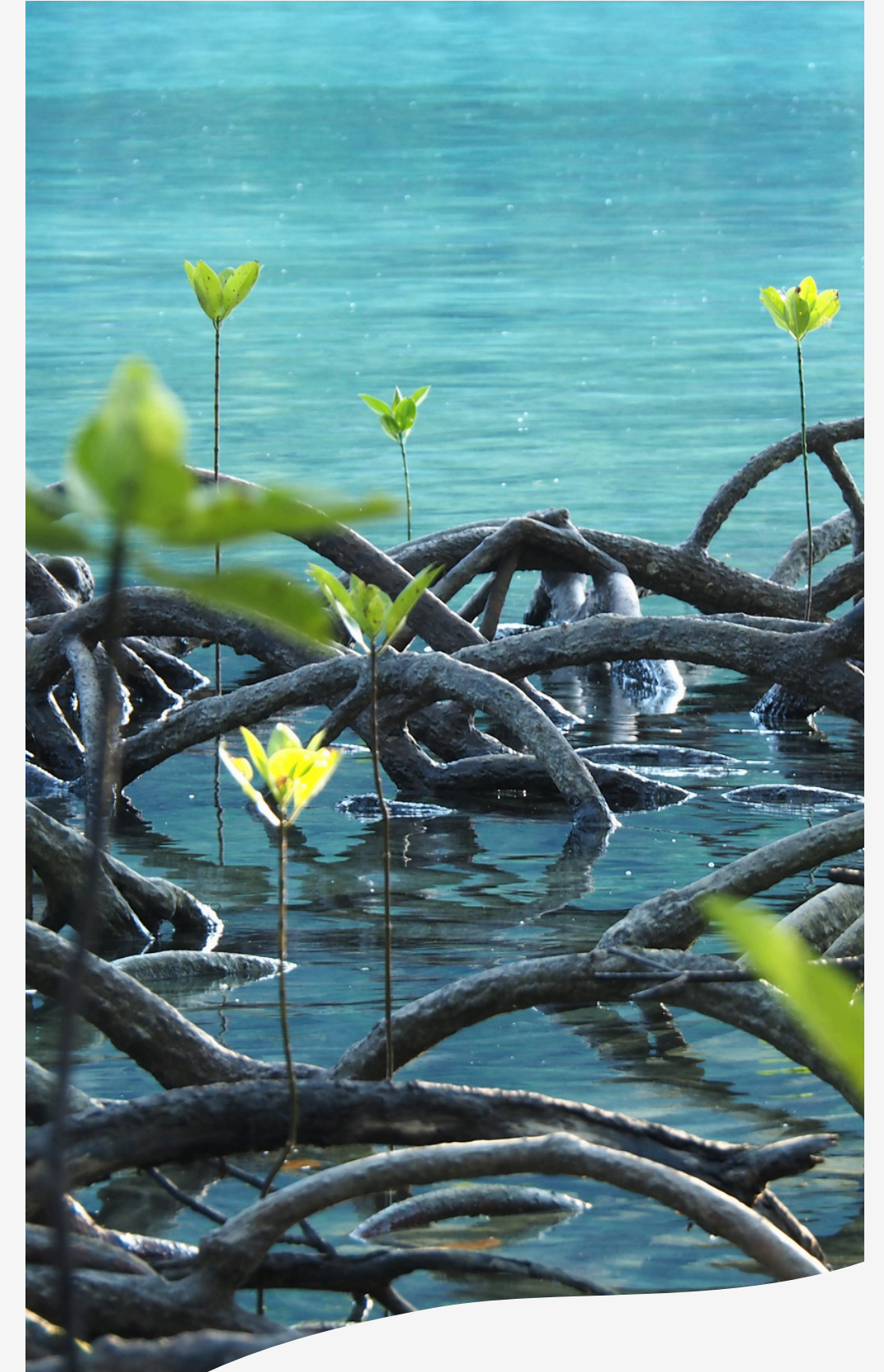
- Review and monitor nature-related risk and opportunities profiles incorporated in enterprise risk management through the SCG Risk Management Committee
- Oversee the management of the Company's sustainability and all climate-related issues, including risk management, investment portfolio, climate strategy, operational eco-efficiency, stakeholder engagement, and innovation as well as determine and review policy, guidelines, and target of SCG sustainability issues including energy and climate.

SCG Risk Management Committee

- Review and monitor material nature-related risks and integrate them into enterprise risk management

The Remuneration Committee

- Review non-financial performance indicators for remuneration policy, particularly in ESG metrics e.g. Energy Consumption, GHG emission, zero waste to landfill, water, circular economy, etc.



Nature- related governance roles and responsibilities

SCG Sustainable Development Committee (Chaired by the CEO and comprised of the highest-level representative)

- Manage ESG issues across the value chain
- Review materiality issues and integrate them into business strategies
- Review and develop nature-related policy, commitments, and targets as well as nature-related dependencies, impacts, risks, and opportunities
- Prepare and engage in national and international stakeholder engagement, such as WBCSD, UNGC, Ellen MacArthur Foundation, TBCSD, the Federation of Thai Industries, The Thai Chamber of Commerce and Board of Trade of Thailand, and government agencies.

Environmental Excellence Committee

- Oversee and review environmental-related issues including waste management, water management, air quality management, biodiversity and ecosystem, circular economy, sustainable products and services, and eco-efficiency, particularly in the priority locations.

Nature Positive Committee

- Develop SCG Nature Positive Roadmap
- Manage nature-related dependencies, impacts, risks, and opportunities across the value chain
- Identify ways to make positive impacts on nature and cultivate a nature positive lifestyle among employees

Sustainability Development working group

- Evaluate and assess nature-related dependencies, impacts, risks and opportunities

To emphasize the importance of ESG and sustainable development at SCG, non-financial performance indicators related to ESG, and climate metrics are integrated into the remuneration policy. These indicators are linked to variable compensation and merit for 15% of the CEO's and executives' pay, ensuring the company's sustainable growth. Examples of nature-related metrics and targets include energy consumption, GHG emissions, waste & water management, and circular economy initiatives.



1.2 Human rights

People are an integral part of nature, both dependent on and impacting the environment. The connection between Indigenous Peoples, Local Communities, and natural ecosystems is vital, as their knowledge, community-driven practices, and long-standing institutions have proven highly effective in safeguarding biodiversity.

To ensure that the business minimizes disruption and respects the rights of local communities to access natural resources, SCG strictly complies with laws and is committed to respecting human rights in accordance with internationally accepted standards. This includes support for and compliance with the Universal Declaration of Human Rights (UDHR), the United Nations Global Compact (UNGC), the United Nations Guiding Principles on Business and Human Rights (UNGPs), Organisation for Economic Co-operation and Development (OECD), and the International Labor Organization Declaration on Fundamental Principles and Rights at Work.

SCG has established human rights due diligence process guidelines to identify and assess human rights risks affecting stakeholders, prioritize key issues, and implement preventive and mitigation measures. Local Communities are a critical

stakeholder group reviewed under this due diligence framework, which includes monitoring and tracking mechanisms to ensure accountability. Through continuous engagement with relevant stakeholders, SCG evaluates risks, formulates mitigation actions, and monitors their effectiveness across all business operations in Thailand and international.

SCG respects stakeholder rights and values their opinions. The company fosters an understanding of sustainability practices, promotes constructive cooperation, and actively contributes to societal and environmental development to ensure sustainable business operations.

Strict environmental policies are implemented to protect communities near SCG operations, including waste management and pollution control & monitoring. Advanced technology is utilized, and vigilant oversight is maintained to minimize environmental impact.

SCG upholds Good Corporate Citizenship, particularly in local communities including indigenous peoples where we operate, by respecting the right of stakeholders and stands ready to obtain feedback and insights through many engagement approaches such as community visiting and community forum, organize an open house, be a thought

partners and providing consultation, and conduct community satisfaction survey. For new projects, Local Communities and affected stakeholders were engaged and public hearing regarding environmental impacts in the Environmental Health Impact Assessment (EHIA) process throughout various development phases and after construction completion, with a focus on ecological concerns and potential impacts on surrounding areas. Significant risks, concerns and mitigation will be informed and proposed to management for decision making and discuss potential opportunities for collaboration.





2 Strategy

According to the LEAP approach in line with TNFD recommendation, SCG's strategy for nature assessment starts with L-Locate. The three-step process for the state of nature assessment was implemented, as follows:

1. Data assessment to gain insights into site locations, ensuring quality assurance and quality control (QA/QC), and preparing the data for further processing.
2. GIS analysis, which involved overlaying and manipulating the data from 9 acceptable assessment tools to enable manageable analysis at the site and buffer levels across all data layers, with 5, 10, and 50 km buffers applied based on the nature of business activities of the sites.
3. Output analysis, where sites with the highest sensitivity levels were prioritized.

2.1 Scope of nature assessment

52 sites of SCG business from 5 business units, including the value chain are assessed for sensitive locations under the locate phase. The sites are selected based on the sites' proximity to important natural habitats, environmental footprint, impact and significance to SCG's portfolio.

- 38 sites of direct operation, cover approximately 60% of total revenue in 2024
- 14 sites of the value chain
 - 8 upstream sites
 - 6 downstream sites

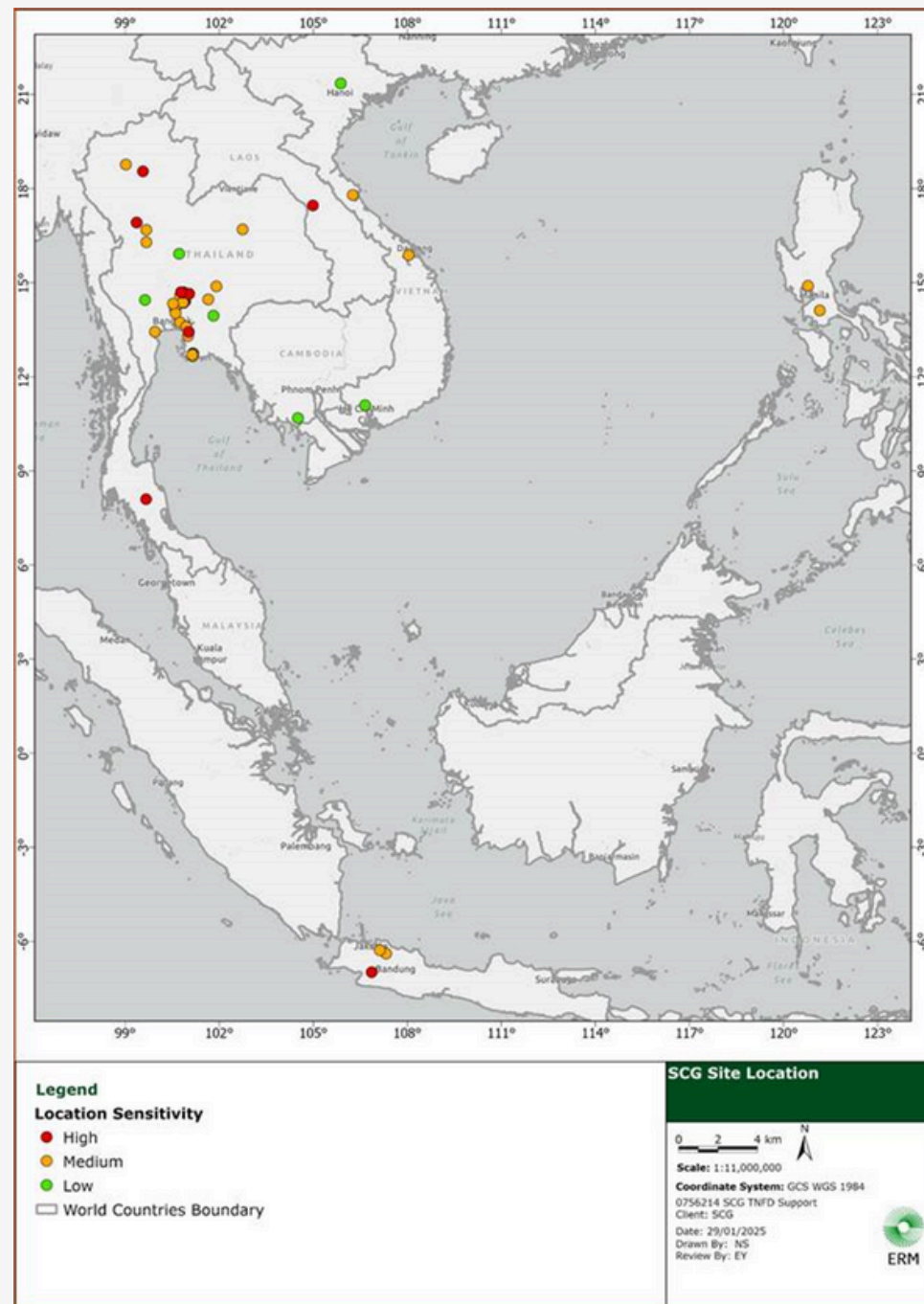
In the future, SCG intends to expand the scope of the assessment to cover at least 80% of the total revenue.

SCG's site and business unit of operation

TNFD Sensitive Location Criteria	Indicator Layer for GIS analysis	Low	Medium	High
Biodiversity Importance	Key Biodiversity Areas	26	7	10
	Protected Areas	15	5	5
	Mean Species Abundance	52	-	-
	Sensitive Species	17	5	-
Ecosystem Integrity Water Stress	Ecoregion - Nature needs half	40	7	5
	Baseline Water Stress	6	3	43
	100 Priority Basins	-	-	-
Ecosystem service delivery importance	Land Use Land Cover	29	15	8
	Ethnic Group	9	1	-

To combine all data layers for finding significant locations, the site sensitivity calculation employs a weighted scoring system where each indicator score is multiplied by its corresponding weight. Based on the results, sites are categorized into three sensitivity levels: High, Medium, and Low as show in the following figure .

2.2 Location sensitivity

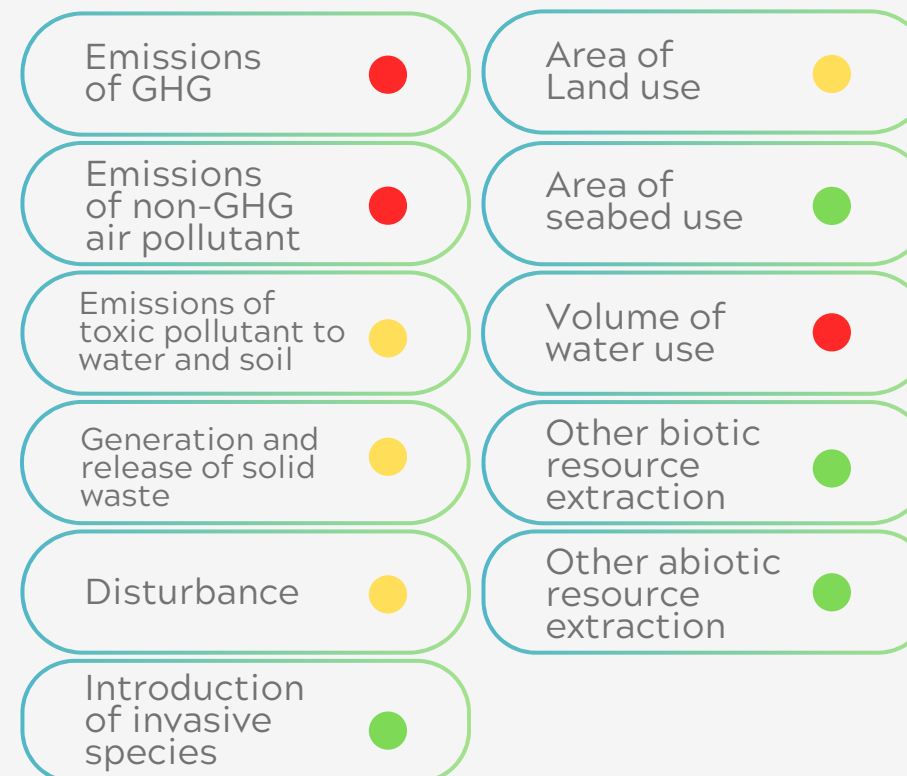


A 5 km buffer for low-impact operation such as warehouse, storage tank and office building, A 10 km buffer for medium impact operation such as all manufacturing sites including ceramic, tile, paper packaging, chemical, etc., and a 50 km buffer for very high impact operation such as mining activities

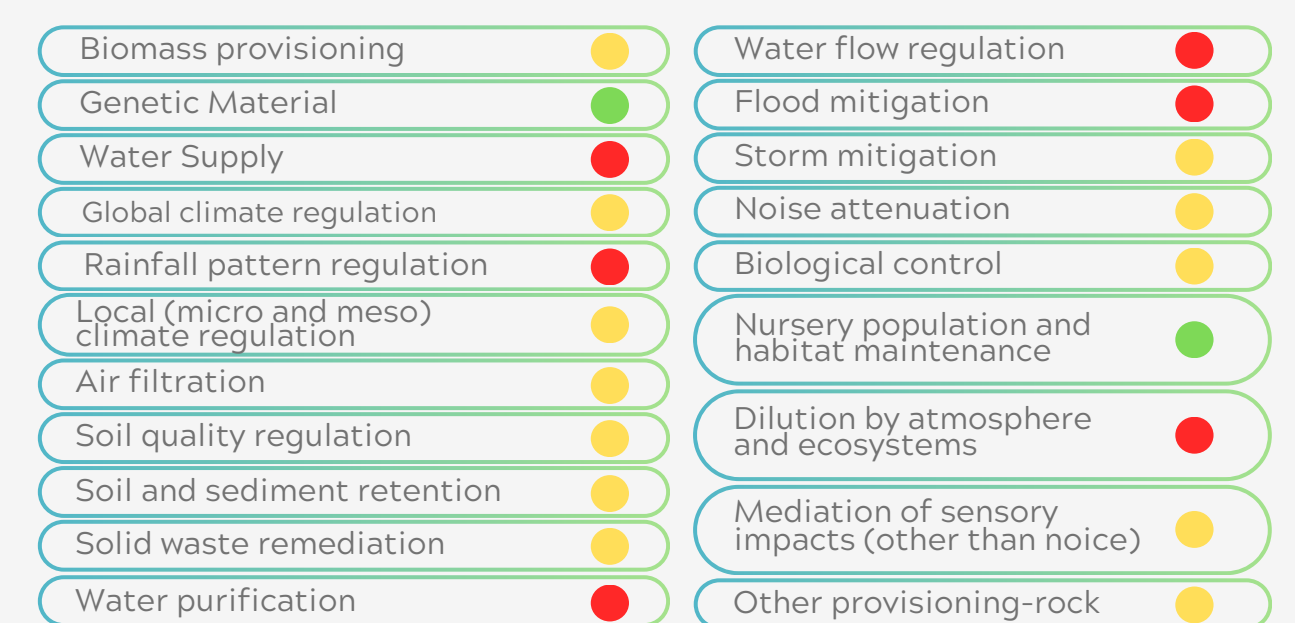
2.3 Material impacts and dependencies

Following the E-Evaluate steps of LEAP, the ENCORE tool was utilized to identify the relevant impacts and dependencies for SCG. The results were then validated by SCG's working team to ensure that the identified impacts and dependencies were significant for the SCG group. The results are shown in the figure below.

Material impacts



Material dependencies



Impact/Dependency Materiality Level

● High ● Medium ● Low

2.4 Nature - related risks and opportunities

The lists of nature-related risks are drafted by considering results from WWF BRF, the nature-related impacts and dependencies (from the Evaluate approach), SCG's climate risk assessment, the HRDD results, indicators analysis results (from the Locate approach), SCG's corporate risk criteria, and the perspective of SCG' subject matter experts (SMEs.)

Time Horizons Classification

In this study, the timeframe for each prioritized nature-related risk is defined as short-, medium-, and long-term, with description below, following SCG's climate change target to move towards Net-Zero Emissions by 2050, and SCG's commitment to achieve Net Positive Impact involved.

Short-term

Risks that may affect the organization within a time horizon of 0 to 2 years (2025 - 2026). This period is typically associated with immediate impacts and operational adjustments.

Medium-term

Risks that are expected to materialize or significantly influence the organization within a time horizon of 3-4 years (2027-2028). This period allows for the planning and implementation of strategies to address emerging challenges.

Long-term

Risks and opportunities that will impact the organization over a time horizon of 5 years or more (from 2029 and beyond). This period focuses on strategic planning, adaptation, and sustainable development efforts that align with future goals.



SCG's nature - related risks

SCG's nature-related risks are identified and assessed using SCG risk framework. Most of the resulting nature-related risks are at low level. The key risks are summarized as follows:

- Changes in the state of ecosystems and species - Changes to protection from natural hazards due to changes in hazard mitigation services: Land degradation and the increasing frequency of extreme weather events such as floods, storms, landslides, wildfires, extreme heat, and tropical cyclones are interconnected issues leading to significant environmental and economic consequences.
- Changes in the state of ecosystems and species - Changes to the supply of natural inputs: Climate change is making essential resources like water and fiber scarcer, which affect the supply chains and costing more to operate.
- Changes in sentiment towards the organization/brand due to impacts on nature - Due to social impact: Plant disturbances spark resident protests,

hindering operations and investment. Chemical operations can risk worker health (skin, respiratory issues) without safety procedure. Stricter environmental rules raise costs, potentially harming lower-income workers via wage/benefit cuts or less sustainable investment, increasing inequality.

- Changes in sentiment towards the organization/brand due to impacts on nature - Due to stigmatization of industry and/or media scrutiny: Negative environmental incidents and the resulting unfavorable coverage pose a significant threat to a company's brand value and market standing.

To manage the risks, SCG's mitigation strategies, including adopting sustainable processes, enhancing resource efficiency, and engaging in community and environmental initiatives, have been prepared to effectively manage the risks and impacts.



SCG's nature - related opportunities

For the identified nature-related opportunities, SCG considers the aspect of overall business with five categories as outlined in TNFD's recommendation.

- Resource efficiency
- Products/ services
- Markets
- Capital flow and financing
- Reputational capital

SCG focuses on developing eco-friendly products, accessing new markets, and leveraging green financing. SCG's proactive measures and comprehensive risk management aim to ensure sustainability and resilience in its operations.

2.5 Nature - related strategy

SCG's Nature-Related Strategy is designed to manage and address nature-related risks and opportunities, aligning with global sustainability objectives. This strategy builds upon the management approaches, which details key processes for managing nature-related dependencies, impacts, risks, and opportunities. By integrating these processes into the broader strategic framework, SCG ensures a holistic approach to safeguarding ecosystems while enhancing business resilience.

This section delves into the application of these strategies within the business model, value chain, and operational context. It includes targeted measures such as environmental management systems, stakeholder engagement, resource optimization, and monitoring and reporting mechanisms. These initiatives reflect SCG's commitment to integrating sustainability into its core operations and addressing nature-related risks, particularly in priority locations.

Priority locations.

- The Siam Cement Ta Luang (Khoa Wong Plant) Co.,Ltd. - Thailand
- The Siam Cement (Kaeng Khoi) Co.,Ltd. - Thailand
- The Siam Cement (Thung Song) Co.,Ltd. - Thailand
- The Siam Cement (Lampang) Co.,Ltd. - Thailand
- Khammouane Cement Co., Ltd. - Lao PDR
- PT Semen Jawa - Indonesia
- Siam Forestry Co., Ltd. - Thailand
- Phoenix Pulp & Paper Public Company Limited - Thailand
- PT Fajar Surya Wisesa Tbk. - Indonesia
- United Pulp and Paper Co., Inc. - The Philippines

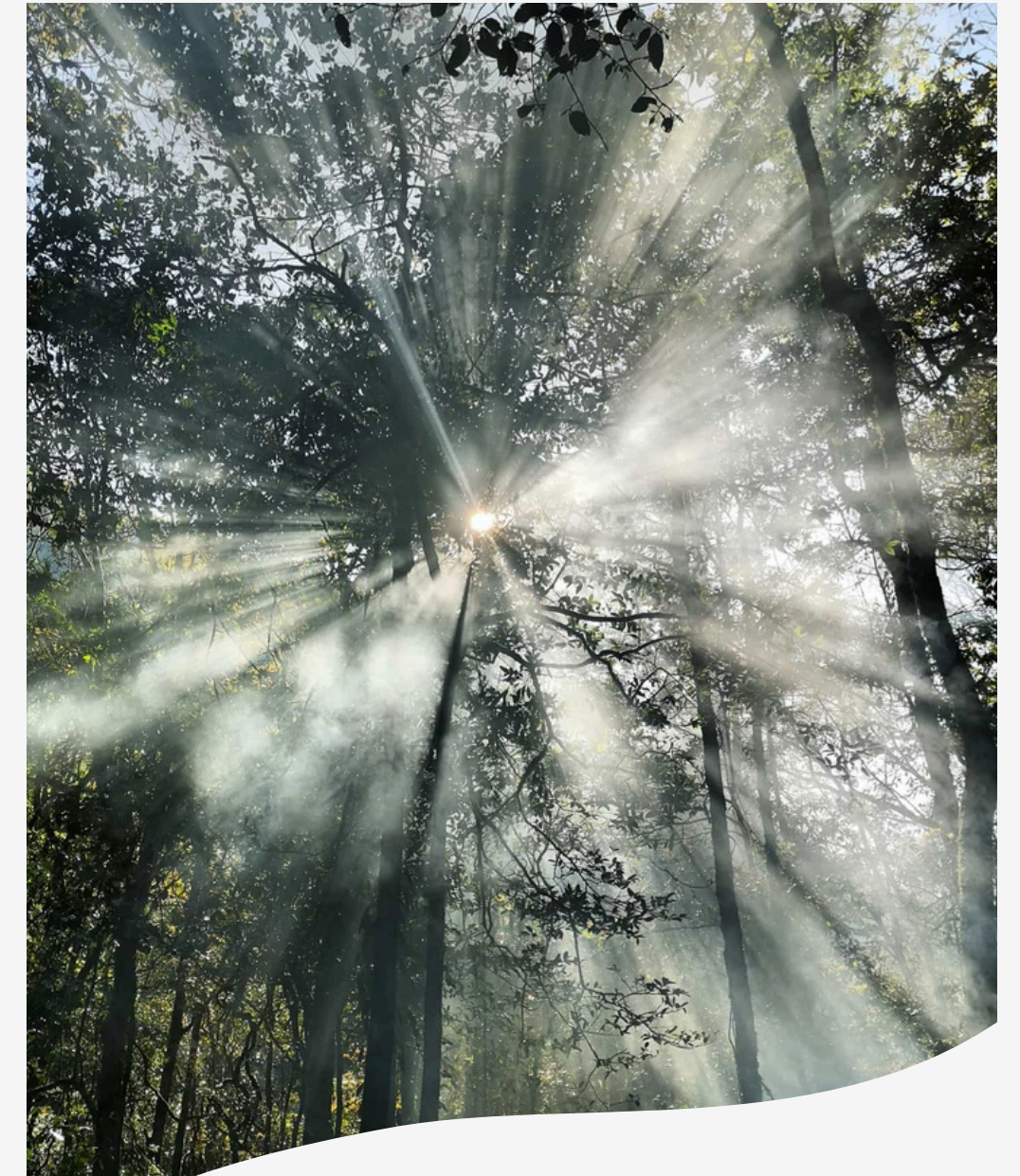
****Priority locations** are defined as those that are material and nature-sensitive, demonstrating medium to high nature-related impacts and dependencies, and located in medium to high-sensitivity areas.

SCG's sustainable practices includes improving operational eco-efficiency and circular economy, developing and implementing physical risk adaptation, coordinating with climate strategy, integrating across the value chain, and conducting mitigation hierarchy.

Nature - related support / contribution & spending

SCG allocate resources to drive sustainable business growth in alignment with ESG principles. This includes efforts to mitigate climate change impacts, maximize resource efficiency, improve waste management, and support the United Nations Sustainable Development Goals (SDGs). Additionally, SCG is committed to supporting the long-term transition to a net-zero, low-carbon economy, with the aim of limiting global temperature rise to 2°C above pre-industrial levels by 2050.

The detail of allocation is shown in the table below, for the nature-related spending in 2024.





Issue or Topic	Description	2023	2024
Collaboration for driving sustainable business growth and the long-term net-zero transition into a low-carbon economy	SCG contributes to trade associations and organizations, mainly the World Business Council for Sustainable Development (WBCSD), the Global Cement and Concrete Association (GCCA), the UN Global Compact (UNGC), and Thai associations and organizations such as the Thai Cement Manufacturers Association (TCMA), The Thai Chamber of Commerce, and the Board of Trade of Thailand, to develop all public policies and initiatives at the corporate level aimed toward achieving tangible and intangible ESG performance and the United Nations Sustainable Development Goals (SDGs), as well as the long-term goal of achieving net zero emissions	16,958,840 THB	19,166,885 THB
Collaboration in driving the Circular Economy	SCG works closely with all stakeholders to encourage involvement and provides intensive support to trade associations such as the Alliance to End Plastic Waste (AEPW) in order to promote and develop Circular Economy initiatives that support our commitment	10,848,930 THB	17,843,250 THB

For more information on SCG’s nature - related strategies, please refer to chapter 3 risk & impact management and chapter 5 nature initiatives.

3 Risk & Impact Management

3.1 Overall SCG's risk management framework

SCG has developed its ERM process according to the ISO31000 and COSO Enterprise Risk Management (ERM) Framework to ensure the ERM process is transparent and aligns with international practices.

There are four-step risk management process to ensure comprehensive and effective risk management across the organization.



Risk Management Process

Step 1: Risk/Opportunity Identification

SCG utilizes the results from the Assess phases, which are nature-related risks and opportunities, to identify potential risks that could negatively affect the Company's goals, as well as opportunities that could increase the company's competitive advantages. The identified risks and opportunities will be integrated into the SCG Risk Universe, which is a list of risks that SCG may face in the future in eight categories.

SCG Eight Risk Categories





Step 2 : Risk/Opportunity Assessment and Prioritization

Risk owners assess the likelihood and impact of risks, both qualitatively (e.g., legal, reputation) and quantitatively (e.g., EBITDA impact). SCG uses a Risk Map to categorize risks into high, medium, or low levels. Risk mitigation measures are developed based on risk levels and internal capabilities. SCG's Risk Universe lists potential future risks grouped into eight categories.



Step 3 : Risk Response and Mitigation

Risk owners develop mitigation options, including Key Risk Indicators (KRIs) and Key Performance Indicators (KPIs), to anticipate and manage risks. Mitigation strategies are discussed in various planning meetings for medium-term and annual plans, and project investments.



Step 4 : Risk Monitoring and Reporting

Risk owners continuously monitor and review risks, with mitigation results reported to various committees such as the Business Unit Risk Management Committee, SCG Risk Management Committee, and SCG Board of Directors, at intervals based on risk type (e.g., medium-term risks are reported annually, operational risks quarterly).

By embedding nature-related risks into broader risk management strategies, SCG enhances transparency and ensures that risks are managed effectively across operations, upstream, and downstream activities.

SCG identified and prioritized key business activities within selected sites using the ENCORE tool. Fourteen industry categories were mapped using the International Standard Industrial Classification (ISIC) system to evaluate impact and dependency scores across the value chain. The relevant impacts and dependencies of SCG and its value chain are based on the ENCORE, the results were validated through a collaborative process involving SCG's internal SMEs and external biodiversity specialists to ensure the robustness of the identified material impacts and dependencies. The impacts and dependencies were identified for each of SCG's business units, with group-level impact calculated by weighting individual impact levels according to each unit's revenue contribution percentage. This approach allows SCG to target sustainability efforts toward areas with both high environmental impact and financial significance. Using a percentile-based ranking, SCG was able to prioritize high-impact areas while still addressing medium- and low-impact activities. This supports a more targeted and risk-informed sustainability response.

3.2 Processes for integrating into and informing

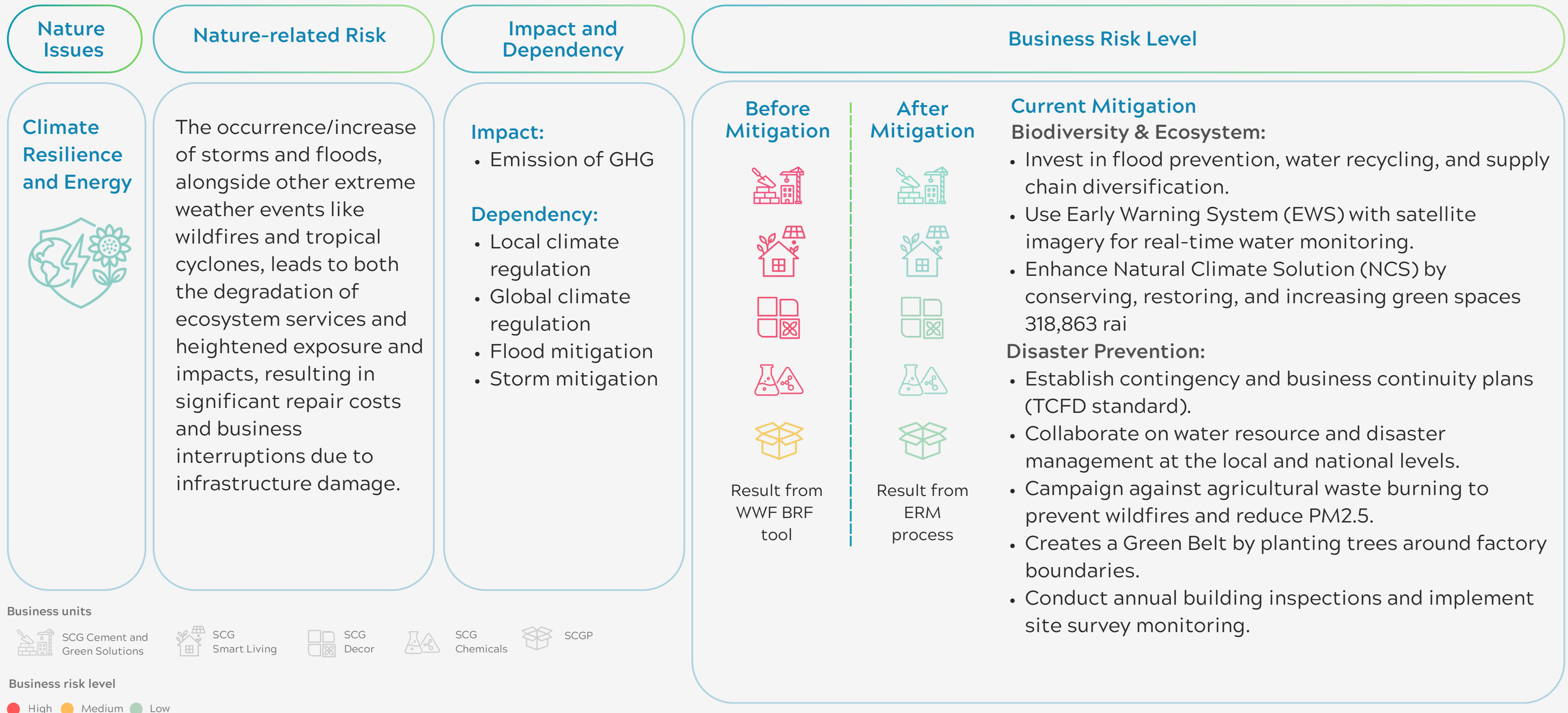
The insights gained through integrating nature-related risks into the ERM framework form the foundation for the Prepare phase of the TNFD LEAP approach. This phase focuses on developing appropriate mitigation plans, establishing key risk indicators, and embedding nature-related risks into financial planning and governance processes. While the specific nature-related strategies are available—such as SCG's Green Mining, Circular Economy initiatives, and Climate Strategy, the ERM framework ensures that risks associated with these themes are:

- Translated into financial and operational terms
- Assigned to responsible risk owners
- Managed and monitored using SCG's ERM procedures, including regular review by the Risk Management Committee and Board-level oversight.

This ensures consistency between SCG's sustainability ambitions and risk governance, enabling more proactive and integrated management of nature-related risks across all levels of the organization.



3.3 Nature - related risks and current mitigation



Nature Issues

Nature-related Risk

Impact and Dependency

Business Risk Level

Water Management



Increased water scarcity, driven by climate change and exacerbated by organizational activities and broader watershed issues, is leading to supply chain disruptions and higher operational costs. This progressive reduction in water availability can further necessitate changes in production lines or even reduce production capacity due to competing demands for this increasingly limited resource.

Impact:

- Volume of Water Use

Dependency:

- Water Supply
- Rainfall Pattern Regulation
- Water Flow Regulation

Before Mitigation



Result from WWF BRF tool

After Mitigation



Result from ERM process

Current Mitigation

Monitoring and Prevention:

- Reduce water withdrawal by 5% compared to 2020 BAU.
- Increase water use efficiency with advanced technology.
- Systematically monitor and prevent environmental violations (water use and discharge).
- Investigate and mitigate water-related issues. Water Withdrawal and Efficiency

Risk Management:

- Manage water-related risks at all sites per international standards and tools like WRI AQUEDUCT, satellite images, and EWS for risk analysis.

Wastewater Treatment:

- Efficiently manage and reuse treated wastewater.

Stakeholder Engagement:

- Representative on the river basin committee aligns with the NWRC Plan.
- Maintain ongoing engagement with stakeholders.

Infrastructure and Maintenance:

- Reserve the reservoir as a backup water source. Comprehensive maintenance program for water supply network

Business units



risk level before mitigation

● High ● Medium ● Low

Nature Issues

Nature-related Risk

Impact and Dependency

Business Risk Level

Air Quality and Pollution Management



Violations of environmental regulations due to pollutant emissions can lead to legal penalties, fines, or lawsuits. Community disturbances from business activities may cause concerns, hindering investment and operations. Negative sentiment from resource competition and unmet stakeholder expectations can harm the brand. Improper management of dust, particulate matter, and wastewater in ceramics and construction materials production can damage local air and water quality. Environmental incidents or negative coverage, such as chemical runoff, can severely damage brand value, causing clients and investors to withdraw their business and capital.

Impact:

- Emissions of non-GHG air pollutants
- Emissions of toxic pollutants to water and soil

Dependency:

- Dilution by atmosphere and ecosystems

Before Mitigation



Result from WWF BRF tool

After Mitigation



Result from ERM process

Current Mitigation

Air Quality:

- Ensure air quality meets international standards.
- Use AI-powered Detect Odor & Monitoring (DOM) system to manage air quality, noise, and vibration in packaging business.
- Monitor and manage pollution at company sites and surrounding areas.

Community concerns:

- Prevent conflicts with communities by managing operational impacts.
- Improve community quality of life and foster sustainable self-reliance.
- Promote engagement for an inclusive, shared-value society.
- Communicate transparently to build stakeholder confidence.
- Develop accessible complaint channels for stakeholder feedback.
- Assess organizational benefits in terms of quantity, value, and economic returns.

Business units



SCG Cement and Green Solutions



SCG Smart Living



SCG Decor



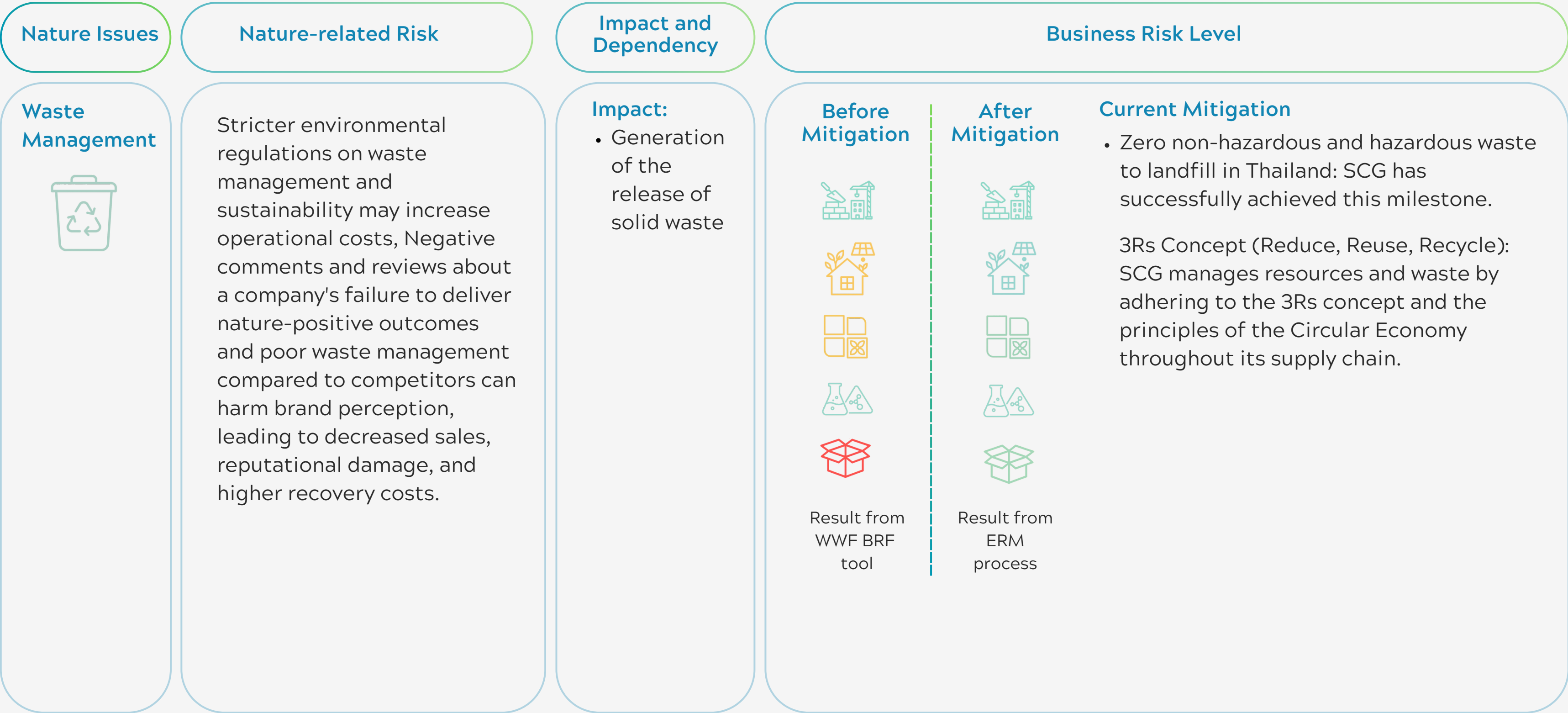
SCG Chemicals



SCGP

risk level before mitigation

● High ● Medium ● Low

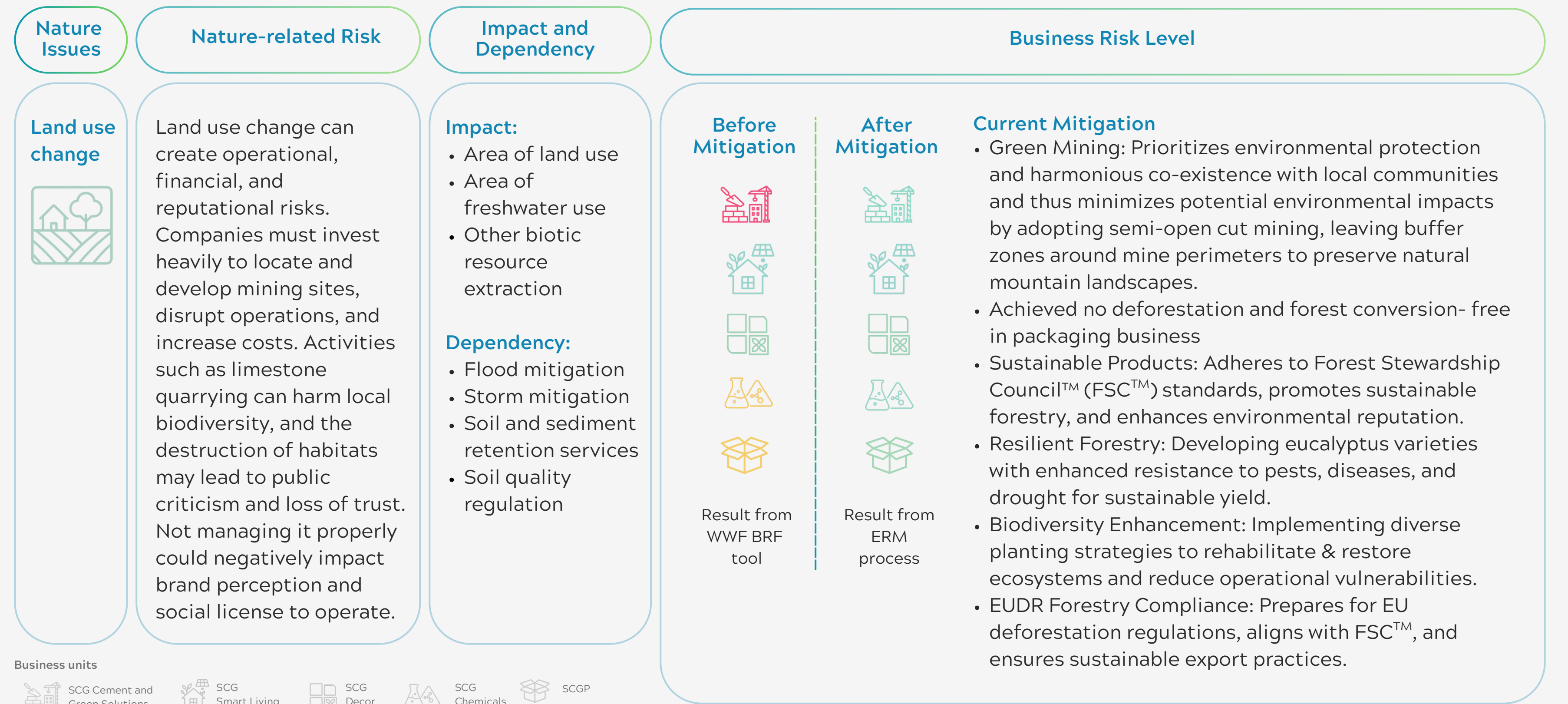


Business units

SCG Cement and Green Solutions
 SCG Smart Living
 SCG Decor
 SCG Chemicals
 SCGP

risk level before mitigation

● High
 ● Medium
 ● Low






4 Metrics & Targets

4.1 Targets & Commitments


SCG is committed to being a regional leader in innovation and sustainability, recognizing the importance of environmental and climate management for sustainable growth. The company has updated SCG Environmental and Climate Policy to ensure its effectiveness, covering all operations, business facilities, partners, and joint ventures. The policy emphasizes compliance with regulations, reducing environmental impacts, and aligning with the Paris Agreement’s goal of net-zero emissions by 2050. Key priorities include sustainable resource use, waste reduction, zero deforestation, and positive impacts on nature. SCG also focuses on implementing environmental management systems, continuous improvement, transparent reporting, and stakeholder engagement while educating employees and partners on environmental issues.



	Target for SCG’s operation	2024 Performance
<div>  <div>Climate Change</div> </div>	Net Zero by 2050	25.48 million tons GHG emissions in 2024 (1.60 million tons GHG emissions reduced)
	GHG scope 1 & 2 emissions reduction by 25% by 2030 compared with the base year of 2020	25.59% of GHG Scope 1 and 2 emissions reduction in 2024
	GHG scope 3 emissions reduction from the use of fossil fuel by 25% by 2031 compared to the base year 2021	20.66 % GHG Scope 3 emissions reduction from the use of fossil fuel
<div>  <div>Water</div> </div>	Water withdrawal reduction by 5% by 2030 compared with BAU at the base year of 2022.	Water withdrawal increased by 5.3% in 2024 compared to 2023.
<div>  <div>Air Pollution</div> </div>	Dust emissions reduction by 4% by 2030 compared with BAU at the base year of 2020.	Dust emissions increased by 2.15% in 2024 compared to 2023.

	Target for SCG's operation	2024 Performance
<div>Waste</div>	8 million tons of recycled and renewable materials by 2025.	Resource consumption was reduced through utilization of recycled and renewable raw materials increased by 8.93 million tons in 2024
	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% of SCGP packaging was reusable, recyclable, or compostable
	SCGC recover and recycle 500,000 tons of used plastic to the circular economy annually by 2030	SCGC recover and recycle of used plastic 185,200 tons in year 2024
	Zero landfilling of hazardous and non-hazardous waste from production processes in Thailand every year	Zero
	Zero landfilling of hazardous waste from production processes abroad in 2030	6,968 tons





Biodiversity

Target for SCG’s operation	2024 Performance
Striving to be Nature Positive by conserving and restoring nature to increase green spaces and enhance biodiversity, while fostering engagement with communities and stakeholders	<p>Conserve, Restore, and increase Green Spaces, totaling 318,863 rai , including:</p> <ul style="list-style-type: none"> • Terrestrial forests 317,105 rai • Mangrove forests 1,688 rai • Seagrass beds 70 rai
	<ul style="list-style-type: none"> • Terrestrial forests 317,105 rai • Mangrove forests 1,688 rai • Seagrass beds 70 rai
	Installed coral reef habitats 1,115 units
	Constructed water diversion dams 127,618 units
Develop a 100% mine rehabilitation plan.	100% coverage of mine rehabilitation plan.
Develop a 100% Biodiversity Management Plan (for limestone mines in Thailand only).	100% coverage of Biodiversity Management Plan .
More than 60% similarity index between restored mining areas and natural forest buffer zones (For limestone mines in Thailand only)	68% at the limestone quarry in Thung Song
At least 10% of the FSC™-certified area must be designated as a biodiversity conservation area according to FSC™ standard.	SCGP allocated 10.6% of its FSC™-certified land, totaling 5,351 rai, for biodiversity conservation areas.



4.2 Nature - related metrics

SCG has incorporated the TNFD global disclosure metrics into this report to the fullest extent possible for the current reporting year. Beyond the TNFD global disclosure metrics, SCG has also reviewed and started data collection aligned with the three additional sector-specific guidelines from the TNFD Sector Core and Additional Disclosure Metrics framework. This comprehensive approach includes utilizing dependency, impact, risk, and opportunity matrices to systematically identify potential material dependencies and impacts on nature within SCG's operational sector. The three sector-specific guidance are; (1) Construction materials, (2) Forestry, Pulp and paper, and (3) Chemicals. All relevant metrics that SCG has collected have been sorted in the tables below.

Theme	Metric	Unit	2023	2024
Climate Change	Total GHG emissions: Scope 1	tCO ₂ e	24,329,050	22,869,440
	Total GHG emissions: Scope 2 (Location-based)		2,935,118	2,860,118
	Total GHG emissions: Scope 2 (Market-based)		2,754,817	2,610,166
	Total Biogenic GHG emission		3,968,392	5,522,750
	Total GHG emissions: Scope 3		10,606,251	10,695,208
	1: purchased goods and services		5,303,395	5,822,774
	2: capital goods		0	53,830
	3: fuel- and energy-related activities		1,460,420	1,266,371
	4: upstream transportation and distribution		1,480,778	1,109,770
	5: waste generated in operations		22,427	76,327
	6: business travel		3,910	6,761
	7: employee commuting		9,981	36,009
	8: upstream leased assets		0	0
	9: downstream transportation and distribution		566,064	388,330
	10: processing of sold products		246,235	434,023
	11: use of sold products		887,651	918,074
	12: end-of-life treatment of sold products		67,203	58,623
	13: downstream leased assets		0	106
	14: Franchises		6,578	3,977
	15: Investments		551,609	520,234

4.1 Targets & Commitments 4.2 Nature - related metrics

Theme	Metric	Unit	2023	2024
Production and Raw Material	Production	Tons	77,518,763	79,120,677
	Raw Materials	Tons	82,039,769	88,201,788
	Renewable Materials	Tons	5,445,245	7,497,227
		%	6.64	8.50
	Recycled Materials	Tons	6,892,041	7,458,443
		%	8.40	8.46
	Renewable Materials and Recycled Materials	Tons	8,564,830	8,929,642
		%	10.44	10.12
Energy Consumption	Total Energy Consumption	Petajoules	225.11	220.94
	Non-Renewable Fuel Consumption		166.49	157.55
	Renewable Fuel Consumption		38.25	43.23
	Steam & Heat Consumption		2.61	2.59
	Electrical Consumption		18.01	17.81
	Electricity Sold		0.25	0.25
Co-processing Performance of Cement-Building Materials Business	Alternative fuel used to replace the fossil fuel (as % of total heat consumption)	% of total heat consumption	35.50	43.52
	- Alternative fossil fuel		11.66	15.05
	- Biomass		23.84	28.47
	Alternative raw materials contained in cement	%	7.33	7.64
	Alternative raw materials contained in concrete	%	1.05	1.25
	Clinker-to-Cement ratio	%	71.24	69.25
	Alternative raw materials contained in other building materials	%	7.34	6.20

4.1 Targets & Commitments 4.2 Nature - related metrics

Theme	Metric	Unit	2023	2024
Water Withdrawal and Effluent Quality	Water Withdrawal from surface water	Million Cubic Meters	49.83	28.24
	Water Withdrawal from groundwater		38.99	32.58
	Water Withdrawal from third-party water		30.51	25.88
	Total water withdrawal		119.32	86.70
	Recycled water		17.99	-
	Water discharged to surface water		64.87	49.06
	Water discharged to groundwater		0.03	0
	Water discharged to seawater		0.12	0.05
	Water discharge to third-party water		0.84	0.66
	Total water discharge		65.88	49.76
	BOD	Tons	570	455
	COD		6,031	5,939
	TSS		830	742
Waste Management	Total Weight of Waste Generated	Tons	1,642,500	1,552,106
	Total Weight of Hazardous Waste Generated		107,335	87,984
	Total Weight of Non-Hazardous Waste Generated		1,535,165	1,464,123
	Total Weight of Waste diverted from disposal			
	- Onsite		613,716	609,233
	- Offsite		528,141	559,821
	Total Weight of Hazardous Waste diverted from disposal			
	- Onsite		40,782	4,055
	- Offsite		51,025	55,390

4.1 Targets & Commitments 4.2 Nature - related metrics

Theme	Metric	Unit	2023	2024
Waste Management	Total Weight of Non-Hazardous Waste diverted from disposal	Tons		
	- Onsite		572,934	605,178
	- Offsite		477,117	504,431
	Total Weight of Waste directed to disposal			
	- Onsite		269,171	198,701
	- Offsite		231,472	184,351
	Total Weight of Hazardous Waste directed to disposal			
	- Onsite		3,162	4,331
	- Offsite		12,367	24,207
	Total Weight of Non-Hazardous Waste directed to disposal			
	- Onsite		266,009	194,370
	- Offsite		219,105	160,144
Air Emissions	Oxides of Nitrogen	Thousand Tons	33.51	28.64
	Oxides of Sulfur		5.80	4.24
	Particulate Matter	Kilograms	2.45	2.28
	Mercury		11.34	19.36

Theme	Metric	Unit	2023	2024
Biodiversity/ Environmental Expenditures and Benefits/Violations of Legal Obligations and Regulations (Only Thailand Operations)	Quarries with Biodiversity Management Plan in place	Number of Sites %	4	4
	Operating Expenses - Environmental	Million Baht	100	100
	Capital Investment - Environmental		2,913	1,741
	Total Expenses - Environmental (Capital Investment + Operating Expense)		1,015	5,288
	Savings, cost avoidance, and tax incentives linked to environmental investment		3,928	7,029
	Total costs from water-related incidents		72,177	65,395
	Number of violations of legal environmental obligations/regulations (over USD 10,000)	Number of Cases	0	0



5 Nature initiatives

Nature - related advocacy and partnerships

SCG maintains political neutrality and has established a policy of providing no financial or other forms of support to any political party. The company did allocate resources to drive sustainable business growth in alignment with ESG principles. This includes efforts to mitigate climate change impacts, maximize resource efficiency, improve plastic waste management, and support the United Nations Sustainable Development Goals (SDGs). Additionally, SCG is committed to supporting the long-term transition to a net-zero, low-carbon economy, with the aim of limiting global temperature rise to 2°C above pre-industrial levels.


Example of Nature-Related initiatives through partnerships

SCG has established an integrated environmental partnership through various projects, uniting communities, industry collaborators, government bodies, and academic institutions to tackle ecological challenges. This approach aims to minimize SCG's environmental impact while promoting biodiversity and ecosystem health. By collaborating with diverse stakeholders, SCG develops comprehensive solutions to environmental issues, creating lasting value for communities and ecosystems. The framework encourages productive engagement, helping partners identify priorities, design interventions, and implement practices that drive measurable ecological improvements. Examples of these initiatives are provided below.






Details of initiatives/projects

Issue or Topic	Description
 Water	Wet Forest Project at Lampang Cement Plant Since 2003, the Cement and Green Solution Business has been restoring the ecosystem at its Lampang cement plant using the "wet forest system," which includes 7,000 check dams, a forest fire break, solar-powered pumps, and the Stop Log in Huay Pu Creek, boosting water reserves by 12,000 cubic meters annually.
	The Conserving Water from Mountain to Mighty River Project SCG has implemented the Conserving Water from Mountain to Mighty River Project for over 20 years and has taken part in working with local communities to conserve natural resources through tree planting, building check dams, and building series of pond to combat drought and prevent flood as well as enhance local communities' quality of life, increase their productivity and income, and foster self-reliance in a sustainable way. A total of 318,813 rai of terrestrial forests, mangrove forests, and seagrass beds have been restored, 127,618 check dams have been constructed, and 304,000 cubic meters of water have been distributed for local community irrigation annually.
	Eastern Region Water Management In response to the heightened risk of water shortages in Thailand's eastern region, SCG Chemicals (SCGC) collaborated with key stakeholders on collective water management. SCGC actively participated in various committees, including East Coast Basin Committee, Eastern Economic Corridor Water Management Subcommittee, and Keyman Water Warroom. Furthermore, as Chair of the Water and Environment Institute for Sustainability, SCGC spearheaded initiatives to promote efficient water management and foster collaboration among water users and managers at both the basin and national levels.



Details of initiatives/projects

Issue or Topic	Description
 Biodiversity	SCG Mae Than Model SCG’s rehabilitation of the Mae Than mine addresses community and government needs, focusing on restoring ecosystems and creating a sustainable future. The process involves using native plants for rapid ecosystem recovery and applying King Rama IX's philosophy of "three benefits, four uses" by planting edible plants for local food sources. Additionally, the Mae Kua community contributes by selling organic fertilizer made from agricultural waste, which supports soil restoration and generates income for the community. In 2020, a floating solar farm and a solar-power pumping system were installed to pump water from the former mining pit with a potential to store 50 million cubic meters of rainwater to nearby community reservoirs for agricultural use, thus increasing productivity and generating income for local communities
	Love the Sea Project: Expanding Coral Home Installation In 2022, SCG launched the Love the Sea Project in collaboration with the Department of Marine and Coastal Resources, Chulalongkorn University’s Faculty of Veterinary Science, and the Earth Agenda Foundation. The project uses SCG's 3D printing technology to create coral homes, which are designed to help coral larvae attach and promote reef restoration. The design has been refined to mimic natural coral, providing suitable habitats for reef fish. SCG expanded the initiative by partnering with organizations like the Rotary Club of Mining, Thai Union Group PLC, and Supalai PLC, which have installed coral homes at various locations. To date, 1,115 coral homes have been installed, resulting in 39,600 coral colonies, and surveys have identified 17 sessile species and over 50 fish species.
	Biodiversity Preservation and Restoration in Quarry SCG has collaborated with experts from various universities, including the Faculty of Forestry at Kasetsart University, the Faculty of Science at Prince of Songkla University, and the Forest Restoration Research Unit (FORRU) of the Faculty of Science at Chiang Mai University to do the study on biodiversity in mining areas, impacts assessment, and ecological restoration for all mining sites. In addition, SCG has been sharing knowledge from the study to over 5000 audiences through biodiversity learning center and international conferences.



Details of initiatives/projects

Issue or Topic	Description
 Biodiversity	<p>Mangrove Reforestation for Biodiversity Enhancement</p> <p>SCGC has restored abandoned shrimp ponds into mangrove forest and conducted a biodiversity baseline study in collaboration with Kasetsart University and the Department of Marine and Coastal Resources to monitor environmental changes in mangrove plantations in Noen Kho Sub-district, Klaeng District, Rayong. The study, running from 2024 to 2026, focuses on enhancing aquatic habitat restoration and evaluating mangrove reforestation success. It also explores the relationship between climate change and biodiversity to improve ecosystem health and support surrounding communities.</p>
	<p>Community forest networks</p> <p>SCG is supporting and strengthening 45 community forests networks in Saraburi under “Saraburi Sandbox Project” by facilitating knowledge exchanges and promoting the conservation and restoration of 15,000 rai of community forests. These efforts aim to enhance biodiversity, promote sustainable forest use for food sources, and develop eco-tourism in collaboration with the Saraburi Tourism Association.</p> <p>In the upcoming year, SCG plans to engage with more communities located near the operational site identified as highly sensitive locations by supporting community forest networks in Lampang province, covering 30,000 rai of community forest in 2026.</p> <p>SCGP supports the conservation areas of Baan Huay Saphan Samakee Community Forest and Khao Cha-ang Conservation Forest in Kanchanaburi, as well as Kamphaeng Phet Conservation Forest in Kamphaeng Phet. These foster strong involvement and connection with local communities and demonstrate an ongoing commitment to ensuring the site's proper management and adherence to established FSC™ standards.</p>
 Waste	<p>SCG Zero Waste Community Project</p> <p>SCGP is advancing circular economy principles through its "SCGP Zero Waste Community" Project, a flagship community initiative launched in 2019. This project has successfully expanded to 183 model communities in the Ban Pong district of Ratchaburi by 2024 (100% of Ban Pong district). The company also plans to introduce the project to other districts of Ratchaburi, where SCGP’s manufacturing facilities are based, and upgrade its implementation in Ban Pong district into “Low-Carbon Community Project”.</p>

6.1 Acronyms and ABBREVIATIONS

6 Appendix

ACRONYMS AND ABBREVIATIONS

Acronym	Description	Acronym	Description
COSO	Committee of Sponsoring Organizations of the Tread way Commission	SMEs	Subject Matter Experts
CSR	Corporate Social Responsibility	TCFD	Task Force on Climate-related Financial Disclosures
EBITDA	Earnings Before Interest, Tax, Depreciation, and Amortization	tCO ₂ e	tonnes of Carbon Dioxide Equivalent
ENCORE	Exploring Natural Capital Opportunities, Risks and Exposure	TBCSD	Thailand Business Council for Sustainable Development
ERM	Enterprise Risk Management	TNFD	Taskforce on Nature-related Financial Disclosures
ESG	Environmental, Social, and Governance	UNGC	the UN Global Compact
EWS	Early Warning System	UNGP	United Nations Guiding Principles on Business and Human Rights
FSC™	Forest Stewardship Council™	WBCSD	World Business Council for Sustainable Development
GBF	Global Biodiversity Framework	WRI	World Resources Institute
GHG	Greenhouse Gas	WWF BRF	World Wildlife Fund Biodiversity Risk Filter
ISIC	International Standard Industrial Classification of All Economic Activities		
HRDD	Human Rights Due Diligence		
ISO	International Organization for Standardization		
km	Kilometer		
KPIs	Key Performance Indicators		
LEAP	Locate, Evaluate, Assess, and Prepare		
N	North		
OECD	Organisation for Economic Co-operation and Development		