

2023

TCFD

Task Force on Climate-related
Financial Disclosures Report

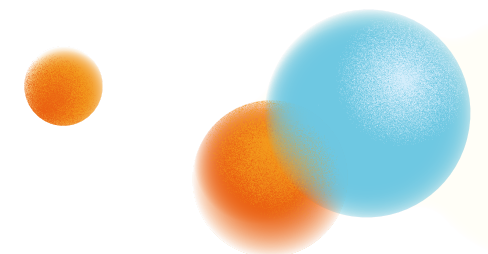
CHIA HSIN CEMENT CORPORATION



嘉新企業團
CHIA HSIN CEMENT GROUP



Table of Content



About the Report 02

01 Company Profile 03

- 1.1 Introduction of CHIA HSIN CEMENT Group 03
- 1.2 Climate-related Milestones 04

02 Climate Change Governance 05

- 2.1 Supervision of the Board of Directors on Climate-related Risks and Opportunities 05
- 2.2 Roles of the Management in Assessing and Managing Climate-related Risks and Opportunities 06

03 Climate Change Strategies 07

- 3.1 Identification of Short-, Mid-and Long-Term Climate-related Risks and Opportunities 07
- 3.2 Impacts of Climate-related Risks and Opportunities 08
- 3.3 Scenario Analysis 15

04 Climate Risk and Opportunity Management 18

- 4.1 Integration of Climate-related Risk Identification, Assessment, Management Processes and Issues 18

05 Climate Metrics and Targets 20

- 5.1 Environment and Energy Policy 20
- 5.2 Main Implementation Results and Future Goals of the Environmental Management Approach 21
- 5.3 Greenhouse Gas Inventory and Emission Statistics 22
- 5.4 Other Climate-related Metrics 24
- 5.5 Climate Action 25

Appendix 27

- Appendix 1: Reference 27
- Appendix 2: Index of TCFD Disclosures 28
 - Guidance for All Sectors 28
 - Cross-Industry, Climate-related Metrics for Management 28

About the Report

Based on the framework of Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) under Financial Stability Board (FSB), this report is structured around the four thematic areas and 11 recommended disclosures that are applicable to all sectors according to the general guidance to disclose Chia Hsin Cement (hereinafter referred to as "CHC") Group's resilience and adaptation plans in response to climate change. The Climate Change Taskforce under CHC's Sustainable Development Office is responsible for identifying and assessing risks and opportunities of climate change, assisting the development of relevant internal quantitative methods and metrics, which are further developed into management measures to mitigate and adapt to climate change. This report is the first independently published climate-related financial disclosure of CHC Group. Please refer to "Sustainability Report" by CHC Group in the past years for prior climate-related financial disclosures.



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Report Boundary

Disclosure Scope:

Consolidated financial statements of Chia Hsin Cement Corporation (CHC Group).

Disclosure Period:

January 1st to December 31st, 2023

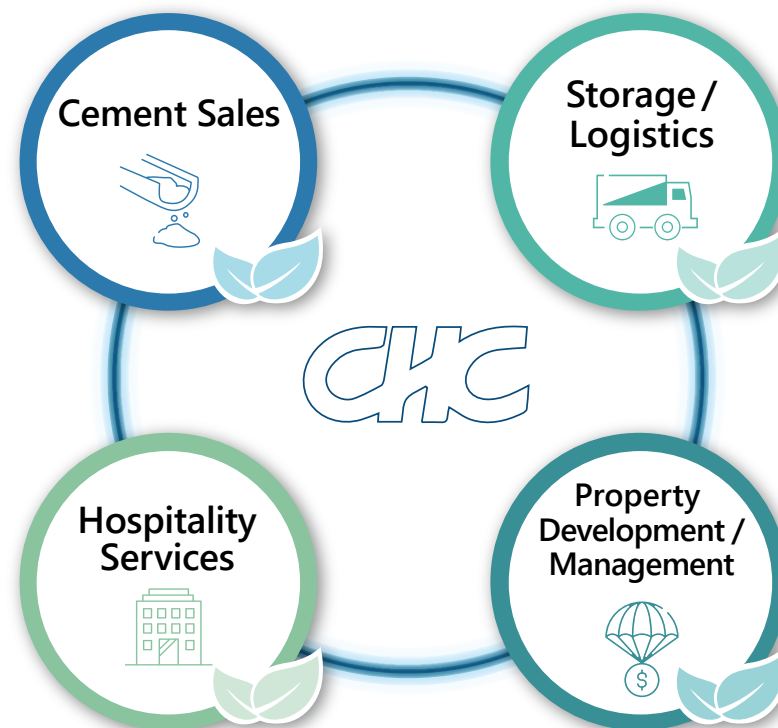
Company Profile

1.1 Introduction of CHIA HSIN CEMENT Group

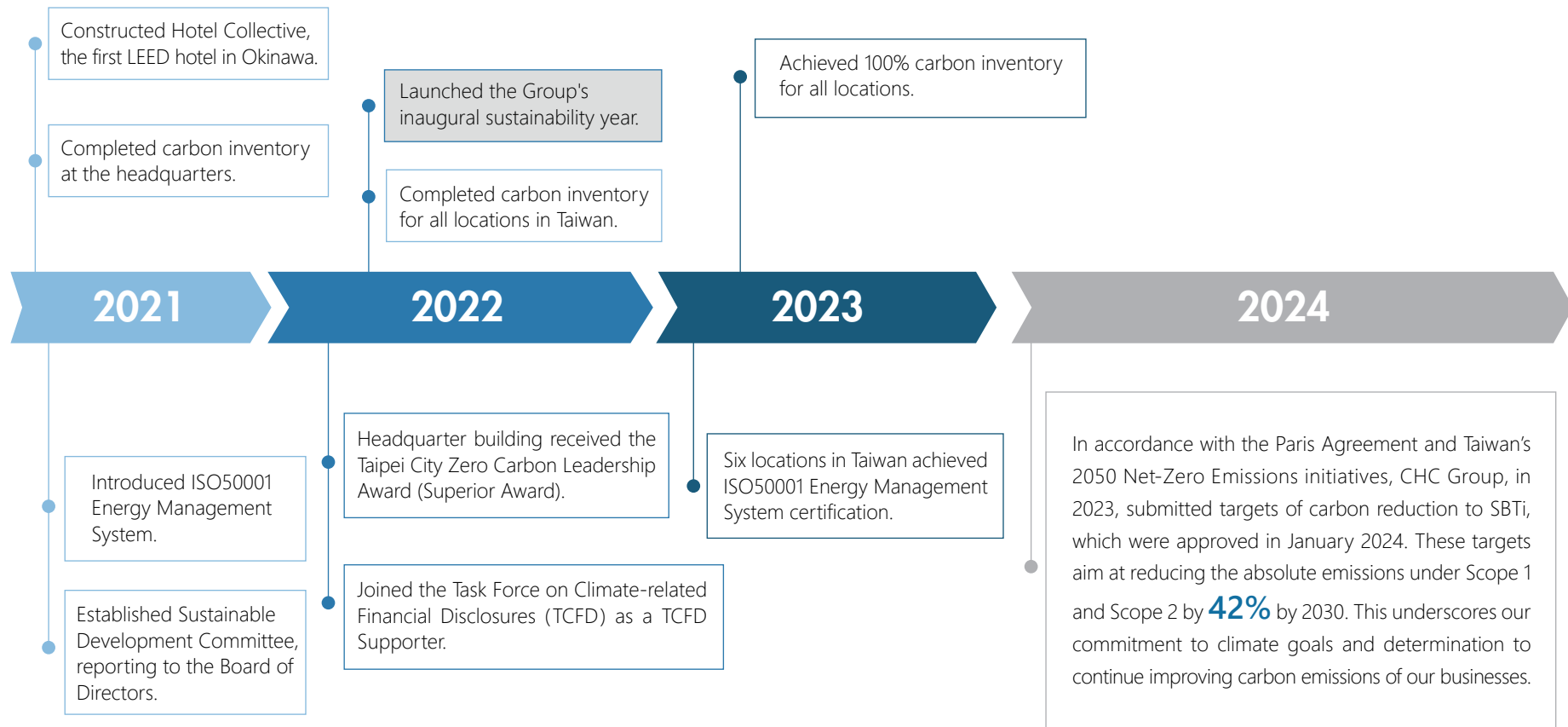
CHIA HSIN CEMENT CORPORATION (CHC), established in 1954 by Mr. M. Y. Chang, is the first privately-owned cement company in Taiwan.

Over the past 60 years, CHC has been making constant and unwavering efforts to provide a better life to people as time progresses. It started by meeting people's essential needs of food, clothing and shelter, and gradually transformed itself into a business group composed of a variety of business units, including cement sales and storage and logistics, property development/ management, and hospitality services to enable a lifestyle that ensures mental, physical and spiritual health and happiness.

CHC is now prioritizing hospitality as an emerging area of its business operation, and combining green and environmental protection concepts more widely into its business practices. For example, green building design principle LEED was introduced when constructing hotels, and WELL Building Standard was adopted when building postpartum care centers to create a friendly, livable and healthy space.



1.2 Climate-related Milestones



Climate Change Governance

2.1 Supervision of the Board of Directors on Climate-related Risks and Opportunities

In 2020, CHC Group started to report regularly to the Board of Directors about the progress of implementing various sustainable development projects. To align with international trends and demands for sustainable developments, the company established a Sustainable Development Committee at the end of 2021. This Committee incorporated related functions within the original corporate governance organization (including risk management, corporate social responsibility and corporate governance), instituted a Chief Sustainability Officer role, and created a Sustainable Development Office to be responsible for running all the functions of the original corporate organization. In addition, related tasks were incorporated into different aspects of the company's sustainable efforts (such as environmental protection and climate actions), assisting the Board of Directors to meet the goal of sustainable operation, and actively promoting the company's sustainable developments.

The highest management of CHC Group on climate-related issues is the Board of Directors, which established the Sustainable Development Committee. The Committee is chaired by Mr. Jason K.L. Chang, Chairman of the Board of Directors, and Ms. Li-Hsin Wang, President of the group, serves as the Chief Sustainability Officer. In addition, the Sustainable Development Office was established under the Committee, with the Office Manager serving as the Executive Secretary. The Committee is responsible for reviewing CHC's climate change strategies and goals, supervising related implementation progress, and reporting related status to the Board of Directors on a quarterly basis.

The Sustainable Development Committee meets at least twice a year. Two meetings were convened in 2023 to review CHC Group's sustainable development blueprint, greenhouse gas inventory progress, 2023 budget and progress of various projects.

Board of Directors

Sustainable Development
Committee

Sustainable Development
Office

Governance Taskforce

Social Responsibility
Taskforce

Environmental Management
Taskforce

Climate Change Taskforce

Risk Management Taskforce

2.2 Roles of the Management in Assessing and Managing Climate-related Risks and Opportunities

The Company's Sustainable Development Office is responsible for promoting sustainable development-related planning and issues. The Chief Sustainability Officer coordinates the management of the Office, which supervises five taskforces including Governance, Social Responsibility, Environmental Management, Climate Change and Risk Management, staffed by personnel from various operating units and departments of the CHC Group. The Office holds regular meetings for implementing and monitoring the CHC Group's sustainability goals and progress. In 2023, the Office held 6 meetings.

To address climate change more effectively, the Environmental Management Taskforce and Climate Change Taskforce have incorporated carbon reduction goals and climate-related topics into individual annual KPI as assessment items when formulating the 2023 Individual Annual Performance Development Plan. In addition, the annual performance contributions of each Taskforce are rewarded with bonus points to encourage Taskforce members' efforts and contributions to sustainable development. This is intended to enhance their understanding of climate change issues and motivate active participation in sustainability initiatives, fostering ongoing collective contributions to environmental protection. In the future, CHC Group will further strengthen sustainable performance management, including linking the performance and remuneration of the president with ESG performance. This initiative encourage senior managers to pay more active attention to ESG issues in order to achieve sustainable management goals.

Climate Change and Sustainability Issues

Addressed mainly by the Climate Change Taskforce, Environmental Management Taskforce and Risk Management Taskforce.



Climate Change Taskforce

Responsible for identifying climate change-risks and opportunities, and assessing risks and impacts.

Environmental Management Taskforce

Responsible for energy savings, carbon reduction, energy management, and introducing the Science-based Target (SBT) for a carbon reduction roadmap.

Risk Management Taskforce

Responsible for internal and external risk management of the CHC Group, including risks identified by the Climate Change Taskforce, as well as the continuous monitoring and development of management measures for these risks.



Climate Change Strategies

3.1 Identification of Short-, Mid-and Long-Term Climate-related Risks and Opportunities

On July 28, 2022, the United Nations (UN) adopted a resolution affirming “a clean, healthy, and sustainable environment as a basic human right.” This recognition of the link between human rights and the environment not only responds to the rapidly escalating climate crisis but also serves as a call for justice for those affected by extreme weather events.

Under the influence of climate change, many areas around the world are suffering from high temperatures, torrential rains, droughts, strong winds or wild fires, with subsequent impacts on health (such as heat exhaustion, mosquito-borne diseases, lack of clean water, respiratory diseases caused by air pollution), food (such as crop losses, rising prices, famine), safety (such as floods, fires, house collapse, landslides) and other risks.

Faced with impacts of extreme weather the Climate Change Taskforce of the CHC Group sorted out a list of climate-related risks and opportunities according to three major business units through interviews and cross-departmental cooperation. The Taskforce organized workshops, and referred to the framework of TCFD Recommendations for Climate-related Financial Disclosures as well as measurement standards of the CHC Group's Risk Management Taskforce to identify significant climate-related risks and opportunities based on the degree of impact, probability of occurrence, and timing of impacts.

After identifying major risks, the Taskforce estimated their potential financial impacts to further develop responsive measures so to enhance operational resilience, mitigate impacts of climate change risks, and seize opportunities brought by climate change. The major risks identified above have been included in the overall risk ranking by the risk management taskforce.

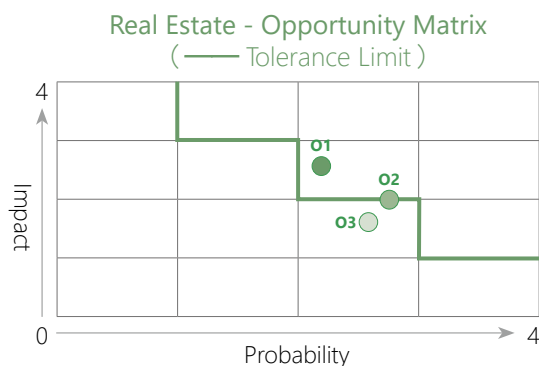
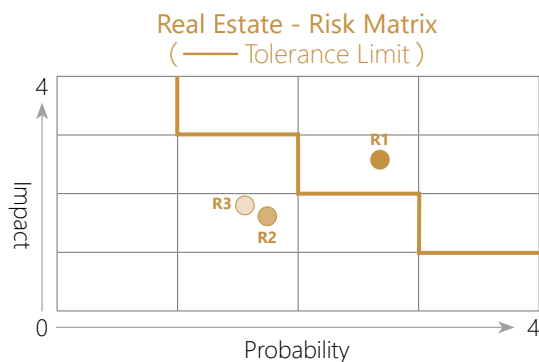
3.2 Impacts of Climate-Related Risks and Opportunities

In accordance with the nature of the three major business units of CHC Group: cement and warehousing, real estate, and hospitality, this report collected lists of related risks and opportunities, and designed questionnaires respectively. After analyzing the questionnaires, opportunity and risk matrices were drawn to assess impacts on CHC Group. Relevant matrix diagrams, potential financial impacts and countermeasures are as follows:



3.2.1 Real Estate Business

Climate Risk and Opportunity Matrix



Risk/ Opportunity Type		Item	Description of Significance
Transition Risk	Policy and Legal	R1 : Policy requirements lead to cost increases.	Above tolerance limit. Prioritize in response strategy planning.
	Acute	R2 : Disasters or accidents cause damages to assets or equipment.	Below tolerance limit. Acceptable risk. No action at the moment.
Physical Risk		R3 : Climate disasters potentially impact operations.	
Opportunity	Products and Services	O1 : Development and/or expansion of low emission goods and services.	Above tolerance limit. Prioritize in response strategy planning.
	Resource Efficiency	O2 : Improve building energy efficiency, reduce energy consumption, and lower costs.	
	Energy Source	O3 : 1. Use of lower-emission sources of energy. 2. Shift toward decentralized energy generation.	Below the tolerance limit, the opportunity has not yet reached the action standard.

▼ Impact Timing of Various Risks and Opportunities

Short-term (<3 yrs)	Mid-term (3~5 yrs)	Long-term (>5 yrs)
R2 、 O3	O2	R1 、 R3 、 O1

▼ Major Climate Change Risks, Opportunities, and Response Strategies

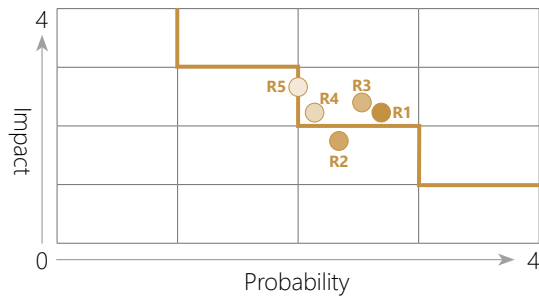
Risk Type	Risk Factor	Risk Description	Potential Financial Impact	Response Plan
Transition - Policy and Legal	Policies lead to cost increases.	The company must address changes in new energy and building regulations in its new construction or maintenance works.	Capital expenditure increase. Operating cost increase.	<ul style="list-style-type: none"> Comprehensively adopt products certified by Green Mark or Energy Label. Actively promote energy-saving and carbon reduction programs to improve energy efficiency. Evaluate the installation of solar panels. Develop assets in line with consumer preferences, and evaluate the feasibility to introduce green building labels.
Opportunity Type	Opportunity Factor	Opportunity Description	Potential Financial Impact	Response Plan
Products and Services	Development and/or expansion of low emission goods and services.	Increase competitiveness through low-carbon products and services, such as green building certifications.	Revenue increase. Cost increase.	<ul style="list-style-type: none"> Develop assets and evaluate the feasibility to introduce green building labels. Prioritize the procurement of high energy efficiency equipment designed to save power, and actively promote various environmentally-friendly and energy-saving measures.
Resource Efficiency	Improve building energy efficiency, reduce energy consumption, and lower costs.	Enhance the resource efficiency of buildings, such as replacement and carbon reduction, energy-saving equipment, and evaluate the possibility of installing photovoltaic equipment.	Operating cost decrease. Revenue increase.	<ul style="list-style-type: none"> Improve energy efficiency by formulating plans to procure high efficiency equipment. Maintain and adjust the efficiency of energy consuming equipment. Replace elevators with energy-saving and carbon-reducing models starting from 2023. Evaluate the feasibility of introducing Energy Management Systems (EMS) into buildings to improve energy efficiency.



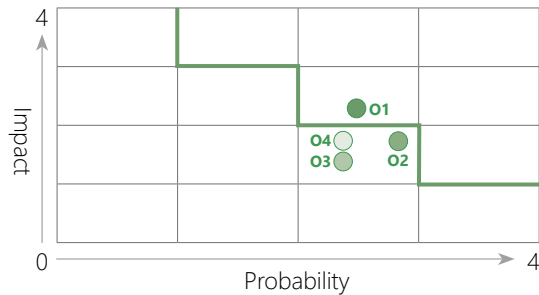
3.2.2 Cement and Storage Business

Climate Risk and Opportunity Matrix

Cement and Warehousing - Risk Matrix
(— Tolerance Limit)



Cement and Warehousing - Opportunity Matrix
(— Tolerance Limit)



▼ Impact Timing of Various Risks and Opportunities

Short-term (<3 yrs)	Mid-term (3~5 yrs)	Long-term (>5 yrs)
	R1 、 R2 、 O1	R3 、 R4 、 R5 、 O2 、 O3 、 O4

Risk/ Opportunity Type		Item	Description of Significance
Transition Risk	Policy and Legal	R1 : Strengthen regulation of existing products and services.	Above tolerance limit. Prioritize in response strategy planning.
	Reputation	R2 : Stigmatization of the cement industry (impact on company image).	Below tolerance limit. Acceptable risk. No action at the moment.
Physical Risk	Acute	R3 : Increased severity of extreme weather events disrupts operations.	Above tolerance limit. Prioritize in response strategy planning.
		R4 : Disruption of construction activities.	
	Chronic	R5 : Rising sea levels.	
Opportunity	Products and Services	O1 : Low-carbon and environmentally-friendly Storage equipment.	Above tolerance limit. Prioritize in response strategy planning.
	Market	O2 : Demand for low-carbon cement.	Below the tolerance limit, the opportunity has not yet reached the action standard.
		O3 : Demand for high-strength cement.	
		O4 : Demand for infrastructure transformation.	

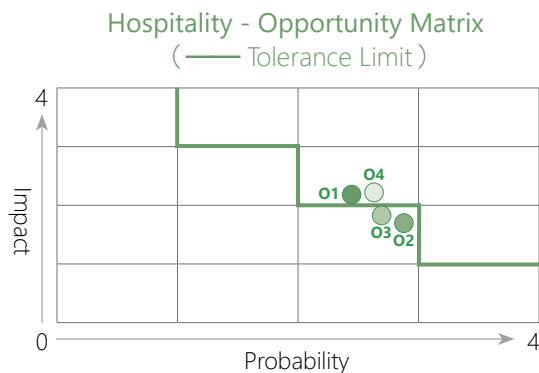
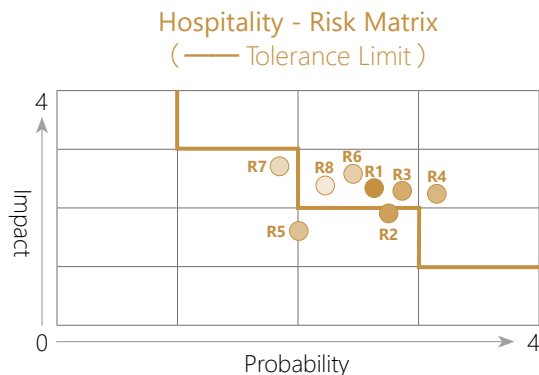
▼ Major Climate Change Risks, Opportunities, and Response Strategies

Risk Type	Risk Factor	Risk Description	Potential Financial Impact	Response Plan
Transition - Policy and Legal	Strengthen regulation of existing products and services.	Compliant with national net-zero requirements to pay carbon fees, resulting in cost increase.	Equipment procurement and renewal result in capital expenditure and operating cost increases.	<ul style="list-style-type: none"> Completed the setting of SBT for carbon reduction. Introduced ISO 50001 EMS into bases in Taiwan and completed the first verification. Install solar photovoltaic systems, expected to generate 2.2 million kWh of power annually starting in 2026.
Physical - Acute Risk	Increased severity of extreme weather events - operational disruptions.	Increased frequency of extreme weather events causes transportation difficulties, affecting shipment schedules and deliveries from suppliers. Typhoons, floods, prolonged high temperatures, and other extreme weather events disrupt port loading and unloading operations, and impact labor and infrastructure schedules.	Revenue decrease.	<ul style="list-style-type: none"> Refer to various domestic and international monitoring data and research reports; observe changes in rainfall and water levels. Transfer risks and cover losses with insurance. Implement optimal inventory and flexible transportation scheduling. Focus on coastal area protection, and strengthen damage prevention measures at production sites.
	Disturb construction activities.	Extreme weather conditions will affect customers' construction activities, thereby impact product sales and reduce revenue.	Revenue decrease.	
Physical - Chronic Risk	Rising sea levels.	Ports and operational equipment are affected by rising sea levels, leading to existing assets (and assets that are in construction) being submerged by seawater. This results in depreciated asset values, operational disruptions, and undermines the value of commodities such as cement and coal.	Asset impairment, operational disruption, and the value of commodities such as cement and coal is undermined.	
Opportunity Type	Opportunity Factor	Opportunity Description	Potential Financial Impact	Response Plan
Products and Services	Low-carbon and environmentally-friendly Storage equipment.	Provide low-carbon and environmentally-friendly Storage equipment and services, including the introduction of renewable energy generators, and smart, energy-saving loading and unloading equipment to enhance automation and operational efficiency, and reduce operating costs.	Revenue increase. Capital expenditure increase.	<ul style="list-style-type: none"> Introduced ISO 50001 EMS into bases in Taiwan and completed the first verification. Install solar photovoltaic systems, expected to generate 2.2 million kWh of power annually starting in 2026. Continuously inventory and assess outdated power-consuming equipment for replacement.



3.2.3 Hospitality Business

Climate Risk and Opportunity Matrix



▼ Impact Timing of Various Risks and Opportunities

Short-term (<3 yrs)		Mid-term (3~5 yrs)	Long-term (>5 yrs)
R4 、 R5 、 R6 、 O2 、 O4		R2 、 O1 、 O3	R1 、 R3 、 R7 、 R8
Risk/ Opportunity Type		Item	Description of Significance
Transition Risk	Policy and Legal	R1 : Capital expenditure or operating cost increases.	Above tolerance limit. Prioritize in response strategy planning.
	Market	R2 : Shift in consumer preferences.	Below tolerance limit. Acceptable risk. No action at the moment.
	Technology	R3 : Transition to renewable energies, and changes in energy supplies lead to cost increases.	Above tolerance limit. Prioritize in response strategy planning.
	Market	R4 : Raw material prices increase leads to operating cost increase.	Above tolerance limit. Prioritize in response strategy planning.
	Reputation	R5 : Stakeholder concern and negative feedback increases.	Below tolerance limit. Acceptable risk. No action at the moment.
Physical Risk	Acute	R6 : Frequency of extreme weather events increases.	Above tolerance limit. Prioritize in response strategy planning.
	Chronic	R7 : Rising sea levels.	Below tolerance limit. Acceptable risk. No action at the moment.
Opportunity	Chronic	R8 : Changes in long-term climate patterns and frequencies (such as precipitation pattern changes, rising average temperatures).	Above tolerance limit. Prioritize in response strategy planning.
	Resource Efficiency	O1 : Improve building energy efficiency, reduce energy consumption, and lower costs.	Above tolerance limit. Prioritize in response strategy planning.
	Energy Source	O2 : 1. Use of lower-emission sources of energy. 2. Shift toward decentralized energy generation.	Below the tolerance limit, the opportunity has not yet reached the action standard.
	Market	O3 : Provide low-carbon services.	Above tolerance limit. Prioritize in response strategy planning.
		O4 : Public and transparent disclosure of sustainability-related information.	Above tolerance limit. Prioritize in response strategy planning.

▼ Major Climate Change Risks, Opportunities, and Response Strategies

Risk Type	Risk Factor	Risk Description	Potential Financial Impact	Response Plan
Transition - Policy and Legal	Policies cause cost increase.	Policies requiring the adoption of low-carbon materials and green power lead to operating costs and capital expenditure increases.	Equipment procurement and replacement lead to capital expenditure and operating cost increases.	<ul style="list-style-type: none"> ● Purchase high energy efficiency equipment designed to save power. ● Use full heat exchangers to reduce air conditioning power consumption load. ● Adopt Variable Refrigerant Volume (VRV) air conditioning systems that automatically adjust based on indoor temperatures to reduce electricity consumption. ● Use heat pumps to produce hot water as an alternative to boilers. ● Install rainwater harvesting systems for plant irrigation to reduce tap water usage. ● Use LED lighting fixtures throughout the building that adjust brightness based on usage conditions to save energy. ● Adopt water-saving sanitary equipment to effectively reduce daily water consumption. ● Actively promote energy conservation awareness internally.
Transition - Technical Risks	Cost of transitioning to low-carbon technologies.	Transition to renewable energies, and changes in energy supplies lead to cost increases.	Capital expenditure and operating cost increases.	<ul style="list-style-type: none"> ● Venture into the solar energy market to develop new energy businesses.
Transition - Market Risk	Raw material cost increase.	Increased costs of raw materials and energy lead to higher costs of products and services provided by the supply chain, thereby increases operating costs for hospitality business units.	Operating cost increase.	<ul style="list-style-type: none"> ● Set short-term targets under SBT. ● Implement energy management to improve usage efficiency.
Physical - Acute Risk	Frequency of extreme weather events increases.	Increased frequency of extreme weather events reduces customers' willingness to stay, leading to reservation cancellations and a decrease in occupancy rates, resulting in revenue decrease.	Revenue decrease.	<ul style="list-style-type: none"> ● Develop emergency response manuals for natural disasters such as typhoons, tsunamis and so on, and implement and regularly update typhoon safety protection net measures. ● Conduct fire drills, emergency evacuation training, and basic CPR training to enhance staff readiness. ● Reference various weather data to monitor changes in wind speed, rainfall, water levels and so on, and respond promptly.

Risk Type	Risk Factor	Risk Description	Potential Financial Impact	Response Plan
Physical - Chronic Risk	Changes in long-term climate patterns and frequencies (such as precipitation pattern changes, rising average temperatures).	<ul style="list-style-type: none"> ● Usage of hotel air conditioning and refrigeration equipment increases. ● Potential impact on consumer preference for tourism facilities as they prefer indoor over outdoor activities, thus require additional indoor facilities. 	Operating cost and capital expenditure increases.	<ul style="list-style-type: none"> ● Cultivate employees' ability to prepare for and respond to crisis events, and recover from disasters through education and training. ● Manage equipment usage to reduce waste of resources. ● Add indoor activity options to cater to consumers' preference to stay indoors and enhance the attractiveness of facilities. ● Buy corporate liability insurance to transfer accident risks and cover disaster losses.
Opportunity Type	Opportunity Factor	Opportunity Description	Potential Financial Impact	Response Plan
Resource Efficiency	Improve building energy efficiency.	<ul style="list-style-type: none"> ● Reduce energy consumption and usage to lower operating costs. ● Enhance the sustainable image of hospitality units to generate positive feedback from stakeholders, thereby promoting brand value. 	Operating cost decrease. Market value of the brand increases.	<ul style="list-style-type: none"> ● Continuously manage energy and resources used for operating hotels through energy management, reduce the use of energy and space during off-peak hours. ● Certified by LEED and WELL Building Standards as healthy buildings, enhance brand image. ● Use energy-saving equipment to reduce energy consumption and costs. ● Reduce the use of consumables, do not proactively provide disposable supplies, and use bulk packaging for bath products. ● Select eco-friendly and recyclable materials for amenities. ● Digitize room notices to reduce paper consumption from photocopying. ● Encourage guests staying multiple nights to reduce number of sheet changes.
Products and Services	Public and transparent disclosure of sustainability-related information	Publicly disclose data, information, goals, and strategies related to sustainable and environmental aspects that different stakeholders care about, enhance brand visibility and reputation, and increase confidence of investors/financial institutions in investment and financing.	Revenue increase. Market value of the brand increases.	<ul style="list-style-type: none"> ● Communicate with stakeholders through official websites, annual reports, shareholders' meetings, and investor relations briefing about efforts and results in implementing sustainable operations, environmental initiatives, and corporate social responsibility to strengthen the link between the brand and sustainability. ● Complete the setting of SBT to improve corporate image.

3.3 Scenario Analysis

The CHC Group conducted a climate risk scenario analysis based on the TCFD framework, focusing on specific physical and transition risks, and estimated their financial impacts. Based on the analysis results, The Group appropriately planned and implemented adaptation policies to mitigate risks, enhancing climate resilience and adaptive capacity.

1 Physical risk Scenario of increased frequency of extreme weather events.

The Group evaluated the financial impacts caused by increased frequency of extreme weather events such as typhoons, floods, and torrential rain. Based on the analysis results, the Group appropriately planned and implemented adaptation policies to mitigate risks, enhancing climate resilience and adaptive capacity.

▼ Reference: IPCC 6th Assessment Report (AR6)

Scenario setting	Temperature scenario	SSP5-8.5 (temperature rise of 4.0°C)
	Impact period	Short term (<3 yrs). Analysis is based on 2025
	Affected parties	CHC, upstream, and downstream partners

Risk topic	Increased frequency of extreme weather events.
Operational impact	Increased frequency of extreme weather events reduces customers' willingness to stay, leading to reservation cancellations and a decrease in occupancy rate.
Possible financial impact	Revenue decrease.
Accounting for % of the business unit's estimated revenue in 2025	1.00%
Response strategy	Please refer to "Hospitality - Major Climate Change Risks, Opportunities, and Response Strategies" for details.

2 Physical risk Rising sea levels.

Ports and operational equipment are affected, causing the Group unable to operate or have to relocate.

▼ Reference: IPCC 6th Assessment Report (AR6)

Scenario setting	Temperature scenario	SSP5-8.5 (temperature rise of 4.0°C)
	Impact period	Long term (>5 yrs). Analysis is based on 2030
	Affected parties	CHC, upstream, and downstream partners

Risk topic	Rising sea levels.
Operational impact	Existing assets (and assets in construction) are submerged by seawater.
Possible financial impact	Asset impairment, revenue decrease (operational disruption), and cost increase (the value of commodities such as cement and coal is undermined).
Accounting for % of the business unit's estimated financial impact in 2030	0 (Note)
Response strategy	Please refer to "Cement - Major Climate Change Risks, Opportunities, and Response Strategies" for details.

Note: The financial impact caused by rising sea levels was estimated based on the pier surface level of necessary facilities for port operations, and the scenario of asset impairment, operational disruption, and undermining of value of commodities such as cement and coal did not occur.

3 Transition risk Strengthen regulation of existing products and services.

In response to the national net-zero emission goal, some regulations or clients may require the Group to provide low-carbon warehousing, loading, unloading, and sales services, resulting in cost increases.

▼ Reference: IPCC 6th Assessment Report (AR6)

Scenario setting	Temperature scenario	SSP1-2.6 (temperature rise of 1.5°C). Taiwan achieves NDC goals.
	Impact period	Mid-term (3~5 yrs). Analysis is based on 2030 (Note 1).
	Affected parties	CHC

Risk topic	Strengthen regulation of existing products and services.
Operational impact	The government' s carbon management regulations require carbon fees.
Possible financial impact	Cost increase.
Accounting for % of the business unit's estimated revenue in 2030 (Note 2)	0.005 % ~ 0.084 %
Response strategies	Please refer to "Cement- Major Climate Change Risks, Opportunities, and Response Strategies" for details.

Note 1: The estimated data for 2028 cannot be obtained due to restrictions on the availability of external data, so the analysis is based on 2030.

Note 2: The estimation is based on two scenarios: SBT and BAU (Business As Usual).

4 Transition risk Raw material price increase leads to operating cost increase.

Increased costs of raw materials lead to higher costs of products and services provided by the supply chain, thereby increases operating costs for hospitality business units.

▼ Reference: IPCC 6th Assessment Report (AR6)

Scenario setting	Temperature scenario	SSP1-2.6 (temperature rise of 1.5°C). Taiwan/ Japan achieve NDC goals.
	Impact period	Short term (<3 yrs). Analysis is based on 2025
	Affected parties	CHC, upstream, and downstream partners

Risk topic	Raw material prices increase leads to operating cost increase.
Operational impact	Costs of products and services provided by the supply chain become higher.
Possible financial impact	Cost increase.
Accounting for % of the business unit's estimated revenue in 2025	0.66 %
Response strategies	Please refer to "Hospitality- Major Climate Change Risks, Opportunities, and Response Strategies" for details.

5 Opportunities

Invest in and use renewable energy.

In order to respond to the trend of future energy transformation in advance, the CHC Group actively evaluated various renewable energy usage options, and planned to develop energy storage and photovoltaic projects to address the Group's green energy goals. It is expected that from 2026, solar panels will produce approximately 2.2 million kWh/year of electricity. And starting from 2023, new investments totaling NT\$105 million will be made to Chia Hsin Green Electricity Co.,Ltd. A preliminary financial impact assessment was conducted through scenario analysis for the cost invested in related equipment for energy transformation and the operating costs reduced after the transformation is introduced.

Scenario setting	Impact period	Mid-term (3~5 yrs). Analysis is based on 2030
	Affected parties	CHC, upstream, and downstream partners
Opportunity topic	Invest in green power to phase in energy transformation and reduce costs.	
Operational impact	Photovoltaic equipment generates electricity for self-use, saving electricity purchase costs.	
Possible financial impact	Revenue increase, operating cost decrease.	
Financial impacts accounting for % of the CHC Group's estimated revenue in 2030 (Note)	0.051%	
Response strategy	Chia Hsin Green Electricity Co.,Ltd. uses the Group's own bases to install photovoltaic equipment and is expected to generate 2.2 million kWh of electricity annually.	
Management costs account for % of the CHC Group's estimated revenue in 2030 (Note)	0.036%	

Note: The financial impacts, management costs and revenue are accumulated from 2026 to 2030.

04

Climate Risk and Opportunity Management



4.1 Integration of Climate-related Risk Identification, Assessment, Management Processes and Issues

In response to diversified developments of the CHC Group, the three major business units cement and warehousing, real estate and hospitality- will re-identify existing climate-related risks and opportunities every two years. The identification updates relevant topics so to align with current industry trends and regulatory requirements, and organizes cross-department meetings to discuss these topics. Once major risks are identified, their potential financial impacts and operational impacts are further evaluated and relevant response plans are formulated. Following the CHC Group's significance standards of risk management different measurement indicators are formulated for finance, strategy, reputation, supervision, legal and operation aspects. Each measurement indicator is divided into four levels (minimal, low, moderate, and high) to comprehensively analyze the significance of opportunities and risks. For example, the financial significance is mainly assessed based on the percentage of the CHC Group's revenue of the year that may be impacted by the risk or opportunity; and the operational significance is assessed based on the number of days that operations may be interrupted due to the risk or opportunity.

At the same time, workshops and questionnaires are utilized to identify potential impact degree, probability of occurrence and impact timing of each risk factor for each business unit. The findings, in combine with the abovementioned assessment results, reveal what the major risks and opportunities are. Then, these risks and opportunities are passed to the risk management and control team to identify critical physical risks and transition risks, and include them in the overall risk ranking. The team also reports relevant response measures and progress of these measures to the audit committee. The Sustainable Development Office is responsible for the horizontal communication and integration of Taskforces, and effectively completes the overall risk assessment, response, oversight and management of the CHC Group.

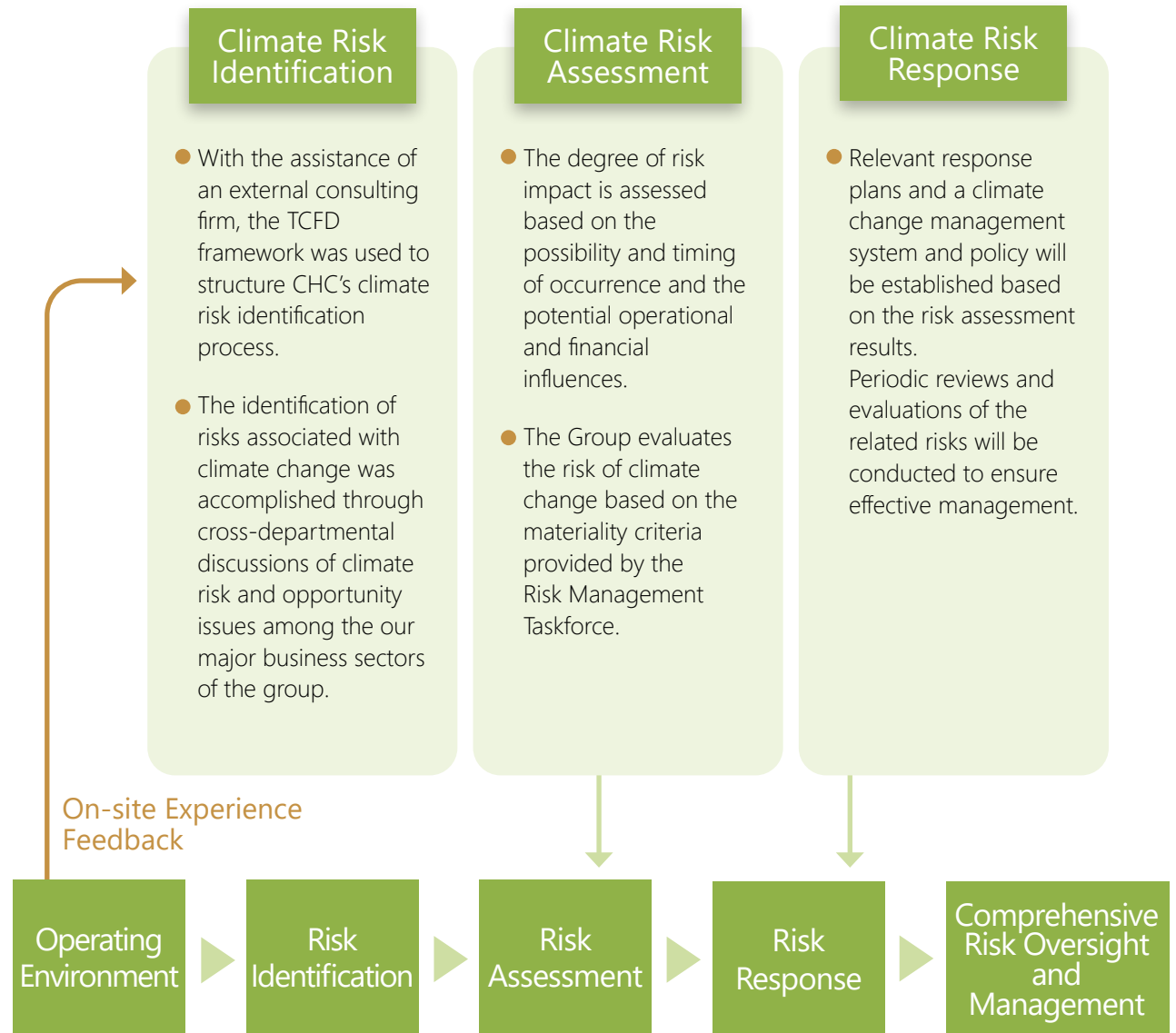
The CHC Group has identified potential climate-related risks and opportunities that it may face in the short, medium and long term. At the same time, it has undertaken investment and financial resource allocation planning in response to the more significant risks and opportunities in order to cope with their impacts in the future. These impacts are included in the financial assessment process and the department relevant to a particular risk or opportunity will conduct preliminary budget and resource planning to establish investment portfolio documents, covering the complete scope and planning of the risks or opportunity. The document then will be submitted to the Sustainable Development Office to review the financial budget and implementation status of the risk or opportunity on an annual basis.



Climate
Change Risk
Management
Process



Group Risk
Management
Process



05

Climate Metrics and Targets

The CHC Group responds to climate change and global warming through various measures. CHC implements energy and water conservation and carbon reduction, continues to replace old products with or adopts environmentally friendly products that save water and electricity, and does not use disposable tableware or reduces bottled water consumption to reduce the impact on the environment. When developing new businesses, CHC actively introduces international quality certification standards or undertakes environmental and ecological protection measures so that buildings are designed, constructed and operated as environmentally friendly and livable spaces. CHC thus realizes the vision of promoting health and quality of life, and fulfills its social responsibility in environmental management and ecological protection.

The CHC Group assesses climate change and related carbon risks, and sets the mid-term goal of achieving carbon neutrality in offices by 2030. In addition to constantly introducing energy and environmental management systems at each office to understand the power consumption status, CHC replaces and scraps equipment to improve power consumption efficiency, and actively evaluates various renewable energy options. To meet its green energy goals, CHC plans and develops energy storage and photovoltaic projects (on-going). The solar panels to be installed as part of the projects are expected to generate around 2.2 million kWh per year starting in 2026.

5.1 Environment and Energy Policy



- Complying with environmental protection and energy regulations, and minimize environmental impacts.
- Continuing to improve environmental performance and resource utilization efficiency.
- Reviewing the procurement process, and prioritizing energy-saving products with Green Mark.
- Raising the awareness of environmental sustainability of all employees through education and training.
- Incorporating environmental sustainability-related international standards when introducing new business projects.
- Implementing group-level best practices for biodiversity conservation and no deforestation.

Scope of parties and application: This policy applies to all of Chia Hsin Cement Group's employees and its subsidiaries, suppliers, contractors, and other key partners, including joint venture partners and outsourced partners, while covering operations, procurement, logistics, product research and development. We conduct due diligence in accordance with this policy before any merger and acquisition to achieve the development of environmental sustainability.

5.2 Main Implementation Results and Future Goals of the Environmental Management Approach

Given that the Company has shifted away from cement production and instead focused on cement sales and reinvestment, the majority of greenhouse gas emissions has been coming from electricity usage in recent years. The Company implemented energy-saving and carbon reduction initiatives such as energy conservation, enhancing energy efficiency, replacing equipment with high-efficiency products, reducing lighting, and adjusting power contract capacity to promote energy efficiency and carbon reduction within the organization. Please refer to the "Carbon Reduction Strategy and Action" for the Company's carbon reduction actions.

① Reduce carbon emissions

② Continuously expand environmental management certifications

③ Plan to use renewable energy

Key Implementation Results in 2023



1. We have implemented various energy-saving and carbon-reducing measures, continuously updating energy-consuming equipment and improving energy efficiency. This year, approximately **8.27** million NTD has been invested in environmental protection and related expenditures, an increase of around 6.55 million NTD from the 1.72 million NTD invested in 2022.
2. The combined Scope 1 and Scope 2 carbon emissions per unit of revenue have **decreased from 3.39 to 2.74** tons per million NTD.

1. The greenhouse gas inventory under ISO 14064-1 covers all locations of the group (100% scope in consolidated financial reporting).
2. In addition to the headquarters building, ISO 50001 and ISO 14001 have been implemented at 5 new locations.

To meet its green energy goals, the Company plans and develops energy storage and photovoltaic projects. Starting from 2026, the planned solar panels are expected to generate approximately **2.2 million kWh per year**.

Goals in 2024



1. Low carbon cement storage and transportation facilities: In response to the global trend of "net zero carbon emission" and future demands for low-carbon cement, a low-carbon cement delivery facility will be added to the Storage and Transportation Center at the Port of Keelung.
2. Photovoltaic green energy plan: On green energy, solar panels will be built on the rooftops of tenants of the Gangshan Plant. The plan is to install facilities of 2MW capacity in two years and generate more than 2.2 million kWh of electricity annually, providing a stable source of green electricity to the CHC Group for its own use and serving as an important pillar of emission reduction.
3. Green building label: The first and second floors of the CHC headquarters building will be renovated, seeking to apply for a green building label.
4. Continue to conduct and expand the scope of supplier evaluation to more bases in the business systems.
5. A carbon inventory, for Scop 3-related emissions, of upstream and downstream suppliers is planned for year 2024-2025.
6. The CHC headquarters building plans to replace six elevators and install a power recovery system to reduce energy consumption.
7. A digital carbon inventory management system is introduced in 2024.
8. An EMS energy-saving project will be introduced into the CHC headquarters building as a plan for year 2024-2025.

5.3 Greenhouse Gas Inventory and Emission Statistics

The CHC Group has been inventorying its GHG emissions on an annual basis starting from 2021. The inventory has been conducted at the organization level in line with ISO14064-1:2018 standards and verified by a third-party every year. The number of operating bases included in the inventory has been increasing year by year to truly understand the status of GHG emissions. The GHG inventories and related information in recent years are as follows:

Implementation of GHG Inventory	Scope of Inventory	Passed Third-Party Verification	Coverage of Inventory
April 2021	Corporate headquarters floors	✓	48%
April 2022	All locations in Taiwan	✓	92%
April 2023	All locations in Taiwan and overseas	✓	100%
April 2024	All locations in Taiwan and overseas	✓	100%

* Scope of the consolidated financial report

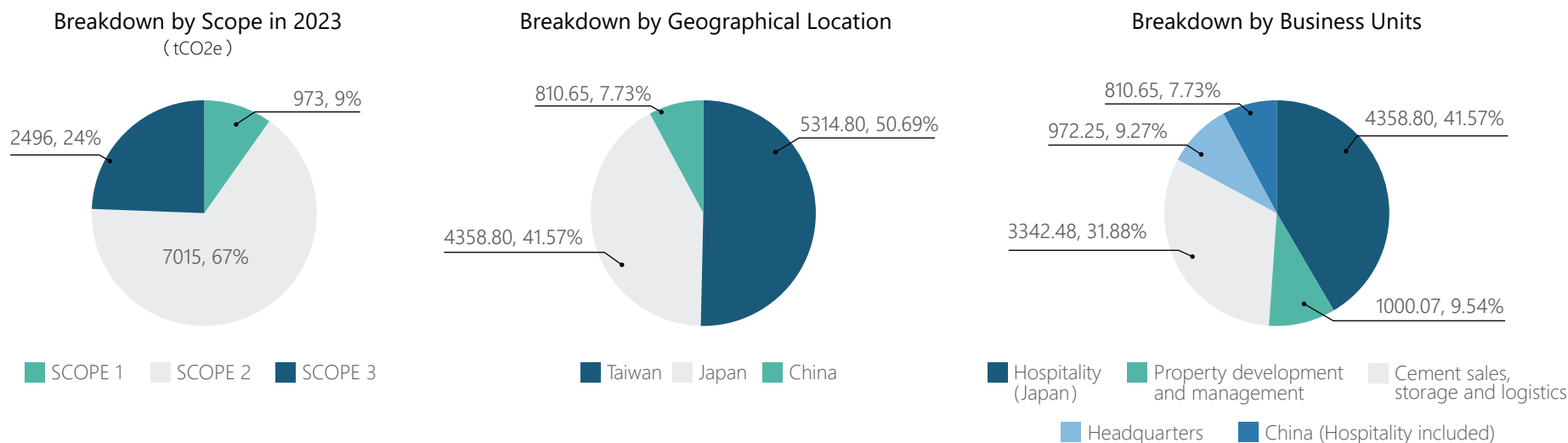
▼ GHG Emission Statistics

Scope	Category	Item	2022	2023	Remark
Scope 1	Category 1: Direct GHG emissions and removals.	Carbon emissions (tCO2e)	834.8500	972.7627	
		Carbon emissions per capita (tCO2e /person)	1.88	2.32	
		Carbon emissions per unit of revenue (tCO2e / NT\$M)	0.37	0.33	
		Data coverage (%)	100%	100%	
Scope 2	Category 2: Indirect GHG emissions from imported energy.	Carbon emissions (tCO2e)	6,807.5640	7,015.3239	
		Carbon emissions per capita (tCO2e /person)	15.33	16.70	
		Carbon emissions per unit of revenue (tCO2e / NT\$M)	3.02	2.41	
		Data coverage (%)	100%	100%	
Scope 3	Category 3: Indirect GHG emissions from transportation. (Note 1)	Carbon emissions (tCO2e)	103.1230	369.1500	
		Carbon emissions per unit of revenue (tCO2e / NT\$M)	0.05	0.13	
		Data coverage (%)	100%	100%	
	Category 4: Indirect GHG emissions from products used by organization. (Note 2)	Carbon emissions (tCO2e)	1,187.4960	1,506.9443	
		Carbon emissions per unit of revenue (tCO2e / NT\$M)	0.53	0.52	
		Data coverage (%)	100%	100%	
	Category 5: Indirect GHG emissions associated with the use of products from the organization.	Carbon emissions (tCO2e)	666.0780	620.0883	
		Carbon emissions per unit of revenue (tCO2e / NT\$M)	0.2956	0.2130	
		Data coverage (%)	100%	100%	
	Category 6: Indirect GHG emissions from other sources.	Carbon emissions (tCO2e)	-	-	Identified as not material
		Carbon emissions per unit of revenue (tCO2e / NT\$M)	-	-	
		Data coverage (%)	-	-	
Total GHG emissions		Carbon emissions (tCO2e)	9,599.111	10,484.2692	
		Data coverage (%)	100%	100%	
Total number of people (person)			444	420	
Total revenue (million NTD)			2,254	2,912	

Note 1: Employee commuting was included in Category 3 inventory items for the first time in 2023, which is the main reason for the difference in emissions in this category from the year before.

Note 2: Indirect emissions of purchased goods was included in Category 4 inventory items for the first time in 2023, and the indirect GHG emissions of externally purchased electricity increased by 223.3278 tCO₂e compared to the previous year. These are main reasons for the difference in emissions in this category from the year before.

▼ Carbon Emissions Structure Analysis






Since 2022, CHC Group has conducted carbon inventory covering 29 operational sites domestically and internationally. Analyzing the latest 2023 annual carbon emissions by location, the hotel in Japan accounts for 41.57% of the group's total carbon emissions, making it the highest emitting site in the entire group. Other sites in Taiwan account for 50.69% of the emissions, while those in China contribute 7.73%.

The Breakdown by Business Units covers cement sales, storage and logistics, hospitality, and property development and management sectors. The primary source of emissions is electricity consumption (Scope 2), which includes equipment and office electricity usage. Scope 1 emissions primarily come from vehicle and natural gas consumption.

Compared to 2022, when some operations were still impacted by the pandemic, the 2023 emissions reflect a return to normal operations, showing an increase of approximately 345.67 tCO₂e in Scope 1 and 2 emissions combined. **However, due to various carbon reduction measures, the carbon intensity, measured by emissions per unit of revenue, decreased from 3.39 to 2.74 tons per 100 million NTD.** To ensure the achievement of net zero, the group will track carbon reduction effectiveness annually and evaluate short, medium, and long-term strategies for setting carbon reduction targets.

5.4 Other Climate-related Metrics

Environmental Indicators		Item	Year 2022	Year 2023	Remarks
 Energy	Total consumption (MWh)	1 MWh=1000 KWh	11,771	12,053	
	Total consumption (GJ)		42,375.57	43,391.74	1 GJ = 0.277778 MWh
	Energy consumption per capita (GJ/ person)		95.4405	103.3137	
	Energy consumption per unit of revenue (KWh/ thousand NTD)		5.2231	4.1398	
	Energy consumption per unit of revenue (GJ/ million NTD)		18.8030	14.9031	
	Data coverage (%)		100%	100%	
 Water	Total water consumption (kilolitre)	1 kilolitre=1000 litres	147,492	172,835	
	Data coverage (%)		99.9%	100%	
 Waste	Total waste generated (ton)		344	378	Waste data of each year includes tenants of the CHC building.
	Total waste reused / recycled / sold (ton)		4.8	82.04	In 2023, the newly added statistic shows that hotel waste recycling accounts for 38% of its total volume.
	Data coverage (%)		100%	100%	
Total number of people (person)			444	420	
Total revenue (million NTD)			2,254	2,912	

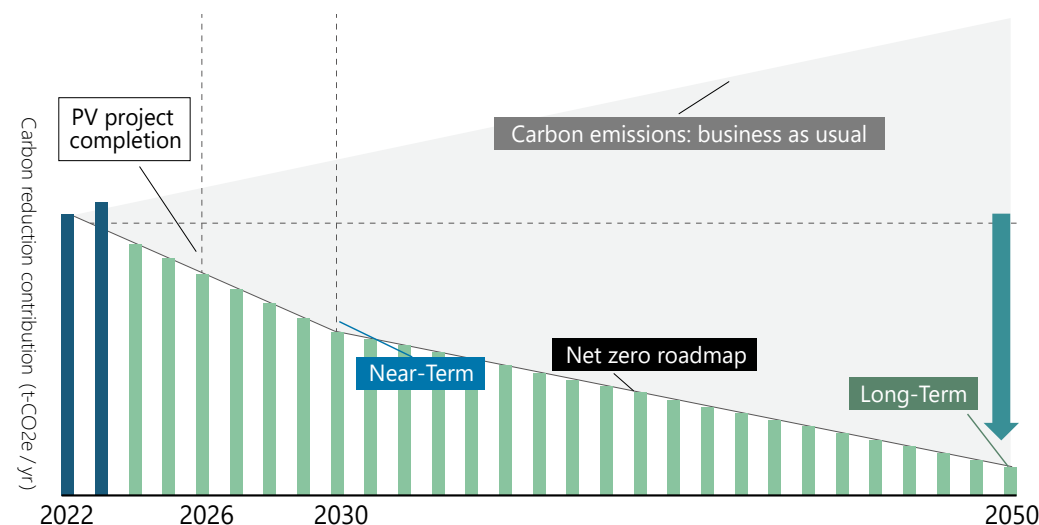
5.5 Climate Action

The Sustainable Development Committee decided to adopt plans to join the Task Force on Climate-related Financial Disclosures (TCFD) and Science Based Targets initiative (SBTi) in 2022. It also formally signed on to become a TCFD Supporter in December 2022.

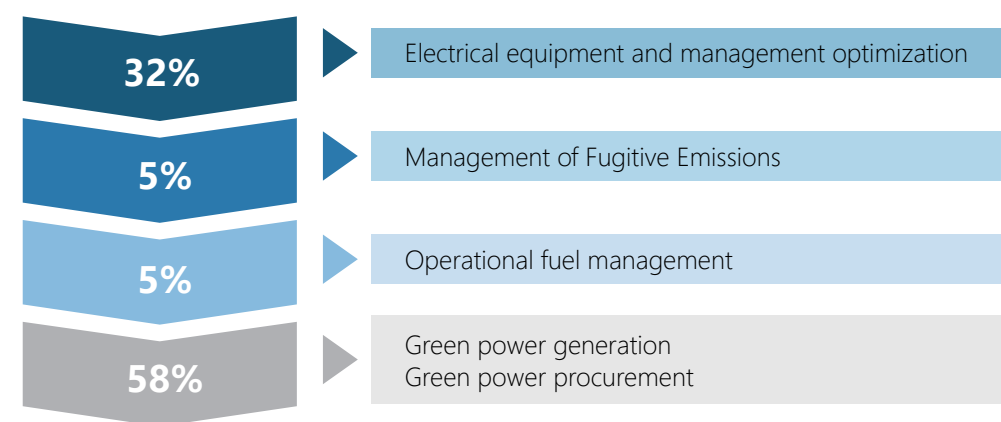
The CHC Group started preparing for the carbon reduction targets of SBTi in 2023. It submitted the target to "use 2022 as the base year, and declared that the short-term target for GHG (Scope 1+2) within the organization is to achieve absolute reduction of 42% by 2030, and will begin to measure and reduce other indirect emissions of GHG (Scope 3)." Together with more than 7,000 well-known companies around the world, the Group responded to the global carbon reduction target of 1.5°C. Environmental sustainability has always been one of the core sustainability issues that the CHC Group concerned about. In recent years, it has been tracking international standards and voluntarily participated in the SBTi. After completing the GHG inventory of the CHC Group (100% scope of the consolidated financial report) in 2023, CHC now takes one step further to conduct GHG emission hotspot analysis to promote the adoption of green energy, demonstrating its determination to reduce carbon emissions.

The CHC Group's carbon reduction actions are based on the climate risks and opportunities identified by the Group headquarters. The three business units- hospitality, cement and warehousing and real estate- promote the carbon reduction strategies according to their respective business scope. The headquarters drafts carbon reduction strategies from perspectives of operation, education, and innovation. The CHC Group's carbon reduction roadmap and carbon reduction strategies and actions are shown in Figure 5.5.1 and Table 5.5.1 respectively.

▼ Figure 5.5.1 Carbon Reduction Roadmap



▼ Carbon Reduction Strategies



▼ Table 5.5.1 Carbon Reduction Strategy and Action

Strategic Pillar	Electrical equipment and management optimization	Management of Fugitive Emissions	Operational fuel management	Green power generation and Green power procurement
	32%	5%	5%	58%
Strategy Description	Inventory and plan for replacement of outdated and inefficient electrical equipment within the Company, with ongoing expansion of the scope.	When refrigerant equipment needs to be replaced or refilled, replace them with equipment using low-GWP (global warming potential) refrigerants.	Reduce fuel usage by managing natural gas in the kitchen, electrifying kitchen appliances and transitioning to electric corporate vehicles.	In 2026, the first phase of the solar photovoltaic system will be launched. CHC will continue to evaluate available areas of its own sites to expand green power installation, and pay attention to possible green power procurement opportunities to increase the use of green power.
Short-Term Action	<ul style="list-style-type: none"> Replace port area equipment with energy-efficient air compressors and screw conveyor motors. Replace office building common area lighting with LED fixtures. 	<ul style="list-style-type: none"> Conduct an inventory of high-energy-consuming refrigerant equipment. 	<ul style="list-style-type: none"> Conduct an inventory of old company-owned vehicles and replace them with electric models. 	<ul style="list-style-type: none"> Initiate the photovoltaic system installation plans.
Mid- to Long-term Action	<p>Cement and warehousing</p> <ul style="list-style-type: none"> Gradually replace plant lighting with high-efficiency LED fixtures. Replace outdated high-power consumption equipment with new high-efficiency equipment or add variable frequency devices to increase energy efficiency. Optimize pipeline systems to avoid pressure loss during transport. <p>Hospitality</p> <ul style="list-style-type: none"> Optimize operating hours of machines, lighting and air conditioning equipment. Increase the pre-cooling temperature before check-in by 1°C. Replace guest room refrigerators with more energy efficient models. <p>Property Development and Management</p> <ul style="list-style-type: none"> Optimize common area illumination. Replace building lighting with high-efficiency LED fixtures. Upgrade building elevators and install power regeneration systems. 	<p>Hospitality</p> <ul style="list-style-type: none"> Replace guest room refrigerators with low-GWP refrigerant models. <p>CHC Group</p> <ul style="list-style-type: none"> Replace or refill refrigerant equipment with low-GWP refrigerants when they reach their end of lifecycle or require maintenance. Install aeration equipment at each base to reduce septic tank emissions. 	<p>Cement and warehousing</p> <ul style="list-style-type: none"> Electrify fuel-powered company vehicles. <p>Hospitality</p> <ul style="list-style-type: none"> Introduce electric kitchen equipment. Design a low-carb menu. Introduce ISO 50001. 	<p>CHC Group</p> <ul style="list-style-type: none"> Install solar photovoltaic systems, expected to generate 2.2 million kWh of power annually starting in 2026. Evaluate green power procurement. Increase green power usage.

Note: The definition of short-term, medium-term and long-term is consistent with the impact period of risks and opportunities: short-term (<3 years); medium-term (3~5 years); long-term (>5 years).

Reference data source: <https://is.gd/bvnKVM>

Independent Third-Party Verification Statement issued by the British Standards Institution (BSI)

Statement number: SRA-TW-809881	Conformity Check Overall Result:
Location: Chia Hsin Cement Corporation No. 96, Sec. 2, Zhongshan N. Rd. Zhongshan Dist. Taipei City 104418 Taiwan 嘉新水泥股份有限公司 臺灣 台北市 中山區 中山北路二段 96 號 104418	The maturity model for the Climate-related Financial Disclosures is Level-B: Excellence grade. 氣候相關財務揭露的成熟度及模型為【 第五級：優秀 】等級。

Latest issue: 2024-08-18 Expiry date: 2025-08-17

Page 2 of 2

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Appendix 2 : Index of TCFD Disclosures

▼ Guidance for All Sectors

Aspects	TCFD-Recommended Disclosure Item	Chapters and Sections of this Report Corresponding to the Item	Page
Governance	a) Describe the board's oversight of climate-related risks and opportunities.	2.1	p.5
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	2.2	p.6
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	3.1	p.7
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. Organizations should clearly disclose the impact on their actual financial performance and financial position, and their plans for transitioning to a low-carbon economy.	3.2 5.5	p.8~p.14 p.25~p.26
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	3.3	p.15~p.17
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks.	4.1	p.18~p.19
	b) Describe the organization's processes for managing climate-related risks.	4.1	p.18~p.19
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	4.1	p.18~p.19
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	5.2 5.5	p.21 p.25~p.26
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	5.3	p.22~p.23
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. Organizations disclosing medium-term or long-term targets should also disclose associated interim targets where available.	5.2 5.4 5.5	p.21 p.24 p.25~p.26

▼ Cross-Industry, Climate-related Metrics for Management

Metric	Item	Page
	GHG Emissions	p.22~p.23
Transition Risks	<ul style="list-style-type: none"> ● Decrease carbon emissions ● Invest in low-carbon products ● Water consumption ● Use renewable energy 	p.20 p.21 p.24~p.26
Climate-related Opportunities	The amount of power generated from renewable energy and the amount used.	p.21 p.26
Capital Deployment	Allocate environmentally friendly fund.	p.21
Internal Carbon Prices	No plan at the moment. But it might be introduced as an environmental management tool in the future.	-
	Remuneration	p.6



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