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Charoen Pokphand Group

Climate & Nature Resilience Report 2024 (IFRS S2 & TNFD)

FORWARD FASTER

FOR A BETTER TOMORROW

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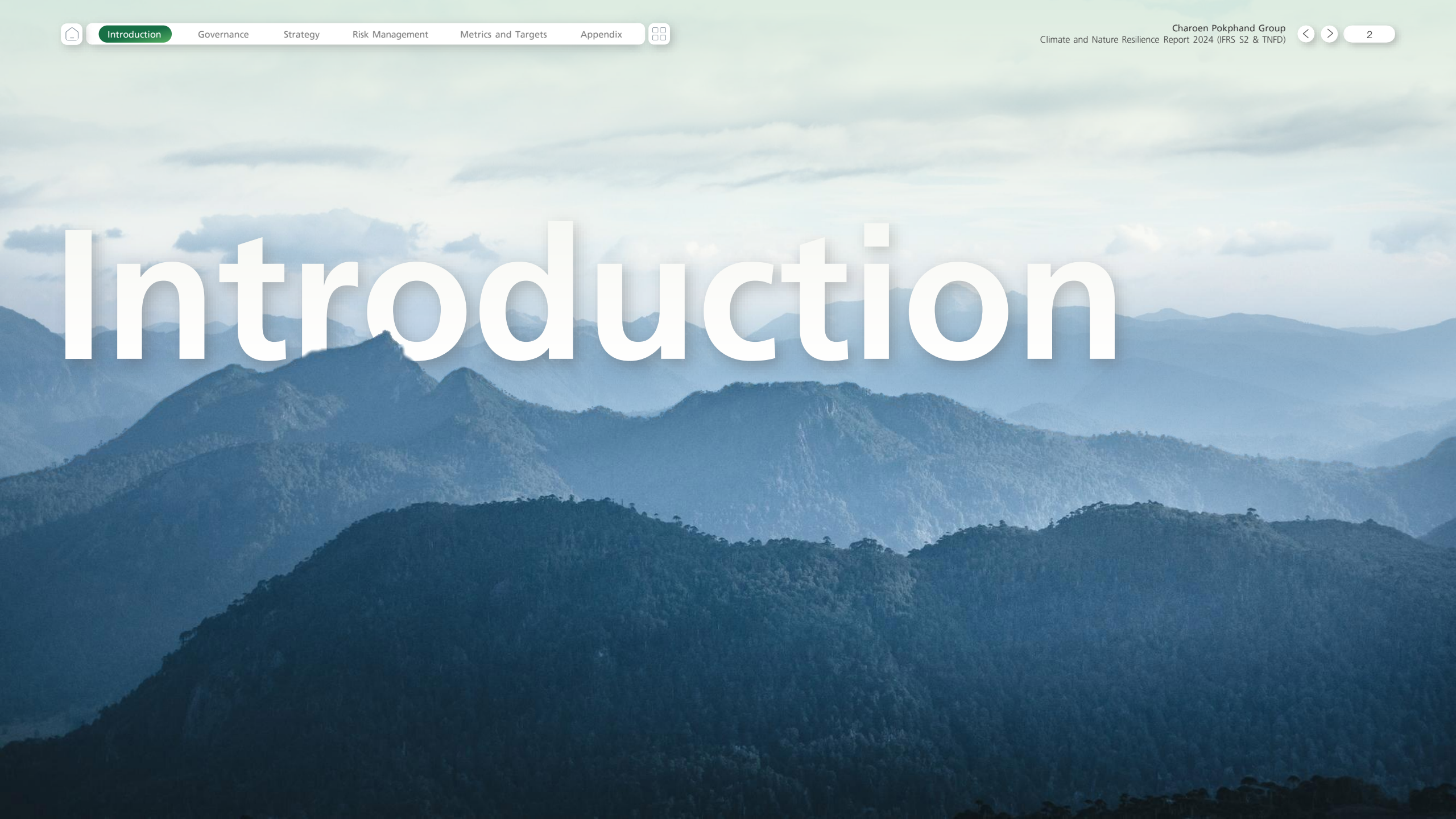


Introduction

INTRODUCTION

Climate change and biodiversity loss are increasingly impacting the economy, society, and business operations. Companies across sectors face environmental risks that may disrupt operations, supply chains, investment strategies, and competitive positioning. To effectively respond to these challenges and unlock opportunities for sustainable growth, organizations are encouraged to adopt environmental disclosures aligned with internationally recognized frameworks such as IFRS S2 and the Taskforce on Nature-related Financial Disclosures (TNFD).

Charoen Pokphand Group is aware that the wide range of our businesses, spanning agriculture, food, retail, and telecommunications, not only impacts the environment but also depends on natural resources and ecosystem services. This dual relationship creates business risks and impacts, such as deforestation, emissions, and resource depletion can lead to regulatory challenges, reputational damage, and shifting consumer expectations, while the Group's dependency on clean water, healthy soil, and stable climate makes it vulnerable to environmental degradation and climate change.

Recognizing these interconnected risks, Charoen Pokphand Group is committed to strengthening environmental risk management to support long-term business resilience and sustainability. As a result, the Group has prepared the Climate and Nature Resilience (IFRS S2 & TNFD) Report 2024 to outline the risks and opportunities related to climate and nature, along with the organization's management strategies that support our broader sustainability objectives as follows:

- Strengthen risk management by addressing climate and nature-related risks
- Support sustainable investment and clarify climate and nature-related financial risks
- Boost transparency and investor confidence by providing reliable ESG data for better decisions
- Unlock financial opportunities through green finance, sustainability-linked loans, and carbon markets

Risk Assessment Framework

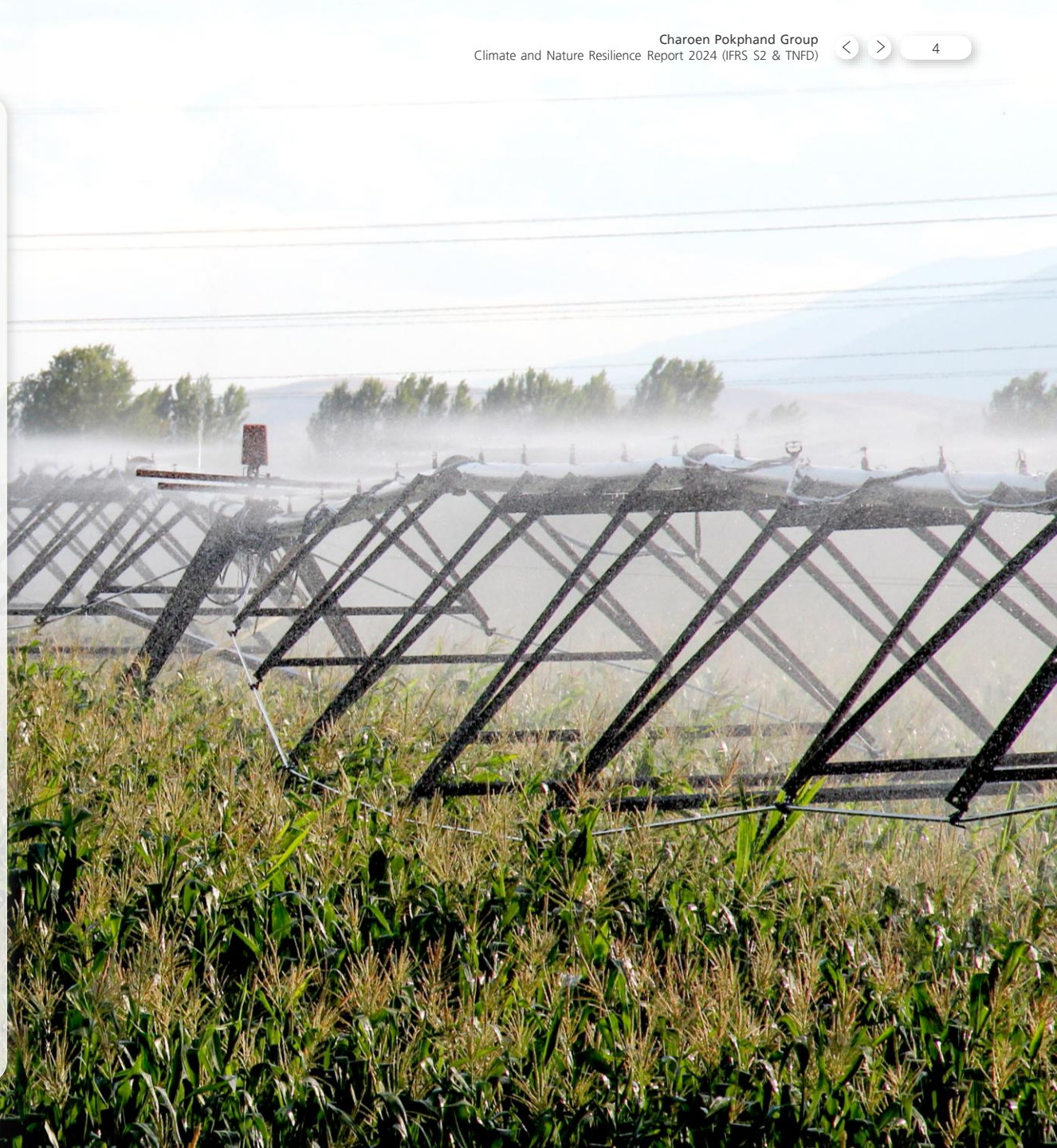
Effective risk management is a cornerstone of sustainable business operations and organizational resilience. Charoen Pokphand Group recognizes the dynamic nature of risks in today's interconnected global landscape and strives to integrate comprehensive strategies to identify, evaluate, and mitigate risks effectively. The Risk Assessment Framework provides a structured approach, aligned with globally recognized standards and principles, to ensure compliance, safeguard assets, and achieve long-term sustainability as follows;

- Charoen Pokphand Group Corporate Governance Principles
- Charoen Pokphand Group Code of Conduct
- COSO Enterprise Risk Management Framework 2017
- ISO 31000:2018 – Enterprise Risk Management Guidelines
- ESG Integrated Risk Management by WBCSD
- IFRS S1 and S2
- Taskforce on Nature Related Financial Disclosure
- COSO's Enterprise Risk Management

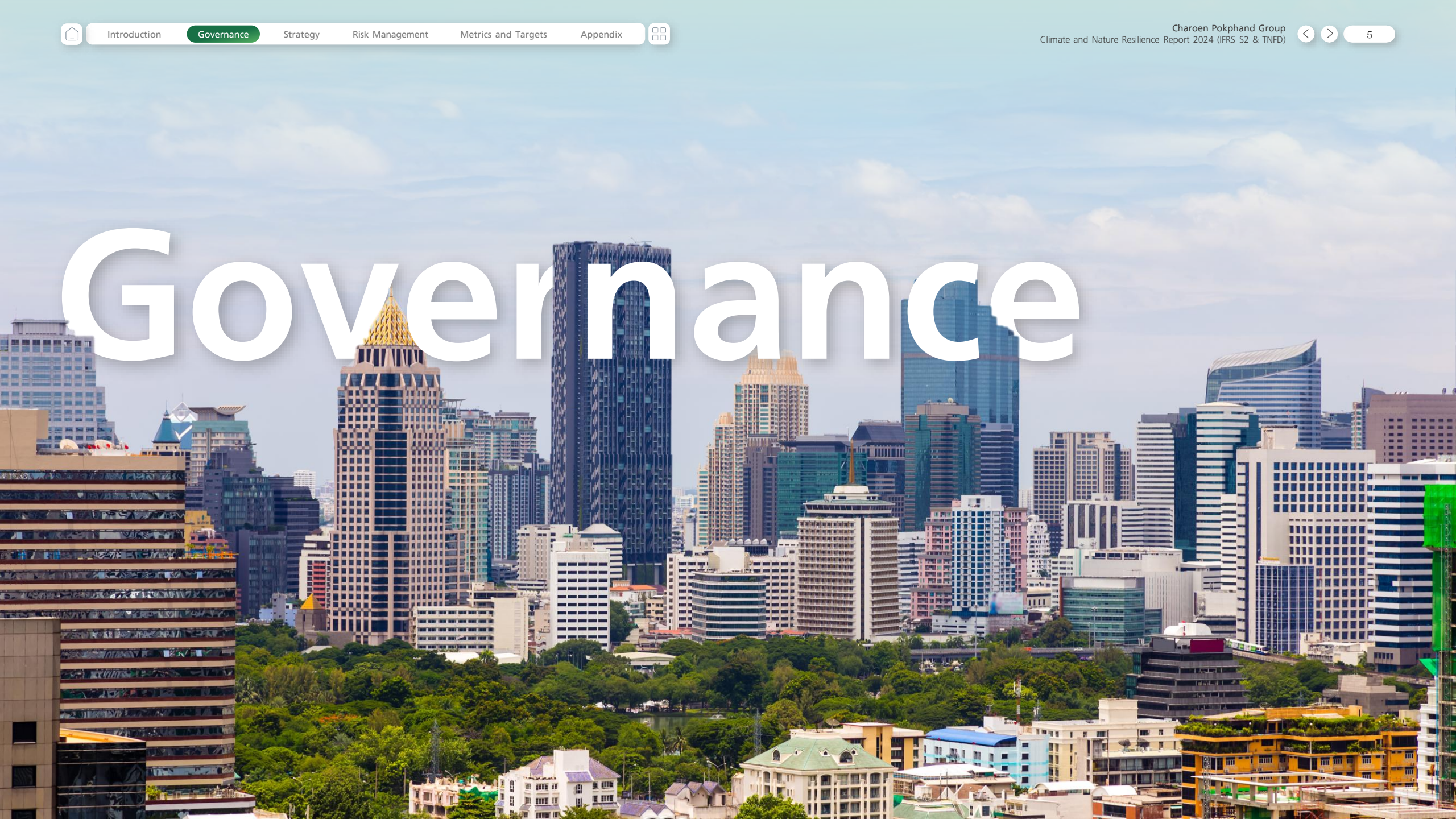
World Business Council for Sustainable Development

IFRS International Financial Reporting Standards

TNFD Taskforce on Nature-related Financial Disclosures



Governance



Governance

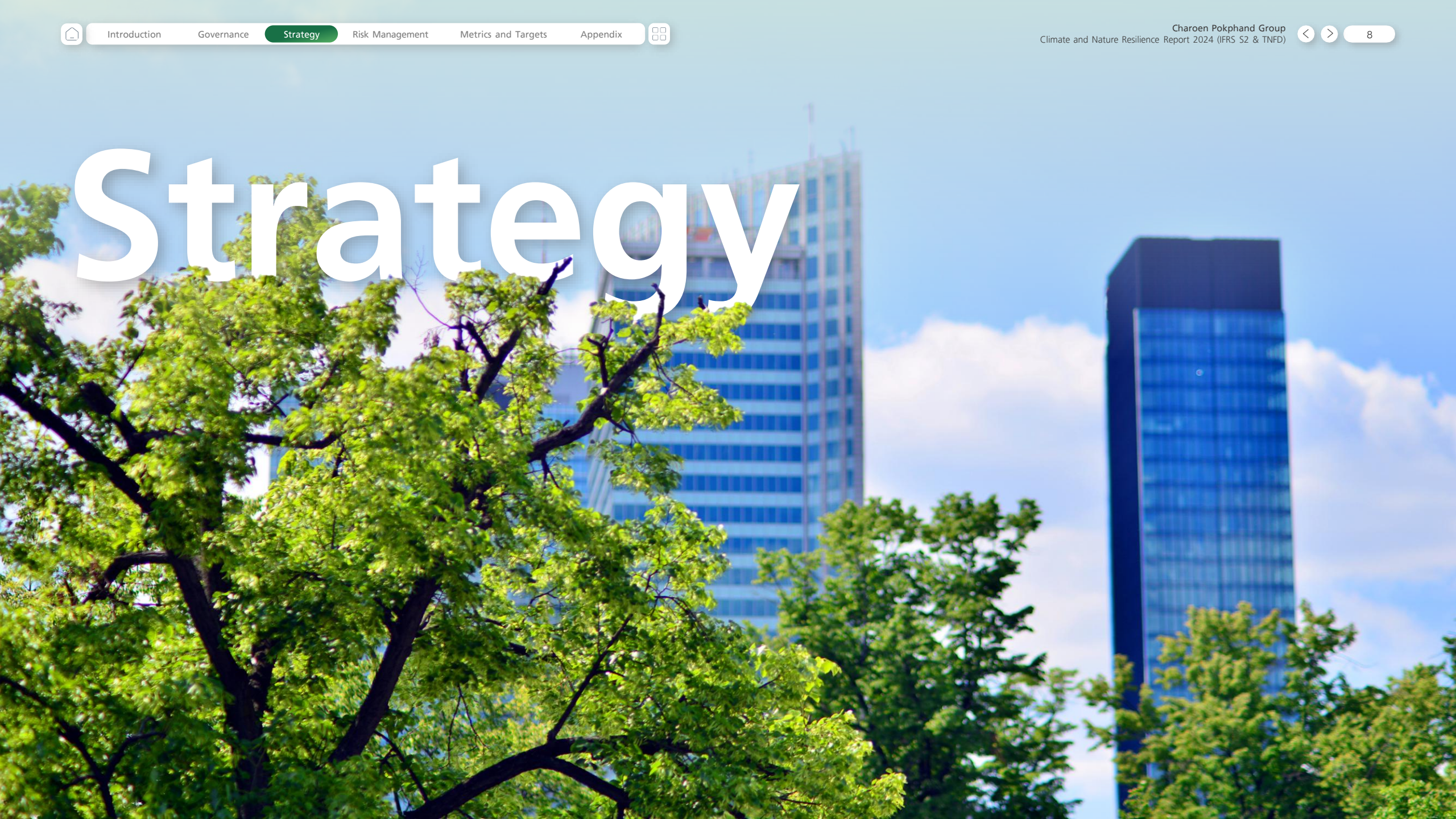
Charoen Pokphand Group has established a robust Governance Framework for Climate and Nature-Related Financial Disclosures (TCFD & TNFD) to oversee climate and nature-related risks in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) and the Taskforce on Nature-related Financial Disclosures (TNFD). The governance structure consists of the Board of Directors (BOD), led by the Chairman, and the Executive Board, chaired by the Chief Executive Officer (CEO). To ensure the integration of climate and nature-related risk management, C.P. Group has set up the Sustainability Committee and the Corporate Governance, Risk, and Audit Steering Committee. These committees play a critical role in identifying and managing risks and opportunities related to climate change and nature loss. Driving the implementation of TCFD and TNFD-aligned strategies across all business units.

Enhancing corporate resilience by integrating environmental, social, and governance (ESG) considerations into business decision-making. At the executive level, the organization is structured into eight key functions, including Sustainability, Good Governance, Corporate Communication (SGC) Office, and Corporate Compliance Office. These functions play a vital role in implementing C.P. Group's sustainability strategy based on TCFD and TNFD principles, ensuring nature- and climate-related risks are appropriately managed under a comprehensive risk management framework. Aligning corporate reporting with international sustainability disclosure standards, such as IFRS S2, GRI, and CDP, by integrating TCFD and TNFD principles, C.P. Group is committed to enhancing transparency, accountability, and resilience, ensuring long-term value creation for all stakeholders.

Roles and Responsibilities

Board Oversight	**The Board of Director**	Meeting: Yearly	The Board of Directors oversees the overall business operations to ensure adherence to the C.P. Group 2030 Sustainability Framework and Goals. Sustainability performance against the Group's goals and targets (including climate and other nature-related topics) is periodically reported to the Board members as a part of the monitoring process.
Management Oversight	**The Executive Board**	Meeting: Every Two Months	The Executives are delegated by the BoD to oversee the C.P. Group's operations. The Management's role is to establish policies, targets, strategies, management approaches, and performance indicators for climate- and nature-related issues, including climate, water, circularity, and biodiversity. The Management also provides strategic advice and decision-making for the Net Zero transition and nature-positive pathways.
Implementation of Sustainability-related Strategies, Policies and Goals	**Sustainability Committee**	Meeting: Quarterly	The Sustainability, Good Governance and Corporate Communication Operating Committee, chaired by the Group's CEO, has the responsibility to drive sustainability goals and strategies by determining key performance indicators, overseeing the sustainability governance, monitoring the establishment of communication channels, and assessing key issues on sustainability. In addition, the Committee works closely with the Corporate Governance, Risk and Audit Steering Committee to determine acceptable ESG risks, including nature and climate, and set up a risk management approach. The committee's meetings are arranged on a quarterly basis to discuss the progress of sustainability performance, and this is also a channel to report ESG risks (including nature-related risk and opportunity) and other ESG issues.
	Governance, Risk, and Audit Steering Committee		The Corporate Governance, Risk, and Audit Steering Committee comprises executives with expertise in risk management. The role is to oversee the Enterprise Risk Management and monitor the implementation of the policies and regulations to ensure that the business is operated in accordance with corporate governance principles, as well as the effectiveness of the risk management, internal controls, and audits.
	Sustainability Good Governance and Corporate Communication Office		The main function is to execute the sustainability strategy, which includes the process of climate- and nature-related risk assessment and management. The assessment outcomes are factored into the group-wide policy, strategy, and risk management framework, which are leveraged across all business units.

Strategy



Risks Identification

In an era where environmental challenges are escalating, businesses are increasingly exposed to climate- and nature-related risks that threaten operational stability, supply chain resilience, and long-term financial performance. As the global climate continues to change, the intensifying frequency and severity of extreme weather events, biodiversity loss, and ecosystem degradation demand a proactive approach to risk identification, assessment, and management.

For Charoen Pokphand Group, a global conglomerate with a diverse portfolio spanning agribusiness, food production, retail, telecommunications, and infrastructure, these risks are particularly material. With extensive agricultural and food supply chain operations, the Group is vulnerable to climate-induced disruptions, such as shifting precipitation patterns, extreme heat, water scarcity, and biodiversity decline. These can directly impact crop yields, livestock health, seafood production, and overall food security.

At the same time, these challenges present significant opportunities for Charoen Pokphand Group to future-proof our operations. By identifying emerging risks and opportunities, such as regulatory shifts, carbon pricing, and nature-related dependencies, the Group can enhance strategic planning, innovate sustainable products and practices, and strengthen resilience across value chains. Proactively aligning with global frameworks and responding to evolving consumer expectations for sustainability also positions C.P. Group to unlock green finance, improve brand trust, and build long-term business value.

This report aims to systematically assess and categorize the key climate- and nature-related risks impacting Charoen Pokphand Group's operations, with a particular focus on the direct and indirect effects on production efficiency, regulatory compliance, and market competitiveness..

By identifying these risks, Charoen Pokphand Group can develop strategies to enhance resilience, mitigate financial and reputational threats, and capitalize on emerging opportunities in the transition to a more sustainable and nature-positive economy. The assessment framework considers both physical risks, such as rising temperatures, shifting precipitation patterns, and natural disasters, and transition risks, including regulatory shifts, market changes, and evolving consumer expectations. Additionally, nature-related risks, such as deforestation, water scarcity, and biodiversity loss, are analyzed for their potential impact on C.P. Group's long-term sustainability.

By systematically identifying climate- and nature-related risks, Charoen Pokphand Group can foster adaptive strategies to not only safeguard our assets but also align with global sustainability goals, strengthen stakeholder trust, and secure long-term value creation.

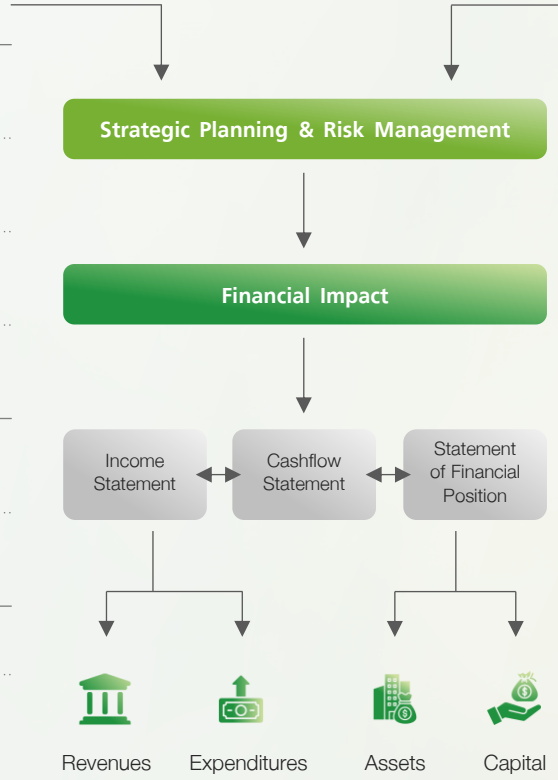
Climate Nexus Nature Related-Risk and Opportunity

In recent years, climate change and nature-related issues have consistently ranked among the top material concerns at the global level, as well as for Charoen Pokphand Group. This is driven by both the increasing physical and transitional risks posed by climate change, including extreme weather events, resource scarcity, evolving regulatory landscapes, and growing stakeholder expectations for corporate environmental responsibility. These factors have a direct impact on the Group's operations, supply chain stability, and long-term profitability.

To address the challenges, Charoen Pokphand Group has integrated climate- and nature-related risks into our Enterprise Risk Management (ERM) framework. This approach enables the Group to identify, assess, and monitor both physical and transitional risks across our operations and value chains. C.P. Group actively identifies and evaluates emerging risks and opportunities related to climate change and nature loss, such as biodiversity decline, carbon pricing, water scarcity, and evolving environmental regulations that could affect our long-term resilience and business performance. Outlined below are the climate-nature nexus risks and opportunities identified by the Group.

Risks

Transition Risks	**Policy and Legal**	• Regulatory mandates on products and services • Adoption of the GBF and NDCs
	Technology	• Transitioning to lower-emission technologies • Failure of climate tech adoption
	Market	• Uncertainty in market trends and regulatory shifts affecting demand for sustainable products
	Reputation	• Failure to meet demands for climate action • Increased scrutiny of sustainability claims
Physical Risks	**Acute**	• Increasing severity and frequency of flooding • Raw material scarcity and supply chain disruptions caused by heatwave
	Chronic	• Long-term droughts and shifting rainfall patterns • Long-term resource scarcity & supply chain instability
Systematic Risks	**Ecosystem Collapse**	• Global Food Supply Chain Disruptions
	Aggregate Risk	• Water scarcity and biodiversity loss • Consumers and regulators are enforcing stricter standards, making compliance more difficult and costly



Opportunities

Resource Efficiency	• Implement circular economy solutions to minimize waste, promote recycling, and extend product lifecycles
Products/ Services	• Develop low-carbon, biodiversity-friendly products and services
Access to Finance	• Access to green finance

Risks and Opportunities Identification:
Transition Risks

Time Horizontal	Short-term	Medium-term	Long-term
	1-5 year	5-10 year	>10 year

Risk Types	Drivers	Effects on C.P.G Business Model	Climate	Nature	Time Horizon
Transition Risks	**Policy and Legal**				
	• Regulatory mandates on products and services: carbon tax, Emissions Trading Systems (ETS), deforestation-free, Kunming-Montreal Global Biodiversity Framework (GBF), and Nationally Determined Contributions under the Paris Agreement	• Market losses due to non-compliance products • Higher OPEX costs for use of non-renewable energy and high-carbon embedded raw materials • CAPEX to minimize embodied carbon and nature-related risk mitigations throughout value chain e.g. traceability system, regenerative agriculture etc.	✓	✓	Short-Medium
	Technological Innovation				
	• Transitioning to lower-emission technologies	• Upfront costs for new equipment, infrastructure, or process redesign and uncertain return	✓	✓	Medium
	• Failure of climate technology adoption	• Unproven technology can cause production delays, system failures, or integration issues leading to downtime and lost revenue	✓	✓	Medium-Long
	Market				
	• Uncertainty in market trends and regulatory shifts affecting demand for sustainable products	• Uncertain revenues and difficulty in forecasting sales • Increasing cost for marketing or rebranding to respond to shifting consumer preferences	✓	✓	Medium
	Reputation				
	• Failure to meet stakeholder and consumer demands for climate action • Increased scrutiny of corporate sustainability claims	• Misleading commitments on carbon reduction, biodiversity, or deforestation-free sourcing risk reputational damage, legal issues, and loss of consumer • Habitat destruction, deforestation, and invasive species spread from land use, causing regulatory risks, reputational harm, and disruptions	✓	✓	Medium-Long

Risks and Opportunities Identification:
Physical Risks/Systematic Risks

Time Horizontal	Short-term	Medium-term	Long-term
	1-5 year	5-10 year	>10 year

Risk Types	Drivers	Effects on C.P.G Business Model	Climate	Nature	Time Horizon
Physical Risks	**Acute**				
	• Increasing severity and frequency of extreme flooding events impacting ecosystems • Heat-driven pest outbreaks and animal diseases	• Operational disruption & property damage • Increasing operation cost and insurance premium • Raw material scarcity and supply chain disruptions	✓	✓	Short
	Chronic				
	• Long-term droughts and shifting rainfall patterns • Long-Term resource scarcity & supply chain instability	• Raising cost for climate-resilient crop investments • Higher costs for temperature-controlled farming facilities • Persistent cost increases in procurement & transportation • Permanent decline in raw material availability • Continuous investment in resource-efficiency technology	✓	✓	Long
Systematic Risks	**Ecosystem Collapse**				
	• Global Food Supply Chain Disruptions	• Higher procurement costs for food and retail business • Potential price volatility for the products	✓	✓	Long
	Aggregate Risk				
	• Water scarcity and biodiversity loss • Consumers and regulators are enforcing stricter standards, making compliance more difficult and costly	• Higher operational costs • Competition for freshwater resources, • Raw material scarcity and supply chain disruptions	✓	✓	Medium

Risks and Opportunities Identification:
Opportunities

Time Horizontal	Short-term	Medium-term	Long-term
	1-5 year	5-10 year	>10 year

Risk Type	Drivers	Effects on C.P.G Business Model	Climate	Nature	Time Horizon
Resource Efficiency and Circular Economy	• Implement circular economy solutions to minimize waste, promote recycling, and extend product lifecycles	• Cost saving and resource efficiency • Compliance with global sustainability regulations • Create new profit opportunities e.g., resale, recycling, product-as-a-service	✓	✓	Short
Products/Services	• Develop low-carbon, biodiversity-friendly products and services	• Access to new markets and customers • Lower operational costs	✓	✓	Short
Resilience	• Access to green finance	• Funding for climate adaptation or low-carbon transitions • Support R&D for sustainable products or services, helping businesses stand out in competitive markets	✓	✓	Short

Business Model Effect

Business Line	Business Model Effect	Risks and Opportunities	Value Chain Transformation
 **Agro-Industry & Food**	Directly affected by climate conditions, which impact production costs and the sourcing of raw materials	**Challenges** • Energy costs have increased due to the use of fossil fuels • Expenses related to ESG compliance and carbon pricing **Opportunities** • Expanding market to plant-based protein and other green products	**Upstream:** - Transition the supply chain toward regenerative agriculture **Midstream:** - Utilize AI and IoT to reduce waste in the production process **Downstream:** - Develop biodegradable packaging
 **Retail & Distribution**	Adapt to shifting consumer demand toward sustainable products, and rising energy costs associated with operations	**Challenges** • Capital investment for green store and logistics **Opportunities** • Increasing sales through environmentally friendly products • Income from EV charging station services and green logistics	**Upstream:** - Encourage suppliers to adopt green packaging **Midstream:** - Use an EV logistics fleet to reduce carbon emissions **Downstream:** - Promote consumer behavior that supports the circular economy
 **Media & Telecommunication**	Rising energy costs and growing demand for environmentally friendly networks	**Challenges** • Increasing OPEX for energy used for network and system **Opportunities** • Revenue from cloud computing and digital transformation	**Upstream:** - Select suppliers that use recycled materials **Midstream:** - Reduce carbon emissions from data centers **Downstream:** - Promote e-waste recycling
 **E-commerce & Digital**	Adapt to shifting consumer demand toward sustainable products	**Challenges** • CAPEX of renewable infrastructures **Opportunities** • Increasing sales through environmentally friendly products	**Upstream:** - Encourage suppliers to adopt green packaging **Midstream:** - Maximize use of renewable energy **Downstream:** - Promote consumer behavior that supports the circular economy

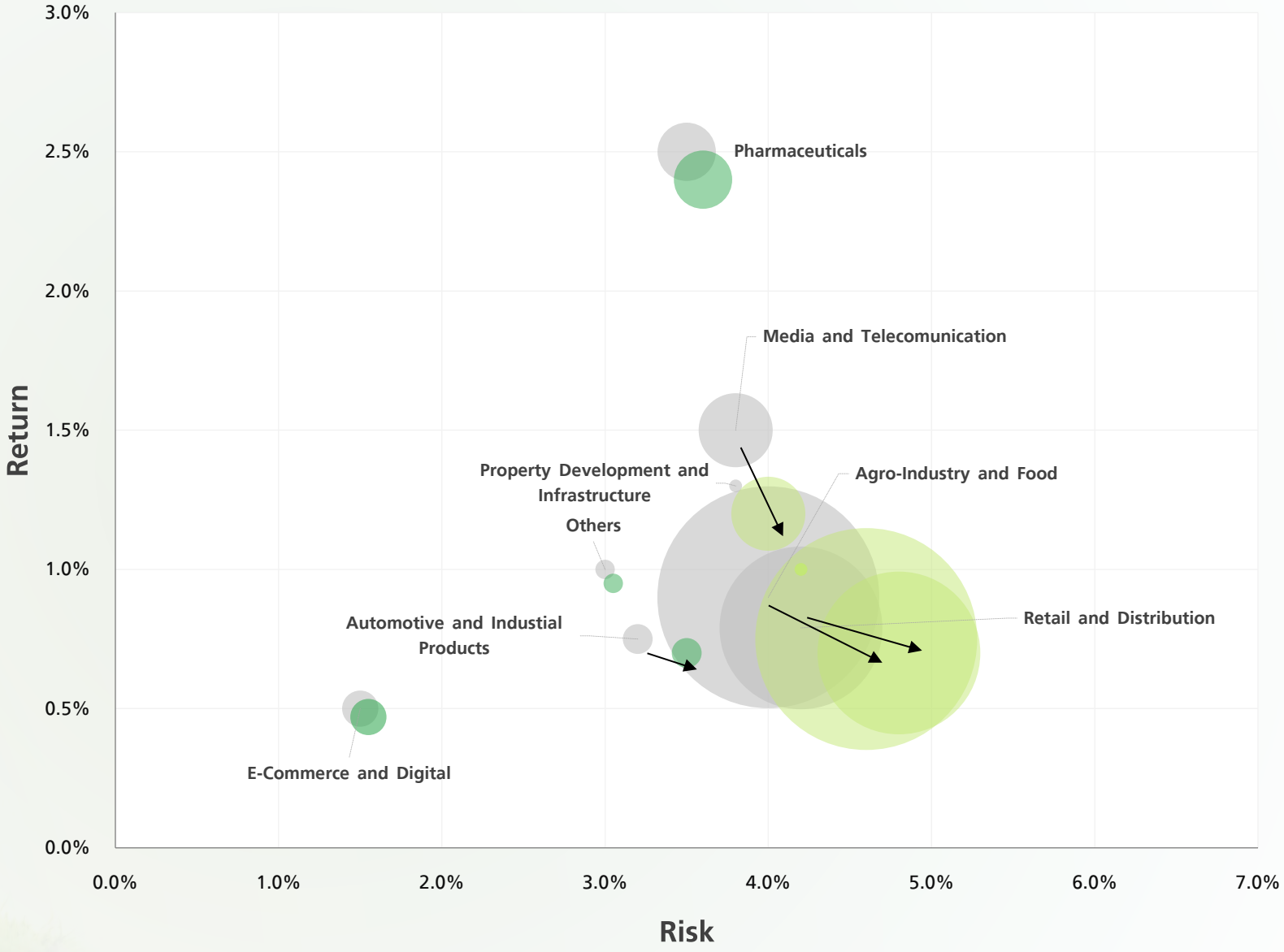
Business Model Effect

Business Line	Business Model Effect	Risks and Opportunities	Value Chain Transformation
 **Property and Infrastructure**	The property and infrastructure business faces increasing green building regulations and rising material costs	**Challenges** • Higher costs are driven by green construction materials and alternative energy systems **Opportunities** • Growth potential lies in the Net Zero Building and Smart City markets	**Upstream:** - Adopt environmentally friendly construction materials **Midstream:** - Use AI for building management to optimize energy efficiency **Downstream:** - Develop Smart Grid systems for energy distribution and control
 **Automotive & Industrial Products**	The industry is undergoing a major shift from internal combustion engines to electric vehicles (EVs), alongside mounting pressure to comply with ESG standards across the supply chain	**Challenges** • Higher raw material costs due to the rising prices of rare metals • CAPEX associated with transitioning to green factories **Opportunities** • Rising demand for EVs open up opportunities to expand into battery production and green manufacturing	**Upstream:** - Adjust the supply chain to incorporate recycled materials **Midstream:** - Develop factories powered by clean energy **Downstream:** - Promote EV adoption in logistics and transportation operations
 **Pharmaceuticals**	The pharmaceuticals business must adapt to ESG standards in drug manufacturing and packaging, reduce greenhouse gas emissions in medical logistics, and develop sustainable business models	**Challenges** • Higher energy and transportation costs, particularly cold-chan logistics. • Increased ESG compliance costs across operation **Opportunities** • Emerging markets for Green Pharma and carbon-neutral medicines present opportunities to expand eco-friendly drugs and vaccines	**Upstream:** - Use biodegradable packaging materials **Midstream:** - Implement AI systems to reduce waste in pharmaceutical production **Downstream:** - Promote carbon-neutral healthcare services
 **Finance and Banking**	The financial sector faces increasing requirements for ESG investing and green financing, which directly impact lending and investment strategies	**Challenges** • Rising costs of restructuring investment portfolios to align with ESG principles **Opportunities** • Opportunities lie in green bonds, ESG-linked loans, and sustainable investment products	**Upstream:** - Screen and select investment projects that align with ESG criteria **Midstream:** - Develop factories powered by clean energy **Downstream:** - Provide loans to businesses with Net Zero targets

Nature and Climate Risk Assessment

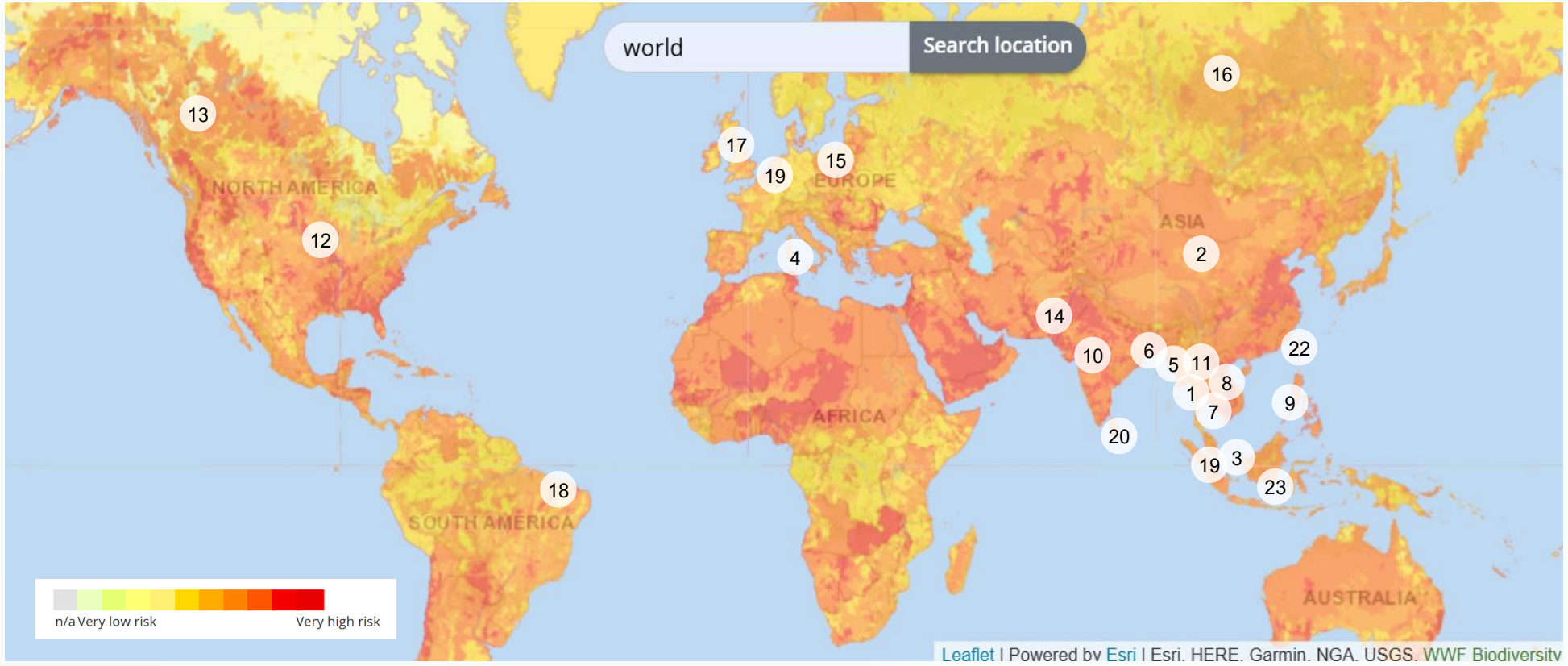
Sectoral Exposure and Strategic Implications

This matrix illustrates the relationship between climate-related risk and potential financial return across various industry sectors. The horizontal axis (x-axis) represents the level of climate risk exposure, while the vertical axis (y-axis) shows expected returns. Each bubble represents a business sector, with its size indicating the relative market weight or significance.



Physical Risk Exposure in C.P. Group's Operating Regions

Charoen Pokphand Group has established a strong international presence through our investments and business operations across 23 countries and economies. According to the WWF Risk Filter, these countries demonstrate varying degrees of physical risk, primarily driven by the extent to which businesses rely on nature and are exposed to changes in natural systems, either from environmental or human-induced pressures. The risk map indicates that a significant portion of these countries are subject to moderate to high physical risks, particularly in areas relating to provisioning services (such as access to water, food, and raw materials), regulating and supporting ecosystem services (including climate regulation and soil fertility), and pressures on biodiversity. Countries like India, Myanmar, Bangladesh, and parts of Southeast Asia exhibit considerable exposure to these risks, as shown by darker red and orange zones on the map.



THA (1)
CHN (2)
MYS (3)
TUR (4)
BGD (5)
MMR (6)
KHM (7)
VNM (8)
PHL (9)
IND (10)
LAO (11)
US (12)
CAN (13)
PAK (14)
POL (15)
RUS (16)
GBR (17)
BRA (18)
SIN (19)
BEL (20)
LKA (21)
TWN (22)
IDN (23)

Measuring Risks

Revenue	Low	Low-Medium	Medium	Medium-High	High
	(±) <0.5%	(±) 0.5-1.5%	(±) 1.6-2.5%	(±) 2.6-3.5%	(±) >3.5%

Risk Type	Effects of Risks and Opportunities	Financial Impacts: Net-Zero by 2050	Financial Impacts: IEA	Mitigations
Transition Risks	**Policies and Regulations Transition**			
	• Rising compliance costs driven by stricter climate policies and regulations – Use of non-renewable energy – Carbon pricing e.g. ETS, carbon tax and etc. – No-deforestation, land conversion and nature-related products – Kunming-Montreal Global Biodiversity Framework (GBF) – Nationally Determined Contributions under the Paris Agreement	3,490 million THB	11,620 million THB	• Shift to renewable energy sources to reduce reliance on fossil fuels • Transition to innovative models e.g. smart farming and AI-based efficiency tools • Develop energy-efficient systems leveraging IoT and traceability technologies • Offer training programs and workshops to improve understanding and capability in using new technologies • Transition to low-carbon supply chains through sustainable sourcing and regenerative agriculture • Build traceability systems into the supply chain to monitor and reduce embodied carbon. Invest in nature-positive initiatives
	Technologies Transition			
	• Capital investments for low-carbon technologies and climate-resilient infrastructures • Failure of climate technology adoption can cause production delays, system failures, or integration issues	4,200 million THB	15,500 million THB	
	Market Fluctuation			
	• Revenue losses from adapting to new market demands and difficulty in forecasting sales. • Increasing cost for marketing or rebranding to respond to shifting consumer preferences	7,650 million THB	20,215 million THB	
	Reputation			
	• Misleading commitments on GHG reduction and nature-related issues may reduce market valuation and resulting in revenue loss. • Habitat destruction, deforestation, and invasive species spread from land use, causing regulatory risks, reputational harm, and disruptions	914 million THB	3,520 million THB	

Measuring Risks

Revenue	Low	Low-Medium	Medium	Medium-High	High
	(±) <0.5%	(±) 0.5-1.5%	(±) 1.6-2.5%	(±) 2.6-3.5%	(±) >3.5%

Risk Type	Effects of Risks and Opportunities	Financial Impacts: Net-Zero by 2050	Financial Impacts: IEA	Mitigations
Physical Risks	**Acute Risks**			
	• Increasing OPEX costs and insurance premiums due to frequent and flooding, destabilizes ecosystems, impacting C.P.G's agricultural and food production and our infrastructures • Raw material scarcity and supply chain disruptions caused by heatwave, particularly in feed ingredients, agricultural products, and packaging results in the increasing OPEX	370 million THB	13,215 million THB	• Enhance infrastructure resilience against extreme weather events to reduce vulnerability • Invest in sustainable agricultural practices e.g. regenerative farming, soil restoration, and agroforestry for resilience • Secure alternative sources for feed ingredients, agricultural products, and packaging materials • Utilize smart farming tools, AI, and predictive analytics to improve resource efficiency
	Chronic Risks			
	• Rising CAPEX associated with investment of climate-resilient crops, temperature-controlled farming, and sustainable agricultural technology • Increasing OPEX and revenue decreased due to changing precipitation patterns that would result on raw material volatility and supply chain disruptions, particularly in feed ingredients, agricultural products, and packaging materials, and increasing procurement challenges	13,780 million THB	50,240 million THB	

Measuring Risks

Revenue	Low	Low-Medium	Medium	Medium-High	High
	(±) <0.5%	(±) 0.5-1.5%	(±) 1.6-2.5%	(±) 2.6-3.5%	(±) >3.5%

Risk Type	Effects of Risks and Opportunities	Financial Impacts: Net-Zero by 2050	Financial Impacts: IEA	Mitigations
Systematic Risks	**Ecosystem Collapse** • Higher procurement costs and operation disruptions for food and retail business due to investing in sustainable agricultural practices and diversifying supply sources	24,250 million THB	78,120 million THB	• Build strategic supplier partnerships with shared sustainability goals • Managing OPEX costs by adopting cutting-edge technologies, optimizing resource use, and incorporating nature-based solutions into farming and production processes • Optimize production processes to reduce water intensity per unit of output • Strengthen supplier engagement for sustainable procurement and regenerative farming • Restore forests, wetlands, and coastal ecosystems
	Aggregate Risk • Increasing water scarcity, biodiversity loss, and competition for freshwater resources are driving higher operational costs and intensifying compliance requirements • Raw material scarcity and disruptions in the supply chain create critical challenges for businesses, emphasizing the need for sustainable practices.	9,736 million THB	20,230 million THB	

Measuring Opportunities

Revenue	Low	Low-Medium	Medium	Medium-High	High
	(±) <0.5%	(±) 0.5-1.5%	(±) 1.6-2.5%	(±) 2.6-3.5%	(±) >3.5%

Risk Type	Effects of the Opportunity	Financial Impacts: Net-Zero by 2050	Financial Impacts: IEA	Actions to Realize Opportunity
Opportunity	**Resource Efficiency and Circular Economy**			
	• Implement circular economy solutions to minimize waste, promote recycling, and extend product lifecycles to attract eco-conscious consumers	1,743 million THB	14,520 million THB	• Sustainable Packaging Initiatives • Product Take-Back and Recycling Programs • Eco-design principles to reduce emissions and environmental impact
	Products/ Services			
	• Lead in sustainability by offering low-carbon, biodiversity-friendly products that strengthen brand value and market positioning	2,550 million THB	23,370 million THB	• Develop low-carbon product lines • Create biodiversity-friendly offerings, such as certified sustainable food
	Resilience			
	• Access financial incentives for sustainability transitions for climate adaptation and disaster preparedness programs e.g. drought-resistant crops, water-saving irrigation systems, and low-water-use products	1,680 million THB	12,346 million THB	• Implement water-efficient Technology • Strengthen Infrastructure for Disaster Preparedness

Risks Prioritization

Climate- and nature-related risks are assessed and prioritized using a risk assessment matrix, which evaluates each risk based on its likelihood and potential impact. The scale of likelihood and magnitude of impact if climate change event occurred are divided into five levels as following;

Likelihood	Magnitude of Impact
Rare (1)	Low (1)
Unlikely (2)	Low-Medium (2)
Possible (3)	Medium (3)
Likely (4)	Medium-High (4)
Almost certain (5)	High (5)

The determination of likelihood category and impact magnitude are provided in Appendix I.

Transition Risks	Physical Risks	Systematic Risks	Opportunities
Policy and legal	Acute	Ecosystem Collapse	Resource Efficiency
Technology	Chronic	Aggregate Risk	Technology
Market Fluctuation			Resilience
Reputation			

Climate and Nature Resilience

Sustainable Energy

- Conservation and Increase Energy Efficiency
- Usage of Alternative and Renewable Energy

Sustainable Operation

- Efficient Resource Utilization in the Production Process and Logistics
- Zero Waste to Landfill
- Environmentally friendly Refrigerant

Sustainable Agriculture

- Utilization of Technology to Increase Productivity, Reduce Emission and Increase Carbon Capture in Agricultural Activities
- Utilization and Production of Renewable Energy from Agricultural Waste

Wildlife Protection and Anti-poaching Efforts

- Enforcing Laws to Combat Illegal Wildlife Trade and Habitat Destruction.

Protected Areas and Conservation Reserves

- Establishing National Parks, Wildlife Reserves, and Marine Protected Areas (MPAs)

Sustainable Land and Water Use Management

- Implementing Agroforestry, Sustainable Fishing, and Responsible Mining Practices

Carbon Removal and Ecosystem Restoration and Reforestation

- Removal of Carbon through Natural Approach
- Restoring Degraded Landscapes through Reforestation and Wetland Rehabilitation.

Sustainable Consumption

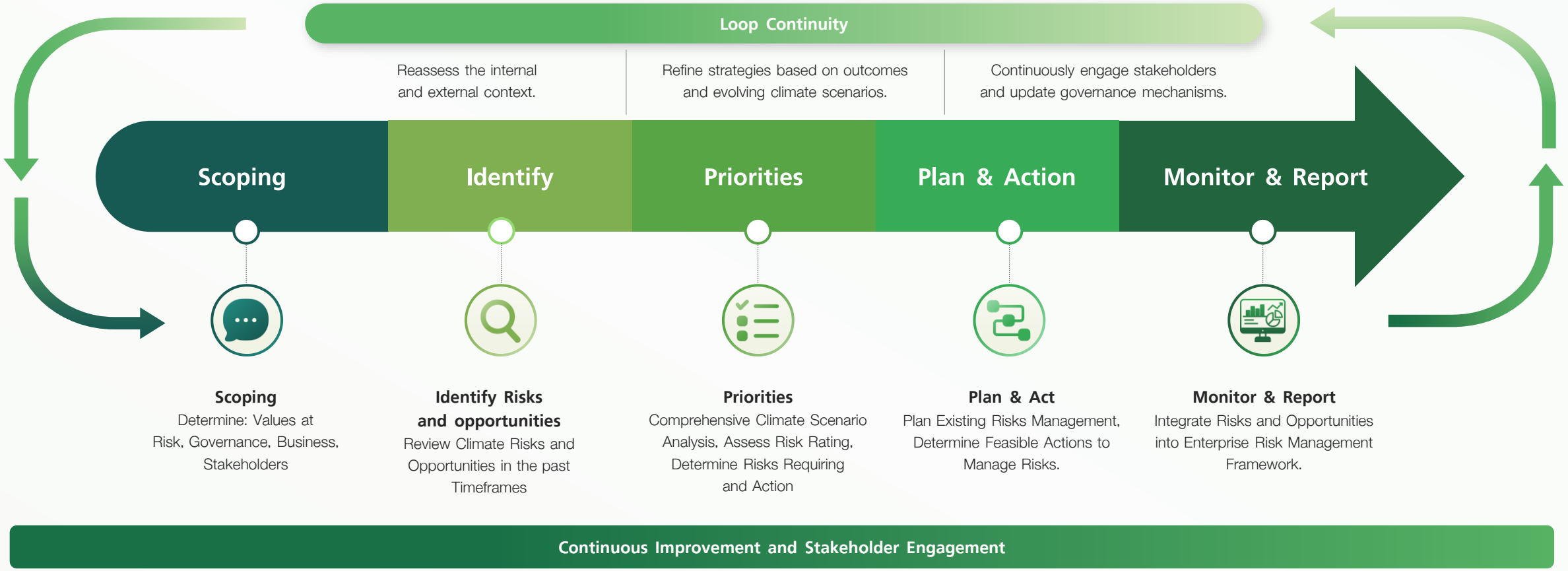
- Procurement of Raw Materials for Product from Sustainable Sources
- Products and Services that help Reduce GHG Emissions at the Use-phase

Risk Management

Climate Risk Management

The Climate Risk Management process is a cyclical and dynamic framework comprising five critical phases: Scoping, Identify, Priorities, Plan & Action, and Monitor & Evaluate. It begins with scoping organizational values at risk and governance context, progresses through identifying historical and projected climate risks, and prioritizes them through scenario-based assessments.

Action plans are then developed to manage these risks effectively, followed by integration into broader ERM systems. This process supports continuous improvement and stakeholder engagement, ensuring climate resilience is maintained across strategic and operational levels.



1. Scoping

Charoen Pokphand Group has implemented a systematic approach to define the scope of climate-related risk assessment across our business operations. The process begins with identifying values and assets at risk, encompassing key sectors, such as agriculture, food processing, and real estate, particularly in locations vulnerable to natural hazards, including floods, droughts, or heat waves. Strategic assets, including production centers, large-scale factories, livestock farms, and logistics systems, are prioritized to assess potential impacts on operations and financial performance. C.P. Group also establishes clearly defined time horizons for risk assessment to enable flexible and robust responses to climate uncertainty. These timelines are aligned with the Group's strategic goal of achieving Net Zero by 2050. From a governance perspective, C.P. Group has established a Group Sustainability Committee, which oversees climate-related policy direction, risk monitoring, and strategic alignment. Roles and responsibilities are assigned across key departments, such as environmental management, finance, risk management, and business units to ensure integrated accountability and participation organization-wide.

Through this comprehensive Scoping approach, Charoen Pokphand Group has built a solid foundation for effective risk assessment, aligned with the TCFD framework and international ESG standards. This enables the organization to meet stakeholder expectations and strengthen long-term climate resilience and adaptability in a sustainable manner.

2. Risk Identification

Charoen Pokphand Group places strong emphasis on systematically identifying both the risks and opportunities associated with climate change. The process begins with a thorough review of historical climate-related events and potential impacts across the supply chain, production, logistics, and operational activities of each business unit. These risks include physical impacts such as extreme heat, droughts, floods, and disruptions from changing weather patterns. Additionally, transition risks are assessed, including the tightening of environmental regulations, the introduction of carbon pricing mechanisms, and rising stakeholder expectations for ESG disclosures, which may affect financial performance, operational continuity, or brand reputation. Simultaneously, C.P. Group also identifies climate-related opportunities that may arise in this evolving context. These include the development of low-carbon products, investment in renewable energy, adoption of smart farming technologies, and expansion into sustainability-driven markets. The Group also categorizes these risks and opportunities based on their expected timeframe, ensuring appropriate planning and strategic alignment across business horizons. Through this approach, C.P. Group can prioritize material risks and recognize potential growth opportunities that support the transition to a low-carbon economy. This process lays a critical foundation for subsequent planning, decision-making, and long-term value creation aligned with the Group's climate resilience strategy.

3. Priorities

In the Priorities phase, which plays a critical role in the climate risk management process, Charoen Pokphand Group systematically evaluates the climate-related risks identified in previous steps to prioritize those with the most significant impact on business operations. The Group employs climate scenario analysis to assess a range of potential futures, drawing from governmental and scientific sources to simulate the effects of various climate change pathways such as a global temperature rise of 1.5°C or 2°C. C.P. Group integrates the scenario analysis with risk rating assessments, evaluating both the impact and likelihood of each risk. This allows the Group to rank risks across multiple dimensions, such as revenue disruption, operational continuity, regulatory compliance, and stakeholder expectations. Each risk is then classified based on the required type of response, whether it involves strategic adaptation, additional capital investment, or operational adjustments. The outcomes of this phase enable C.P. Group to focus its resources on the most material risks, ensuring effective allocation of attention and investment

4. Plan & Action

Charoen Pokphand Group focuses on developing and executing strategies to reduce climate-related risks and enhance organizational resilience. Based on the risk prioritization conducted in the previous phase, the Group has formulated a comprehensive climate risk management plan, addressing both mitigation and adaptation dimensions. On the mitigation front, C.P. Group has implemented a wide range of initiatives, including the deployment of renewable energy sources (such as solar rooftops, biomass, and biogas), the adoption of energy-efficient technologies, and the reduction of greenhouse gas (GHG) emissions throughout the value chain. In addition, the Group continues to explore lower-carbon materials and processes as part of our broader decarbonization strategy. For adaptation, the Group has taken proactive steps to reduce vulnerability across our operations, such as enhancing water management and drainage systems at farms and factories, reinforcing logistics planning in the face of climate disruptions, and conducting capacity-building programs for employees in high-risk business units. These plans are supported by clearly defined targets, performance indicators, and timelines, with regular monitoring at both the business unit and corporate levels. This ensures that climate responses remain agile and effective in the face of evolving risks. The Plan and Action phase thus serves as a key driver in strengthening C.P. Group's climate resilience and long-term sustainability amidst the growing challenges of global climate change.

5. Monitor & Evaluate

Charoen Pokphand Group underscores the importance of continuous performance tracking and transparent disclosure of climate-related actions and outcomes. A structured Monitoring & Evaluation (M&E) framework has been established to align with the Group's environmental targets and climate risk indicators at the project, business unit, and corporate levels. This system enables C.P. Group to assess the realized impacts of climate-related risks and compare them against prior risk assessments and mitigation assumptions. The organization routinely conducts systematic reviews and updates of its climate risk data, incorporating scientific inputs from meteorological agencies, ESG performance benchmarks, and stakeholder feedback. This iterative approach ensures the Group's climate risk strategies remain adaptive and responsive to both physical climate variability and shifting regulatory or market expectations. For reporting and disclosure, C.P. Group adopts internationally recognized frameworks such as the Task Force on Climate-related Financial Disclosures (TCFD) to ensure the clarity, reliability, and comparability of its climate-related information. These disclosures serve as a vital communication tool for investors, strategic partners, and regulatory bodies, reinforcing stakeholder trust and accountability. Furthermore, the Group actively promotes a culture of continuous improvement and organizational learning, leveraging insights from monitoring activities to inform future planning cycles. This integrated approach enhances C.P. Group's long-term climate resilience and supports its strategic ambition to remain competitive and sustainable in the face of escalating climate-related challenges.

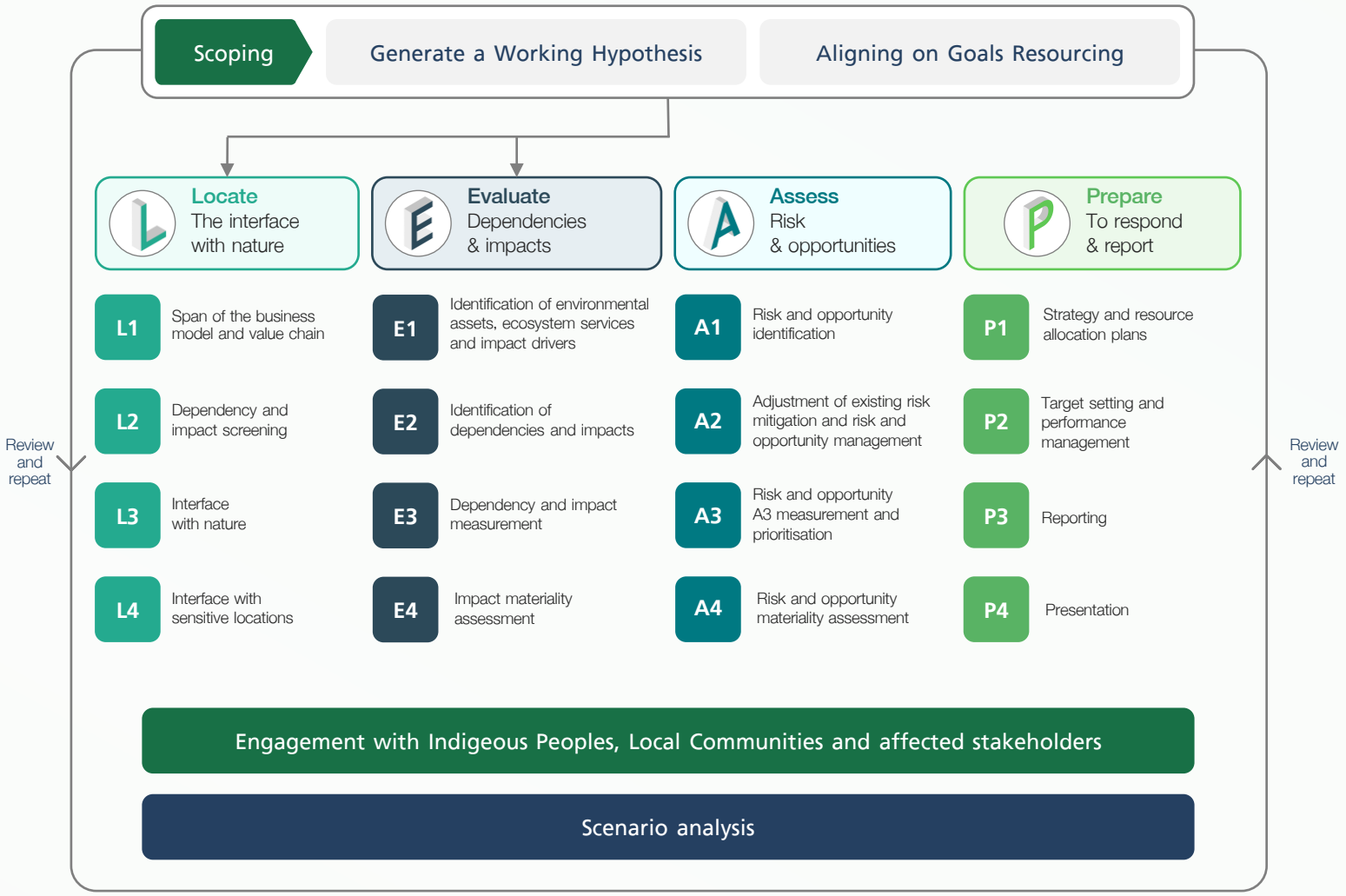
Nature-Related Risk Management Framework

TNFD LEAP Approach

The Taskforce on Nature-related Financial Disclosures (TNFD) developed the LEAP process to help organizations assess, manage, and disclose nature-related risks and opportunities. As nature's role in economic and financial stability gains attention, businesses must integrate these considerations into decision-making. For Charoen Pokphand Group, this approach aligns with its commitment to sustainability and responsible business practices. The LEAP process consists of four key stages:

- **Locate** – Identifying operations, supply chains, and investments that interact with nature.
- **Evaluate** – Assessing dependencies, impacts, and related risks or opportunities.
- **Assess** – Determining material risks, opportunities, and financial implications.
- **Prepare** – Developing a strategy and disclosures in line with TNFD recommendations.

By applying the LEAP process, Charoen Pokphand Group enhances resilience, ensures regulatory alignment, and advances its sustainability strategy, reinforcing its leadership in the transition to a nature-positive economy.

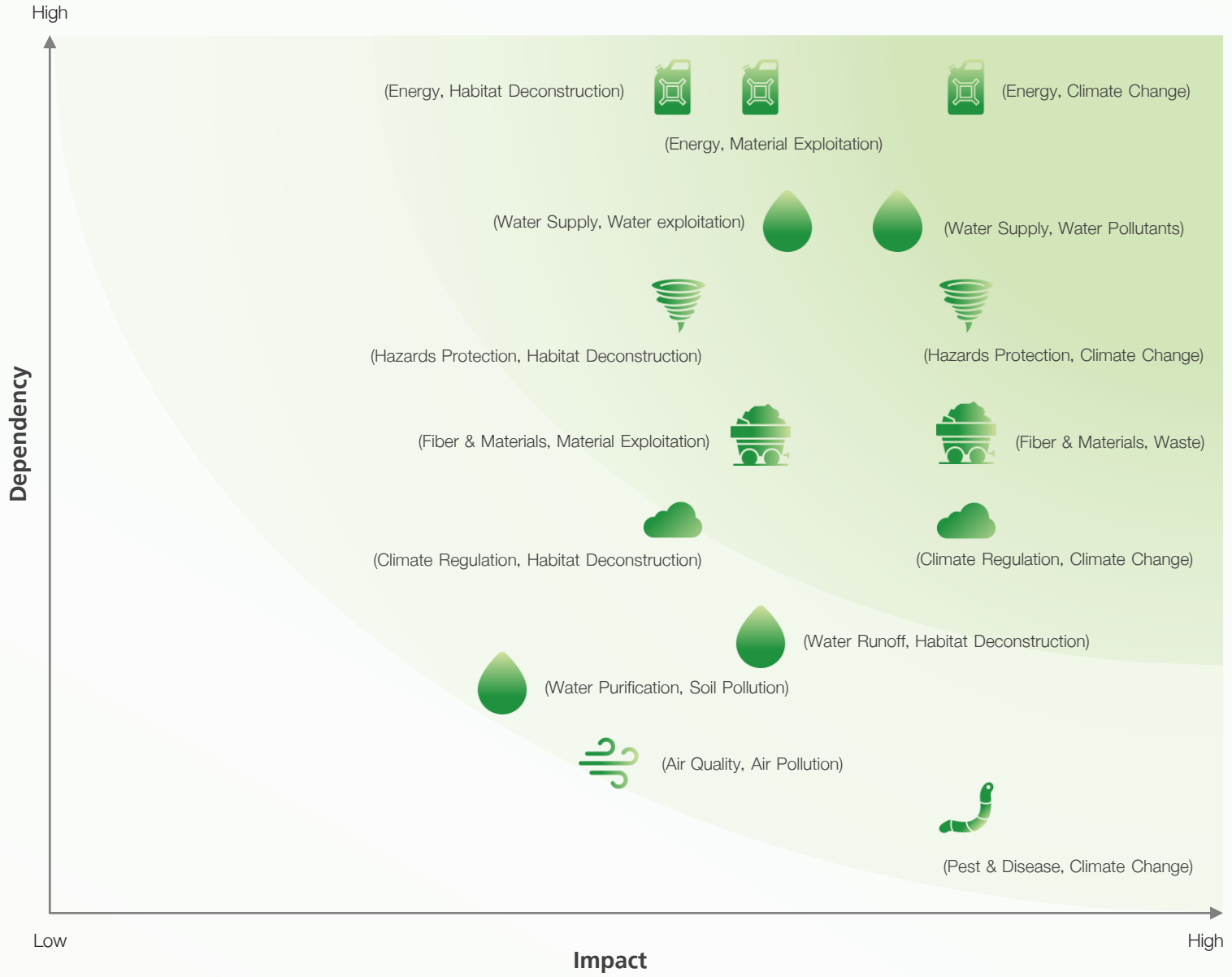


By applying the LEAP process, Charoen Pokphand Group enhances resilience, ensures regulatory alignment, and strengthens its sustainability strategy by integrating nature and climate risks into business operations. Recognizing the interconnectedness of climate change and biodiversity loss, C.P. Group takes a holistic approach to risk management, reinforcing its leadership in the transition to a nature-positive and climate-resilient economy.

Prioritizing Ecosystem Services Using a Double Materiality Matrix

Overall success of Charoen Pokphand Group's diverse business operations is intricately linked to the health and availability of these ecosystem services. In particular, the Agro-Industry and Food sector depends significantly on provisioning services such as water supply, fertile soil, and crop pollination. Additionally, regulating services like climate regulation and water purification, as well as supporting services, including nutrient cycling and habitat provision, are critical to maintaining the productivity and sustainability of our agricultural activities. While other sectors, such as E-commerce and Digital, are less dependent on natural capital, understanding and managing these dependencies is crucial for the Group's long-term resilience and sustainability.

To guide this effort, we evaluated Charoen Pokphand Group's overall levels of dependency and impact on nature across business sectors. This assessment is visualized in the double materiality matrix (shown in the diagram and detailed further in Appendix II), which helps prioritize the most critical nature-related topics. The matrix plots ecosystem services and related pressures along two axes—Dependency (vertical) and Impact (horizontal). Topics appearing in the upper-right quadrant, such as energy use and climate change, water supply and water pollutants, and climate regulation, are characterized by both high dependency and high impact. These areas are particularly material to the Group's operations and require focused management and mitigation strategies to safeguard business continuity and contribute to broader sustainability goals.

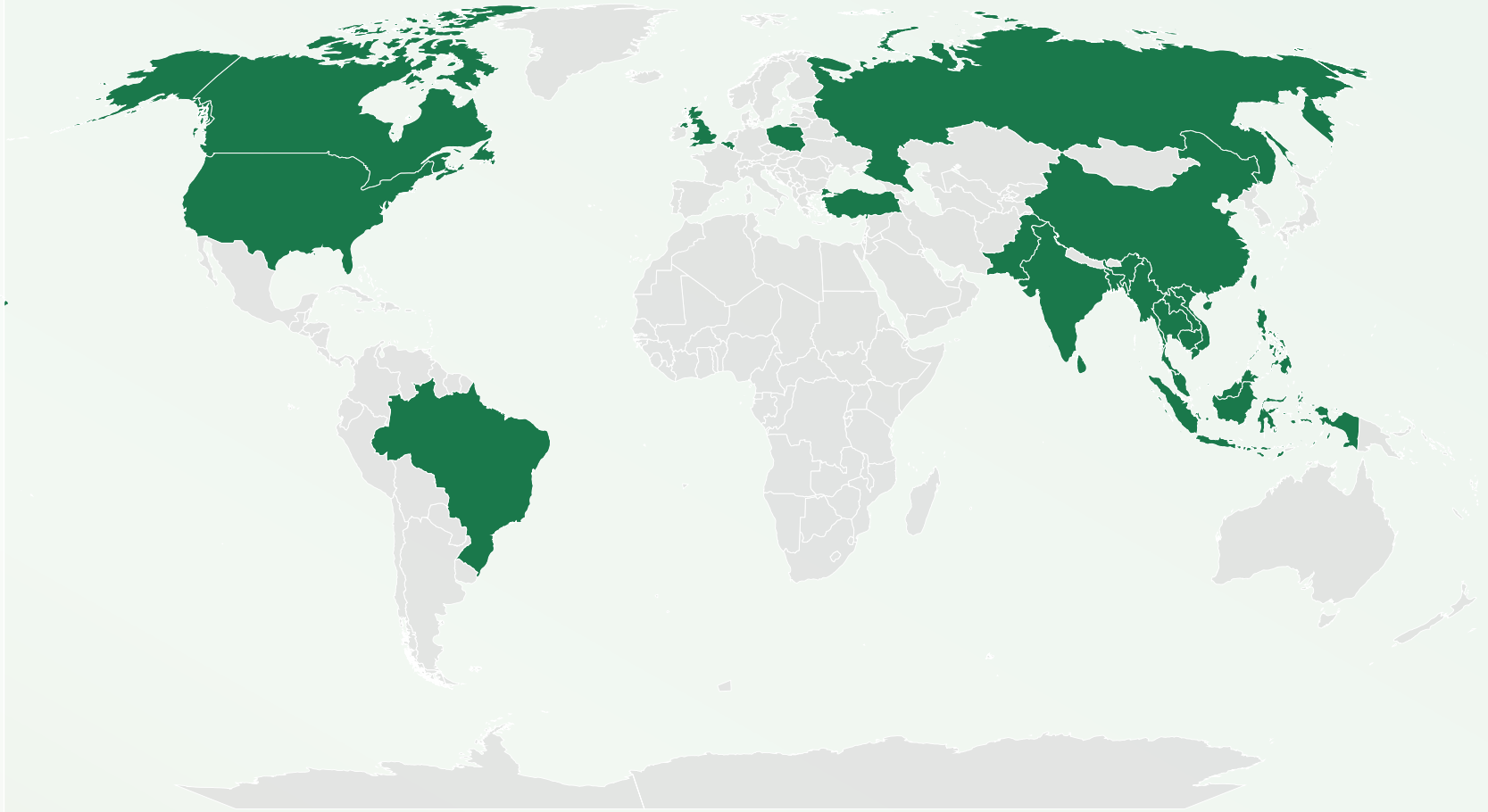


Scope of Geographical Evaluation

Charoen Pokphand Group Company Limited serves as a parent company of C.P. Group. As a holding company, the Group holds shares of subsidiaries in Thailand and overseas. The Group operates across many industries, ranging from industrial to service.

These consists of 8 business lines, including

1. Agro-industry and Food Business
2. Retail and Distribution Business
3. Media and Telecommunication Business
4. E=commerce and Digital Business
5. Property Development and Infrastructure Business
6. Automotive and Industrial Products Business
7. Pharmaceuticals Business
8. Financial and Banking Business



Reflecting its broad spatial footprint, Charoen Pokphand Group operates across 23 countries with facilities including 15,367 7-Eleven stores, 2,636 Lotus's and Makro outlets, 298 production sites, 91 R&D centers, and 1,007 livestock and aquaculture farms, each potentially exposed to distinct climate-related risks and opportunities.

Key Inputs and Parameters for Transition Climate Risk Assessment

This diagram illustrates the interconnection between data sources, assessment parameters, and operational scope in conducting a Transition Climate Risk Assessment. The process begins with collecting reliable data related to climate policy, regulatory frameworks, technology trends, market behavior, and reputational risks. These inputs provide a foundation for evaluating how external drivers may impact the organization during the transition to a low-carbon economy.

The data informs the assessment parameters, which include identifying carbon-intensive assets, applying climate-related scenario analysis, quantifying financial implications such as carbon pricing or stranded assets (Financial Materiality), and evaluating the organization's internal capacity to adapt (Strategic Flexibility & Readiness). This structured linkage enables businesses to proactively address transition risks, align with global disclosure standards, and support strategic decision-making.

Data Source

Category	Data Provider
Policy & Regulatory Data	National climate strategies (e.g., NDCs), carbon pricing registries (World Bank), EU CBAM, SEC climate rules
Technology Trends	IEA Energy Technology Perspectives, patent databases, industry R&D reports
Market Signals & Consumer Behavior	CDP, SBTi targets, ESG investment flows, consumer preference surveys
Legal & Reputational Risk	Litigation databases, NGO campaigns, media monitoring tools, ESG ratings (MSCI, Sustainalytics)

Assessment Parameters

Parameter	Description
Carbon Exposure Mapping	Identify carbon-intensive assets, processes, and product lines at risk under transition scenarios
Scenario Analysis	Apply externally recognized scenarios (e.g., IEA NZE, NGFS) to model impacts of policy and market changes
Financial Materiality	Quantify impact on operating cost (e.g., carbon tax), stranded asset risk, revenue shifts, CapEx needs
Strategic Flexibility & Readiness	Assess internal capabilities to pivot — R&D investment, alternative product development, workforce transition planning

Scope of Operations

Scope	Inclusions
Owned/ Operating Site	All fixed facilities, real estate, plants, warehouses, data centers
Supply Chain	High-emitting suppliers and sourcing geographies vulnerable to policy shifts
Products & Services	High-carbon products, materials, or offerings facing obsolescence or reduced demand
Geographic Markets	Countries with aggressive climate regulations or evolving carbon pricing

Key Inputs and Parameters for Physical Climate Risk Assessment

This diagram provides a concise framework for physical climate risk assessment, covering three key areas: data inputs, assessment parameters, and operational scope. It recommends using credible sources such as IPCC reports, climate models, and hazard maps to gather relevant data. Key parameters include geographic and temporal scope, climate scenarios (e.g., SSP1-2.6, SSP5-8.5), asset sensitivity, and critical dependencies.

The operational scope includes owned facilities, high-risk suppliers, and customer-facing sites. Together, these components enable organizations to identify, assess, and manage physical climate risks in a structured and strategic manner.

Data Source → Assessment Parameters → Scope of Operations

Data Source

Category	Data Provider
Climate Data	IPCC AR6/AR5 reports, CMIP6 datasets, national climate agencies (e.g., NOAA, UK Met Office, Thai Meteorological Department)
Hazard Data	Flood maps (e.g., UNEP, JRC), wildfire risk models, heatwave indexes, drought models
Historical Weather Records	Temperature, precipitation, wind, storm tracks, sea-level trends from national databases or international repositories
Engineering & Infrastructure Data	Building age, materials, design thresholds, site elevation, drainage systems
Geospatial Data (GIS)	Topography, land cover, coastal proximity, flood plains, critical infrastructure overlays

Assessment Parameters

Category	Data Provider
Geographic Scope	Locations of operational assets, supply chain nodes, logistics corridors, and critical infrastructure
Temporal Scope	Short-term (0–5 years) Medium-term (5–20 years) Long-term (>20 years)
Climate Scenarios	SSP1-2.6 (low emissions), SSP5-8.5 (high emissions)
Asset Sensitivity	Functional vulnerability to climate stress (e.g., temperature-sensitive equipment, coastal erosion risk)
Exposure & Dependency Mapping	Dependency on local utilities, workforce availability, water sourcing, transport networks

Scope of Operations

Scope	Inclusions
Owned/ Operating Site	All fixed facilities, real estate, plants, warehouses, data centers
Supply Chain	Critical Tier 1 suppliers, particularly in high-risk geographies
Customer Interface	Distribution points, retail outlets, and service centers

Scenario Analysis

Transition Risks and Opportunities

Scenario	Assumptions	Risks	Opportunities
Scenario 1: **Business-as-Usual:** IEA	• Limited global cooperation on climate policy • Continued reliance on fossil fuels • Rising global temperatures with severe climate consequences	• Escalating physical risks: extreme weather, sea level rise, food insecurity • Disruptions in global supply chains and trade networks • High adaptation costs for businesses and governments	• Innovation in disaster resilience and risk management solutions • Market growth for water and food security technologies • Increased demand for corporate adaptation strategies
Scenario 2: **Net-Zero by 2050:** IEA	• Aggressive global policies to limit warming to 1.5°C • Rapid decarbonization and renewable energy adoption • Strict carbon regulations and ESG compliance	• Stranded assets in fossil-fuel-dependent industries • High costs of transitioning to sustainable operations • Regulatory pressure on carbon-intensive businesses	• Expansion in renewable energy and sustainable infrastructure • Cost reductions through energy efficiency and circular economy models • Market differentiation through ESG leadership

Physical Risks and Opportunities

Scenario	Assumptions	Risks	Opportunities
Scenario 1: **RC.P. 2.6:** IPCC	• Strong global commitment to net-zero by 2050 • High carbon pricing & strict climate policies • Rapid adoption of clean energy & green technologies • Mandatory ESG disclosures & compliance	• Moderate chronic risks (e.g., sea-level rise, heat) • Lower frequency of acute climate events • Less disruption to operations and supply chain	• Competitive advantage from early ESG adoption • New revenue streams from low-carbon solutions • Energy savings via efficiency and renewable use • Preferential access to green capital markets
Scenario 2: **RC.P. 8.5:** IPCC	• Weak or delayed global climate actions • Continued dependence on fossil fuels • Minimal climate-related regulations • Global temperature rise exceeding 4°	• High exposure to chronic risks (e.g., drought, flood) • Increased severity and frequency of extreme weather • Major disruptions to assets, logistics, and workforce	• Market demand for climate resilience products • Innovation in infrastructure & disaster recovery • Growth in water, food security, and adaptation services

Climate and Nature Related Transition Plan

Charoen Pokphand Group has developed a comprehensive plan to achieve Net-Zero greenhouse gas emissions. The organization prioritizes energy management and resource optimization to reduce emissions while enhancing energy efficiency. By integrating clean energy solutions and adopting green technologies, C.P. Group aims to minimize environmental impacts. Furthermore, the company fosters sustainable collaboration with stakeholders to ensure the long-term success of its greenhouse gas reduction initiatives.

SUSTAINABLE ENERGY

Energy sources and systems that meet current energy demands without compromising the ability of future generations to meet their needs. It prioritizes efficiency, minimal environmental impact, and the responsible use of resources.

SUSTAINABLE OPERATIONS

To business practices that minimize environmental impact while maximizing efficiency, resource conservation, and long-term sustainability. This includes integrating eco-friendly technologies and strategies across various operational areas.

SUSTAINABLE SUPPLY-CHIN

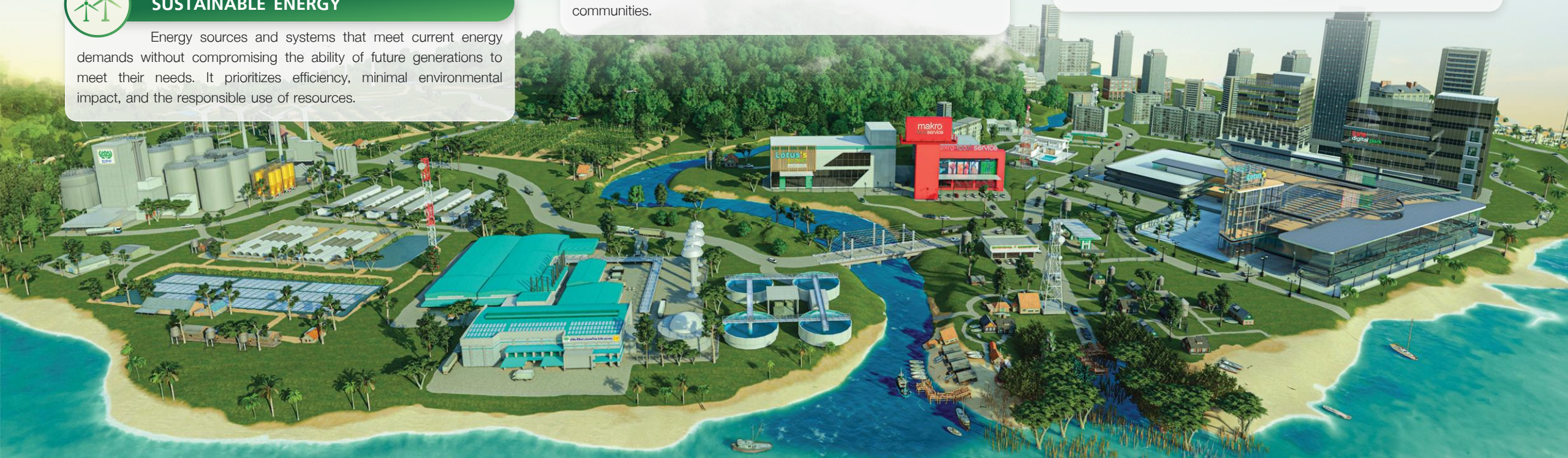
Sustainable agriculture is a farming approach that meets present food production needs while ensuring environmental, economic, and social sustainability for future generations. It focuses on responsible resource management, reducing environmental impact, and promoting economic viability for farmers and communities.

SUSTAINABLE CONSUMPTION

The responsible use of goods and services in a way that minimizes environmental impact, reduces resource depletion, and supports economic and social well-being by promoting efficiency, waste reduction, and ethical consumer choices.

CARBON REMOVAL

Strategies and technologies aimed at extracting carbon dioxide (CO_2) from the atmosphere to mitigate climate change and achieve net-zero emissions. It includes both nature-based solutions and technological approaches, which play crucial roles in long-term carbon sequestration.



Implementing Internal Carbon Pricing at Charoen Pokphand Group

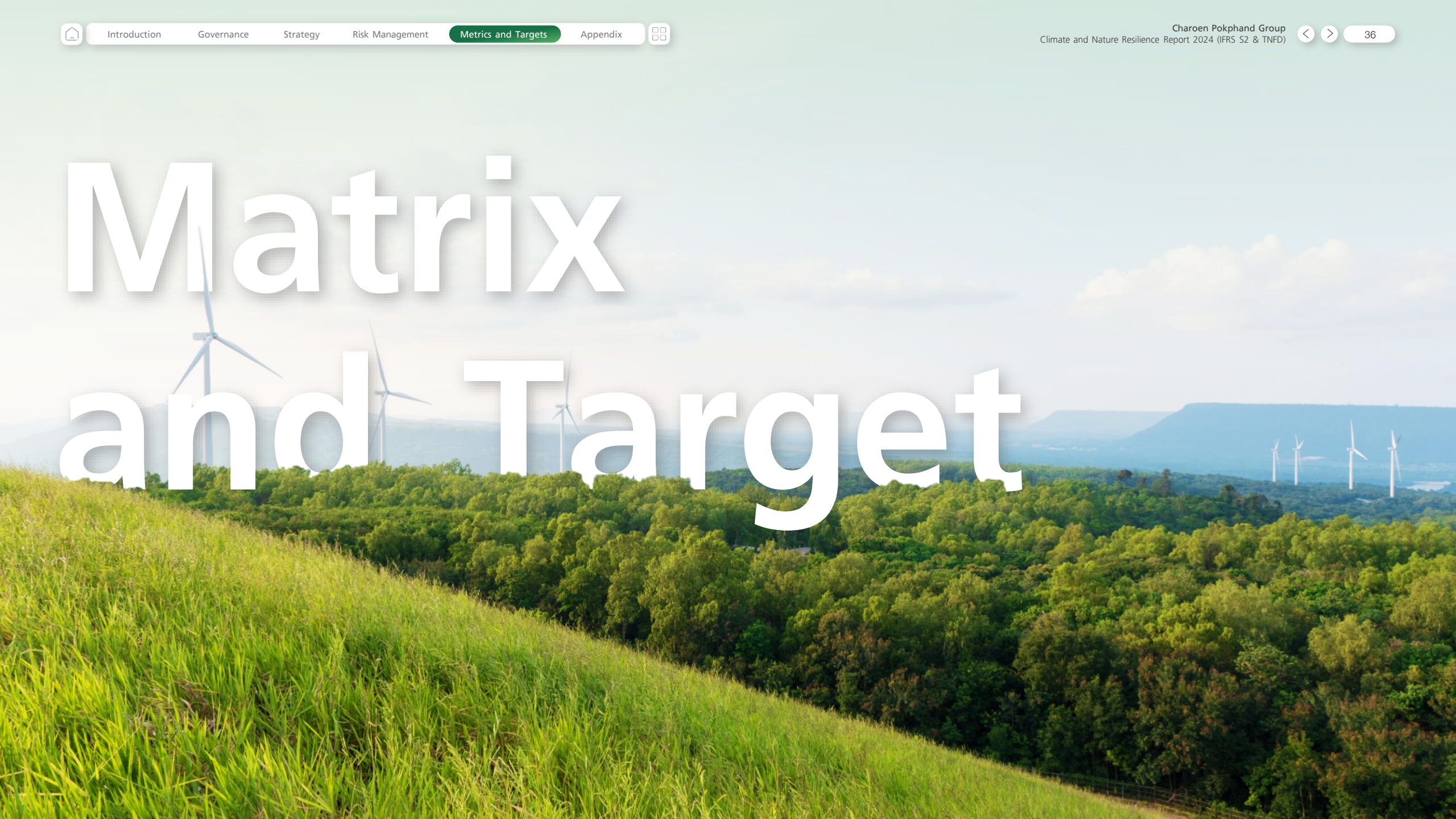
The implementation of an Internal Carbon Price (ICP) represents an effective approach for managing environmental risks. Organizations can utilize IC.P. as an internal mechanism to drive strategic decision-making aligned with long-term sustainability goals such as **Net-Zero.**

At Charoen Pokphand Group, the Internal Carbon Price (ICP) is applied as a strategic tool to embed climate considerations into business decision-making. The Group adopts a **Shadow Price model, currently set at USD 25 per ton of CO_2e**, to support investment evaluation and guide resource allocation toward low-carbon solutions.

Internal Carbon Price (ICP) is integrated across key functions, such as capital expenditure planning, procurement, energy selection, and logistics policies. By incorporating a carbon cost into these processes, the Group encourages environmentally responsible choices aligned with its Net-Zero commitment.

Charoen Pokphand Group also monitors the impact of the Internal Carbon Price (ICP) through clear performance indicators such as estimated CO_2e reductions and energy savings with outcomes disclosed in the annual Sustainability Report. This approach reinforces C.P. Group's leadership in climate action and sustainable value creation.

Matrix and Target



Matrics and Targets

Charoen Pokphand Group began tracking our greenhouse gas (GHG) emissions data through a comprehensive Greenhouse Gas Inventory, The Group has embedded emissions reduction as a core pillar of its sustainability strategy. This foundational step marked the beginning of a structured approach to climate action, leading to the establishment of clear, measurable, and science-aligned targets. As the Group's sustainability framework has matured, we have progressively enhanced our climate ambition. At present, C.P. Group has committed Near-term Science-Based Targets (SBTs) for 2030, designed in alignment with the 1.5°C trajectory,

A long-term ambition to achieve Net Zero emissions by 2050, covering Scope 1, 2, and 3 emissions across the entire value chain and in 2023, our corporate emissions reduction targets were officially validated by the Science Based Targets initiative (SBTi), affirming their alignment with global climate science and best practices. These actions reflect C.P. Group's deep commitment to responsible environmental management and its active role in supporting the global decarbonization.

C.P. Group GHG Reduction Targets

Near-Term Target 2021-2030

42%

Reduction in absolute
Scope 1 and 2 GHG emission by 2030
(Science-based Targets)

25%

Reduction in absolute
Scope 3 GHG emission by 2030
(Science-based Targets)

Long-Term Target 2031-2050

90%

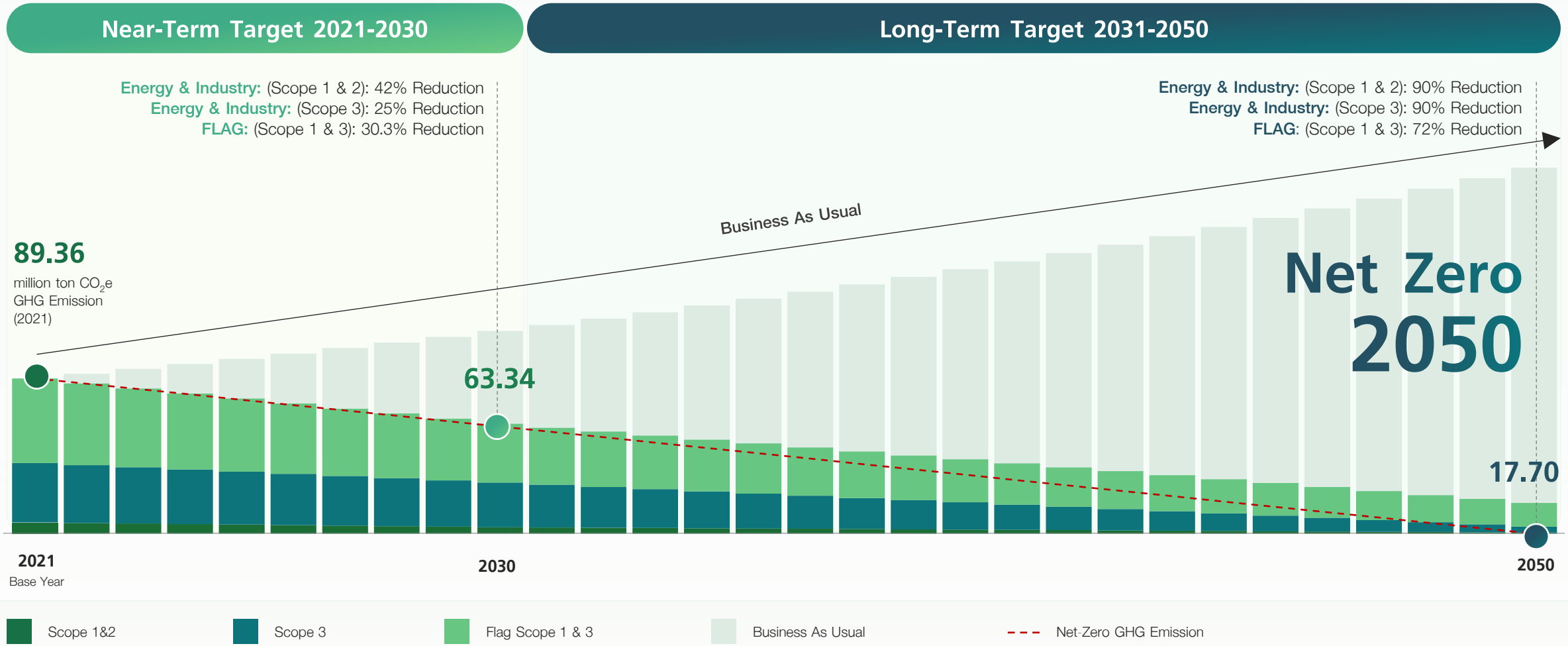
Reduction in absolute
Scope 1,2 and 3 GHG emission by 2050
(Science-based Targets)

Net Zero
GHG Emission
Achieve Reduction
GHG emission 2050

C.P. Group Net Zero 2050 Pathway

Charoen Pokphand Group has received recognition for its science-based targets and has been officially approved by the Science Based Targets initiative (SBTi).

C.P. Group's greenhouse gas emissions reduction targets align with the objectives of the Paris Agreement, setting ambitious and effective goals to mitigate GHG emissions



SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Approved Net-Zero Science-Based Targets

Charoen Pokphand Group Co., Ltd. commits to reach net-zero greenhouse gas emissions across the value chain by 2050.

Near-term Targets

Energy & Industry:

C.P. GROUP commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from a 2021 base year.*

C.P. GROUP also commits to reduce absolute scope 3 GHG emissions 25% within the same timeframe.*

FLAG:

C.P. GROUP commits to reduce absolute scope 1 and 3 FLAG GHG emissions 30.3% by 2030 from a 2021 base year.**

C.P. GROUP also commits to no deforestation across its primary deforestation-linked commodities, with a target date of December 31, 2025.

Long-term Targets

Energy & Industry:

C.P. GROUP commits to reduce absolute scope 1 and 2 GHG emissions 90% by 2050 from a 2021 base year.*

C.P. GROUP also commits to reduce absolute scope 3 GHG emissions 90% within the same timeframe.*

FLAG:

C.P. GROUP commits to reduce absolute scope 1 and 3 FLAG GHG emissions 72% by 2050 from a 2021 base year.**

*The target boundary includes land-related emissions and removals from bioenergy feedstocks.
**The target includes FLAG emissions and removals.

Date of approval: 06 May 2025

Nature-related Targets

No Net Loss

100% of key raw materials are sourced from deforestation-free areas within 2030

20% reduction in water withdrawal per unit revenue compared to baseline year 2020

Zero food waste and waste to landfill and all plastic packaging are recyclable, reusable or compostable

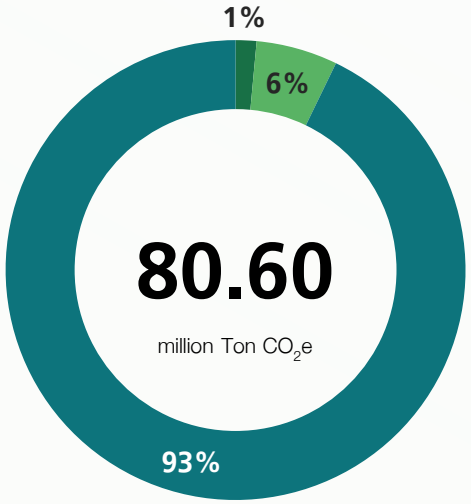
Net Positive

100% business having participating in biodiversity programs with relevant international partners within 2023

Planting 20 million tress by 2025

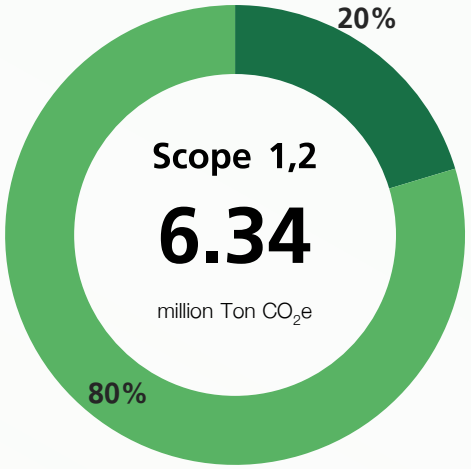
Environment Data 2024

Total GHG Emission

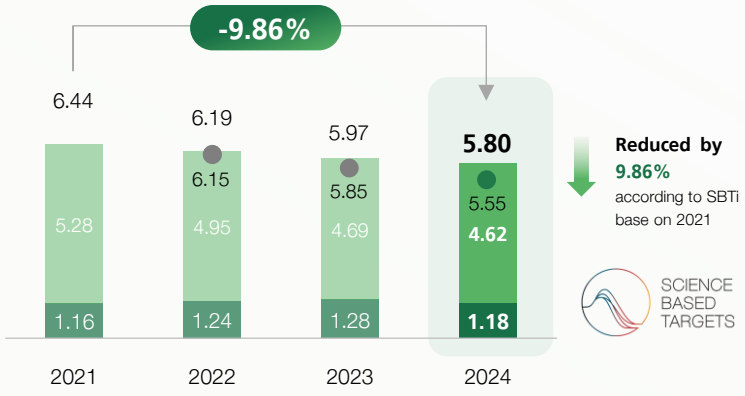


Scope 1: Direct GHG Emissions from organization	**1.18**	**1%**
Scope 2: Indirect GHG Emissions from organization	**4.62**	**6%**
Scope 3: Other indirect GHG emissions	**74.80**	**93%**

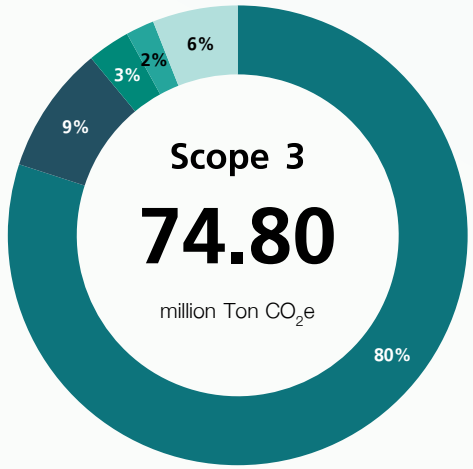
GHG Emission Scope 1+2



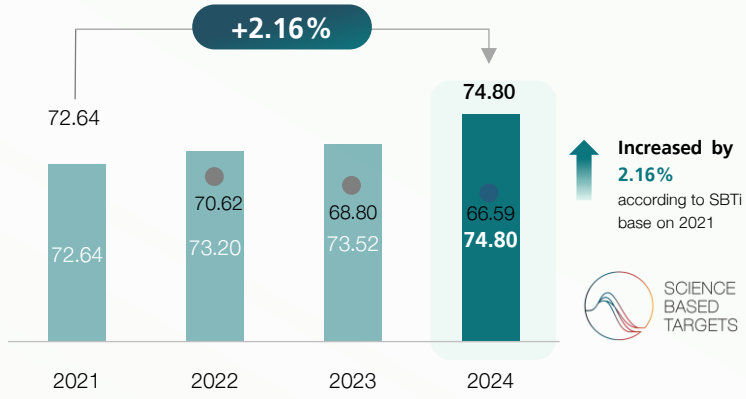
Trends of Scope 1, 2 (million Ton CO_2e)



GHG Emission Scope 3



Trends of Scope 3 (million Ton CO_2e)



Renewable Energy & Financial Environmental Data

17%

Renewable Energy Ratio

Total Investment

4,891

million THB

Saving

1,978

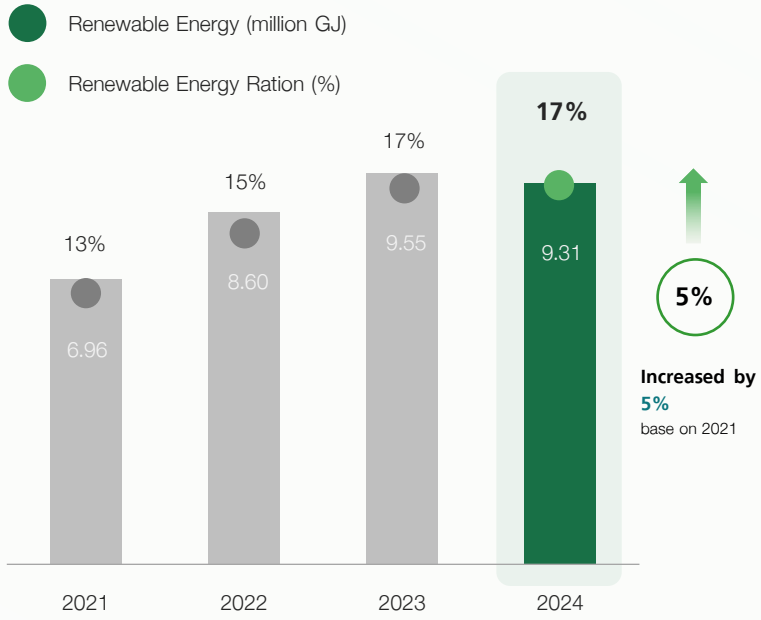
million THB

GHG Emission Reduction

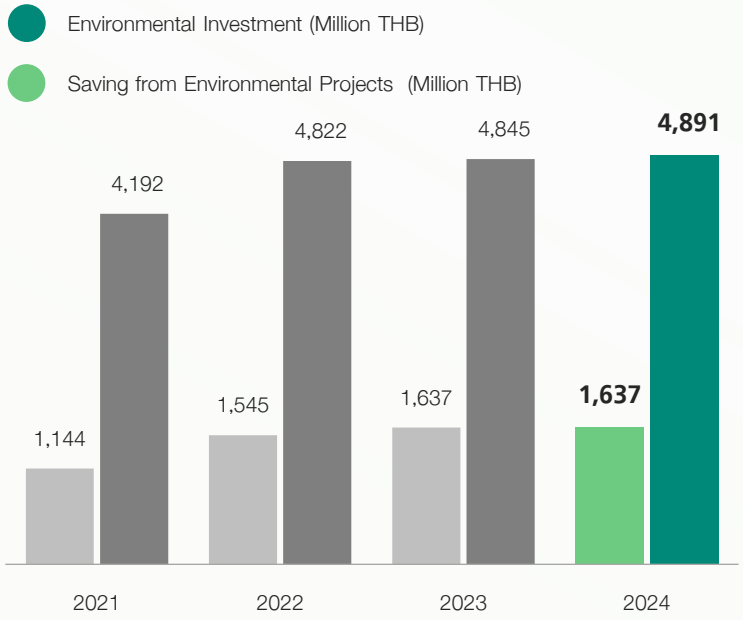
1.76

million Ton CO_2e

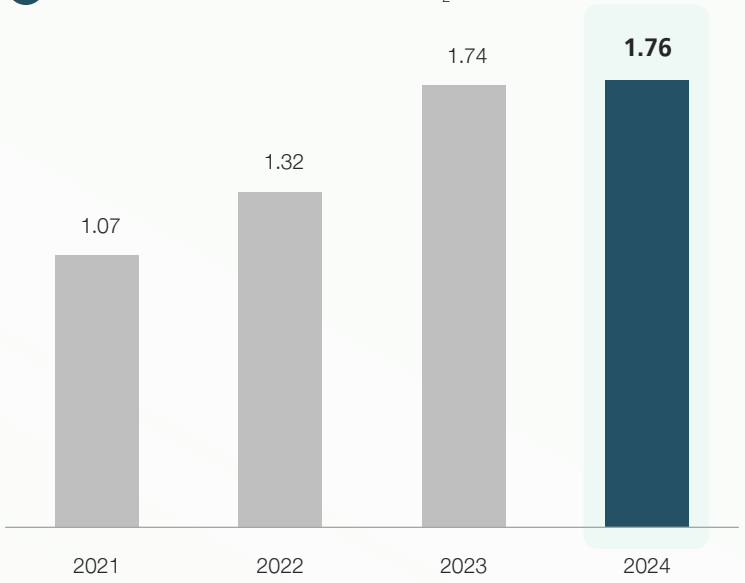
Renewable Energy Trend



Environmental Investment



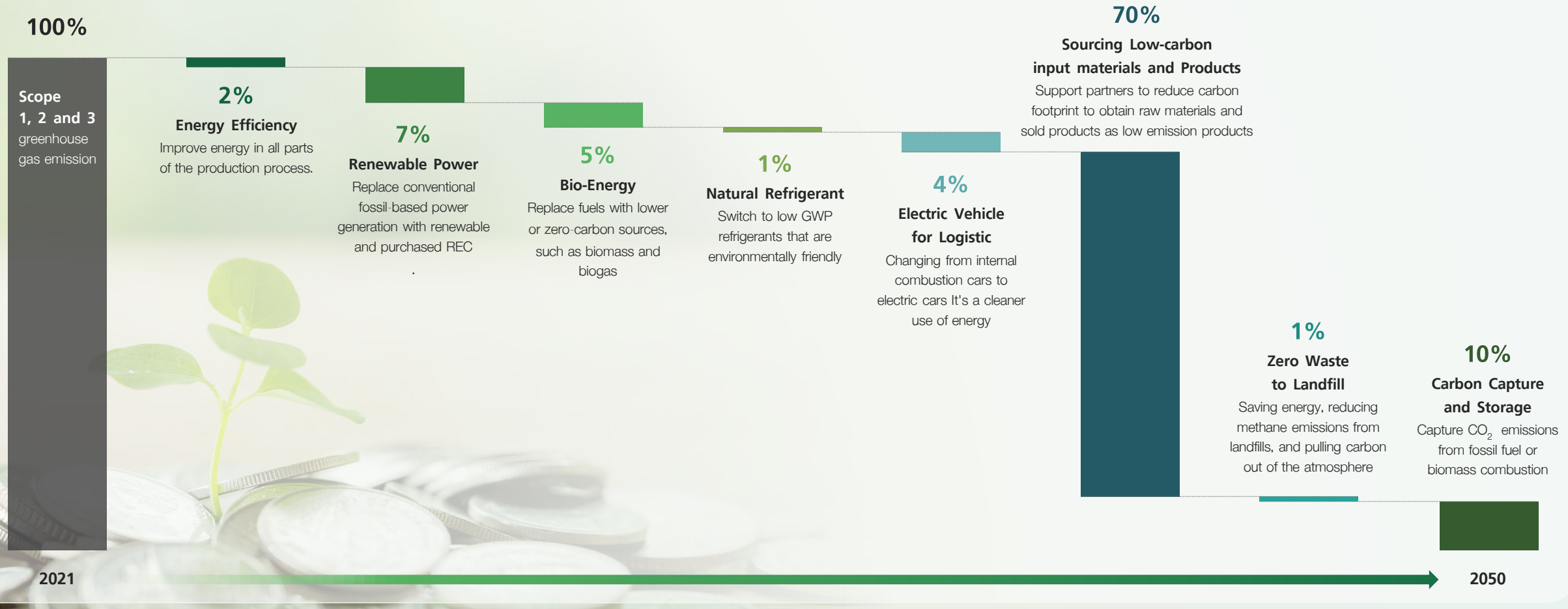
Greenhouse Gas Emission Reduction



Key GHG Reduction Measures for All Emissions Scopes

Climate opportunities are part of Charoen Pokphand Group's business strategy. Mitigating climate change by reducing greenhouse gas emissions can help increase efficiency and reduce business costs both in the short-term and in the long-term related to current regulations and future carbon pricing trends. Across our organization, C.P. Group is committed to continuously working to reduce energy, water, and waste emissions.

Our emission reduction efforts include improving the energy efficiency of our buildings and manufacturing processes. and emphasizing energy conservation by employees Our own manufacturing facility is a key platform to prove our vision of becoming a Net Zero Organization by 2050. We focus on energy efficiency. operational efficiency and supplying more renewable energy



Appendix

Appendix I

Likelihood	Magnitude of Impact
Rare (1)	Unlikely during the next 25 years
Unlikely (2)	May arise once in 10 years 25 years
Possible (3)	May arise once in 10 years
Likely (4)	May arise about once per year
Almost certain (5)	Could occur several times per year

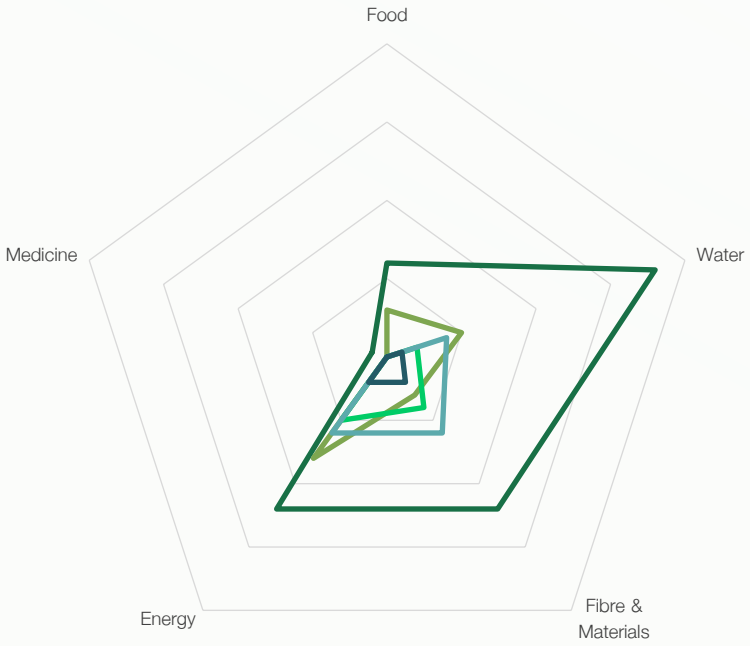
Vulnerability	Impact to Operation	Impact to Supply chain
Low (1)	• The business is profitable, and growth is achieved but they both fail to meet expectations	• Isolated difficulties would arise in the supply chain and market but would be resolved
Low-Medium (2)	• The business would only be marginally profitable with growth stagnant	• Components of the supply chain and market would require more than normal levels of management attention to protect the Business
Medium (3)	• The business would be unprofitable and contract and require significant remedial action to remain viable	• Major disruption of a key source of supply or market having a significant effect • on the business
Medium-High (4)	• Business would be unprofitable and contract markedly and would likely become unviable even with significant remedial action	• Severe disruption of a key source of supply or market having a serious effect on the business
High (5)	• Business would be unprofitable and contract markedly making it unviable. Business would have to be wound up	• Loss of a key source of supply or market threatening the business

Appendix II

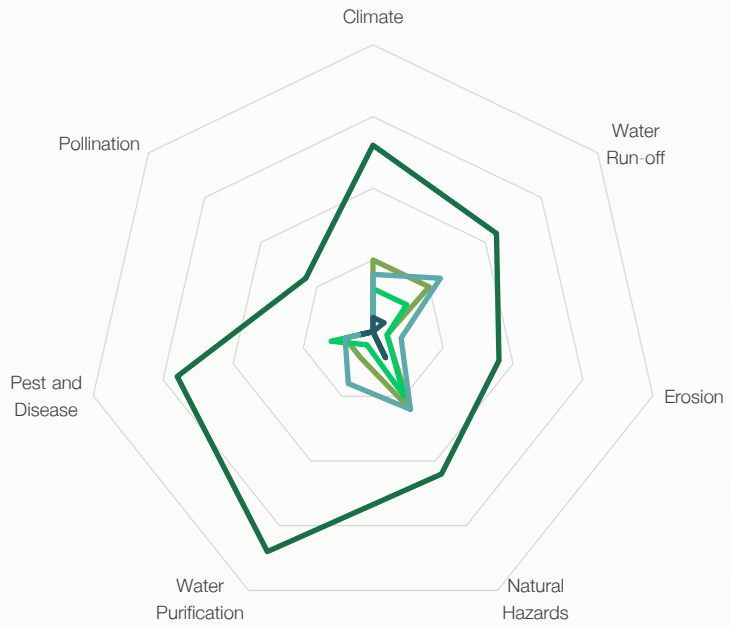
Dependency (Own Operation)

Agro-Industry and Food | Retail and Distribution | Telecommunication | Property Development | E-commerce and Digital

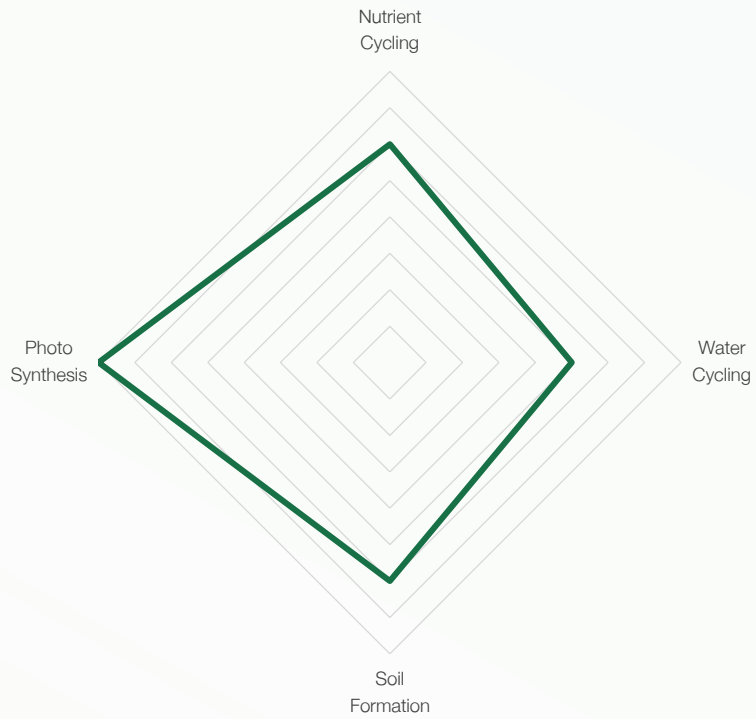
Provision Services



Regulating Services



Supporting Services

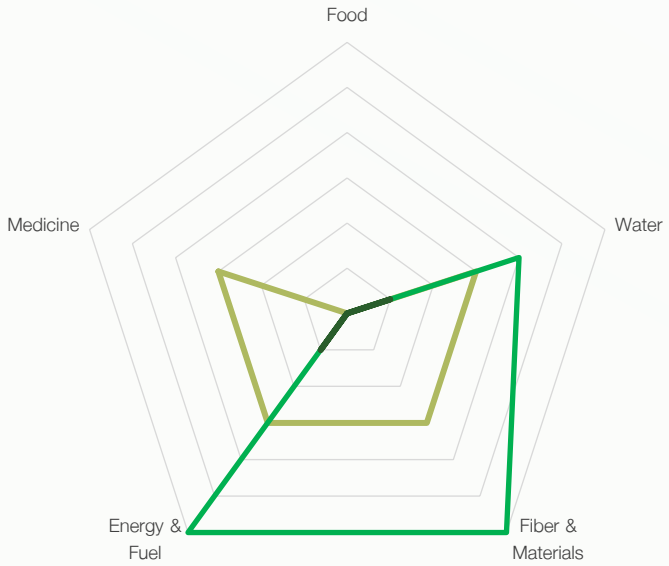


Appendix II

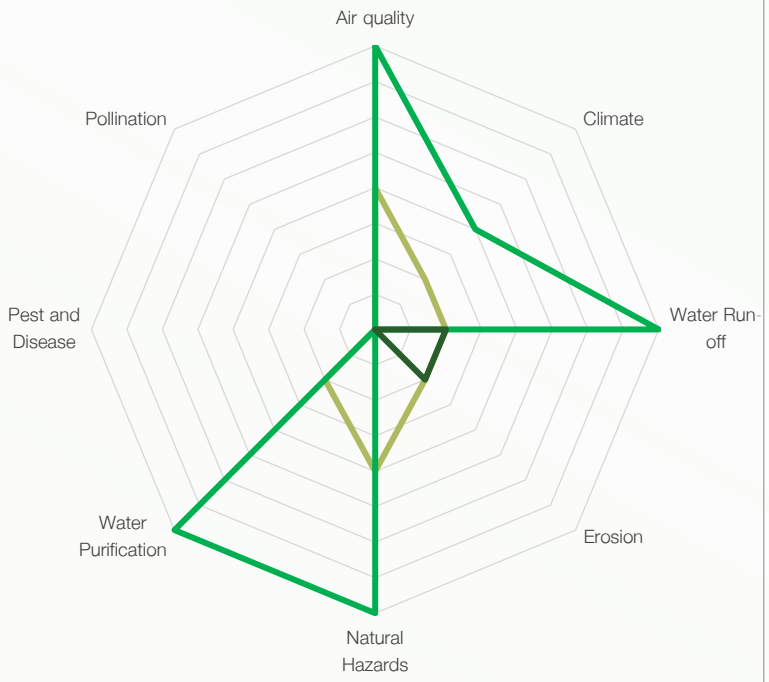
Dependency (Joint Venture)

Finance and Investment
Automotive and Industrial Products
Pharmaceutical

Provision Services



Regulating Services



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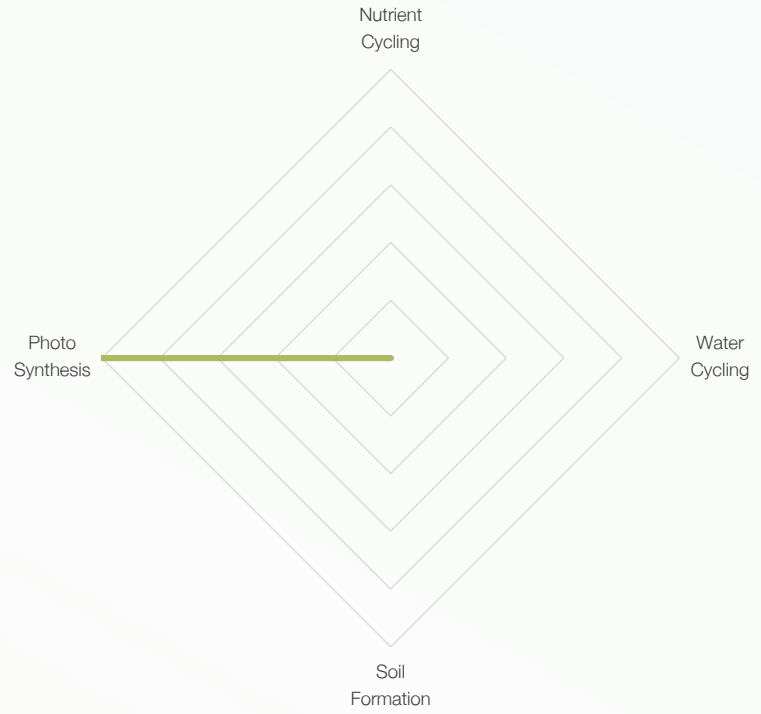
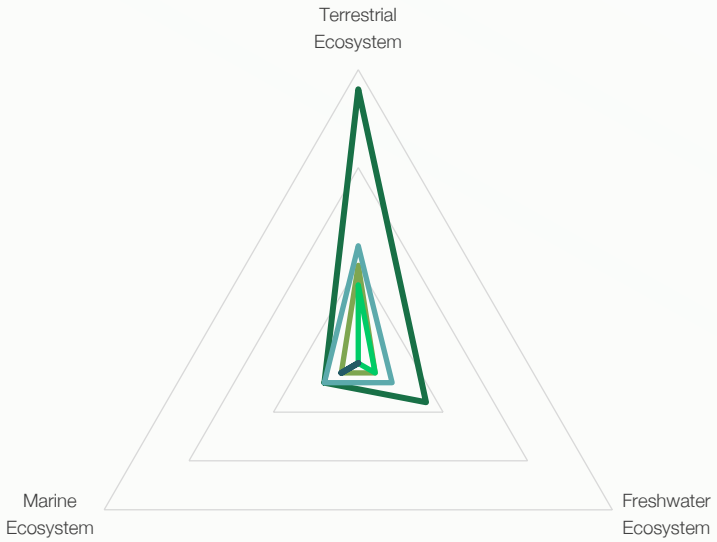


Appendix II

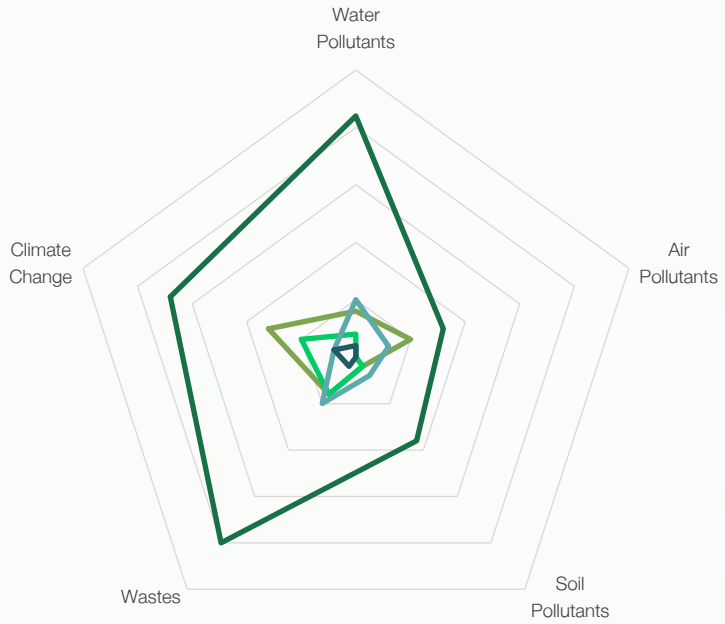
Impact Driver (Own Operation)

Agro-Industry and Food | Retail and Distribution | Telecommunication | Property Development | E-commerce and Digital

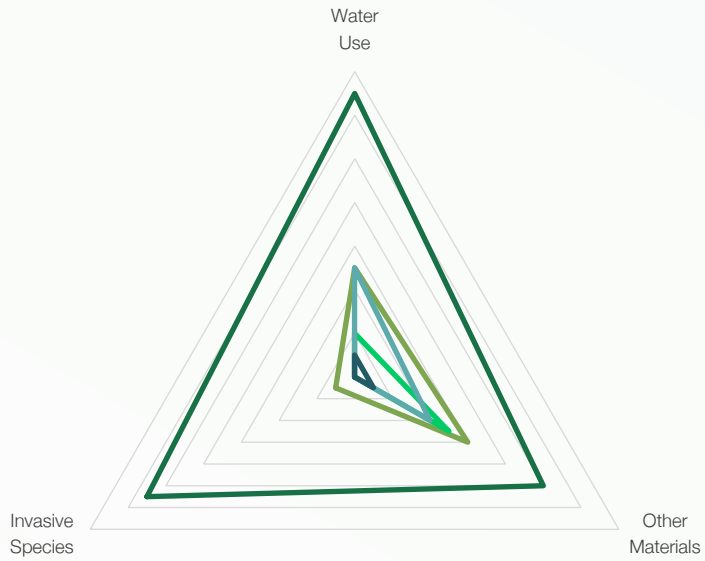
Habitat destruction



Pollution



Resource Exploitation

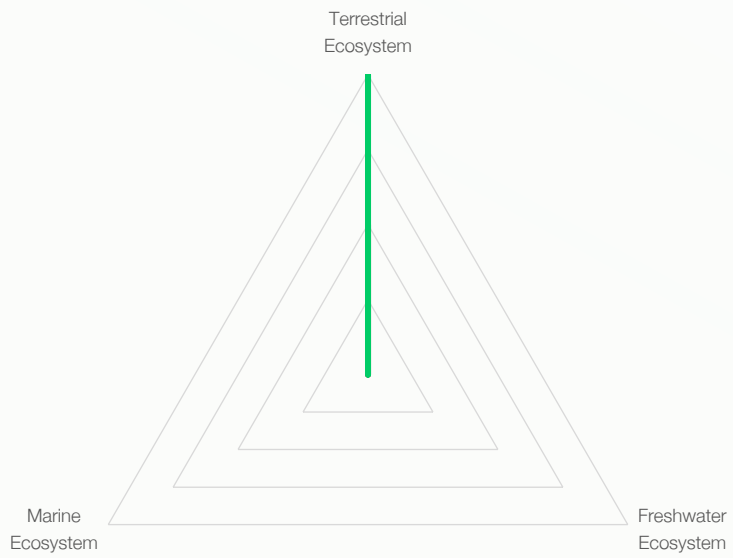


Appendix II

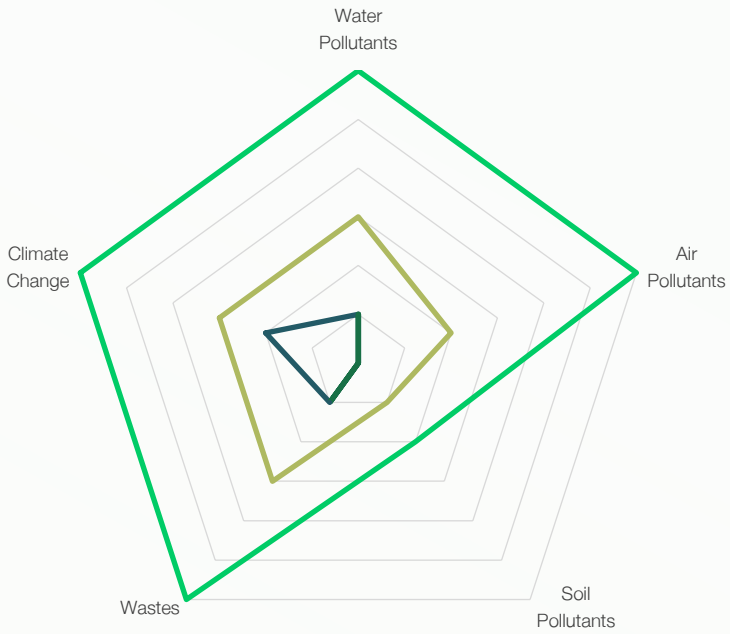
Impact Driver (Joint Venture)

Finance and Investment
Automotive and Industrial Products
E-commerce and Digital
Pharmaceutical

Habitat destruction



Pollution



Resource Exploitation

Appendix II

Business Dependency on Nature

CPG Business Unit	High	Medium	Low
1. CPG	• Water • Fiber and Materials • Energy and Fuel • Natural Hazards	• Air Quality • Climate • Water Run-off • Water Purification • Pest and Disease Control	• Food • Medicine • Erosion Control • Pollination • Water Cycling • Soil formation
2. Agro-Industry and Food	• Water • Water Purification	• Fiber and Materials • Energy and Fuel • Air quality • Climate • Water Run-off • Erosion Control • Natural Hazards • Pest and Disease Control	• Food • Medicine • Pollination • Nutrient Cycling • Water Cycling • Soil Formation • Photo Synthesis
3. Retail and Distribution Business	• Energy and Fuel • Natural Hazards	• Food • Water • Fiber & Materials • Air quality • Climate • Water Run-off	• Erosion • Water Purification • Pest and Disease
4. Telecommunication	• Fiber & Materials • Energy & Fuel • Natural Hazards	• Climate • Water Run-off • Pest and Disease Control	• Water • Air Quality • Water Purification

Appendix II

Business Dependency on Nature

CPG Business Unit	High	Medium	Low
5. Property Development	• Water • Fiber & Materials • Energy & Fuel • Air Quality • Water Run-Off • Natural Hazards	• Climate • Water Purification	• Erosion • Pest and Disease
6. E-Commerce and Digital	• Energy and Fuel	• Fiber and Materials • Natural Hazards	• Water • Air quality • Climate • Water run-off • Pest and Disease Control
7. Pharmaceutical	• Water • Fiber & Materials • Energy & Fuel • Medicine	• Air Quality • Natural Hazards	• Climate • Water Run-off • Erosion • Water Purification • Photo Synthesis
8. Automotive and Industrial Products	• Water • Fiber & Materials • Energy & Fuel	• Air Quality • Water Run-Off • Natural Hazards • Water Purification	• Climate
9. Finance and Investment	-	-	• Water • Energy & Fuel • Water Run-off • Erosion

Appendix II

Business Impact on Nature

CPG Business Unit	High	Medium	Low
1. CPG (IDD)	• Habitat deconstruction • Pollution (Water Pollutants, Wastes) • Climate Change • Resource Exploitation (Water, other materials)	• Pollution (Air Pollutants, soil pollutants)	• Habitat deconstruction (Freshwater and marine ecosystem) • Invasive species
2. Agro-Industry and Food	• Pollution (Water Pollutants, Wastes) • Climate change	• Habitat deconstruction (Terrestrial ecosystem) • Pollution (Air Pollutants, soil pollutants) • Resource Exploitation (Water Use, Other Materials) • Invasive Species	• Habitat deconstruction (Freshwater and marine ecosystem)
3. Retail and Distribution Business	• Climate change	• Habitat deconstruction (Terrestrial ecosystem) • Pollution (Air Pollutants, waste) • Resource Exploitation (Water Use, Other Materials)	• Habitat deconstruction (Freshwater and marine ecosystem) • Pollution (Soil pollutants)
4. Telecommunication	-	• Habitat deconstruction (Terrestrial ecosystem) • Pollution (Waste) • Climate change • Resource Exploitation (Other Materials)	• Habitat deconstruction (Freshwater ecosystem) • Pollution (Water pollution, soil pollution) • Resource Exploitation (Water use)
5. Property Development	• Habitat deconstruction • Pollution (Waste)	• Pollution (Air Pollutants, water pollutants) • Climate change • Resource Exploitation (Water Use, Other Materials)	• Habitat deconstruction (Freshwater and marine ecosystem) • Pollution (Soil pollution)

Appendix II

Business Impact on Nature

CPG Business Unit	High	Medium	Low
6. E-Commerce and Digital	-	• Climate change	• Pollution (Air Pollutants, waste) • Resource Exploitation (Water Use, Other Materials)
7. Pharmaceutical	• Pollution (Water Pollutants, waste) • Climate change • Resource Exploitation (Water Use, Other Materials)	• Pollution (Air Pollutants)	• Habitat deconstruction (Terrestrial ecosystem) • Pollution (Soil pollutants)
8. Automotive and Industrial Products	• Pollution (Air Pollutants, water pollutants, waste) • Climate change • Resource Exploitation (Water Use, Other Materials)	-	• Habitat deconstruction (Terrestrial ecosystem) • Pollution (Soil Pollutants)
9. Finance and Investment	-	-	• Pollution (Water Pollutants, Wastes) • Resource Exploitation (Water Use)

CHAROEN POKPHAND GROUP CO., LTD.

18 True Tower, Ratchadaphisek Road, Huai Khwang, Bangkok 10310, Thailand

Tel: +66(0)-2766-8000

Email: cpg-sd@cp.co.th

Website: www.cpgroupglobal.com