

Making Today  
a Better Tomorrow



Charoen Pokphand Group

# Biodiversity (TNFD) Report 2022



Taskforce on Nature-related  
Financial Disclosures

# TABLE OF CONTENTS

<b>1. Introduction</b>	<b>3</b>
<b>2. Governance</b>	<b>4</b>
2.1 Governance Structure	4
2.2 Role and Responsibility	5
2.3 Governance Framework	6
<b>3. Strategy</b>	<b>7</b>
3.1 Interface with Nature	8
3.2 Nature-related Risks	13
3.3 Nature-related Opportunity	14

<b>4. Risk Management</b>	<b>15</b>
4.1 Nature-related Risk and Opportunity Assessment	16
4.2 Risk Management	17
<b>5. Metrics and Targets</b>	<b>19</b>
5.1 Nature-related Targets	19
5.2 Climate-related Targets	20

<b>6. Definition</b>	<b>21</b>
<b>7. References</b>	<b>22</b>



# 1. INTRODUCTION



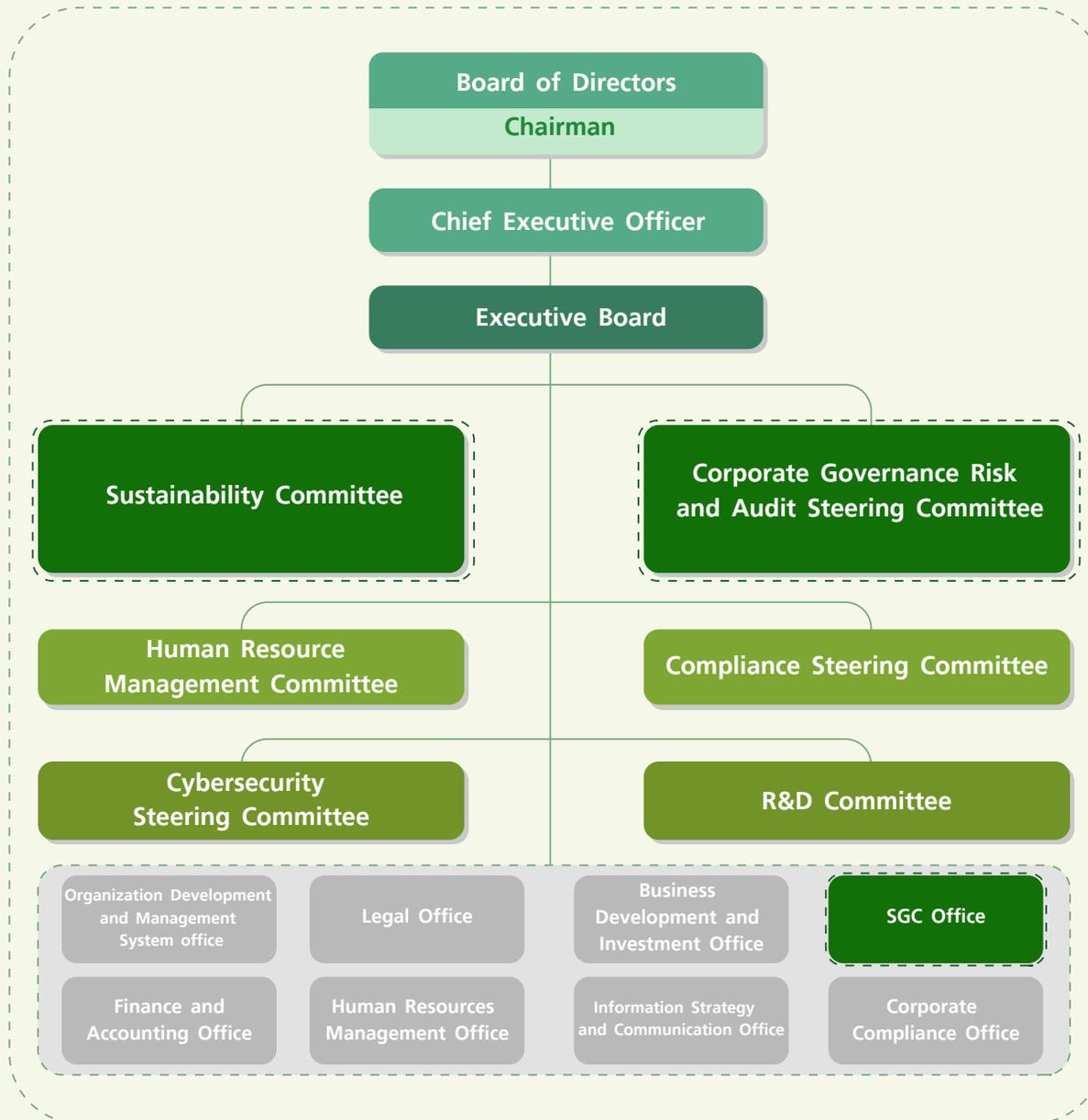
Biodiversity loss and ecosystem collapse are the growing threats to the global economy. According to the World Economic Forum, it is estimated that over half of the world's total GDP is potentially at risk as a result of the dependence of business on nature and its services. Charoen Pokphand Group (C.P. Group) as a holding company operating in a diverse business sectors, we aware that our business activities heavily rely on natural resources and ecosystem services, for instance provision of materials, climate control, soil erosion control etc.

Lack of knowledge, capability, and data to understand the relationship between business and nature can be underestimated risk to the organization. As a result, the Group has decided to adopt the Taskforce on Nature-related Financial Disclosure (TNFD) framework to gain more understanding of our dependence, impact, risk and opportunity. This is order to integrate the nature-related issues into the decision-making, strategic planning, and enterprise risk management process.

**this report (July 2023) is our first step for the adoption of TNFD framework and there will be the new revision once the final version of TNFD released on September 2023.**

## 2. GOVERNANCE

### 2.1 GOVERNANCE STRUCTURE



C.P. Group's corporate governance structure consists of the Board of Directors (BOD), leads by the Chairman, and the Executive Board, which is chaired by the Chief Executive Officer (CEO). In addition, C.P Group has established Sustainability Committee and Corporate Governance Risk and Audit Steering Committee. These two committees play a vital role in managing nature-related risks and opportunity and driving the implementation of nature climate strategies to all business units.

Under Executive Board, there are the working level which comprise of 8 functions including Sustainability, Good Governance, and Corporate Communication (SGC) Office and Corporate Compliance Office which are the main functions that implement the C.P. Group sustainability strategies and ensure that the nature/ climate related risks are managed appropriately under risk management framework model

## 2.2 ROLE AND RESPONSIBILITY



### The Board of Directors

The Board of Directors oversees the overall business operations to ensure the adherence to C.P. Group 2030 Sustainability Framework and Goals. Sustainability performance against the Group's goals and targets (including climate and other nature-related topics) are periodically reported to the Board members as a part of monitoring process.



### The Executive Board

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 nature-related issues including climate, water, circularity, and biodiversity. The Management also provides the strategic advices and decision-making for Net Zero transition and nature positive pathway.



### Sustainability Committee

The Sustainability Committee, chaired by the Group's CEO, has responsibility to drive sustainability goals and strategies by determining key performance indicators, overseeing the sustainability governance, and 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 the 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 agenda.



### Governance, Risk, and Audit Steering Committee

The Corporate Governance, Risk, and Audit Steering Committee comprises of executives with expertise in risk management. The role is to oversee the enterprise risk management and monitor the implementation of the policies and regulation to ensure that the business are 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 to execute the sustainability strategy framework, which include the process of climate and nature-related risk assessment and management. The assessment outcomes are factored in the group-wide policy, strategy, and risk management framework which are leveraged across all business units.

## 2.3 GOVERNANCE FRAMEWORK

Under a complex business environment and fast-changing uncertainties, Charoen Pokphand Group aims to drive corporate governance in a systematic manner across the Group. In doing so, the Group focuses on the structure and process of governance. We have established the group-wide level policies, commitment, and guidelines related to the protecting, preserving, and enhancing natural capital and ecosystem services which are the framework for all business units to implement across our entire value chain.

We also assess nature-related dependency, impact, risks and opportunities according to the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD) and develop comprehensive risk management that include physical, technology, market, policy, legal, and reputational risks.

The nature-related targets, goals, and risk management are set and communicated to our employees and other stakeholders through various channels.

In addition, building capacity and raise awareness for nature actions, the appropriate trainings are provided to employees and stakeholders. The implementation of action plan is depended on the the dependency and impact of the business on the nature capital and ecosystem services. The nature-related performances are monitored and reported through the various channels including sustainability report, corporate website, the Communication on Progress to the UN Global Compact, and CDP's disclosure programs.



Environment Policy



Climate Resilience Policy



Circular Economy Policy



Water Stewardship Policy



Ecosystem & Biodiversity Protection



Air Quality Management



Sustainable Packaging



Hazardous Chemicals & Substance Management



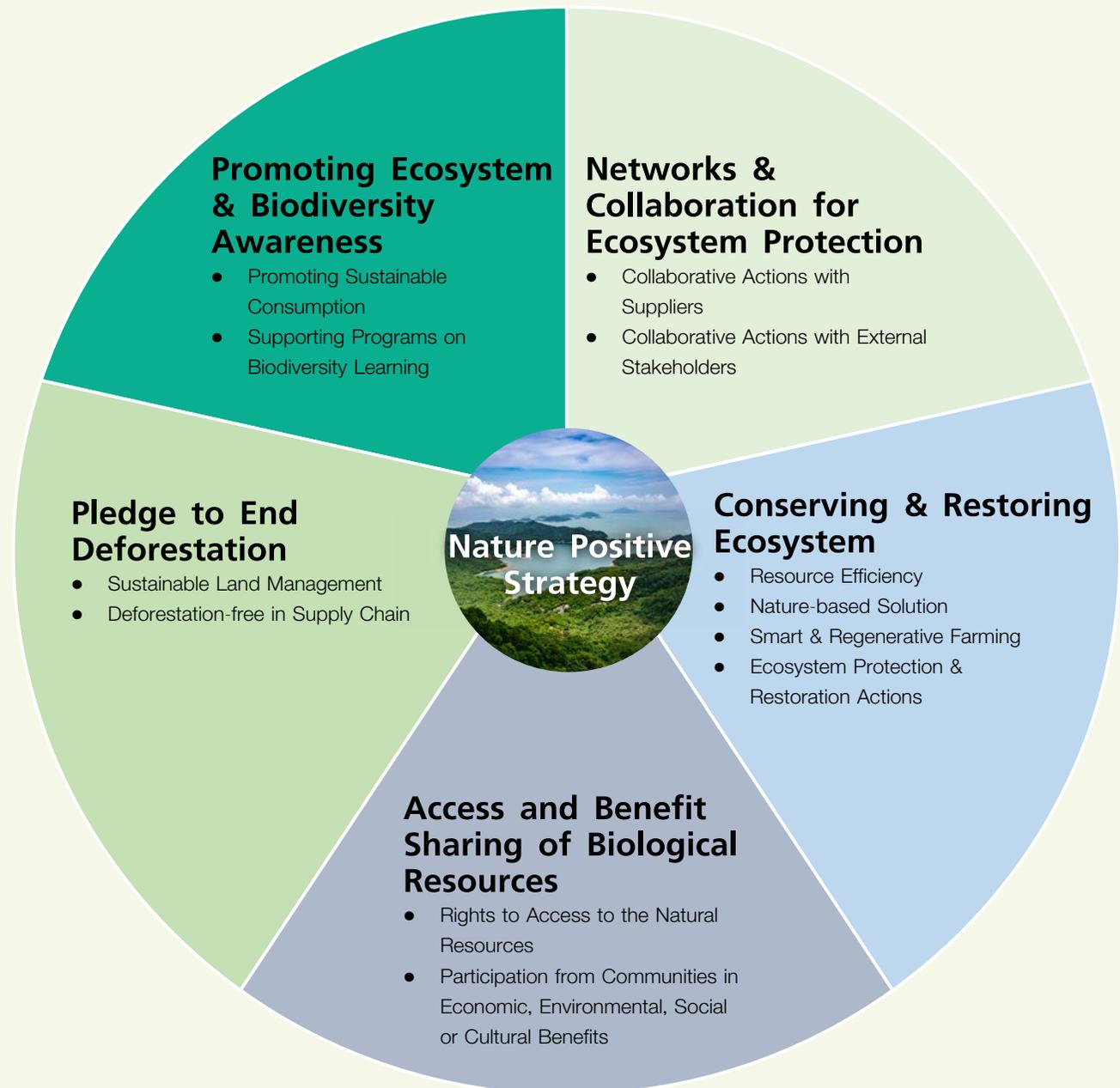
Deforestation



## 3. STRATEGY

We are aware that the resilience of natural ecosystem is important to the business operation. Our business sectors are significantly dependent on ecosystem services for product and service. To maintain healthy and diverse ecosystem of this planet, C.P Group has established the “Nature Positive Strategy” by considering DIRO (Dependency, Impact, Risk, and Opportunity) from 8 business lines. “LEAP approach” was applied to identify, assess, and manage nature-related risk and opportunity.

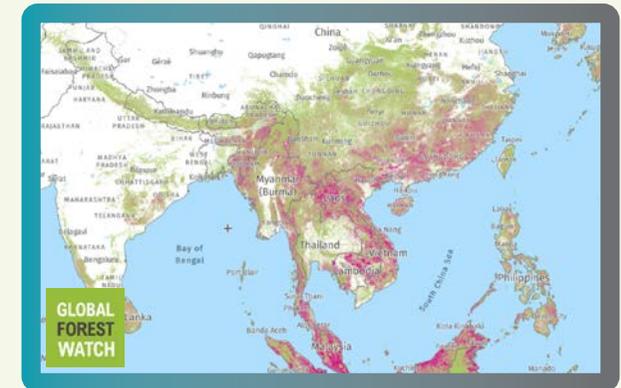
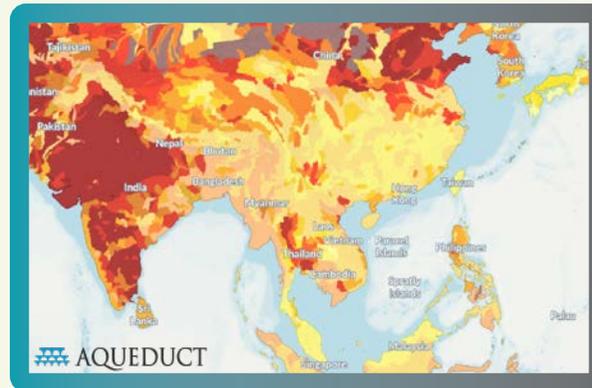
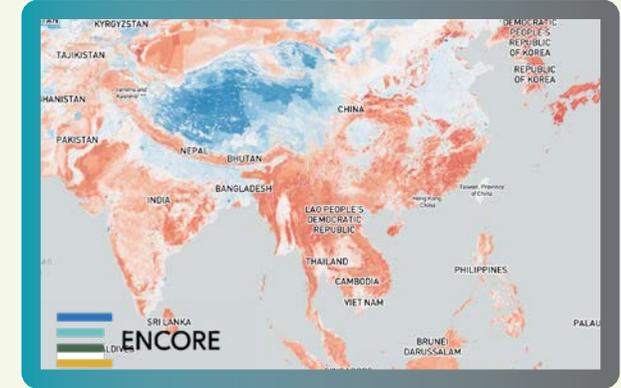
Identified risks and opportunities have been classified to short, medium, long-term based on the financial impacts. Nature positive strategy is aimed to halt nature loss and reverse the degraded ecosystem that is align with according to Kunming-Montreal Global Biodiversity Framework. The strategy is our framework to manage nature-related risks in our operation and supply chain. In addition, It also helps us to convert the nature-related risks to business opportunities.



## 3.1 INTERFACE WITH NATURE

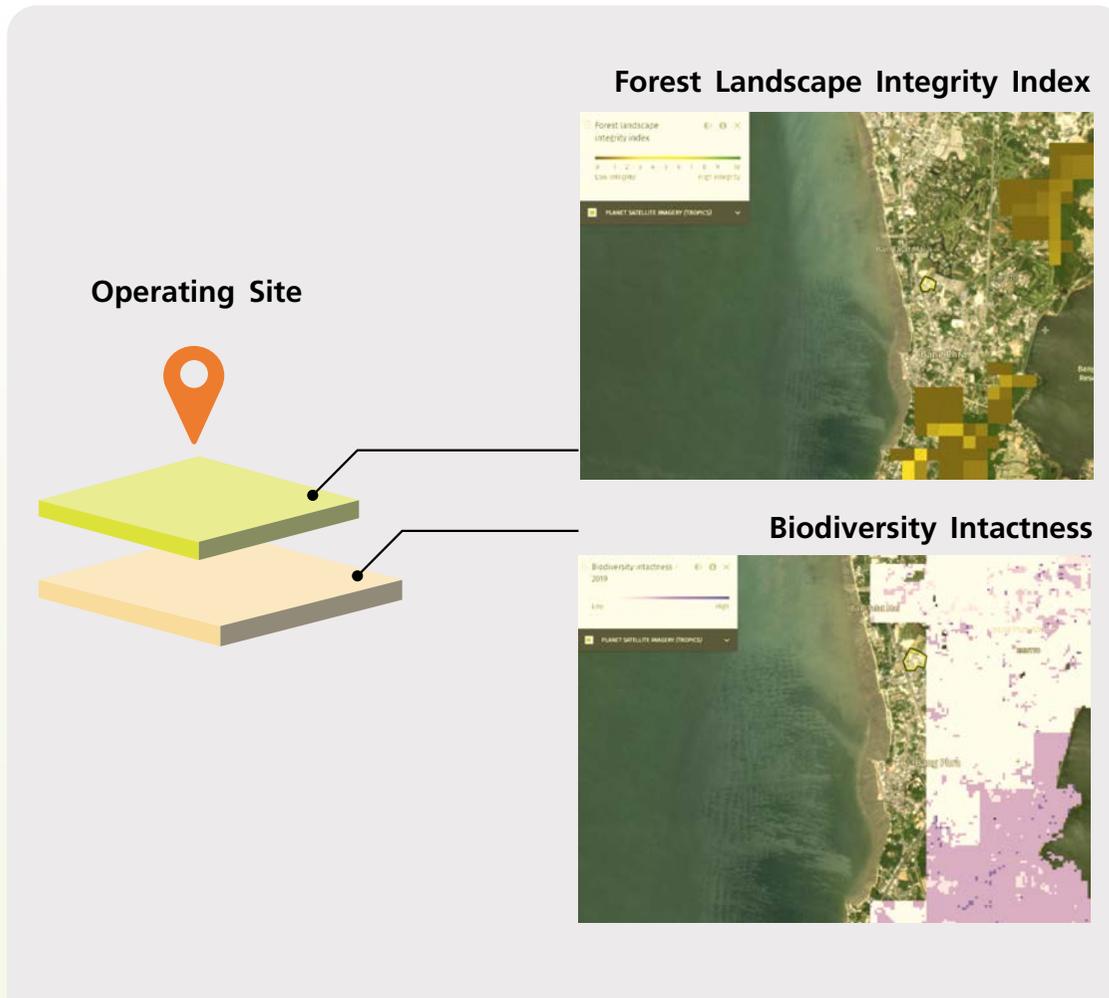
We are aware that the nature and biodiversity risk could arise from the business footprint, particularly from the operation site that is near or within the wilderness and biodiversity hotspot areas. Therefore, we have assessed the interface with the nature by mapping the location of the site globally with the ecosystem type, biomes, biodiversity importance using the TNFD recommended tools, including IBAT, Global Forest Watch, Encore, and Aqeduct.

As industrial conglomerate with diversified businesses, this process help us to gain more understanding more about the interaction between our operation with the natural resources surrounding, current status and potential change of ecosystem in the future. This is the initial step to identify the nature-related risk.



# ECOSYSTEM INTEGRITY

Ecosystem integrity is one of the index representing the completeness and functionality of an ecosystems that are the sources of supply goods and provide the ecosystem service. To assess the ecosystem integrity at the site-specific level, we use the Tool “Global Forest Watch” developed by the World Resources Institute. There are two (2) screening indicators; (1) forest landscape integrity index, and (2) biodiversity intactness.



## Biomes



Remarks <sup>1/</sup> Others include Deserts and xeric shrublands (0.65%), Boreal forests/ Taiga (0.35%), Montane grasslands and shrublands (0.12%), Temperate conifer forests (0.12%), Flooded grasslands and savannaes (0.18%)

## Integrity of Ecosystem

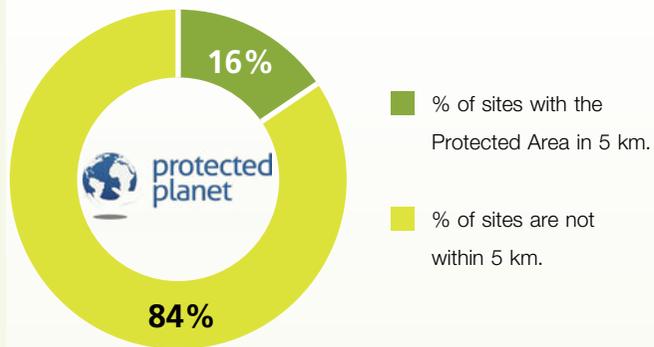
Indicator	Low (0-3)	Medium (4-6)	High (7-10)
Forest landscape integrity index	99.52%	-	0.48

Indicator	Low	Medium	High
Biodiversity intactness	61.35%	12.56%	26.09%

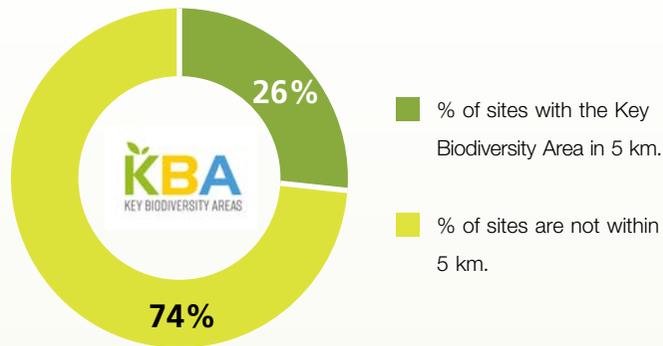
# BIODIVERSITY IMPORTANCE

C.P. Group has undergone the rapid screening of biodiversity-related risk. The operating sites from all business units have been assessed using IBAT program that integrates 3 database, including Protected Areas (PAs), Key Biodiversity Area (KBAs), and IUCN Red List species

## Summary of Protected Areas



## Summary of Key Biodiversity Areas



## Summary of IUCN Red List

Number of Threaten Species <sup>2/</sup> within 50 km.	Number of Sites
> 450	6
351 - 450	39
251 - 350	159
151 - 250	536
51 - 150	1,027
< 50	224

Number of protected area within 5 km. breaking down by regions



Number of Key Biodiversity Area within 5 km. breaking down by regions

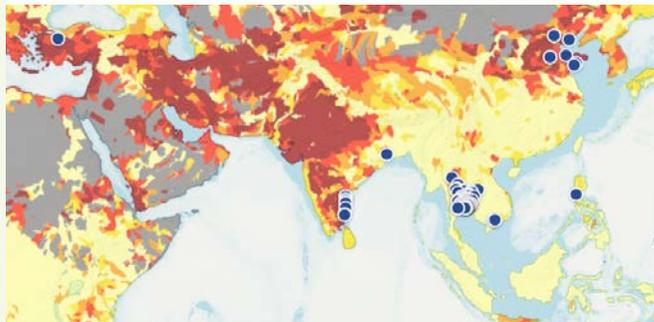


Top 5 Sites	CR <sup>2/</sup>	EN	VU
1	54	123	317
2	47	115	293
3	37	124	315
4	37	122	315
5	32	148	348

# WATER STRESS

C.P. Group has adopted the internationally-recognized Aqueduct Water Risk Atlas tool of the World Resources Institute (WRI) to use as our preferred assessment tool to determine which operations are located in areas with water stress, where water-related impacts might be significant.

Based on the tool, water stress is defined as the ratio of total annual water withdrawal to total available annual renewable water supply (baseline water stress) is high (40-80%) or extremely high (>80%). The result reveals that 36% of all operation units under C.P. Group are in areas with water stress.



AQUEDUCT

## Water Stress

low (<10%)	low-medium (10-20%)	medium-high (20-40%)	high (40-80%)	extremely high (>80%)	arid and low water use
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C.P. Group has also developed a water risk assessment framework that is applied across all operations in its business units. The assessment evaluates risk factors in various dimensions, including the volume of water withdrawal by organization, and baseline water stress level from Aqueduct Water Risk Atlas tool.

The results of the assessment are ranked according to three levels of water risk and are then used to develop appropriate management plans.

## Water Risk Assessment Framework

Water Stress	The Volume of Water Withdrawal	Water Risk Level
 Low - Medium	+ Low - Medium Volume High Volume	Low Risk Medium Risk
 High - Extremely High	+ Low Volume Medium Volume High Volume	Low Risk Medium Risk High Risk

### Water Management Plan

#### Low Risk

- Regularly monitor water withdrawals through reporting systems

#### Medium Risk

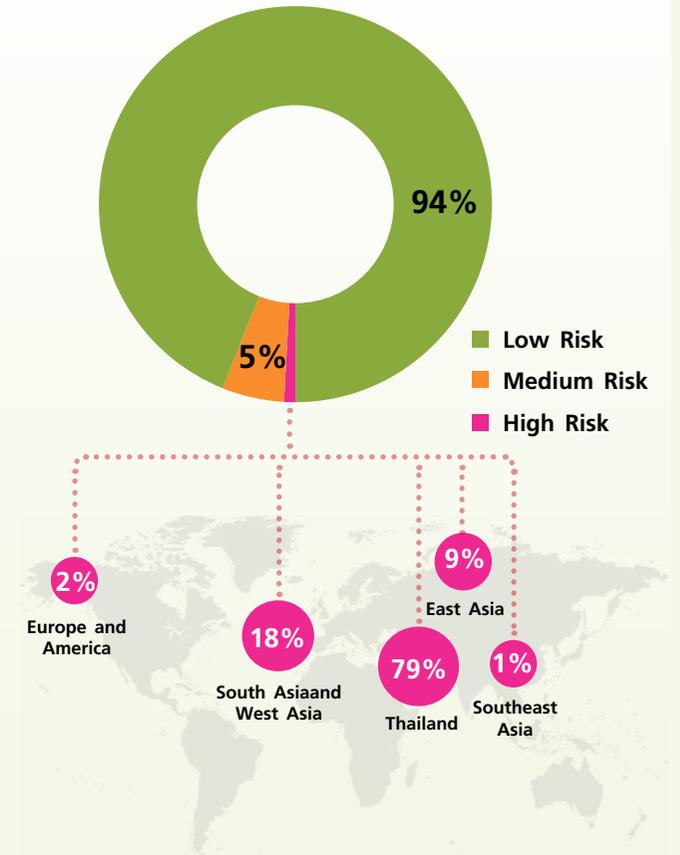
- Improve water use efficiency using the “5Rs” principle
- Regularly monitor water withdrawals through reporting systems

#### High Risk

- Improve water use efficiency using the “5Rs” principle
- Regularly monitor water withdrawals through reporting systems
- Assess local-level risks using the “Local Water Tool”
- Assess water risks for key suppliers

Based on the water risk assessment, only 1% of the C.P. Group’s operations with high level of water risk, 79% of which is located in Thailand. Accordingly, C.P. Group focuses on encouraging our Thailand-based business groups to develop intensive water-related measures and monitor water use reduction on a regular basis.

## C.P. Group’s Operation Units with High Water Risk Level By Region



# DEPENDENCY AND IMPACT

Business Lines	Production Process	Dependency on Ecosystem Services										Drivers of Nature Change					
		Energy and Fuels	Fiber and Materials	Erosion Control	Pest and Disease Control	Bioremediation of Waste	Flood and Storm Protection	Water Supply	Water Flow and Purification	Nutrient Cycle	Pollinator	Climate Regulation	Land/ Sea Use Change	Climate Change	Resources Use	Pollution	Invasive Alien Species
Agro-Food Business	Seed	Low	Low	Med	Med	Med	High	High	High	High	High	Low	High	Low	High	Low	High
	Livestock Farming	Med	Low	Low	Low	Med	Med	High	Low	Low	Med	High	High	High	Low	High	High
	Aquaculture Farming	Low	Low	Low	Med	Med	Med	High	Low	Med	Low	High	High	Low	High	High	High
	Animal Feed	High	Low	Low	Low	Med	Med	High	Med	Low	High	Low	High	High	High	High	Low
	Food Processing	High	Low	Low	Low	Med	Med	High	Med	Low	High	Low	High	High	High	High	Low
Retail and Distribution Business	Supermarket Hypermarket and Supercenter	High	High	Med	Low	Med	Med	Low	Low	Low	Low	Low	High	High	Low	High	Low
Telecommunication	Telecommunication and Wireless Service	High	High	Med	Low	Low	High	Low	Low	Low	Low	High	High	Low	Low	Low	Low
Property Development	Real Estate Activities	Med	High	High	Low	Med	Med	High	Low	Low	Med	High	Low	High	High	High	Low
E-Commerce and Digital	Digital Platform	High	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High	High	Low	High	Low
Pharmaceutical Industry	Manufacturing	Med	High	Low	Low	Med	Low	High	Low	Low	Low	Low	High	High	High	High	Low
Automotive and Industrial Products	Manufacturing	High	High	Low	Low	High	Low	Med	Low	Low	High	Low	High	High	High	High	Low
Finance and Investment	Financing Services	Low	Low	Med	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High	Low	Low

**Remarks**

	High Dependency		High Impact
	Medium Dependency		Medium Impact
	Low Dependency		Low Impact

## 3.2 NATURE-RELATED RISKS

Nature-related Risks		Time Horizon	Realms			
			Land	Freshwater	Ocean	Atmosphere
<b>Transition Risks</b>						
<b>Policy and Legal</b>	• Adoption of Kunming-Montreal Global Biodiversity Framework	Short	●	●	●	●
	• Emerging policies and regulations to halt loss and restore biodiversity e.g. EU deforestation-free etc.	Medium	●	●	●	●
<b>Technological Innovation</b>	• Growth of digital agribusiness marketplaces	Medium	●	●		●
	• Emerging technology and innovation for natural conservation	Medium	●	●		●
<b>Market Dynamics</b>	• Shifting of customer demands for no-deforestation products and eco-friendly products	Long	●			●
<b>Reputation</b>	• Any damage or effect on Key Biodiversity Area or important species caused by the operation	Short	●	●	●	●
<b>Physical Risks</b>						
<b>Acute</b>	• Climate change creates new pest, animal diseases, and impact to crop productivity	Medium	●	●		●
	• Water scarcity from El Nino event	Short	●	●		●
<b>Chronic</b>	• Loss of global pollinator due to agrochemical, climate change and other manmade activities	Long	●			●
	• Loss of organic matters and soil contamination	Long	●			

Remarks:

● Short Term (< 2 years)

● Medium Term (2-5 years)

● Long Term (>5 years)

### 3.2 NATURE-RELATED RISKS

Nature-related Risks		Time Horizon	Realms			
			Land	Freshwater	Ocean	Atmosphere
<b>Systematic Risks</b>						
<b>Ecosystem Collapse</b>	<ul style="list-style-type: none"> <li>Permanently change in extent and condition of surface water from climate change or human made</li> </ul>	Long <span style="color: green;">●</span>		<span style="color: grey;">●</span>		<span style="color: grey;">●</span>
<b>Aggregated Risk</b>	<ul style="list-style-type: none"> <li>Soil degradation from suppliers and other human activities could destroy the economy of entire region and reinforced by climate change and water scarcity</li> </ul>	Long <span style="color: green;">●</span>	<span style="color: grey;">●</span>			<span style="color: grey;">●</span>

### 3.3 NATURE-RELATED OPPORTUNITIES

Nature-related Opportunities		Time Horizon	Realms			
			Land	Freshwater	Ocean	Atmosphere
<b>Opportunity</b>						
<b>Resource Efficiency</b>	<ul style="list-style-type: none"> <li>Permanently change in extent and condition of surface water from climate change or human made</li> </ul>	Short <span style="color: yellow;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>
<b>Sustainable Finance</b>	<ul style="list-style-type: none"> <li>Increasing volume of green finance, climate bond, sustainable loan in the market</li> </ul>	Short <span style="color: yellow;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>
<b>Nature Based Solution</b>	<ul style="list-style-type: none"> <li>Use Nature based solution to conserve, manage and restore natural and modified ecosystems in ways that address the ESG challenges</li> </ul>	Medium <span style="color: green;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>
<b>Ecosystem Protection and Restoration</b>	<ul style="list-style-type: none"> <li>Collaborate with the local community and stakeholders to drive the projects that protect, regenerate, and restore habitat and ecosystem</li> </ul>	Medium <span style="color: green;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>	<span style="color: grey;">●</span>

Remarks:

● Short Term (< 2 years)

● Medium Term (2-5 years)

● Long Term (>5 years)

## 4. RISK & IMPACT MANAGEMENT

C.P. Group has identified the short-, medium-, and long-term nature-related risks and opportunities. It has also assessed the probability and impacts of those risks and opportunities to the group. These nature-related, together with other ESG issues, have been integrated into C.P. Group's Risk Management Framework which consist of five elements; governance, risk assessment, measures, monitoring, and disclosure.

The identified risk as the outcome of the LEAP approach are further analyses to understand the potential financial impacts on revenues, expenditures, values of assets and liabilities, and capital and financing. The strategies and measures both adaptation and preparedness are designated to mitigate the nature-related risks that are material to the group's operation.

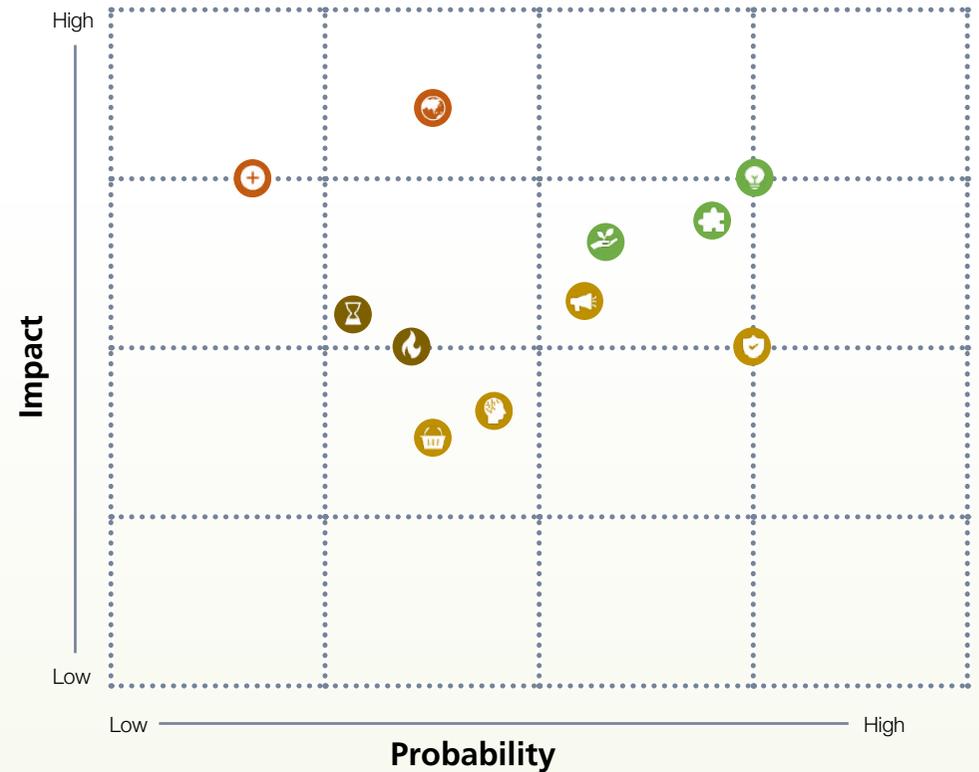


# NATURE-RELATED RISKS AND OPPORTUNITIES ASSESSMENT

The nature-related risk assessment helps C.P. Group understand the impacts of risks and opportunities on businesses, recognize potential financial impacts on revenues, expenditures, values of assets and liabilities, and capital and financing, assign ownership to drive specific actions around them and take relevant steps to address those risks and opportunities.

Risk and Opportunity	Short Term (2023-2025)	Medium Term (2026-2030)	Long Term (2031-2050)
<b>Transition Risk</b>			
Policy and Legal	●	●	●
Technology	●	●	●
Marketing	●	●	●
Reputation	●	●	●
<b>Physical Risk</b>			
Acute	●	●	●
Chronic	●	●	●
<b>Systematic Risk</b>			
Ecosystem Collapse		●	●
Aggregate Risk		●	●

● Low Impact    ● Medium Impact    ● High Impact



<p><b>Transition Risks</b></p> <ul style="list-style-type: none"> <li>Policy and Legal</li> <li>Technology</li> <li>Market Dynamic</li> <li>Reputation</li> </ul>	<p><b>Physical Risks</b></p> <ul style="list-style-type: none"> <li>Acute</li> <li>Chronic</li> </ul>	<p><b>Systematic Risks</b></p> <ul style="list-style-type: none"> <li>Ecosystem Collapse</li> <li>Aggregate Risk</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Resource Efficiency</li> <li>Nature Based Solution</li> <li>Ecosystem Protection and Restoration</li> </ul>
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Risk Type	Nature-Related Risks	Financial Impact	Risk Management
<b>Transition Risks</b>			
<b>Policy and Legal</b> 	<ul style="list-style-type: none"> <li>Adoption of Kunming-Montreal Global Biodiversity Framework</li> <li>Emerging of Nature-related Policies and Regulations</li> </ul>	Major 	<ul style="list-style-type: none"> <li>Establish the policies, commitments, and internal procedures to address the regulatory requirements;</li> <li>Align the existing strategies and goals with the Kunming-Montreal Global Biodiversity Goal and 23 targets;</li> <li>Upgrade existing compliance system to include the nature-related topics;</li> <li>Build the capacity of the employee, compliance assessment, active leadership.</li> </ul>
<b>Technological Innovation</b> 	<ul style="list-style-type: none"> <li>Digital agribusiness marketplaces</li> <li>Energy use and negative consequences</li> </ul>	Minor 	<ul style="list-style-type: none"> <li>Explore the use of new technologies such as blockchain, agricultural drones and satellite imagery to improve efficiency, reduce waste and bring transparency into supply chains for both agricultural and livestock products.</li> <li>Biotechnology is introduced to tackle the GHG emission and climate adaptation including weather-resistant seeds, eco-friendly animal feed.</li> <li>Shift from the energy and electricity consumption towards low emission energy and renewable resources.</li> <li>Develop new products which not only can be used for emission reduction in the direct operations, but also increase our revenues through access to new and emerging markets</li> </ul>
<b>Market Dynamics</b> 	<ul style="list-style-type: none"> <li>Shifting of customer demands for no-deforestation products and eco-friendly products</li> </ul>	Minor 	<ul style="list-style-type: none"> <li>Integrate nature-based solution into C.P. Group strategy for net-zero roadmap;</li> <li>Promote regenerative agriculture to reduce emissions from livestock, increase the soil quality, and restore the biodiversity in the agriculture land;</li> <li>Implement reforestation, afforestation, and agro-forestry projects for carbon sequestration and restoration of natural habitat;</li> </ul>
<b>Reputation</b> 	<ul style="list-style-type: none"> <li>Any damage or effect on Key Biodiversity Area or important species caused by the operation</li> </ul>	Medium 	<ul style="list-style-type: none"> <li>Set the nature-related commitment and target including no-deforestation in the key raw materials including corn, soy, and palm oil;</li> <li>Implement traceability system to trace back to the sources of the key commodities.</li> </ul>

Remarks:



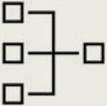
Minor (<100 Million USD)



Medium (100-500 Million USD)



Major (>500 Million USD)

Risk Type	Climate-Related Risks	Financial Impact	Risk Management
<b>Physical Risks</b>			
<b>Acute Risk</b> 	<ul style="list-style-type: none"> <li>Climate change creates new pest threats, spread of animal diseases, and impact to crop productivity</li> <li>Habitat modification cause the GHG emission and biodiversity loss</li> </ul>	Medium 	<ul style="list-style-type: none"> <li>Explore the nature-based solutions e.g. using biological control agents to control caterpillar pests in a wide range of horticultural and crop field;</li> <li>Use technology and innovation to monitor climate-sensitive disease outbreak;</li> <li>Integrate the climate-sensitive pest resistance plant into the product development;</li> <li>Utilize spatial data and tools including IBAT, global forest watch etc. to avoid any impact from land conversion on natural habitat</li> </ul>
<b>Chronic</b> 	<ul style="list-style-type: none"> <li>Loss of global pollinator due to agrochemical, climate change and other manmade activities</li> <li>Loss of organic matters and soil contamination</li> </ul>	Major 	<ul style="list-style-type: none"> <li>Take environmental issues into consideration in the process of innovating new food products to reduce environmental impacts while promoting the responsible use of resources;</li> <li>Implement the traceability system for key raw materials to ensure that these products are from sustainable sourcing;</li> <li>Implement the regenerative agriculture to maintain the soil health, nutrition, biodiversity, and carbon storage.</li> </ul>
<b>Systematic Risks</b>			
<b>Ecosystem Collapse</b> 	<ul style="list-style-type: none"> <li>Permanently change in extent and condition of surface water from climate change or human made</li> </ul>	Major 	<ul style="list-style-type: none"> <li>Implement the water management efficiency based on the 5Rs principle;</li> <li>Treat effluent to meet the local and national standard before discharge into nature to prevent impact on the environment and surrounding communities;</li> <li>Enhance sustainable water management throughout the value chain and implements measures to support and enhance water use efficiency for suppliers;</li> <li>Collaborate with partners from all sectors to drive water resource conservation and support local communities in improving access to clean water and sanitation.</li> </ul>
<b>Aggregated Risk</b> 	<ul style="list-style-type: none"> <li>Soil degradation caused by our suppliers and other human activities could destroy the economy of entire region and reinforced by climate change and water scarcity</li> </ul>	Major 	<ul style="list-style-type: none"> <li>Support the sustainable agriculture practice in the supply chain;</li> <li>Manage manure from the chicken farming process by producing the biogas and waste from biogas process is used for pre-cultivation improvement of soil condition or saline-alkali Land Improvement</li> </ul>

Remarks:

 Minor (<100 Million USD)

 Medium (100-500 Million USD)

 Major (>500 Million USD)

# 5. METRICS AND TARGETS

## 5.1 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



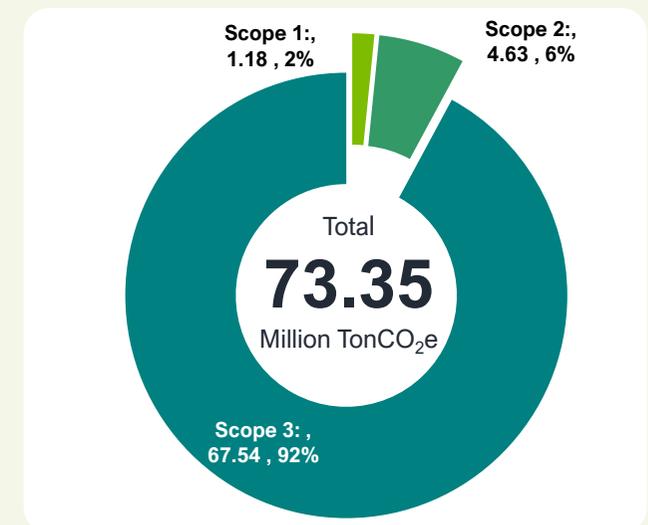
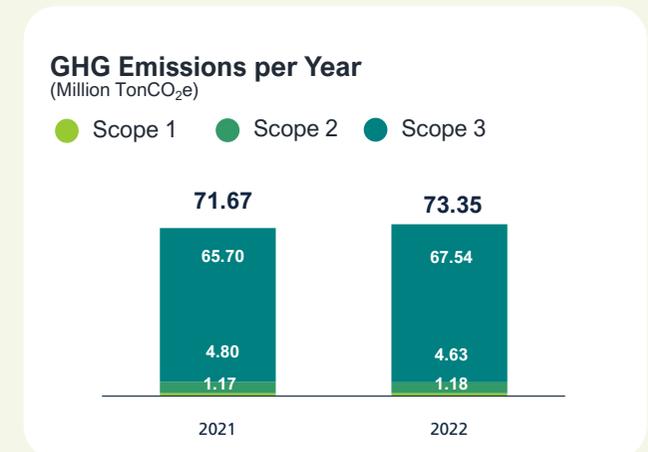
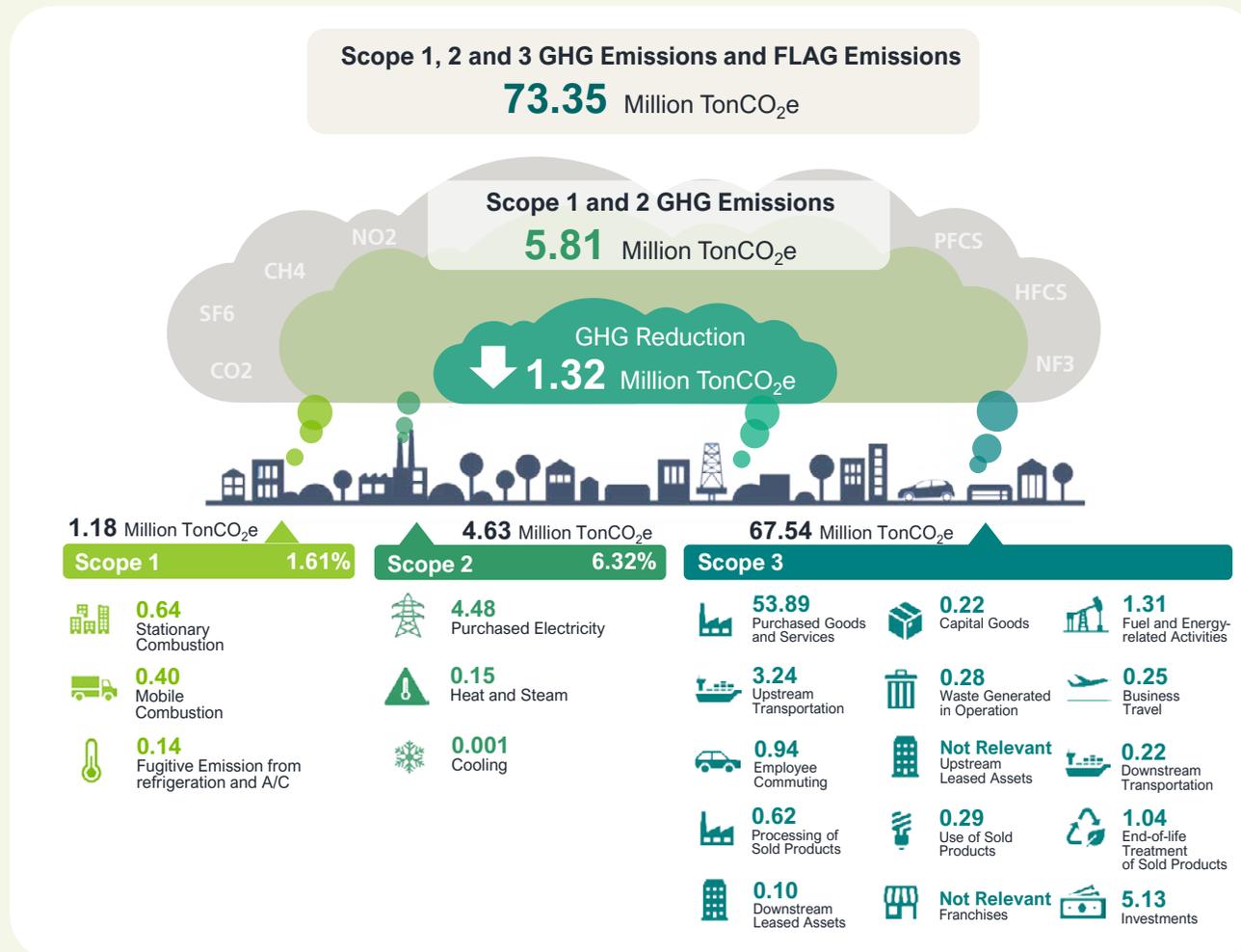
100% business having participating in biodiversity programs with relevant international partners within 2023



Planting 20 million trees by 2025

## 5.2 CLIMATE-RELATED TARGETS

Scope 1, 2, 3 emissions for the past four years are presented in the table below. All emissions are listed in metric tonnes CO<sub>2</sub>e. Emissions are calculated based on guidance from the GHG protocol. Limited assurance over Scope 1, Scope 2 and Scope 3 emissions figures is provided by a third party to evaluate the accuracy and reliability of our methods and data and to promote accountability, as shown in our LRQA Independent Assurance Statement.



## 6. DEFINITION

B

### Biodiversity

The variability among living organisms from all sources including, interalia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species,

D

### Dependencies

Aspects of ecosystem services that an organization or other actor relies on to function. Dependencies include ecosystems' ability to regulate water flow, water quality, and hazards like fires and floods; provide a suitable habitat for pollinators (who in turn provide a service directly to economies), and sequester carbon (in terrestrial, freshwater and marine realms).

E

### Ecosystem Assets

A form of environmental assets that relate to diverse ecosystems, where an ecosystem is a dynamic complex of plant, animal and microorganism communities and the non-living environment that interacts as a functional unit

### Environmental Assets

The naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity.

### Ecosystem Services

Ecosystem services provide benefits to business. The categories of ecosystem services are provided below;

- Provisioning services represent the contributions to benefits that are extracted or harvested from ecosystems.
- Regulating and maintenance services result from the ability of ecosystems to regulate biological processes and to influence climate, hydrological and biochemical cycles, and thereby maintain environmental conditions beneficial to individuals and society. Provisioning services are dependent on these regulating and maintenance services.

- Cultural services are the experiential and intangible services related to the perceived or actual qualities of ecosystems whose existence and functioning contributes to a range of cultural benefits.

I

### Impact

A change in the state (quality or quantity) of natural capital, which may result in changes to the capacity of nature to provide social and economic functions. Impacts can be positive or negative. A single impact driver may be associated with multiple impacts.

### Impact Drivers

A measurable quantity of a natural resource that is used as a natural input to production or a measurable non-product output of a business activity

### Impact Pathways

A particular impact driver can lead to changes in natural capital, and in turn, how these changes affect different stakeholders.

N

### Natural Capital

The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people.

### Nature Loss Nature-Related Opportunities

The loss of, and/or decline in, the state of nature.

Activities that create positive outcomes for corporates and/or financial institutions and nature by avoiding or reducing impact on nature, or contributing to its restoration

### Nature-related risks

Potential threats posed to an organisation linked to their and wider society's dependencies on nature and nature impacts. These can derive from physical, transition and systemic risks.

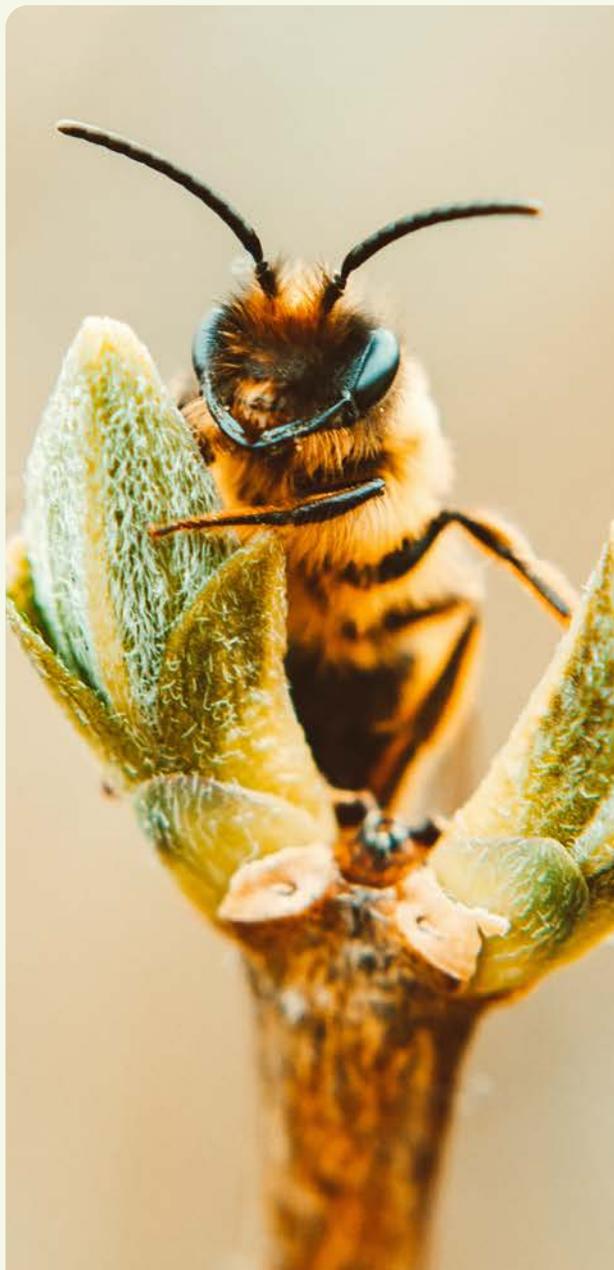
T

### Timeframe

The definition of the timeframe in this report are provided as follows;

- Short-term – less than 2 years
- Medium-term – 2-5 years
- Long-term – more than 5 years.

## 7. REFERENCE



### TNFD Framework

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### Science-Based Targets Network

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### Thailand Business Council for Sustainable Development (TBCSD)

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## Charoen Pokphand Group Co., Ltd.

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

Tel : +66(0)-2766-8000

Email: [prcpgroup@cp.co.th](mailto:prcpgroup@cp.co.th)