



# SUSTAINABILITY REPORT 2022

Charoen Pokphand Produces Co., Ltd. ,  
Charoen Pokphand Agriculture Co.,Ltd.  
and companies in Crop Integration Business.  
Charoen Pokphand Group.





**CROP INTEGRATION BUSINESS**

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**MESSAGE FROM VICE CHAIRMAN  
CROP INTEGRATION, RICE,  
TRANSPORTATION AND SERVICE BUSINESS**



**Mr. Prasit Damrongchietanon**

**MESSAGE FROM CHIEF  
EXECUTIVE OFFICER  
CROP INTEGRATION BUSINESS.**



**Mr. Sumeth Pinyosnit**

**INNOVATIVE ORGANIZATION**

“Innovation development isn’t just a matter of policy but should be conscious mind of every employee” Our vision is to become an organization that fosters innovation, creating economic, social and environmental benefits for the entire world. Charoen Pokphand Produces Co., Ltd. and companies in the Crop Integration Business Group are focus on creating a culture of exchanging knowledge along with encouraging employees to create innovations. To step towards sustainable business growth in terms of economy, society, and environment.

**ENVIRONMENT**

**“It is our responsibility to strike the right balance between development and the conservation of our natural resources while respecting the rights of all of our stakeholders”**

Charoen Pokphand Produces Co., Ltd. and companies in the Crop Integration Business Group are constantly seeking ways to share knowledge with and build the capabilities of the communities we impact while also ensuring we do all we can to help ecosystems and biodiversity flourish. This will help ensure that the natural resources, on which our business depends, remain sustainable and abundant.

**HAVE THE KNOWLEDGE TO LEARN NEW THINGS.**

Include the Charoen Pokphand Group just in case, don’t forget the words “3 benefits” in every country that they invest in. which is good that the success of various businesses The important thing with responsibility and accountability to the questions that the surrounding social community grows together.

Crop Integration Business which operates upstream of the production sector and will be a part that makes farmers earn and bring growth because it is considered various technologies to increase production efficiency to be transferred to farmers. At the same time, employees are encouraged to participate in creating new innovations. to become a learning organization and business growth in terms of economy, society, and environment in a sustainable manner.

“Everything around us can be innovative. Start with interest and action. Don’t let fear makes us dare not think or do something different If you try it and you get an error reviewed and made improvements. Our company is ready to support employees to participate in creating new things that are beneficial to the organization and society.”

**REWARD YOU LAND BY TAKING CARE OF THE ENVIRONMENT**

Our company places importance on participation in conservation. Rehabilitation of natural resources and the environment in collaboration with the agency and network partners in many areas Continue to take care of important watershed forests. as well as encouraging employees to jointly take care of and planting perennials in the organization’s area in the event “Planting forests in the house” to increase green space for the country because of participation in nature conservation considered as one of the goals to repay the land. that the integrated plant business intends to operate.



# SUMMARY OF KEY PERFORMANCE IN 2022

(GRI 102-7)

## ECONOMIC GROWTH



Employee benefits  
**40.31**  
Million baht



Employee training expenses  
**15.15**  
Million baht



Taxes paid to the government  
**101.11**  
Million baht



Development investment expenses and support society and communities

**1.51** million baht



## HEART : LIVING RIGHT



**Number of employees**  
**2,183**  
people  
(CPP, CPS & CPA)

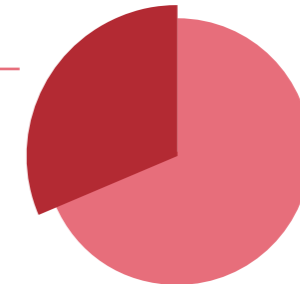
### Employee proportion



Male  
**68.67%**  
**1,499** people



Female  
**31.33%**  
**684** people



New hires  
**353** people



**100%**

Employees and leaders trained in sustainability, safety

### Safety



**1.47**

Employees

**6.49**

Contractor

Lost time injury rate (Per 1,000,000 working hours)

### Leadership development



Number of trainees and sustainability development  
**47** people

### Human resource development



**18.50**

(Hour / person / year)

Training time averages All employees

Announcement of the use of ethics in Operate the business of the group

**“Code of Conduct of the Group, our practice”**

Evaluate and identify key human rights issues. At the chain level

**4** Issues





## HEALTH : LIVING WELL



Promoting access to education and knowledge organization

**9,546** people



Support farmers and Vulnerable groups

**53,030** people



**116.15**

Million baht

Investment in research and development



**21**

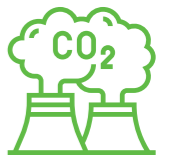
Number of plant protection registrations in Thailand and India



## HOME : LIVING TOGETHER

Greenhouse gas emissions (Scope 1+2)

**53,816.67** TonCO<sub>2</sub>

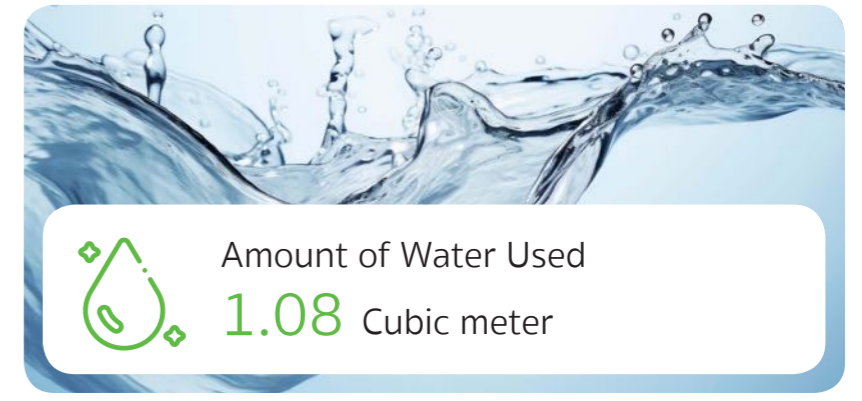
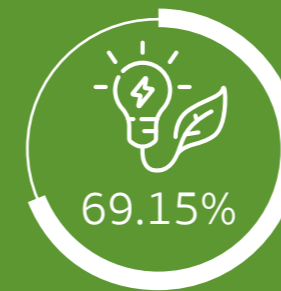


Energy consumption

**113,263.91**

Gigajoule

Proportion of renewable energy use



Amount of Water Used

**1.08** Cubic meter



The amount of Waste Product

**487.67** Ton

Proportion of water recycled/reused



Environmental Investment

**6** million baht

(By Safe Thai Nature Project)



# PERFORMANCE RESULTS OF THE 15 SUSTAINABILITY GOALS 2022



**Heart:**  
**Living Right**



**Health:**  
**Living Well**



**Home:**  
**Living Together**



## Heart: Living Right

### HUMAN RIGHTS & LABOR PRACTICES

**100%**

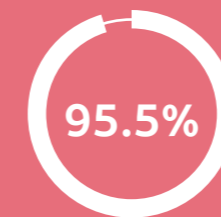


Percentage of Business with Human Rights Impact Assessment.

### CORPORATE GOVERNANCE

**100%**

Percentage of Business assessed on CG practices. (Ethisphere)



### EDUCATION & INEQUALITY REDUCTION

Support 9,546 children, youths, and adults will gain access to education and necessary skills development. Goals 100,000 people.

### LEADERSHIP & HUMAN CAPITAL DEVELOPMENT



Percentage of Employees Engaged in Learning and Initiatives.



### CYBER SECURITY & DATA PROTECTION

**100%**

Percentage of Business with certified international standard.



## Health: Living Well



**HEALTH & WELL-BEING**  
**0.84%**  
Sales from products and services by B2B2 and B2C



**SOCIAL IMPACT AND ECONOMIC CONTRIBUTION**  
**100%**  
Improved employment prospects and quality of life for 53,030 farmers and vulnerable groups. Goals 10,000 people



**OCCUPATIONAL HEALTH & SAFETY**  
Zero Accident 1.47 no. per 1,000,000 working hours



**INNOVATION MANAGEMENT**  
**100%**  
21 registered patents and petty patents from 18 targets.



**STAKEHOLDER ENGAGEMENT**  
engagement score of multi-stakeholder perception survey. Goals 80%



## Home: Living Together

**CLIMATE RESILIENCE**  
Amount of greenhouse gas emissions per revenue increase by **17.87%** to baseline year 2020.





**CIRCULAR ECONOMY**  
**90%** of all plastic packaging are recyclable, reusable or compostable.



**WATER STEWARDSHIP**  
**76.11%** reduction in water withdrawal per unit revenue compared to baseline year 2020



**ECOSYSTEM AND BIODIVERSITY PROTECTION**  
**100%** Protected and restored terrestrial ecosystems by Safe Thai Nature Project.

**RESPONSIBLE SUPPLY CHAIN MANAGEMENT**  
**73.91%** Sustainability audit with 17 high-risk supplier from 23 supplier.







# AWARDS AND STANDARD SYSTEMS (CPP)

## Safety Health and Environment Management-Outstanding Model

Establishment Award Occupational safety and working environment

- Seed Processing Plant Soi 19 (National Level 20<sup>th</sup> years)
- Seed Processing Plant Soi 12 (National Level 16<sup>th</sup> years)
- Organic Fertilizer Plant (National Level 7<sup>th</sup> years)
- Chemical Fertilizer Packing and Mixing plant (Provincial Level 1<sup>st</sup> year)



## Corporate Social Responsibility (CSR) CSR-DIW Award



- Seed Processing Plant Soi 19 (4<sup>th</sup> years)
- Seed Processing Plant Soi 12 (4<sup>th</sup> years)
- Chemical Fertilizer Packing and Mixing plant (2<sup>nd</sup> years)



## Zero Accident Campaign Award

(Zero Accident Campaign Activity)

- Seed Processing Plant Soi 19 (7<sup>th</sup> years Bronze Level and 4<sup>th</sup> years Silver Level)
- Seed Processing Plant Soi 12 (2<sup>nd</sup> years Beginning Level)
- Organic Fertilizer Plant 19 (3<sup>rd</sup> years Beginning Level)
- Chemical Fertilizer Packing and Mixing plant (1<sup>st</sup> year Beginning Level)



## Protection standard award and Solve drug problems (TSRI)



- Seed Processing Plant Soi 19
- Seed Processing Plant Soi 12
- Organic Fertilizer Plant
- Chemical Fertilizer Packing and Mixing Plant







# INTERNATIONAL STANDARD SYSTEMS AND CERTIFICATION

## ISO 9001 : 2015 (Quality Management)

- Seed Processing Plant Soi 19
- Seed Processing Plant Soi 12
- Organic Fertilizer Plant
- Chemical Fertilizer mixing and packing plant
- Seed Processing Plant (Vietnam)

## ISO 17025

- Seed Processing Plant Soi 19
- Seed Processing Plant Soi 12

# AWARDS AND STANDARD SYSTEMS (CPA)

**Charoen Pokphand Agriculture Co.,Ltd. (Rubber factory, Loei)**

ISO 9001:2015    ISO 14001:2015  
 ISO 45001:2018    Eco vadis

## Green Industry Award



- Seed Processing Plant Soi 19 (Green Industry Level 4 : Green Culture)
- Seed Processing Plant Soi 12 (Green Industry Level 4 : Green Culture)
- Chemical Fertilizer mixing and packing plant (Green Industry Level 3 : Green Culture)



## Ministry of Natural Resources and Environment : Thailand Greenhouse Gas Management Organization (Public Organization) (TGO)

Low Emission Support Scheme (LESS) Certificate

**Charoen Pokphand Seeds Co.,Ltd. (Rice Mill , Chainat )**

- Protection standards and solve drug problems in business establishments
- Green Industry Level 2 : Green Activity

**CP Plant Co.,Ltd.**

Good Agricultural Practices (GAP) : Good practices for food crops, TAS 9001-2556

## DOW JONES SUSTAINABILITY INDEX (DJSI)

Charoen Pokphand Produces Co.,Ltd. join the Dow Jones Sustainability Index membership Industry Leader of the Food & Staples Retailing industry for the first time with a 34- score assessment, no.68 in the world, with details as follows :

**34 score assessment**

**no.68 in the world**

**Governance & Economic 32**

- Corporate Governance 15
- Materiality 65
- Risk & Crisis Management 11
- Business Ethics 65
- Policy Influence 0
- Supply Chain Management 52
- Tax Strategy 0
- Info. Security/ Cybersecurity 20
- Innovation Management 31

**Social 37**

- Social Reporting 100
- Labor Practice Indicators 46
- Human Rights 48
- Living Wage 6
- Human Capital Development 27
- Talent Attraction & Retention 16
- Corporate Citizenship & Philanthropy 25
- Occupational Health & Safety 70
- Health & Nutrition 12
- Customer Relationship Management 12

**Environmental 34**

- Environmental Reporting 100
- Environmental Policy & Management Systems 95
- Operational Eco-Efficiency 48
- Biodiversity 26
- Climate Strategy 17
- Food Loss & Waste 39
- Genetically Modified Organism 0
- Packaging 6
- Sustainable Agricultural Practices 0
- Water Related Risks 24

## BUSINESS BASE OF CROP INTEGRATION BUSINESS And Companies in Business

(GRI 102-1, 102-2, 102-3, 102-4, 102-5, 102-6, 102-16,102-45)

**MAIN COMPANY**

- 6 Research Stations
- 12 Laboratory
- 7 Seed Processing Plant
- 4 Fertilizer Plant
- 1 Rubber Plant

**THAILAND**

- 3 Research Stations
- 3 Seed Laboratory
- 1 Biotechnology Laboratory
- 1 Soil and Plant Nutrient Analysis Laboratory
- 1 Chemical Fertilizer Laboratory
- 1 Microbial and Organic Fertilizer Laboratory
- 3 Seed Processing Plant
- 1 Chemical Fertilizer Plant
- 1 Organic Fertilizer Plant
- 1 Rubber Plant

**Number of employees 2,183 people**

**4 countries**  
(Thailand, Myanmar, Vietnam, India)

**Corn Farmers 907,000 people**

Number of farmers in the business base country

**MYANMAR**

- 1 Seed and Plant Nutrients Laboratory
- 2 Seed Processing Plant
- 1 Chemical Fertilizer Plant
- 1 Organic Fertilizer Plant

**VIETNAM**

- 1 Research Station
- 1 Seed Laboratory
- 1 Soil and Plant Nutrient Analysis Laboratory
- 1 Seed Processing Plant

**INDIA**

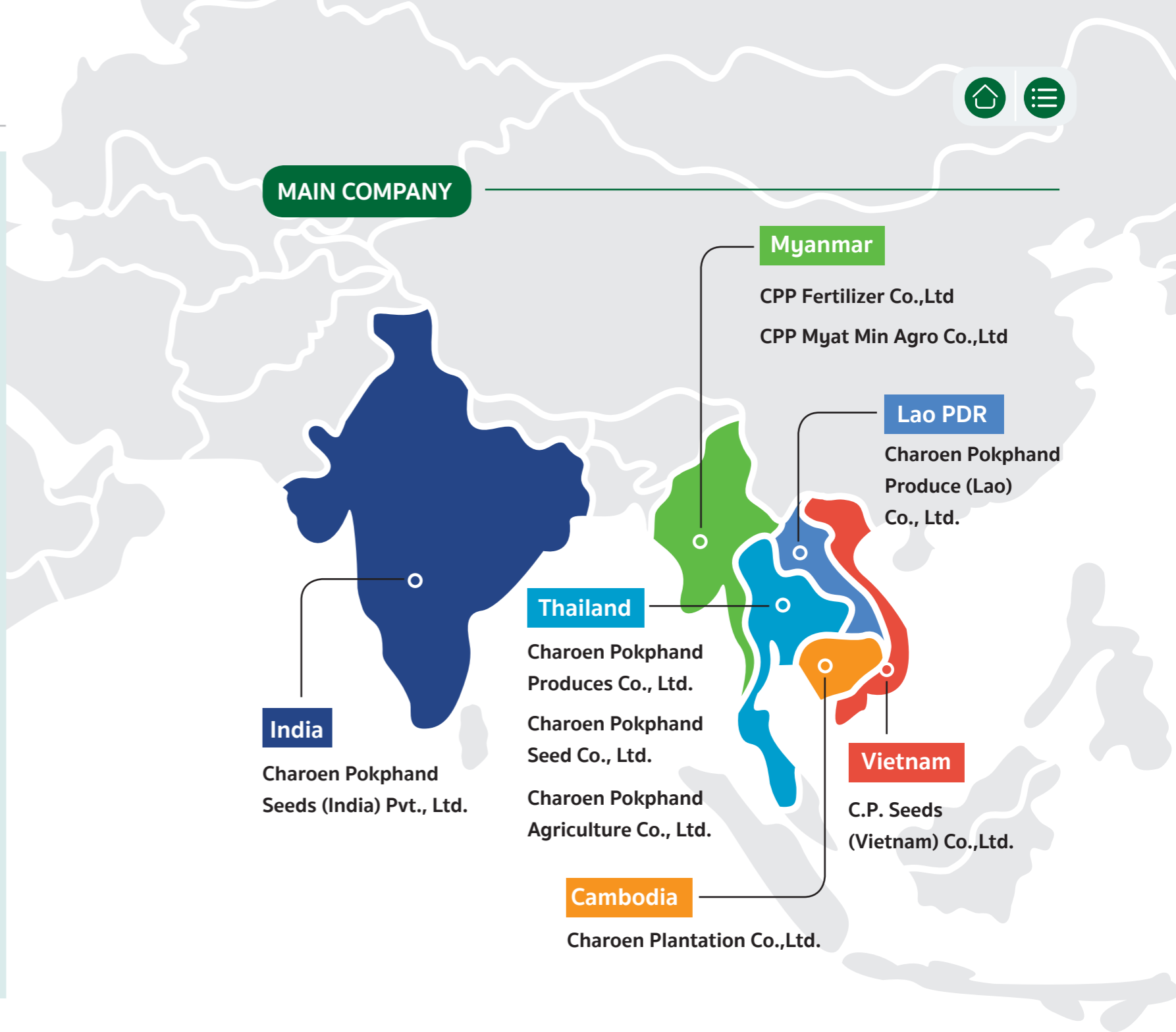
- 2 Research Stations
- 1 Seed Laboratory
- 1 Biotechnology Laboratory
- 1 Seed Processing Plant



# CROP INTEGRATION BUSINESS

## MAIN BUSINESS

From the fact that Charoen Pokphand Group operates an Integrated Agricultural Business and Animal Feed Production for domestic and international, corn being one of the crucial raw materials due to its high protein content. Therefore, to support the production shortfall of corn with stable and good quality for raising animals, Crop Integration Business plays an important role in the upstream production consisting of R&D of corn hybrids to be suitable to climate change and cultivation behavior of growers as well as seed production without contamination through controlled seed production facilities to produce corn hybrid seeds that meet the quality requirement of growers. In addition, the company provides and transfers knowledge about cultivation technology, know how to apply fertilizer to increase production or adding organic fertilizer to improve the soil fertility to member farmers. Last but not the least, the most crucial factor is water resources management and irrigation to enable all year round planting which will result in increasing income and farmers' standard of living according to CP's Three Benefits Principle : Farmers, Countries and Organization.



## โอกาสและความท้าทายทางธุรกิจ



### ECONOMIC DIMENSION

- Governance and Business Ethics
- Customer Relationship Management
- Health & Well-Being
- Supply Chain Management
- Risk Management

### SOCIAL DIMENSION

- Social Impact on Community
- Human Rights
- Occupational Health and Safety
- Human Capital Development
- Talent Attraction and Retention

### ENVIRONMENTAL DIMENSION

- Operational Eco-Efficiency
- Ecosystem and Biodiversity
- Raw Material Sourcing



## SUSTAINABLE UPSTREAM BUSINESS DIRECTION

### CROP INTEGRATION BUSINESS

Now, agriculture tends to face various problems, such as a shortage of agricultural labor. This is due to entering the aging society in the agricultural sector, increasing every year. Thus, the idea of agricultural management using technology was born. To make production costs as cheap as possible and to increase competitiveness. There is also uncertainty regarding crop marketing conditions. And most importantly, there are risk factors from weather conditions, natural disasters, and various environmental conditions as well.

Thailand has over 137 million rai of agricultural land. Farmers have an average holding area of 17 rai per household. It is a problem for the use of agricultural machinery to create value for money in production. Therefore, the idea of merging land into large plots was born. for crop production activities (Not the possession or ownership of land) in order to have an appropriate economic size. Both the conditions of the community and the appropriate size of machinery to be used in every step of production to reduce management costs. and moving to have continuous work from growing crops throughout the year

Using precise technology from planting Providing appropriate plant nutrients according to soil analysis values Controlling diseases and pests Monitoring plant health and vigor throughout its lifespan until harvest. Weather forecast for determining the appropriate planting period. and can evaluate and predict in advance the results of satellite technology. Including the use of IoT technology to collect data. Create a database of farmers as Big Data for income analysis. Production costs allow farmers to make informed decisions about crop cultivation. Most importantly, we

will focus on growing crops in irrigated areas and creating water sources for agriculture. In order to reduce the risk of natural disasters to farmers to a minimum. When there is a water source for agriculture Farmers will be able to increase the cropping cycle in the same area for another 2-3 generations. These factors will be planned for a sustainable upstream agricultural business. And most importantly, it will increase income for farmers so that they have income throughout the year.

Reducing various steps Shortening the supply chain will create stability and sustainability for the Group's and the country's midstream and downstream food businesses by creating a large-scale farming model in the Company's area. and rental space to serve as a model for farmers By using modern and appropriate production technology. And there are specialists who will provide knowledge and academics in each field. Including agricultural machinery Soil/plant nutrients, water/irrigation, knowledge about plants and post-harvest management to achieve maximum efficiency This includes the opportunity to expand large-scale agriculture from combining small farmer areas. It creates awareness and continuously expands the results, increasing both the amount of space and productivity. As well as acceptance by farmers and society will create a cluster and the supply chain to be short and achieve the best efficiency and cost. Including the company will create a supporting industry for processing. and increase value around Planting area within reasonable transportation distance These will cause changes in the country's agricultural sector. For the benefit of farmers, the nation, and the company according to the 3 values of the Charoen Pokphand Group.

## Vision & Mission

### VISION

Leader in integrated agriculture  
agriculture on sustainable irrigated agricultural land

### MISSION

Stepping towards  
Integrated Agriculture.

By using modern machinery and technology.  
Appropriate for maximum efficiency



## C.P. SIX CORE VALUES



1

### THREE BENEFITS

We act as good corporate citizens to maintain good judgment to create value for the customers we serve the community we live together and the countries in which we do business.



2



### SPEED WITH QUALITY

We are committed to achieving our goals. You must think quickly, act quickly and achieve quality results as determined by the company.



3



### SIMPLIFICATION

We are committed to performing work that is beneficial to the organization. There are operating procedures that are not redundant. Always up to date It is accepted by personnel. and can be put into practice quickly and efficiently

4



5



### INNOVATE

We are dedicated to inventing and develop new things in continuous business operations with the goal of driving the organization towards being “Innovative organization” to create the best products and services To respond to the needs of farmers and business partners.

6



### INTEGRITY

We adhere to morality and ethics. Behave with honesty and be true to yourself. Colleagues, consumers and organizations are transparent. Can be verified and trusted.



# SUSTAINABILITY MANAGEMENT



Charoen Pokphand Produces Co.,Ltd. Charoen Pokphand Agriculture Co.,Ltd. and companies in Crop Integration Business, Charoen Pokphand Group believes that in addition to delivering value through quality products and services, and meets the needs of customers and consumers Businesses will be able to operate sustainably. Must be based on social responsibility, and the environment according to the Sufficiency Economy Philosophy

This is the origin of conducting business by adhering to the philosophy of 3 benefits that focuses on creating benefits for the nation, society and companies as always Including applying the C.P. Excellence guidelines.

Our organization is committed to operating sustainably, going beyond complying with the rules, regulations and standards of the countries in which we operate. By following international principles of sustainability such as the UN Global Compact, United Nations Principles on business operations and human rights (UN Guiding Principles on Business and Human Rights: UNGP) and the Sustainable Development Goals of the United Nations (UN Sustainable Development Goals: UN SDGs)



**SUSTAINABILITY STRATEGY**



**SUSTAINABILITY GOVERNANCE**



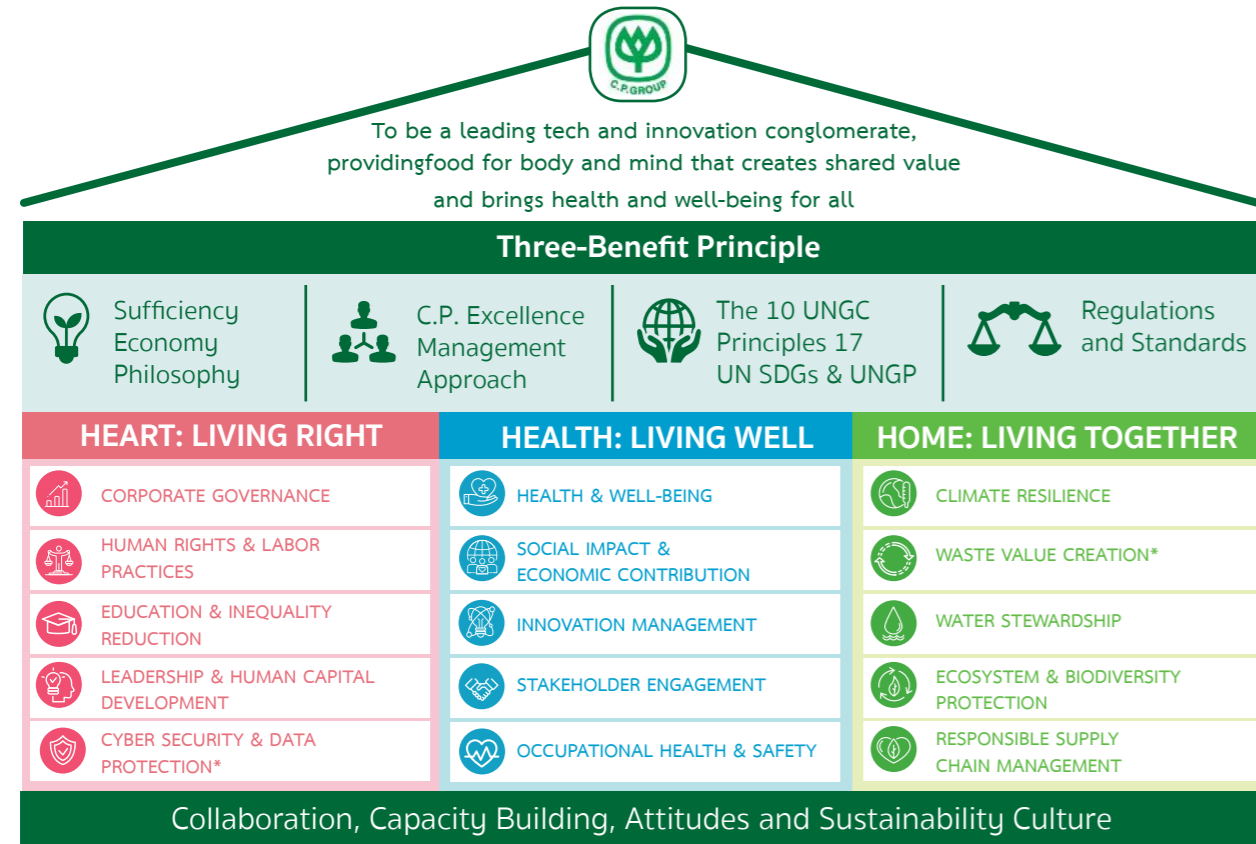
**ABOUT THIS REPORT**



**MATERIALITY ASSESSMENT**



# SUSTAINABILITY STRATEGY FRAMEWORK 2030



Enabled by Partnerships, Capability, and Culture of Sustainability

In 2016, Crop Integration Business has adopted a sustainability strategy and the 2022 sustainability goals of the Charoen Pokphand Group as a framework for sustainable operations. Under the 3Hs framework,

- HEART** Commitment to doing business with a sustainable mind.
- HEALTH** Commitment to a sustainable society.
- HOME** Commitment to a sustainable environment.

The Sustainability Strategy of the C.P. Group consists of 4 main components, which are at the heart of business operations and the foundation of the Group's sustainability, namely the 3-Benefit Philosophy aimed at creating benefits for the nation, society and the company.

In addition, Crop Integration Business also places importance on conducting business on the basis of good governance, transparency and accountability. Including social and environmental responsibility, reflected throughout the Group's operations with the aim of long-term sustainability and for the utmost benefit of all groups of stakeholders. So that sustainability operations cover all sustainability issues. This is in line with the strategy of the Charoen Pokphand Group. Crop Integration Business Group has received 3 additional policies, strategies and goals for sustainability towards the year 2030 :



# SUSTAINABILITY ACTION CONCEPT



CORPORATE GOVERNANCE		SDGs
<b>Goal 2022</b>	100% of Crop Integration Business get a recognized evaluation of Corporate Governance Operations (Ethisphere)	12 RESPONSIBLE CONSUMER BEHAVIOUR, 10 PALEO DIETS AND OTHERS
<b>Goal 2030</b>	100% of Crop Integration Business get a recognized evaluation of Corporate Governance Operations (Ethisphere)	
HUMAN RIGHTS AND LABOR PRACTICES		SDGs
<b>Goal 2022</b>	100% of Crop Integration Business where human rights impacts from activities of high-risk organizations and direct suppliers are regularly assessed	3 AFFORDABLE AND CLEAN ENERGY, 5 GENDER EQUALITY, 8 DECENT WORK AND ECONOMIC GROWTH, 10 AFFORDABLE AND CLEAN ENERGY
<b>Goal 2030</b>	100% of Crop Integration Business where human rights impacts from activities of high-risk organizations and direct suppliers are regularly assessed	
LEADERSHIP & HUMAN CAPITAL		SDGs
<b>Goal 2022</b>	100% of Crop Integration Business group leaders and employees Through training to develop knowledge and understanding of sustainability	4 QUALITY EDUCATION, 5 GENDER EQUALITY, 17 PARTNERSHIPS FOR DEVELOPMENT
<b>Goal 2030</b>	100% of Crop Integration Business group leaders and employees Through training to develop knowledge and understanding of sustainability	



EDUCATION & INEQUALITY REDUCTION		SDGs
<b>Goal 2022</b>	Supporting 9,546 children, youth and adults to have the opportunity to access education and developing the necessary skills from the goal of 100,000 people	4 QUALITY EDUCATION, 8 DECENT WORK AND ECONOMIC GROWTH, 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
<b>Goal 2030</b>	Support children, youth and adults to have the opportunity to access education and developing the necessary skills from the goal of 100,000 people	

CYBER SECURITY & DATA PROTECTION		SDGs
<b>Goal 2022</b>	100% Certified Cyber Security Standards	10 AFFORDABLE AND CLEAN ENERGY, 2 ZERO WASTE
<b>Goal 2030</b>	100% of Crop Integration Business certified to international cyber security and data protection standards.	3 GOOD HEALTH AND WELL-BEING



GOOD HEALTH & WELL-BEING		SDGs
<b>Goal 2022</b>	0.84% of sales come from B2B2C and B2C products and services that promote health and wellness	2 ZERO WASTE, 3 GOOD HEALTH AND WELL-BEING
<b>Goal 2030</b>	Sales generated from B2B2C and B2C products and services that promote health and wellness	

SOCIAL IMPACT & ECONOMIC CONTRIBUTION		SDGs
<b>Goal 2022</b>	100% Promote occupations and quality of life for farmers and vulnerable groups 53,030 out of the target of 10,000	1 NO POVERTY, 4 QUALITY EDUCATION, 8 DECENT WORK AND ECONOMIC GROWTH, 10 REDUCED INEQUALITIES
<b>Goal 2030</b>	Number of farmers, small entrepreneurs vulnerable groups and others throughout the supply chain that has been supported to generate income for all 100,000	

OCCUPATIONAL HEALTH & SAFETY		SDGs
<b>Goal 2022</b>	The lost time accident rate was 1.47 cases/1,000,000 working hours	3 GOOD HEALTH AND WELL-BEING, 8 DECENT WORK AND ECONOMIC GROWTH
<b>Goal 2030</b>	Lost time accident rate is zero.	

INNOVATION		SDGs
<b>Goal 2022</b>	Number of registered patents and petty patents 21 out of 18 targets	8 DECENT WORK AND ECONOMIC GROWTH, 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE, 17 PARTNERSHIPS FOR THE GOALS
<b>Goal 2030</b>	There are a total of 50 registered patents and petty patents.	

STAKEHOLDER ENGAGEMENT		SDGs
<b>Goal 2022</b>	The survey found that Crop Integration Business received 56% stakeholder engagement score from the target 80%	16 AFFORDABLE AND CLEAN ENERGY, 17 PARTNERSHIPS FOR THE GOALS
<b>Goal 2030</b>	80% of multi-stakeholder engagement surveys score positively	



CLIMATE RESILIENCE		SDGs
<b>Goal 2022</b>	The amount of greenhouse gas emissions has increased. 17.87% per revenue unit compared to the base year 2020	7 AFFORDABLE AND CLEAN ENERGY, 11 SUSTAINABLE CITIES AND COMMUNITIES, 12 RESPONSIBLE CONSUMPTION AND PRODUCTION, 13 CLIMATE ACTION
<b>Goal 2030</b>	100% of direct and indirect greenhouse gas emissions (Scope1 and Scope2) net zero.	

CIRCULAR ECONOMY		SDGs
<b>Goal 2022</b>	N/A	3 GOOD HEALTH AND WELL-BEING, 11 SUSTAINABLE CITIES AND COMMUNITIES
<b>Goal 2030</b>	All plastic packaging used is more than 90% recyclable, reusable or compostable.	12 RESPONSIBLE CONSUMPTION AND PRODUCTION

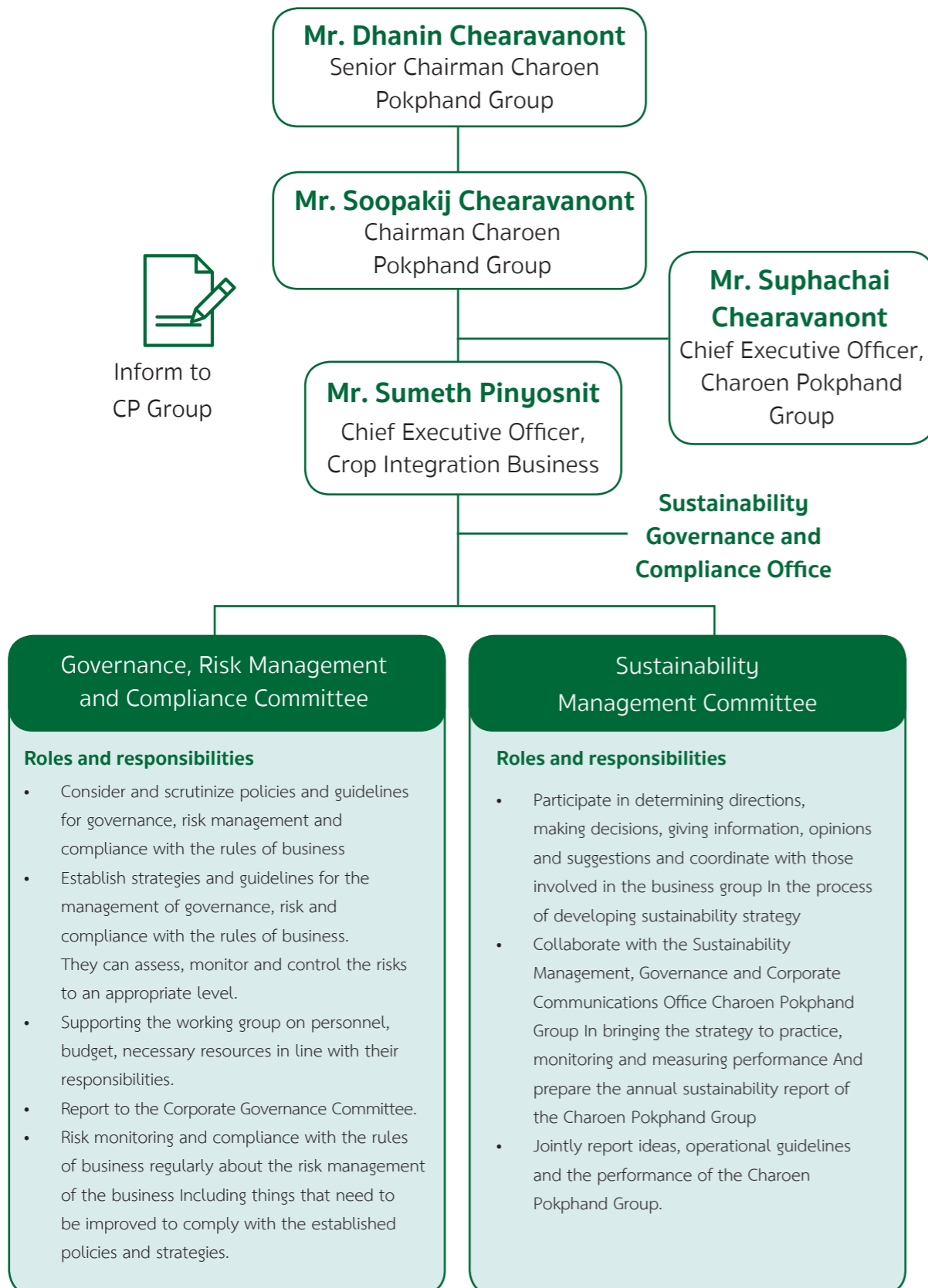
CIRCULAR ECONOMY		SDGs
Goal 2022	N/A	 
Goal 2030	90% of all plastic packaging are recyclable, reusable or compostable.	
WATER STEWARDSHIP		SDGs
Goal 2022	Reduced water consumption 76.11% per revenue unit from the target of 30% compared to the base year 2020	  
Goal 2030	Reduce water consumption by 30% per revenue unit compared to the base year 2020	
ECOSYSTEMS AND BIODIVERSITY PROTECTION		SDGs
Goal 2022	1 project, Safe Thai Nature Project done in conjunction with external organizations	  
Goal 2030	Number of projects with relevant international partners to manage and monitor biodiversity in business operations.	
RESPONSIBLE SUPPLY CHAIN MANAGEMENT		SDGs
Goal 2022	73.91% of businesses with a traceability process of the first-tier business partners, 17 were audited for sustainability.	  
Goal 2030	100% high-risk raw materials are traceable and high-risk suppliers audited.	

## MATERIALITY ASSESSMENT RESULTS OF CROP INTEGRATION BUSINESS

Material Issue	Topic	Business Line			
		Agricultural Integration Business	Seed Business	Fertilizer Business	Crop Integration Business
Corporate Governance	Governance and Business Ethics	●	●	●	●
	Risk and Crisis Management	●	●	●	●
	Cyber Security & Data Protection	●	●	●	●
Human Rights and Labor Practices	Labor Practices and Human Rights (Excluding Occupational Health & Safety)	●	●	●	●
	Safety, occupational health and working environment	●	●	●	●
Leadership & Human Capital Development	Human Resource Management	●	●	●	●
Stakeholder Engagement	Stakeholder Engagement	●	●	●	●
	Customer Relationship Management	●	●	●	●
Social Impact & Economic Contribution.	Corporate Citizenship and Philanthropy (excluding education activities)	●	●	●	●
	Social Impacts from Operations, Products, and Services	●	●	●	●
Health & Well-being	Health & Well-being	●	●	●	●
	Animal Welfare	●	●	●	●
Education & Inequality Reduction	Social Inclusion in Education	●	●	●	●
Innovation	Innovation Management	●	●	●	●
Climate Resilience	Climate Change Impact	●	●	●	●
	Energy Management	●	●	●	●
	Effluent and Waste Management	●	●	●	●
	Resource Efficiency	●	●	●	●
Water Stewardship	Water Management	●	●	●	●
Ecosystem & Biodiversity Protection Responsible	Raw Material Sourcing / Biodiversity and Ecosystems	●	●	●	●
	Packaging	●	●	●	●
Supply Chain	Management Responsible Supply Chain Management	●	●	●	●

● No Impact
● Little impact
● Middle Impact
● High Impact
● Very High Impact

# GOVERNANCE STRUCTURE



# MATERIALITY ASSESSMENT PROCESS

(GRI 102-2, 102-15, 102-32, 102-46, 102-47, 102-54, 103-1)

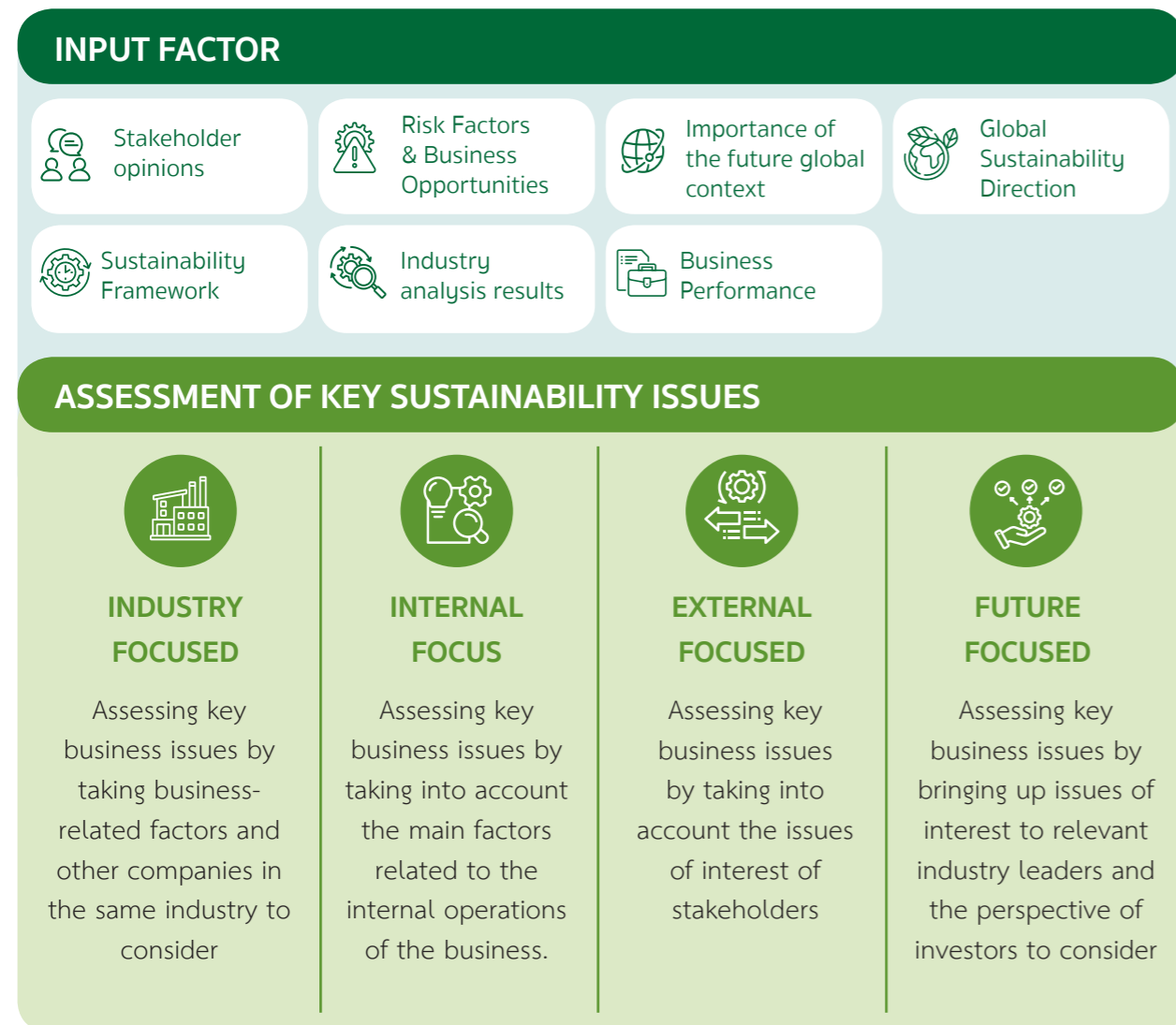


<b>Stakeholder Inclusive</b>	<b>Balance</b>
<b>Sustainability Context</b>	<b>Clarity</b>
<b>Materiality</b>	<b>Comparability</b>
<b>Completeness</b>	<b>Reliability</b>
<b>Accuracy</b>	<b>Timeliness</b>





# SUSTAINABILITY STRATEGY 2030



Crop Integration Business determine the content and quality of this report. On the basis of the organization’s operations and important issues that affect the economy, society and the environment. Under the perspective of stakeholders both inside and outside the organization To be one of the channels for communication for stakeholders to be informed of our commitment and operating results according to the company’s strategic sustainability framework. The company uses international sustainability reporting GRI Sustainability Reporting Standards, Core option, as a framework for preparing the report. By considering both internal and external factors related to operations. To evaluate important sustainability issues

Assessment of sustainability issues under the 10 key principles of the GRI Standards, which includes stakeholder participation ,Considering the context of sustainability ,Assessment of important sustainability issues, completeness. of information, as well as verifying the quality of reports by carrying out work to check the accuracy of disclosed information, balance of operating results. Comparable data to

show historical performance trends, data reliability and reporting timeliness to inform stakeholder decision-making. There are processes and procedures for evaluating important sustainability issues as follows:



## STEPS TO IDENTIFY KEY ISSUE

Information and analysis of important sustainability issues related to Crop Integration Business.

### The steps for identifying important issues include

- Sustainability workshop in 2016 shared between executives Including collecting information from trading partners to consider. After that, it is reviewed every year, once a year.
- Results of the review of significant issues for 2021 of the Charoen Pokphand Group and Crop Integration Business.
- Compare sustainability issues of Crop Integration Business with the same business : Sustainable Development Goals, United Nations Global Compact, World Business Committee for the Environment (WBCSD), Dow Jones Sustainability Index.
- Stakeholder groups from survey data of Charoen Pokphand Group’s trading partners and CSR, total 14 groups.
- Prepare important issues of the subsidiaries that has prepared a sustainability report and organized a forum to listen to opinions with additional stakeholders. From the questionnaire survey





### Prioritization

- Meeting of the Sustainability Management Committee to consider information on important issues regarding sustainability. Separated by stakeholder group
- Survey opinions of employees, executives and stakeholder representatives through an online system.
- Consider important information From meetings and surveys of stakeholders' opinions Follow this step
  - Weighting values for business.
  - Weight of each stakeholder group
  - Calculate the importance score to stakeholders.
  - Calculate the importance score for business operations
  - Materiality Matrix



### Verifying accuracy and reliability

Verify the preparation of sustainability reports according to GRI standards to complete all 4 aspects. The steps for verifying accuracy include:

- Interview external stakeholders to sustainability issues and other ideas to develop sustainability reports.
- The management team considers and approves significant issues.
- Verify and certify the accuracy of sustainability reporting by an independent agency.



### Continuous Development

Listen to opinions in order to develop future sustainability reports. To be able to meet the expectations of stakeholders At the same time, there are also many contact channels open.



## SCOPE OF MATERIALITY ASSESSMENT

Topic	Sustainability Issues	Related GRIs	Scope											
			Inside Organization	Outside Organization										
			Employee	Customers / Consumers	Community & Society	Partners	Shareholders / Investors	Media / Online media	Government Agency	Supplier	Competitor	NGOs	Creditor / Bank	
HEART เศรษฐกิจ	Corporate Governance	102-11, 102-12, 102-13, 102-18, 102-22, 102-24, 102-30, 102-35, 102-38, 103-1, 103-2, 103-3, 205-1, 205-2, 205-3, 406-1	●	●	●	●	●	●	●	●	●	●	●	●
	Human Rights and Labor Practices	102-41, 103-1, 103-2, 103-3, 401-2, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-9, 403-10, 405-1, 405-2, 412-1	●	●	●	●	●	●	●	●	●	●	●	●
	Education	103-1, 103-2, 103-3, 203-2	●	●	●	●	●	●	●	●	●	●	●	●
	Leadership & Human Capital Development	103-1, 103-2, 103-3, 401-1, 404-1, 404-2, 404-3	●	●	●	●	●	●	●	●	●	●	●	●
	Cyber Security and Data Protection	102-19, 102-20, 103-1, 103-2, 103-3, 418-1	●	●	●	●	●	●	●	●	●	●	●	●
HEALTH สังคม	Good health & Well-being	103-1, 103-2, 103-3, 417-1	●	●	●	●	●	●	●	●	●	●	●	●
	Social Impact	103-1, 103-2, 103-3, 201-1, 413-1	●	●	●	●	●	●	●	●	●	●	●	●
	Occupational health & Safety	103-1, 03-2, 103-3, 403-9, 403-10	●	●	●	●	●	●	●	●	●	●	●	●
	Innovation	103-1, 103-2, 103-3	●	●	●	●	●	●	●	●	●	●	●	●
	Stakeholder Engagement	103-1, 103-2, 103-3, 102-40, 102-41, 102-42, 102-43, 102-44	●	●	●	●	●	●	●	●	●	●	●	●
HOME สิ่งแวดล้อม	Climate change Management	103-1, 103-2, 103-3, 302-1, 302-3, 302-4, 305-1, 305-2, 305-4	●	●	●	●	●	●	●	●	●	●	●	●
	Circular Economy	103-1, 103-2, 103-3, 306-1, 306-2, 306-3, 306-4, 306-5	●	●	●	●	●	●	●	●	●	●	●	●
	Water Stewardship	103-1,103-2,103-3, 303-1, 303-2, 303-3, 303-4, 303-5	●	●	●	●	●	●	●	●	●	●	●	●
	Ecosystem & Biodiversity Protection	103-1, 103-2, 103-3, 304-1, 304-2	●	●	●	●	●	●	●	●	●	●	●	●
	Responsible Supply Chain	103-1, 103-2, 103-3, 204-1, 308-1, /414-1	●	●	●	●	●	●	●	●	●	●	●	●

## Objectives of surveying opinions of stakeholders



### Stakeholder Perception Survey and assess sustainability impacts (online system)



Links are separated into each stakeholder group of each business group.



Analyze answers and report overall results for each business. Without specifying the name and identity of the survey respondent.



Can be used from both PC, tablet and mobile phone.



The survey takes approximately 30 minutes and results cannot be saved for later.

## Survey (31 questions)

### Section 1

#### General Information

**2** questions | age  
sex



### Section 2

#### Performance results 15 important goals of Charoen Pokphand Group

**15** questions | 15 questions : Performance level according to the sustainability goals of Crop Integration Business



### Section 3

#### Assessment of Company Sustainability Issues

**15** questions | 10 questions : Stakeholders were asked to select 5 issues of interest from 23 issues.  
3.1 Assess the severity of the impact  
3.2 Assess the likelihood of impacts



### Section 4

#### Communication: Listening and responding to stakeholders.

**3** questions | 4.1 Efficiency in communicating with stakeholders both inside and outside the organization.  
4.2 Listening to the opinions of stakeholders  
4.3 Respond to the needs and expectations of stakeholders



### Section 5

#### Overall Opinions

**1** questions | 5.1 Overall satisfaction with the company





# Results of the assessment of significant sustainability issues

## STAKEHOLDER ENGAGEMENT REPORT YEAR 2022

Crop Integration Business.



### Material Topics and Stakeholders Impact

#### Top 10 Material Topics and Impact Ranking by Stakeholders

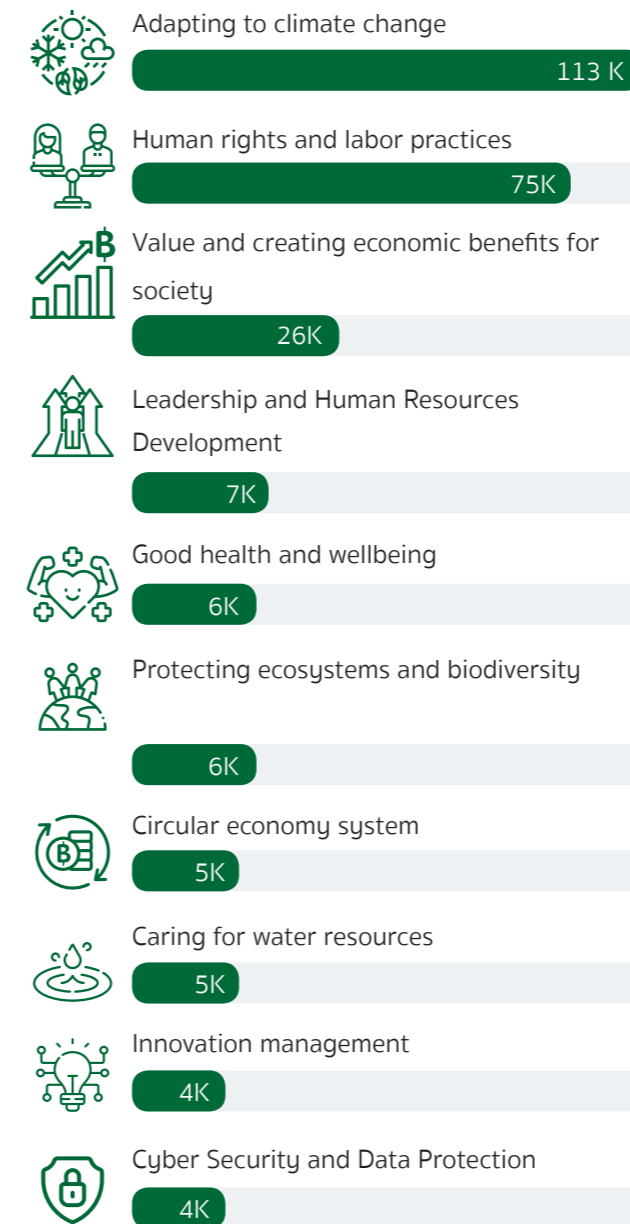


#### Highest Score per Stakeholders



### Sustainability Goals and Stakeholders Impact

#### Top 10 Sustainability Goals and Impact Ranking by Stakeholders



#### Highest Score per Stakeholders





## ABOUT THIS REPORT



### SUSTAINABILITY REPORTING

Crop Integration Business has prepared the 2022 Sustainability Report, the third edition, which was published to the public on October 1, 2023.



### PURPOSE OF THIS REPORT

This report is prepared to communicate the commitment to conduct business towards sustainability in terms of economy, society and environment.

### OPERATION SCOPE



This report presents the overall performance of companies in the Crop Integration Business covering 4 production base countries. from 1 January to 31 December 2022

### REPORT SCOPE



The Company has prepared this Sustainability Report. Complies with Global Reporting Initiatives (GRI) standards and discloses information in accordance with Core Option guidelines.



### THIRD PARTY CERTIFICATION

This report has been assessed and verified for credibility by LRQA (THAILAND) LIMITED. an internationally recognized independent certification body. For the reviewed data, it includes : GRI 101, GRI 102, GRI 102-16, GRI 102-17,

GRI302-1, GRI303-3, GRI 305-1, GRI 305-2, GRI 306-3, GRI 306-4, GRI 306-5, GRI 403-9 และ GRI 403-10



### OPERATION PROGRESS REPORT

The company has continuously presented progress in implementing the principles of the United Nations Global Compact since 2015. Since 2019, the company has raised the level of transparency into the progress report according to the principles of the United Nations Global Compact. 21 United Nations

### UNITED NATIONS SUSTAINABILITY DEVELOPMENT GOALS



The Company is committed to operating in accordance with the 17 Sustainable Development Goals (SDGs) of the United Nations.



### COMPANIES IN THE SCOPE OF THE REPORT

Human resources performance covered all companies in the Crop Integration Business (100%), while energy, water, waste, air and safety performance covered all of the company's four production countries. Charoen Pokphand Produces Co., Ltd. , Charoen Pokphand Agriculture Co.,Ltd. and companies in Crop Integration Business

### CONTACT US



Crop Integration Business, Charoen Pokphand Group values stakeholder participation and listen to opinions, suggestions and criticisms in order to improve the operational process to be more efficient as well as directly responding to the needs of stakeholders by providing a variety of communication channels to be able to communicate quickly and easily to business groups.

#### Office

Sustainability Governance and Compliance Office (SGC) ,

Fortune Tower 23rd floor  
1 Ratchadaphisek Road, Din Daeng, Bangkok 10400



#### Website

<https://sgc.cptg.co.th/>



#### e-mail

[vos.cpp@cptg.co.th](mailto:vos.cpp@cptg.co.th)





# HEART



## LIVING RIGHT

Charoen Pokphand Produces Co.,Ltd. Charoen Pokphand Agriculture Co.,Ltd. and companies in Crop Integration Business. Realize the importance of economic sustainability Therefore, the business has been operated under the concept Organizational growth from the perspective of a stable, long-term economy. There is a planning process and set clear goals that you want to achieve. As well as having an efficient work process that supports risks that occur. To develop new innovative products that leads to sustainability accepted by customers Embedded in the activities of people in the organization, conveying the message to the organization’s brand and products.

To be a leading integrated agricultural business company under the framework of vision, mission, and policy, the integrated plant business has set economic sustainability goals, consisting of:

- 
**CORPORATE GOVERNANCE**
- 
**HUMAN RIGHTS & LABOR PRACTICES**
- 
**EDUCATION & INEQUALITY REDUCTION**
- 
**LEADERSHIP & HUMAN CAPITAL DEVELOPMENT**
- 
**CYBER SECURITY & DATA PROTECTION**



# CORPORATE GOVERNANCE

**GRI** 102-12, 102-13, 102-16, 102-17, 102-18, 102-19, 103-1, 103-2, 103-3, 205-2, 205-3)



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business confidence that good corporate governance It is an important factor for business operations and enhancing competitiveness. as well as leading the organization to sustainable growth In addition, it adds value to partners and stakeholders in the long term. Good corporate governance Demonstrates the existence of an efficient, transparent, and verifiable management system. Build trust among stakeholders in the value chain All of this requires commitment and cooperation from employees at all levels. With a committee and senior executives clearly promote and support corporate governance.

The challenge is creating understanding and communicating to 100% of employees to see the importance of good corporate governance. Leading to the creation of a responsible business culture. and practices are based on the same standards.

**Goal 2030** 100% businesses implement a corporate governance impact scoring assessment **100%**

## SUPPORTING THE SDGs

**SDG 12**  
Responsible Consumption and Production

**SDG 16**  
Peace, Justice, and Strong Institutions

16.5 Substantially reduce corruption and bribery in all their forms.

16.5 Ensure responsive, inclusive, participatory, and representative decision-making at all levels.

16.B Promote and enforce non-discriminatory laws and policies for sustainable development

## KEY OPERATING RESULTS IN 2022

**CORPORATE GOVERNANCE**  
Businesses implement a corporate governance impact scoring assessment **100%**

**CORPORATE GOVERNANCE POLICY**  
There is an announcement system and monitor compliance with the policy.

**RISK MANAGEMENT**  
There is a system (ERM and E&C Risk).

**COMPLIANCE**  
Follow up and report results and take disciplinary action against rules violations.

**GRIEVANCES AND WHISTLEBLOWING**  
There is a process for receiving complaints and Whistle-blowing of the business.



## CODE OF CONDUCT

Crop Integration Business aiming to raise awareness and instilling a sense of responsibility for work according to the standards of good conduct as well as being transparent and verifiable for directors, executives and employees at all levels a course on business ethics has been included in the orientation of new employees. Along with continually organizing training courses to refresh knowledge on business ethics. along with an ethical knowledge test and practice on an annual basis.

Has also prepared a code of conduct for business partners. and encourage business partners to realize the importance and comply with so that the supply chain management takes place in a concrete way and business.

**Important things**  
that Charoen Pokphand Group employees must adhere to as guidelines for organizational sustainability.

#6Corevalues #Inegrity  
#Morality & Honesty

<p>Learning and testing E- Learning</p> <p><b>100%</b></p>	<p>Total <b>2,183</b> people</p>	
	<p>Tested &amp; Passe</p> <p><b>2,183</b> people</p>	<p><b>100%</b></p>

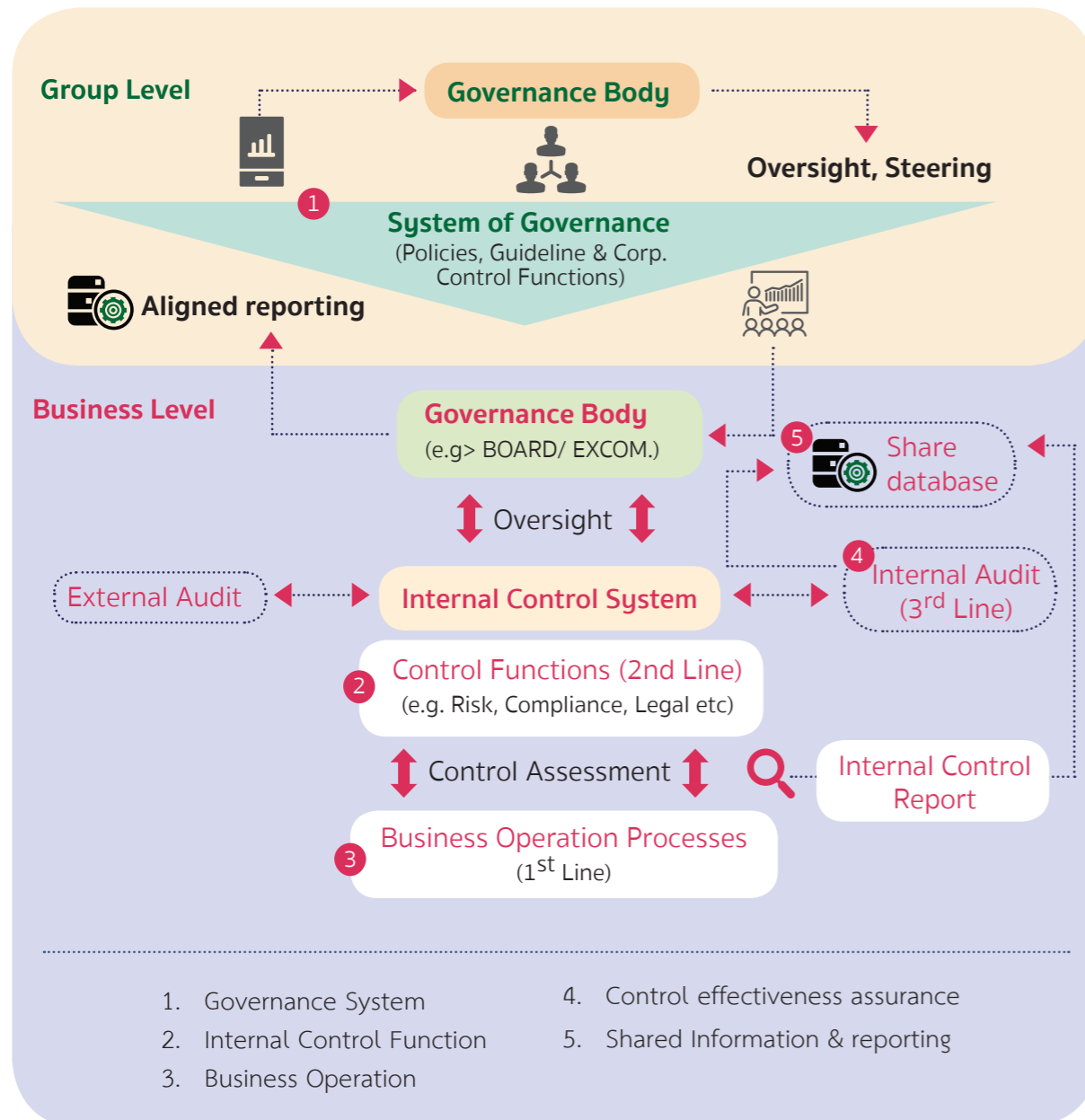
## CORPORATE GOVERNANCE

### MANAGEMENT APPROACH

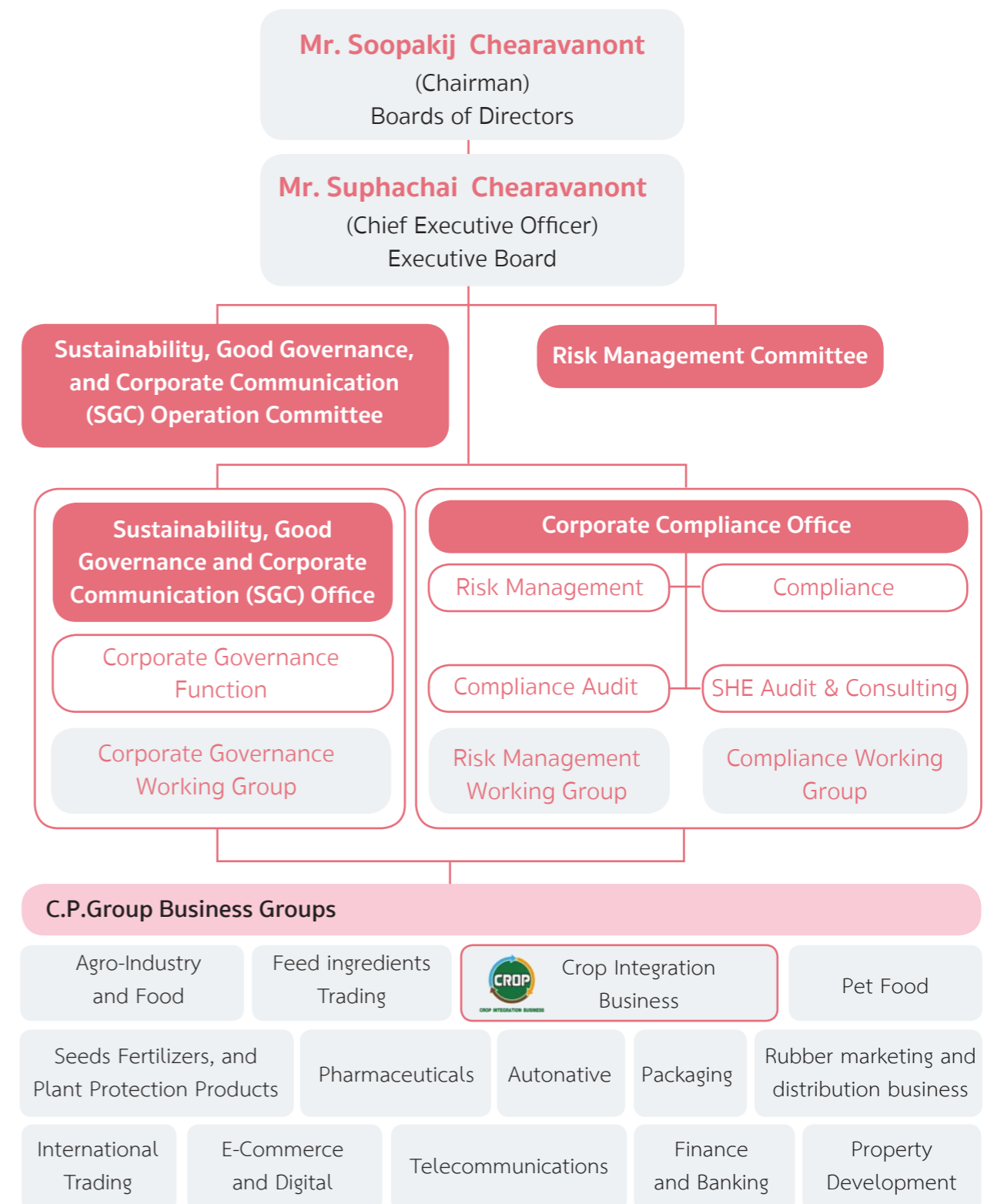
Our business believes that governance good business, risk management and compliance with relevant regulations and laws (Governance, Risk management and Compliance-GRC) GRC is the cornerstone of the organization's sustainable success and confidence in management and stakeholders.



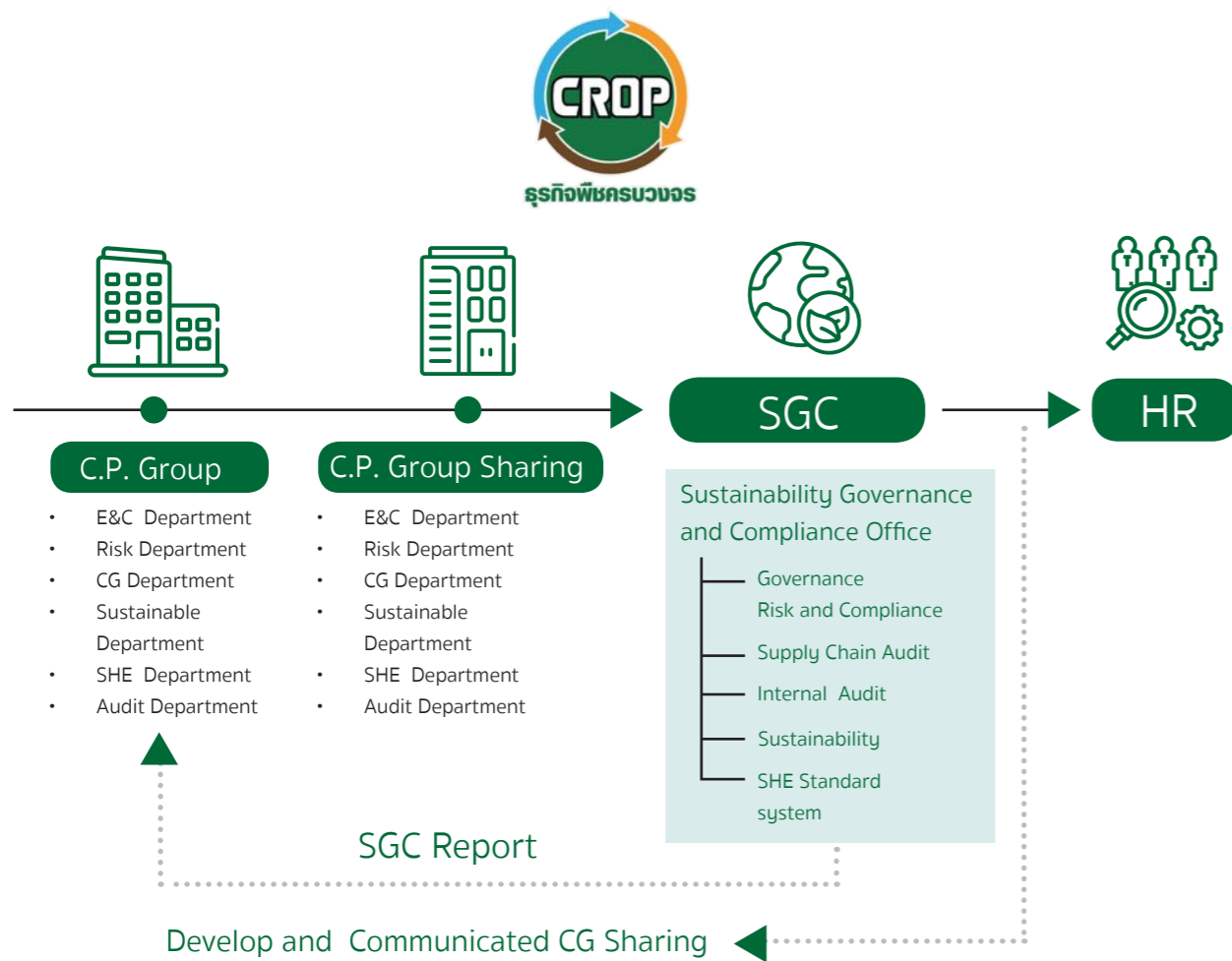
**GOVERNANCE, RISK MANAGEMENT & COMPLIANCE FRAMEWORK**



**Corporate Governance Management Structure**







Business in Thailand	Overseas business
<ul style="list-style-type: none"> <li>CHAROEN POKPHAND PRODUCES CO.,LTD.</li> <li>CHAROEN POKPHAND SEEDS CO.,LTD.</li> <li>CHAROEN POKPHAND AGRICULTURE CO.,LTD.</li> </ul>	<ul style="list-style-type: none"> <li>CPP FERTILIZER CO.,LTD</li> <li>CPP MYAT MIN AGRO CO.,LTD</li> <li>C.P. SEEDS (VIETNAM) CO.,LTD</li> <li>C.P. SEEDS (INDIA) PVT., LTD</li> <li>CHAROEN PLANTATION CO.,LTD</li> <li>CHAROEN POKPHAND PRODUCE (LAO) CO.,LTD.</li> </ul>

## CROP POLICY DEPLOYMENT AND COMMUNICATION

### Management Approach



### Whistle Blowing System

Charoen Pokphand Produces Co.,Ltd. Charoen Pokphand Agriculture Co.,Ltd. and companies in Crop Integration Business. Give importance of providing a channel for reporting clues and complaints to listen to opinions Various suggestions or complaints. Everyone affected or at risk of being affected by business operations. or from illegal acts or business ethics Including behavior that is considered corruption of personnel It is also a tool for surveillance. Follow up on business operations and is a source of information used to improve management and services to be more concise and efficient.

### SYSTEM FOR RECEIVING COMPLAINTS AND NOTIFYING



#### RECEIVING COMPLAINTS

Total number of complaints	8 cases
Employee	7 cases
Partners	1 cases
Reported case were closed within 30 days :	5 cases

#### Complaints

Corruption	5 cases
Conflict of Interest	1 case
Others	2 cases

#### Complaint stats



### Risk Management

(GRI 102-11, 102-15, 102-20, 102-29,102-30,103-1,103-2)



Crop Integration Business has supervised risk management and compliance through the Corporate Governance, Risk and Compliance Committee. (GRC) with continuous review and monitoring. Including reporting results to the C.P. Group’s Risk Management Committee, having a risk management framework used as a common standard within In line with internationally accepted management principles (COSO - Enterprise Risk Management 2017). It is also committed to managing risks by making a risk management plan that will lead to a crisis event and communicate the awareness risk awareness to executive and management levels (Risk Owners)

GRC Committee identifying risk from each unit in the CPP , prepared risk mitigation measures and control risks report and monitor risk management results from all departments as well as communicate the process in every step to executives and employees for acknowledgment And review the risks twice a year, including training to create a culture of organizational risk management for employees on an ongoing basis. In addition, CPP has proactively planned for potential critical conditions and prevent the potential impact of business interruption through Business Continuity Management (Business Continuity Plan: BCP), which is consistent with the business continuity policy Governance and Culture



## COMPLIANCE MANAGEMENT

Now, changes is happening rapidly in terms of laws, rules, regulations and standards has significantly increased the concentration. Charoen Pokphand Produces Co., Ltd. and companies in Crop Integration Business Group are required to regularly evaluate their performance. To manage issues that are inconsistent with corporate and international directions as well as preparing for operations in 2 areas as follows :



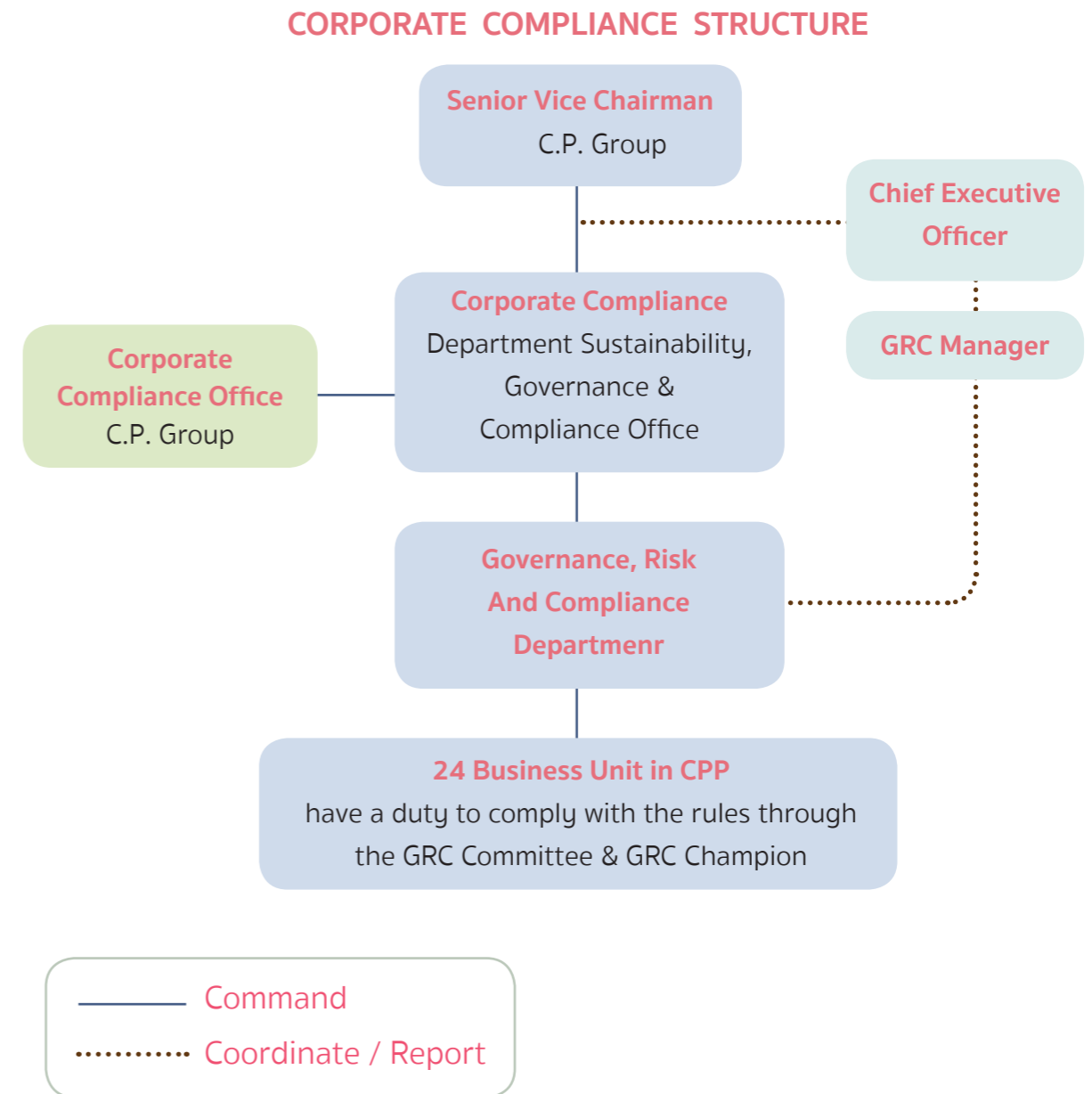
- 1 Announcement of Conflicts of Interest (COL) policies and guidelines which covers all companies in CPP both in Thailand and Overseas
- 2 Establishment of the management structure of the Compliance Department responsible for overseeing compliance with policies and guidelines as well as to find ways to develop and improve for more efficient implementation Including reporting on the performance according to the policies, practices and regulations.

### Building capacity in the organization

In addition to developing responses to assessment results, CPP plans to achieve compliance governance objectives effectively within company. This will be accomplished through projects such as the Compliance Ecosystem, collaboration among C.P. Group companies to prepare for the inclusion of compliance governance into operational processes in a systematic way, where integration will be encouraged between each unit. CPP’s efforts in this area have received the ‘Tone at the top’ and the support of executives from Group companies, who have mandated that there be a “Compliance Network”. That will take on a coordinating role in this Network to liaise with C.P. Group and create awareness, oversee compliance, and establish a system to report performance data to executives.

These workshops helped build their knowledge and understanding of how to operate according to compliance governance guidelines. C.P. Group also arranged trainings on the topics of Compliance & Compliance Audit, Ethical Audit, and Control Self-Assessment Introduction.

## CORPORATE COMPLIANCE STRUCTURE



# HUMAN RIGHTS AND LABOR PRACTICES

**GRI 103-1, 103-2, 103-3, 406-1, 408-1, 409-1, 411-1, 412-1**



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business focuses on promoting the human rights of the foundation of grayness, rights, freedom and equality of ideas. Acts that can not be offensive and must respect the Local laws of each country in order to comply with the way of life, traditions, culture and the practice of good Governance. By avoiding involvement in all forms of human rights violations.


The challenge in our company is the expectation of equal treatment in the labor force of companies, partners or other stakeholders of the supply chain in all dimensions related to human rights. This includes periodic human rights risk assessments.

**Goal 2030** Businesses that regularly assess the human rights impacts of their activities and their high-risk direct suppliers. **100%**

## SUPPORTING THE SDGs

- 
**SDG 3**  
 Good Health and Well-Being
- 
**SDG 5**  
 Gender Equality
  - 5.1 End all forms of discrimination against all women and girls everywhere
- 
**SDG 8**  
 Decent Work and Economic Growth
  - 8.5 Achieve full and productive employment and decent work for all women and men, and equal pay for work of equal value
  - 8.7 Achieve full and productive employment and decent work for all women and men, and equal pay for work of equal value
  - 8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers
- 
**SDG 10**  
 Reduced Inequalities
  - 10.3 Ensure equal opportunity and reduce inequalities of outcome
  - 10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

## KEY PERFORMANCE IN 2022

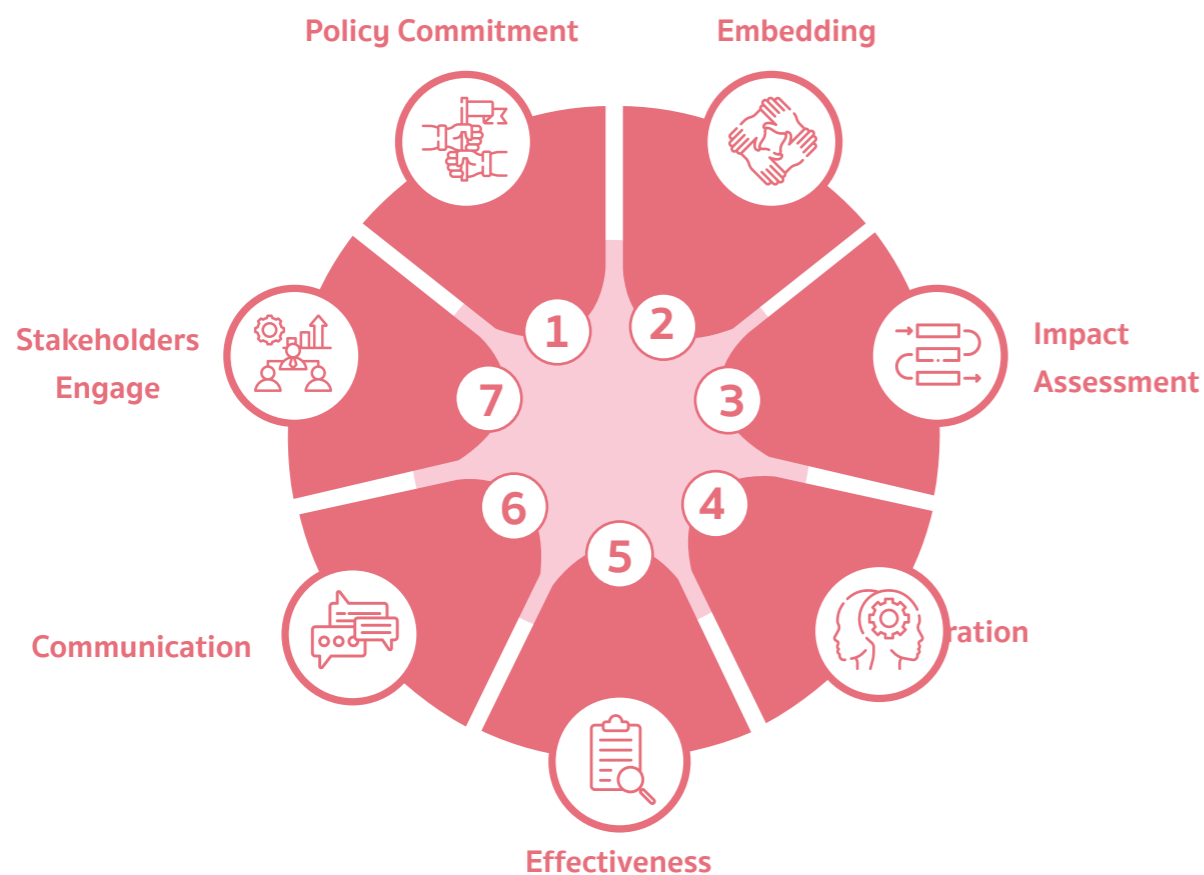
- 
**Human Rights**  
 Human rights impacts from the activities of high-risk organizations and direct suppliers are regularly assessed.
  - 100%**
- 
**Declare commitment to respect human rights**  
 According to the United Nations Guiding Principles on Business and Human Rights
- 
**Female Executive**  
 6% of senior management are women  
 CPP 3 people  
 14.9% of middle are women  
 CPA 17 people
- 
**Disabled Staff**  
 0.64% of employees are disabled.  
 CPP 11 people 0.5%  
 CPA 3 people 0.14%



## MANAGEMENT APPROACH

Charoen Pokphand Produces Co.,Ltd. and companies in Crop Integration Business conduct business by adhering to the philosophy of 3 benefits (benefit to the country, people and the company) and operating with fairness. It is assumed that the personnel is a valuable resource of the organization. The company therefore provides opportunities for everyone to show their talents and be open to advancement opportunities. Create equality for everyone in every country. in which the company has invested Along with developing everyone to have knowledge and skills to work. There is respect for each other's rights and duties. Appreciate the gratitude of your own boss. and subordinates to create value for everyone in the organization

Our company is part of the global community. Therefore, it is of great importance to maintain a philosophy and good practice in taking care of personnel within the organization, as well as striving to expand the scope of operations in respect of human rights. The dignity and equality of all people including customers and partners. and everyone in the supply chain According to international guidelines, which include the Universal Declaration of Human Rights (UDHR) of the United Nations (United Nation) and the Declaration on the Principles and Fundamental Rights at Work of the International Labor Organization. Country (International Labor Organization: ILO) to practice in order to prevent violations. or create human rights impacts both in community and social organizations from the operation of the business, the human rights policy has been established. and labor practices as follows :



1

### Policy Commitment

- Announce Human Rights and Labor Practices Policy
- Announce Code of Conduct
- In the process of developing specific policies, such as a Migrant Workers Employment Policy



2

### Embedding

- Conduct awareness training on human rights, encompassing employees at all levels
- In the process of developing e-learning curriculum to more efficiently educate employees



3

### Impact Assessment

- Assess the severity of human rights risk issues. Cover current activities and that might happen
- Identify key human rights risks of businesses in the countries they invest in.



4

### Integration

- Integrated risk assessment and the normal work processes of the organization
- Develop and communicate guidelines such as responsible supply chain management.



5

### Effectiveness

- Set up key indicators human rights
- Monitoring the progress of human rights actions



6

### Communication

- Report on the progress of implementing Human Rights Due Diligence in the Sustainability Report.



7

### Stakeholders Engage

- Meet and survey needs and expectations of stakeholder groups
- Become a member Network Association UNGC Thailand by 2021 Remedies and Complaints
- Establish a channel for making complaints (Whistleblowing)



## HUMAN RIGHTS PERFORMANCE



### Occupational Health



#### Approach

- Occupational Health and Safety Policy
- Zero Accident Target
- Organize trainings for executives and employees of all levels to help them understand the importance of good governance throughout the supply chain.
- Safety assessment project of business level
- Automotive management

#### Results

of every organization are aware of the importance and contributions to efforts on safety

#### In 2022 Lost time injury rate

##### Employees



**1.47** no. per 1,000,000 working hours (7 people)

Number of employee working hours

**4,746,382** hours

##### Contractor



**6.49** no. per 1,000,000 working hours (8 people)

Number of working hours for contractors

**1,232,222** hours

### Forced Labor and Foreign Worker



#### Approach

- Human rights and labor practices Policy and Guideline
- Operate according to labor standards to provide workers with equal protection
- Assessment of compliance with labor laws, certified by Thai Labor Standards
- Responsible Supply Chain Management Policy and encouraging key business partners to self-assess their sustainability

#### Results

Established operating and governance standards on foreign workers Ethical Recruitment

### Discrimination



#### Approach

- Code of Conduct
- Training to educate employees about rights, equality and coexistence practices.

#### Results

Communicated through an e-learning system to every employee in all business groups to raise awareness and verify

#### Employed



**14** people with disabilities in the business group

### ENVIRONMENTAL IMPACT



#### Approach

- Policy and Target on Environmental Management
- Environmental Plan
- Raising awareness and environmental knowledge
- Surveys to identify community opinion and concerns

#### Results

- Performed according to policy and standards
- Developed action plans to respond to community concerns
- No environment-related grievances reported



# CARING EMPLOYEES

## MANAGEMENT APPROACH

“People are the souls that bring the organization to life”

Charoen Pokphand Produces Co., Ltd. and companies in Crop Integration Business, respect and appreciate the values of all people in the organization. Cultivate and develop to be a good person which will be a role model for those around them at work, family and society overall lead to love ties to the countries, communities and lastly the company according to the three benefits, with guidelines Operations as follows



### Building a working society

- Attention to ability and Assign valuable and challenging tasks.
- Make people in the CPP understand their roles, treat colleagues with respect understand the difference Respect and build good relationships with each other in the team.
- Support for the creation of interest-based clubs to create good relationship
- Encourage people in CPP to be considerate, caring, and caring each other both at work and outside of work, including sharing knowledge, experience, etc. to those who need it. appropriately, creating a feeling of belonging to one family.



### Mind and soul care

- Promote morality in the mind.
- Promote a mindfulness.
- Promote Gratitude



### Building stability in life

- Encourage employees to have good physical and mental health
- Encourage employees to use “Rationality, Moderation, Immunity, use of knowledge Virtue couple” to create stability in life and family.
- Extending the way of building security in life to the family an community of people in the CPP.

## EMPOWERMENT OF FEMALE EMPLOYEES 2022

### Promoting the capacity of female employees in 2022



20.71%

All Executives :  
The proportion of female employees at the level

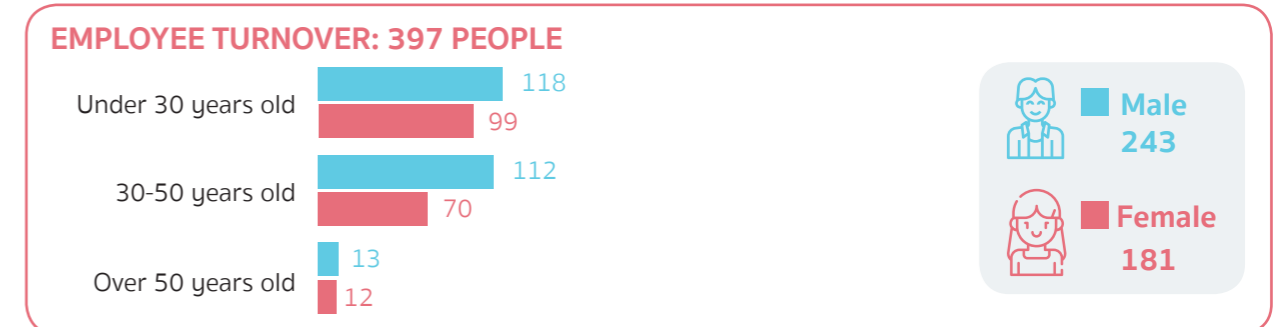
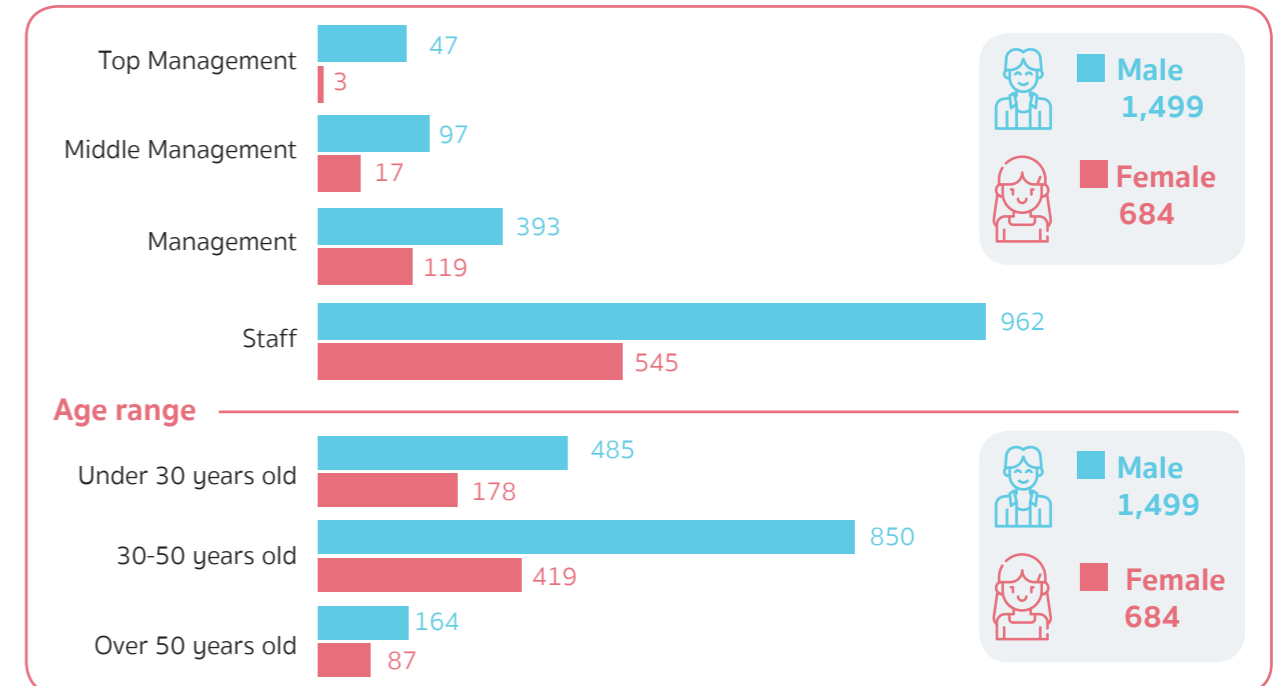
14.9%

Middle Management :  
The proportion of female employees at the level

6%

Senior Management :  
The proportion of female employees at the level

## DIVERSITY OF EMPLOYEES

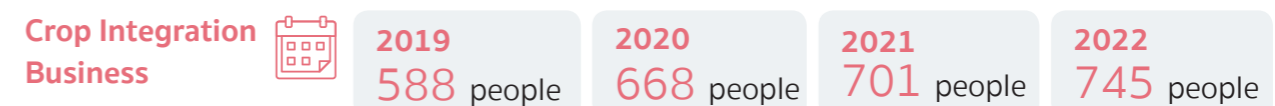


## PROVIDENT FUND

Crop Integration Business recognize that employees need financial security. Especially having savings to spend after retirement, leaving work, disability or as a guarantee for the family in the event of death. Therefore, in order to create morale Motivation to work for employees It also creates a bond with the organization. as well as being an incentive to attract good people talented people to stay with the organization the business group therefore agrees to have a provident fund welfare for employees in 2019, which is operated in a way that both employers and employees jointly established voluntarily.

Employees will pay contributions to the fund in proportion appropriate to themselves by deducting from the salary account and the company contributes part of the money to the fund with the fund management committee Supervise the operations of the selection and management of asset management companies. and various funds to provide information for decision-making for employees on an ongoing basis as well.

### Number of employees participating in the provident fund



# EDUCATION & INEQUALITY REDUCTION

**GRI 103-1, 103-2, 103-3, 201-1, 413-1**



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business believe that innovation and technology It is an important basis for changing the educational model. including upgrading necessary skills It is very important to working in the present era. Therefore, we strive to be an example organization that can adapt to the changes that occur. Including bringing innovation and various technologies are used to reduce inequality.

Our organization also supports the development of basic education structures. and upgrading learning styles that can occur continuously at every age. Using innovation for education

### Goal 2030

**100,000** people supported through educational support, lifelong learning, and upskilling.

### SUPPORTING THE SDGs



**SDG 4**  
Quality Education

4.3 Eliminate gender disparities in education

4.B Substantially expand globally the number of scholarships available to developing countries



**SDG 8**  
Decent Work and Economic Growth

8.6 Substantially reduce the proportion of youth not in employment, education or training



**SDG 9**  
Industry, Innovation and Infrastructure

9.C Significantly increase access to information and communications technology

### KEY PERFORMANCE IN 2022

#### Education



Number of children, youth and adults are encouraged to access education and develop necessary skills.

**9,546** people



Support learning about sustainability with schools around the plant.

**52** Schools.



Number of scholarships sponsored

**114** scholarships



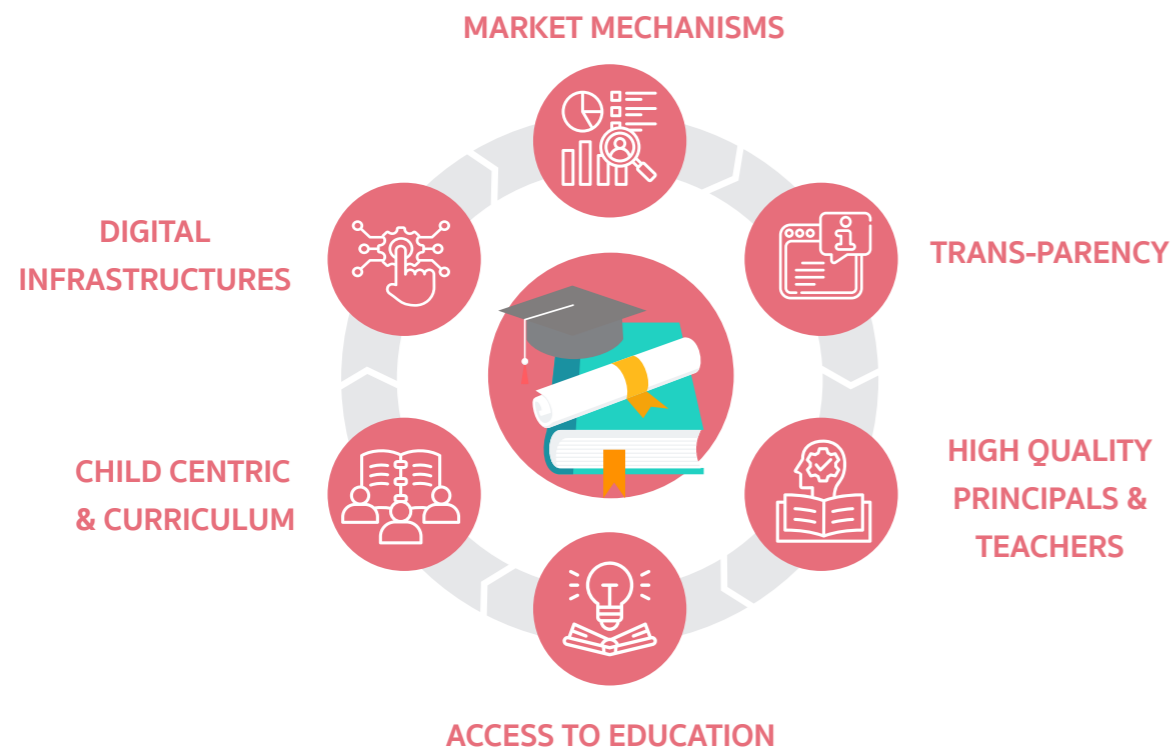
# EDUCATION MANAGEMENT

## MANAGEMENT APPROACH

Charoen Pokphand Produces Co., Ltd. and companies in Crop Integration Business believes that building an inclusive culture for education and creating opportunities for knowledge access involves developing the potential of Thai youths and adults of all ages. This will prepare them to tackle various challenges, reduce inequalities, and increase Thailand’s competitiveness. CPP adheres to five key strategies in our effort to sustainably enhance the quality of education management in Thailand, in accordance with global megatrends. These are: transparency; market mechanisms and an inclusive culture; developing high quality principals and teachers; creating value and a child-centric curriculum; and providing access to basic digital education infrastructure.

Our company is committed in supporting the UN Sustainable Development Goals (UNSDGs), and has developed an implementation plan for UNSDGs alignment with targets that focuses on eliminating inequalities in education, providing opportunities and expanding access, and improving the capabilities of students and teachers to improve the quality of life for all.

## EDUCATION DEVELOPMENT FRAMEWORK



## CASE STUDY

### NATIONAL CHILDREN’S DAY

Corporate Social Responsibility Office, Crop Integration Business has organized National Children’s Day activities every year. With awareness of the importance of children and youth That will be an important force for the country’s future development. In 2022, which will be the 15th consecutive year of organizing activities in collaboration with relevant agencies and networks such as the Culture Office. travel and sports Bangkok Organized National Children’s Day under the concept of “Modern Thai Children Care about the environment.”

Within the event, in addition to academic skills competition activities such as drawing and coloring contests, essay competitions, quiz competitions, etc., to enhance various skills and knowledge for the 3,985 children and youth who have already attended the event. There are also environmental recreational activities. in the form of a learning base through various games To create awareness and create awareness of natural resource conservation work. and environment for the children who join in the event.

## Target group

Children and youth around areas where business operations are conducted both domestically and abroad

1. Seed production line (Salaengphan farm)
2. Seed production line
3. Breeding research and development line (Sawakhalok)
4. Seed Processing Plant Soi 12,19
5. Organic Fertilizer Plant
6. Chemical Fertilizer Plant
7. Farm PRO & Regional sales area
8. Nakhon Luang Rice Factory
9. Wang Daeng Rice Factory
10. Buriram Rice Mill
11. Suphanburi Rice Mill
12. Kamphaeng Phet Rice Mill
13. Rice selling areas in the region





**CASE STUDY** SCHOLARSHIP

“  
Nam Jai nee  
jak Pee soo Nong  
Project  
16<sup>th</sup>  
”



Crop Integration Business is committed to participating in reducing inequality and create opportunities for access to education according to the determination of 3 benefits of Charoen Pokphand Group set “**Nam Jai nee jak Pee soo Nong Project**” to provide assistance to children and youth in remote areas who lack funds. This year is the 16th year and the Charoen Pokphand Group is celebrating its 100th anniversary. Funds have been raised from executives and employees. To deliver 100 scholarships, 2,000 baht each, to elementary school students. and secondary school In the area around the factory who have good behavior and volunteer spirit.



**Grant scholarships**  
Number of  
scholarships  
**100**  
**2,000**  
baht per  
scholarship

**Scholarships with Maejo University**

Our organization provides scholarships to undergraduate students Maejo University who have good academic results, good behavior and volunteer spirit since 2013. In 2022, the company has awarded scholarships to undergraduate students. Maejo University with good academic results Good behavior But there is a lack of funds, a total of 4 scholarships, worth 15,000 baht each.



**Grant scholarships**  
**4** Number of  
scholarships  
**15,000**  
baht per scholarship

**Scholarships for children and grandchildren of forest rangers**



Safe Thai Nature Project participate in giving 10 scholarships to children of forest rangers that Huai Kha Khaeng Wildlife Sanctuary to provide morale and encouragement to forest rangers in continuing the spirit of caring for and conserving natural resources and wildlife in the Huai Kha Khaeng Forest of Mr. Sueb Nakasathien.



**Grant scholarships**  
**10** Number of scholarships

**CASE STUDY** CONNEXT ED - TOUR ONLINE



Charoen Pokphand Group committed to raising the level of education and develop new generations of leaders (School Partner). Therefore, we have implemented the Leadership for Sustainable Education Development or CONNEXT ED project by visiting areas together with the government sector. Civil society, the private sector, communities and schools in the target areas Expand the network for Thai education development which has the following objectives

1. Create a culture of sustainable educational participation.
2. Raise the quality of education to international standards.
3. Link mechanism Integrate education to be thorough and equitable.



Crop Integration Business has participated in the CONNEXT ED project since 2020, with the target school being School 26, Sai 4 Left, Phatthana Nikhom District, Lopburi Province, and in the 2022 academic year, joined with teachers Plan teaching and learning to develop English subjects in the form of Action Learning, along with recruiting CSR SPIRIT volunteer employees who have English language skills. Serves as a volunteer teacher to teach English to students Through the online system, there are 7 classes. In addition, students Practice using English by chatting with foreign tourists at the Grand Palace.





# LEADERSHIP AND HUMAN CAPITAL DEVELOPMENT

**GRI** 102-41, 102-43, 102-44, 103-1, 103-2, 103-3, 401-1, 401-2, 404-1, 404-2, 404-3, 405-1



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business committed to developing integrated business by elevating business operations from B2B to B2C (C means farmers) in order to reach farmers, listen to problems, use information to develop various products, and use modern technology increases production potential. and conveyed to farmers Because farmers can be compared to “life partners” that the company must take close care of. and will move forward together in a sustainable way.

Our organization defines mission, vision, direction and strategy to develop potential. and increasing the capabilities of “Personnel”. In addition, it is important to prepare personnel to cope with changes effectively.

The challenge is Creating engagement and participation for employees at all levels To maintain talented personnel to stay with the organization and support the new generation of leaders learn and grow with the company.

### Goal 2022

Employees engaged in sustainability training and initiatives. **100%**

## SUPPORTING THE SDGs



**SDG 4**  
Quality Education

- 4.4 Increase the number of youth and adults who have relevant financial skills
- 4.7 Ensure that all learners acquire the knowledge and skills needed to promote sustainable development and global citizenship



**SDG 5**  
Gender Equality

- 5.5 Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making.



**SDG 17**  
Partnership for the Goals

- 17.6 Enhance cooperation and access to science, technology and innovation, and enhance knowledge sharing

## KEY PERFORMANCE IN 2022

### Leadership and human resource development



Leader and staff  
**100%** Trained to develop knowledge and understanding in sustainability and business ethics



Employee training hours  
**18.50** Hours/Person/Year



Employee training costs  
**15,148,754** baht / Year

## HUMAN RESOURCES MANAGEMENT

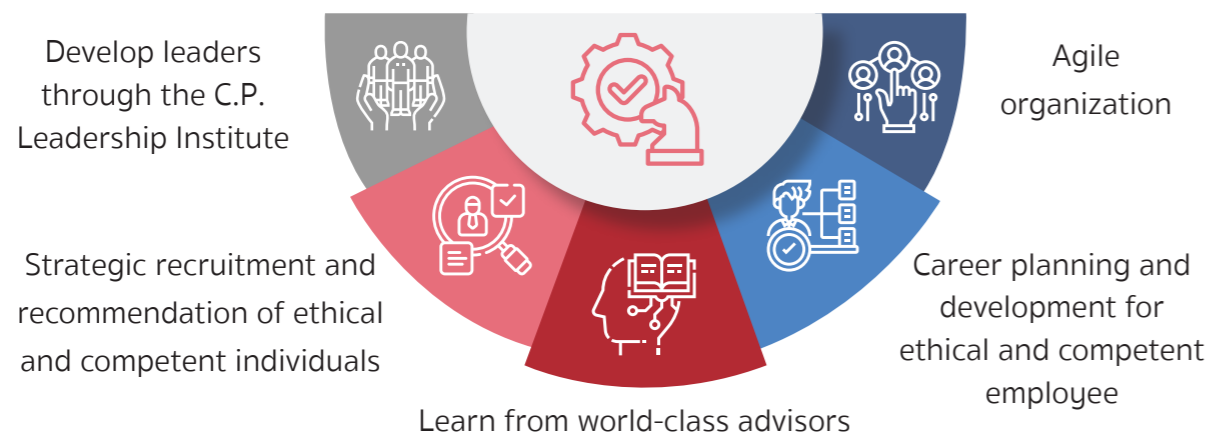


### MANAGEMENT APPROACH

Crop Integration Business believes that our people are the most valuable asset - they are the driving force behind the achievement of our aspirations. This is especially the case today, as CPP is committed to growing its business and expanding investments globally. There now arises the challenge of creating “New Generation Leaders” who will carry forward the organization’s values, while preparing and developing over 300,000 employees across our diverse businesses with the necessary knowledge and skills, and mindsets to embrace and adapt to changes, as well as to reinforce positive experiences for our employees to be proud for taking a part in CPP’s success.

Central to this is CPP “Workforce 4.0” Human Resources Strategy, which is guided by the 6 Core Values, digital information, and technology. The strategy consists of five core pillars, and focuses on developing up a new generation of leaders through real-life learning experiences, with the CPLI being central to these efforts. It also focuses on creating a human resources management ecosystem to promote recruitment of ethical and competent individuals, learning from various world-class advisors, career planning and development, and transforming to an ‘agile’ organization to enhance the Group’s adaptability to business changes and changes prompted by generational gaps.

### C.P. WORK FORCE 4.0 Human Resources Strategy



## LEADERSHIP DEVELOPMENT TRAINING

### Development Courses

Human resources development at C.P. Group aims to develop leaders at all levels. With Charoen Pokphand Leadership Institute (CPLI) at the center, courses are designed to suit the qualifications of all participants. All courses are developed based on real-life applications, focusing on learning through practicing by implementing cross-business and cross-function projects. The projects reinforce trainees to enhance business problem-solving skill and learn from experiencing actual impacts.

OPERATIONAL PROGRAM			STRATEGIC PROGRAM
COURSE OVERVIEW			
The first training course for the Group’s ‘Young Talents’ in Thailand and overseas, which aims to build well-equipped leaders according to the Group’s leadership model.	A leadership development course for employees with proven leadership potentials focuses on business development and integrated management within the scope of their responsibilities, aiming to generate profit and revenue for the sustainable business growth.	A development course for leaders at the operational level is designed to help them manage strategic operational projects. It focuses on reforming processes for efficiency and quality, stimulating cross functional actions, and maximizing resources used.	The course focuses on enhancing and sustainably developing C.P. Group through the formulation of strategic projects that execute C.P. Group’s vision.
PARTICIPANT QUALIFICATIONS			
New graduates and young talents from business	Graduates of the FLP Program and employees from business	Managing directors and mid-level executives	Top-level executives
PROJECT SUPPORTS			
CEO and CEO-1	CEO and CEO-1	CEO and CEO-1	CEO and Group Chairman



## CPP TOWNHALL 2022

March 11, 2022 Crop Integration, Rice, Transport and Service Business organized a vision transfer event Strategy and business direction for the year 2022 (CPP Townhall 2022) By Mr. Prasit Damrongchitanon Vice Chairman, Mr. Sumet Pinyosnit Chairman of the Executive Committee Crop Integration Business, Mr. Chana Laowerakul, Chairman of the Executive Board Domestic and International Transport Business Operations Department.

And Ms. Tatcha Puangphonsri, Deputy Managing Director of Human Resources Management Foreign business Stated the personnel operations plan for 2022



## CASE STUDY CP Future Leader Development Program 2022



Charoen Pokphand Produces Co.,Ltd. supports the creation of new generations of leaders. By sending new generation employees to join the CP Future Leader Program or the Tao Kae Noi Project of the leadership institute Charoen Pokphand Group to learn and develop oneself through actually doing business for a period of 6 months, focusing on creating complete leadership in the style of CP Group, being a smart person, a good person, and having discipline in self-management. Including being a person who can bring out their own potential and others to use for maximum benefit.

“Three benefits project creates income for farmers”



Learning



Practical



PLP		
BU	Project	Number of Leader (people)
CPP	Dried chili business	11
	Manage the upstream supply chain in the Lopburi-Saraburi provinces.	7
	Plante business	7
	Sweet corn business	7
		CPP 32
CPA	Complete aromatic coconut business	7
	Plante business	4
	Sweet corn business	12
		CPA 23
FLP		
BU	Project	Number of Leader (people)
CPP	Push out dried chilies in the country	6
	Manage the industrial rice upstream supply chain.	6
	Manage the supply chain with a large plot Kamphaeng Phet Province area.	4
	Manage the supply chain with a large plot Chainat Province area.	8



# CYBER SECURITY AND DATA PROTECTION

**GRI 103-1, 103-2, 103-3, 201-1, 413-1**



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business commitment to operations includes technologies, processes, and practices designed to protect networks, devices, programs and data from attacks or intentional unauthorized access. To protect business assets from all threats of cyberattacks, including securing personal information of employees and customers. The goal is to have the business group be certified in accordance with international cybersecurity and data protection standards.

### Goal 2030

Businesses certified on international standard of data security and data privacy

**100%**

## SUPPORTING THE SDGs



### SDG 16

Peace, Justice, and Strong Institutions

16.7

Ensure responsive, inclusive, participatory and representative decision-making at all levels

## KEY PERFORMANCE IN 2022

### Cyber Security and Data Protection



Cybersecurity Training : of all employees have been trained or raise cybersecurity awareness.

**100%**



Risk Assessment Cyber Security : the company's access channels have been assessed for cybersecurity risks

**100%**



### CYBER SECURITY & DATA PROTECTION

Security Operations and Cyber Security It is important for every organization. Whether it is the public or private sector To prevent data loss violation of privacy or being attacked by someone who does not wish well Our company has a systematic management approach in this area. By considering the nature of the business and the needs of customers.

Management guidelines are as follows:

#### Office and personnel

Set up a unit to take responsibility and follow up on compliance with the policy set by

There are personnel who have knowledge and skills in managing cyber security and safety. In addition, they also give importance to providing relevant knowledge to all employees.

#### Step operation

Set standards, regulations, and practices in accordance with principles appropriate to our business. and in accordance with relevant laws and regulations.

#### Technology

Use modern technology and be effective in preventing, investigating, solving, and solving problems related to cyber security and safety

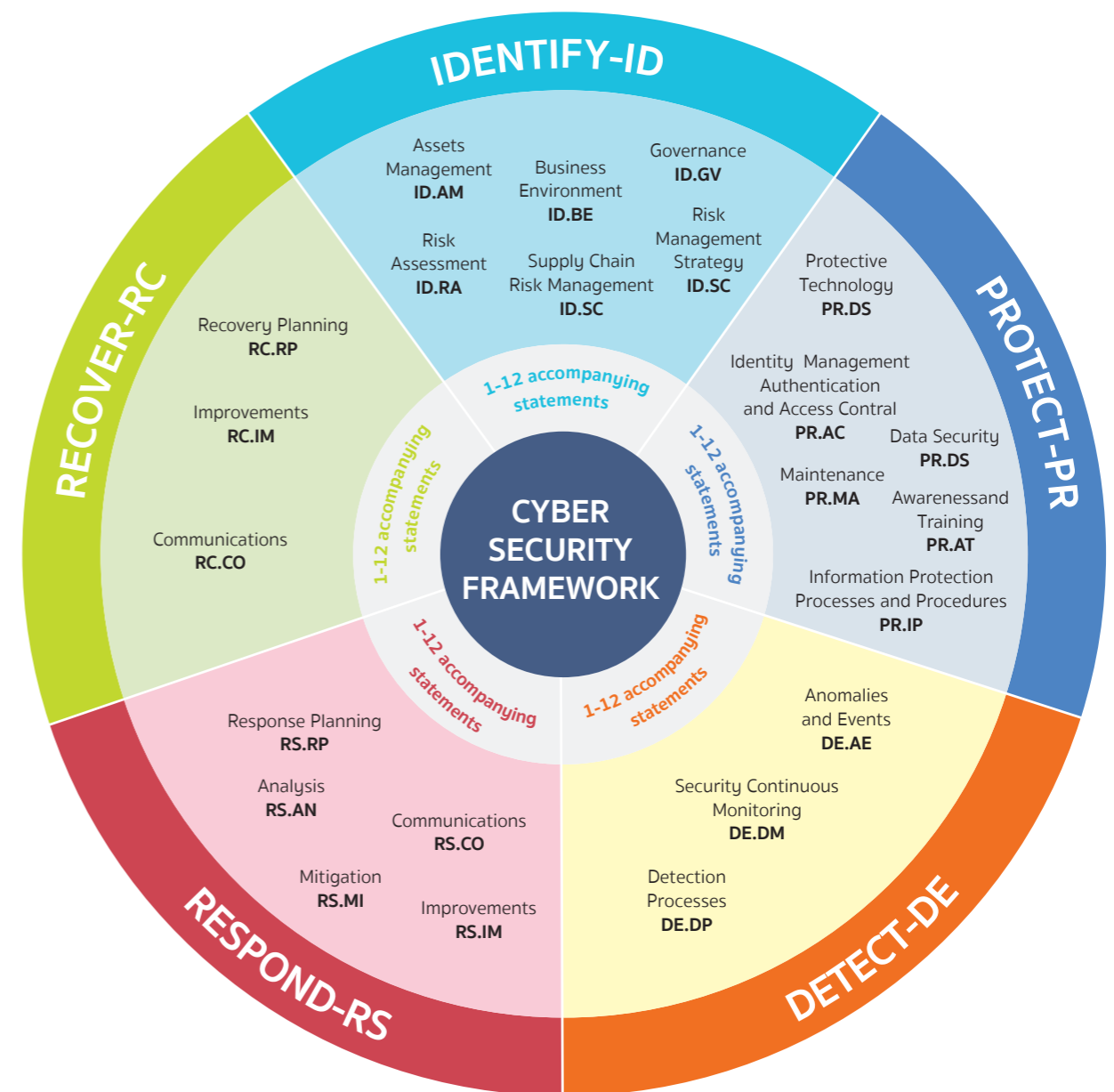
Continuously analyze, evaluate and improve. To ensure that our operations are consistent with changing circumstances and needs.

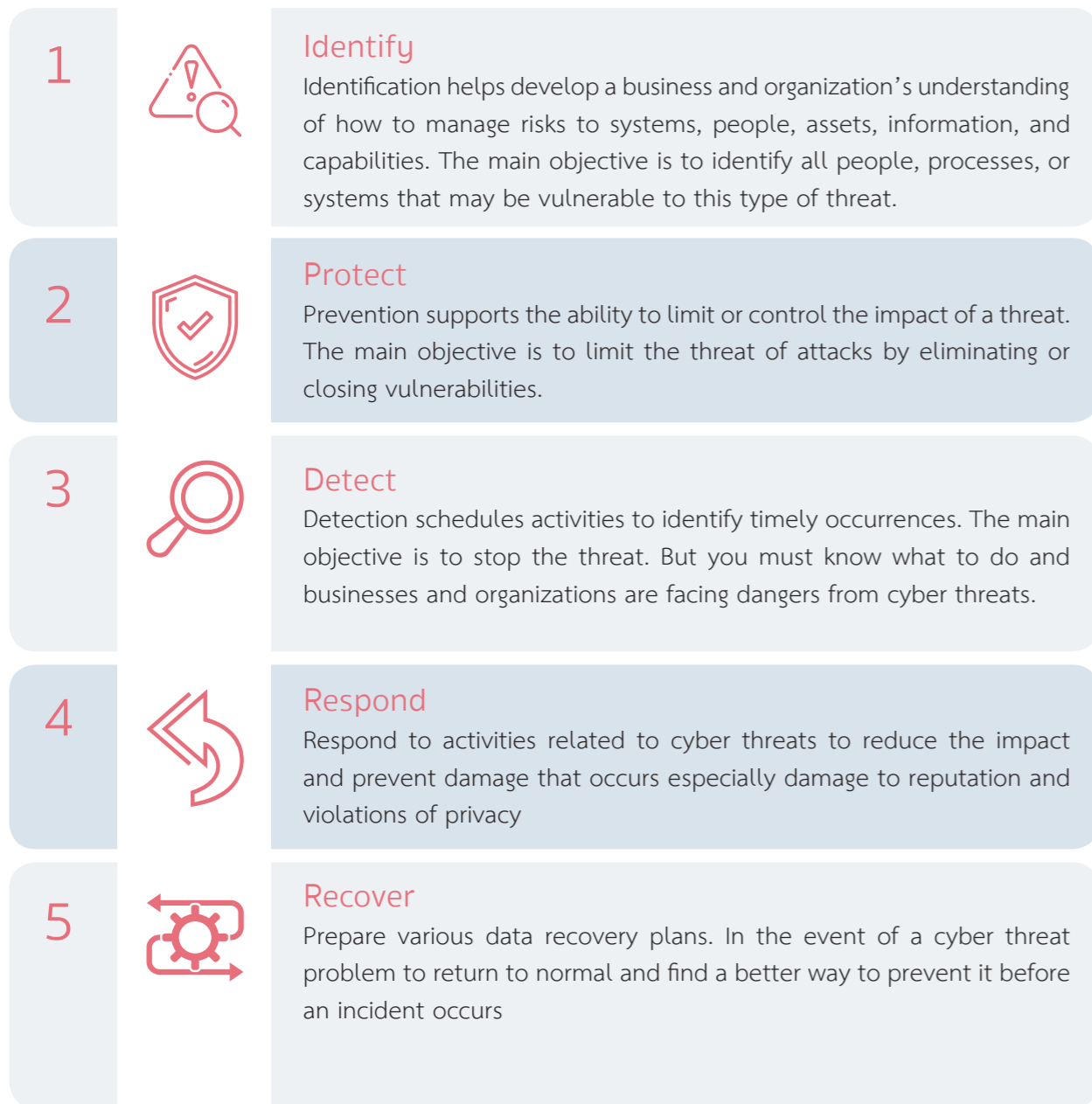
### CYBERSECURITY AND DATA PROTECTION PRACTICES

Create cyber security stability Cybersecurity risk management It is a matter that the organization pays attention to the shortcomings of the system. Threat trends and the most important attack on the business first

Cyber security framework of the National Institute of Standards and Technology (NIST) is one of the frameworks for cyber security. which is very popularly used nowadays.

Frameworks are widely used all over the world. And many organizations in Thailand Starting to use it to deal with cyber threats. Framework brings together a wide range of best practices. To help business organizations determine guidelines for enforcement. and improves security guidance. NIST Cyber Security Framework Functions help create cyber risk prevention strategies. operation into 5 steps : Identify, Protect, Detect, Respond, Recover





Ref : NIST-Framework-Visual-with-Functions-and-Categories(expertip.net)

### CYBER SECURITY & DATA PROTECTION

Crop Integration Business consider the importance of personal data management (PDPA) of employees at all levels to meet standards International and personal data protection from unrelated people Both about requesting information Data collection Data transmission and destruction.

Sustainability Governance and Compliance Office set the following guidelines :



1. Organized training to provide knowledge to employees on the topic of preparing to support the Personal Data Protection Act on 25 May 2022 with the objective of making each agency aware of their roles and methods of dealing with various cases according to the Act. Including clarification of the following matters:
  - Guidelines for managing relevant information in the case of customers or employees exercising their rights. According to the Personal Data Protection Act
  - Guidelines for management in the case of personal information being violated or leaked.
2. Organize knowledge training and take annual PDPA tests for all employees through the Group’s online system.
3. Set PDPA guidelines on Data Subject Request / Data breach for use within the organization.

**CASE STUDY**

**CYBER SECURITY OPERATION FOR CONTINUOUS PROTECTION**



Technology and information systems It is an important tool that makes the business move quickly. But must face risk from cyber threats (Cyber Threats). Surveillance of security and safety against dangers

Cyber threats Therefore, it is important for the company to be vigilant. including cyber threats to personal data, processes, and technological tools Information used.

Our organization has a security operations center(SOC) is responsible for monitoring threats on the network system and Organizational information technology in real time throughout 24 hours. With security experts

Track analysis and notifications when problems are found or new vulnerabilities, including solve problems in a timely manner before they occur escalate.

Our organization has a team of people with knowledge and experience. In dealing with cyber threats; and

Use modern and efficient tools to The implementation of Cyber Security Operation is go effectively and according to international standards.





# HEALTH



## LIVING WELL

Crop Integration Business is committed to driving society toward sustainability through innovations that help promote good health for consumers. In addition, we implement projects aimed at improving the quality of life and health of people through our shared experiences and knowledge with a focus on comprehensive development in economic, social and environmental aspects.

To achieve the vision of being a leading company Integrated agribusiness and industrial agriculture Under the framework of vision, mission and policy, it is determined Social sustainability goals include:



**Social Impact and Economic Contribution**



**Health & Well-being**



**Occupational Safety**



**Innovation Management**



**Relationship with Stakeholders**



# SOCIAL IMPACT & ECONOMIC CONTRIBUTION

**GRI** 103-1, 103-2, 103-3, 201-1, 413-1



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business sees the problem of inequality as one of the causes of discrimination in society. and lack of trust This puts the business at risk for reputation. and more supervision from official agencies as well as may affect the performance of the business in the long run Therefore, the problem of inequality is no longer just a social problem that is nearby. But it can become a business risk.

### Goal 2030

**100,000** people Supported to generate incomes for small farmers, SMEs and vulnerable groups along our supply chain.

## SUPPORTING THE SDGs



**SDG 1**  
No Poverty

1.2 Reduce poverty by at least 50%

1.4 Equal rights to ownership, basic services, technology, and economic resources



**SDG 4**  
Quality Education

4.4 Increase the number of people with the necessary financial skills



**SDG 8**  
Decent Work and Economic Growth

8.6 Substantially reduce the proportion of youth not in employment, education or training



**SDG 10**  
Reduced Inequalities

10.1 Reduce income inequality

## KEY PERFORMANCE IN 2022

### Social Impact



Farmers who received occupational and income promotion

**46,658** people



Vulnerable groups that receive career and quality of life support

**6,372** people



Investment in social development and support

**1.51** million baht



KEY PERFORMANCE 2022



NUMBER OF BENEFICIARIES

 **46,658**  
people  
**farmers supported**


 **6,372**  
people  
**members of vulnerable groups supported**



SOCIAL ACTIVITIES

 **7,894,312** baht  
Charitable Donations

 **1,510,000** baht  
Community Investment

 **1,793,280** baht  
Support community & society

 **101,113,363** baht  
Tax paid to the government



CREATING A GOOD IMAGE FOR THE ORGANIZATION  
**5,000,000** baht  
Media Value



CSR SPIRIT  
**3,075** baht

SUPPORTING FARMERS



Crop Integration Business is aware of and prioritizes business operations that may be affected by economic and social roles. by supporting farmers small entrepreneur and vulnerable groups to be part of the business. Encourage participation and creativity with continuous operation to be able to solve problems and help promote the quality of life for the community as well as vulnerable groups to be able to live sustainably

MANAGEMENT APPROACH



1

Provide farmers with groups. (Market leading production) and operating in an integrated manner between the relevant departments.



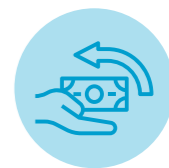
2

Training to farmers until they can reduce production costs, increase productivity and produce good quality.



3

Let the farmers be managers: manage production, produce and market knowledge.



4

CPP as the market for hedging the risk of price fluctuation, which can help members reduce their debt condition



**CASE STUDY** Create a network Corn C.P.



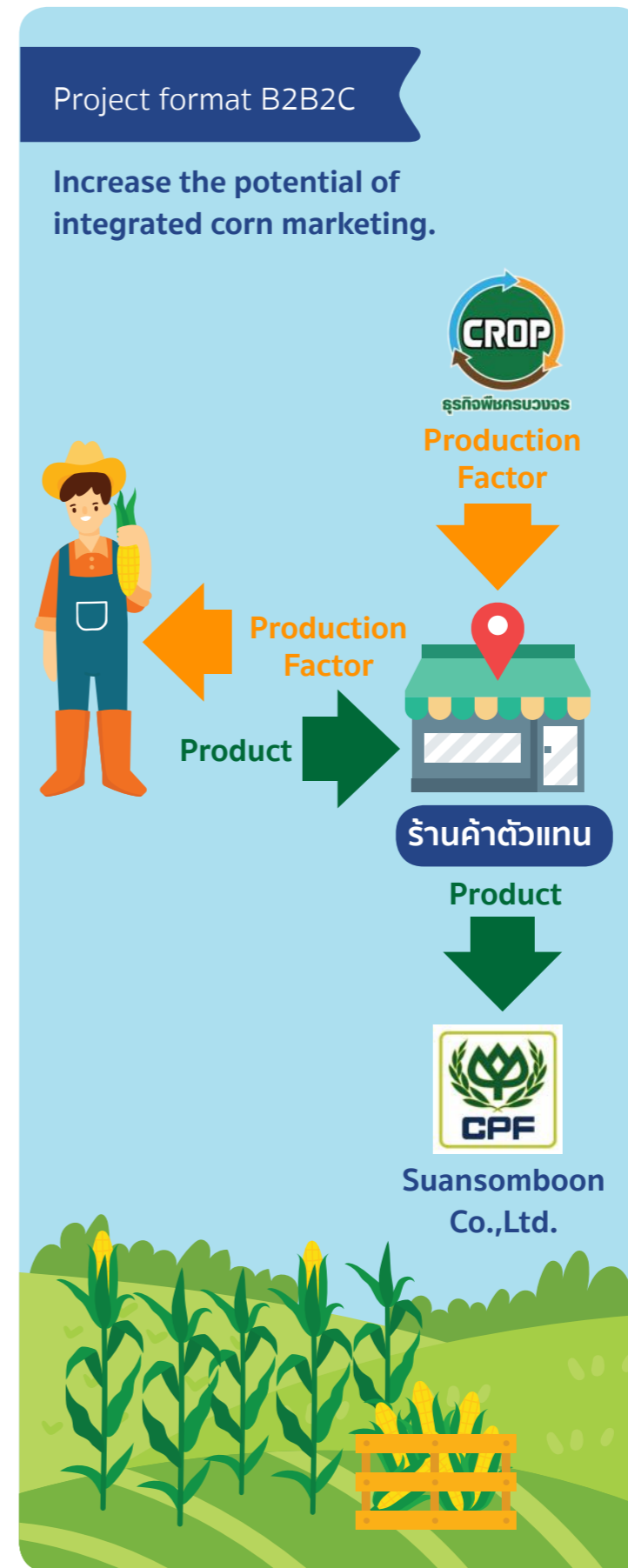
A major problem with corn production in Thailand is that nearly 85 percent of the production goes to market at the same time during August-December. And some of the produce is still harvested during the rainy season. Corn therefore has high humidity and is not of good quality, causing the price to decrease. At the same time, the production is not consistent throughout the year. It also affects the costs and production plans of animal feed factories.

Seed and fertilizer sales in Thailand join shops, distributors and Suansomboon Co.,Ltd. (CPF) building project. Corn grower C.P. To transfer knowledge and technology for growing corn that is correct according to academic principles. to increase production efficiency Control expenses and increase yield per rai by using planting methods that do not harm the environment. There is also a market to buy back produce from farmers participating in the project.

When selecting farmers There is an area suitable for growing corn in both soil conditions. And there is a source of water for agriculture throughout the year. The company will release production factors that are appropriate to local conditions. Both seeds and fertilizer as well as sending officials to act as chaperones Give advice on production methods Care throughout planting Including methods for harvesting quality produce.



**i**  
 In 2022, there are farmers joining the network. Corn C.P. Total 1,541 people, cultivation area 55,025 rai. The company also uses the corn grower network model. Expanded to other field crops to reduce the risk and create sustainability for other field crop producers. It was found that there were 2,053 farmers interested in joining the project, with a cultivation area of 52,373 rai.



**SUPPORT LEARNING TO FARMER 2022**

Farm visit  
**168** points  
 (11,538 farmers)

Farm knowledge  
**353** points

Learning center  
**10** points

Trial  
**14** points



**CASE STUDY**

Promote planting corn behind rice fields project.

In the past, farmers have been affected by the lack of rain, and severe drought Especially farmers who work in off-season rice, which mostly relies on rainwater Therefore, there is a risk that the production will be damaged and lost. Meanwhile, growing maize for animal feed uses only 1/3 of the water compared to growing off-season rice. Importantly, the domestic animal feed industry still has a large demand for corn to feed animals.



Integrated Agri-Service Centers Farm Pro join with Agricultural Cooperatives conduct a “Promote planting corn behind rice fields project” to promote the cultivation of corn in place of second rice farming, for farmers in irrigation areas In the area of 20,000 rai in Ubon Ratchathani province, the company has provided production factors including seeds, and fertilizer that is appropriate for the area As well as organizing knowledge training and having staff go in to give advice on good and appropriate agricultural practices, from soil analysis, good soil preparation, and use of fertilizers appropriate to the area conditions, and efficient use of water throughout the production season Including providing purchasing services for farmers’ produce.



Total of 2,640 farmers participated, with a total area of 25,309 rai. Farmers had an average income of 11,175 baht per rai, average costs of 6,454 baht per rai, leaving an average profit of 4,721 baht per rai. From the past, with off-season rice farming, farmers would have an average profit of 1,060 baht per rai.

Off-season rice \*    Corn the rice field \*\*(Project)

<b>Water use demand (cubic meter/rai)</b>	1,439	768
<b>Cost (baht/rai)</b>	5,431	6,454
<b>Income (baht/rai)</b>	4,371	11,175
<b>Net profit (baht/rai)</b>	1,060	4,721

Ref \* Office of Agricultural Economics 2022, \*\*B2C member farmers, Ubon Ratchathani Province



**CASE STUDY**

Buy rubber products directly from farmers.

Quality issues and the unevenness of the rubber production sent to the factory in 2022, the Rubber Factory in Loei therefore opened a point to receive rubber directly from farmers. To encourage farmers in the area surrounding the factory to raise standards for producing quality, clean rubber and selling it at a fair price according to the quality of the farmers’ rubber.

Farmers who will sell rubber products directly to the factory. In addition to being confident in the standards in weighing and the purchase price matches the quality The factory also provides advice on garden care, fertilizing, and collecting rubber products that are correct according to academic principles, and recommend the production of quality rubber in order to obtain a higher price than general collectors, as well as sending officials to look at and follow up and regularly giving advice in the farmers’ gardens The factory has opened two points for purchasing direct produce as follows :





**Direct purchase point for farmers (Factory and Ban Na Wua)**

The factory opens a point to purchase produce directly from farmers at the factory and a service point for buying rice fields. Farmers can bring their rubber products to the purchasing point, and weighed using a digital scale system. Then the staff will take a random sample. To measure the quality of each farmer's rubber, before paying according to the quality of the produce that farmers sell. Including promoting the development of farmers' produce around the yard.

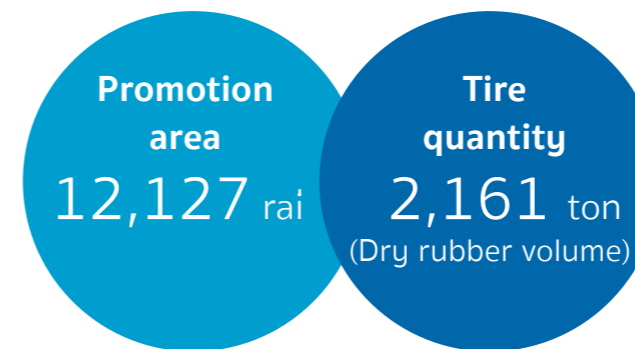
Farmers have an increased tendency to sell their produce directly. The factory plans to increase the amount of direct product purchases. Ready to prepare a knowledge training plan and provide production advice. To raise the standard of rubber in the area to have better quality.



**Project to purchase rubber blocks directly from farmer.**

The service factory purchases produce directly from farmers who are members. And randomly measure the quality of rubber from each plantation, weighing it with a digital scale and pay according to the quality of the produce.

**Buy cup lump rubber directly from farmers.**



The factory sends officials to inspect the garden. To provide advice and knowledge on taking care of rubber plantations during the opening of tapping, and maintenance during breaks. Including soil analysis services for each garden. To give advice on applying fertilizer appropriately for each garden. The objective is to increase the production potential of cup lump rubber. Makes farmers have increased income. And the factory can reduce the cost of raw materials from good quality rubber as well.





## SUPPORTING THE VULNERABLE GROUP

### MANAGEMENT APPROACH


Crop Integration Business committed to conducting business in accordance with the C.P. Excellence approach based on the awareness of social responsibility according to the philosophy of 3 benefits to sustainability of the Charoen Pokphand Group. Ready to drive sustainable development goals Sustainable Development Goals (SDGs) in all 3 areas, consisting of society, economy and environment. to eradicate poverty promote food security build quality of life share educational opportunities gender equality, Sustainable Water Management access to modern renewable energy Support decent work in line with economic growth Develop industry and infrastructure through innovation. Reduce income inequality have a safe settlement of communities and cities Suitable consumption and production plans take care of the climate marine resources and terrestrial ecosystems Fairness and peace, enhancing cooperation towards the Sustainable Development Goals




### PERFORMANCE 2022

#### Develop Education

 **National Children's Day 2021**  
Number of participants  
**3,985** people


 **CONNEXT ED phase 3 , 1 School**  
Tour online **7** times /  
view work **1** times


 **Agricultural youth fight for sustainability YS**  
**3** Schools **378** people

 **Nam Jai nee jak Pee soo Nong**  
**100** scholarships

#### Conservation Natural and environment

##### Disaster relief

 Giving face masks to **8** public health agencies

 Donated **1,005** relief bags

##### Set Zero Waste

 Flat Din Daeng Community 1:  
**130** members

 **PR important environmental day 24 pieces**





Develop community economy and society 


**Went out to the prosthetics unit 3 times**  
(Chaiyaphum, Ubon Ratchathani and Tak provinces)


 **386** disabled people receive prosthetic legs

##### Project for the elderly

 Giving consumer goods **5** times to **359** people

 **The Power of the Heart 1 time**


 **Blood donation at AIA Capital building, 293 people, 220 units**

 **Offering merit- robes to 34 temples**

#### CSR SPIRIT

 CSR SPIRIT Number of people : **1,570** (double count)  
Total **3,075** hours

Communicate a good image for the organization 

 Media worth more than **5,000,000** baht  
Communicated to more than **5** million people



**CASE STUDY** Project for the elderly



Research has found that in 2022 the country will enter a completely aging society. The proportion of people aged 60 years and over will be 20 percent of the total population. And it is expected that in 2033 the proportion of the population aged 60 years and over will be 28 percent of the total population.



As a result, people of working age Need to take care of more elderly people At present in Thailand the ratio of working age : elderly : children is 4 : 1 : 1. It is expected that in 2036 it will adjust down to 2 : 1 : 1, therefore it is likely to have an impact on the savings situation. and limitations on having a good quality of life as well

Receive the changes that have occurred Therefore, it is the source of “Project to create happiness for the elderly” to support basic consumer goods for the elderly Residences are located around the business area. In the form of integration with the government sector to provide health examination services. and take care of basic living conditions. In 2022, we joined with the Phra Nakhon Si Ayutthaya Provincial Social Development Agency to visit the area 5 times to provide consumer goods to 359 elderly people.

**CASE STUDY** Donate Blood



Charoen Pokphand Group places importance on doing good. Promote the morality of being a “giver” and sharing opportunities Therefore, it is the origin of inviting employees to donate blood. which is considered a great gift To reserve blood for the sick Because it is known that Blood is always in short supply. Such activities have been carried out since 1991.

CSR SPIRIT, volunteers in Crop Integration, Rice, Transportation and Service Business activities were organized to invite employees to donate blood on a regular basis. In 2022, there were 293 CSR SPIRIT employees joining in donating blood, 220 units.



**CASE STUDY**

Share kindness to the disabled



Thailand has a large number of amputees who need prosthetic legs. To have a good quality of life and be able to pursue a career to take care of yourself But with the expensive cost of making prosthetic legs. While the Prostheses Foundation of Her Royal Highness Princess Srinagarindra Boromarajonani can make prosthetic legs at a cheap price because it is possible to find materials to replace imports Prosthetic limbs provided free of charge Do not choose race or religion (no card required)

Crop Integration, Rice, Transportation and Service Business participated in the Royal Prosthetic Leg Unit with the Princess Srinagarindra Prostheses Foundation. Continuously for more than 15 years. In 2022,

Participated in the prosthetics unit 3 times, including Chaiphum, Ubon Ratchathani, and Tak provinces, with a total of 386 disabled people receiving prosthetics and they also gave royal rice to support the medical team. and prosthetics technician.





# HEALTH AND WELL-BEING

**GRI 103-1, 103-2, 103-3**

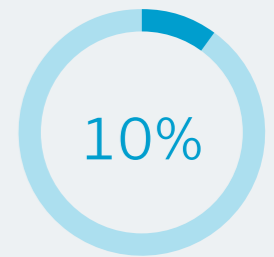


## OPPORTUNITIES AND CHALLENGES

Crop Integration Business dedicated to research and develop products to meet agricultural product standards. By controlling and inspecting quality throughout the value chain, along with promoting knowledge and technology to farmers. Along with implementing projects to promote the health and well-being of employees and people in the community.

### Goal 2030

Sales generated from **B2B2C and B2C** products and services that promote health and well-being.



## SUPPORTING THE SDGs



### SDG 2

Zero Hunger

- 2.1 Access to food that is nutritious and safe based on international standards
- 2.2 End all forms of malnutrition



### SDG 3

Health and Well-being

- 3.4 Reduce mortality from non-communicable diseases and support good well-being
- 3.B Support research, development, and access to affordable essential medicines and vaccines

## KEY PERFORMANCE IN 2022

### Good health and well-being



Sales generated from B2B2C and B2C products and services that promote health and well-being.

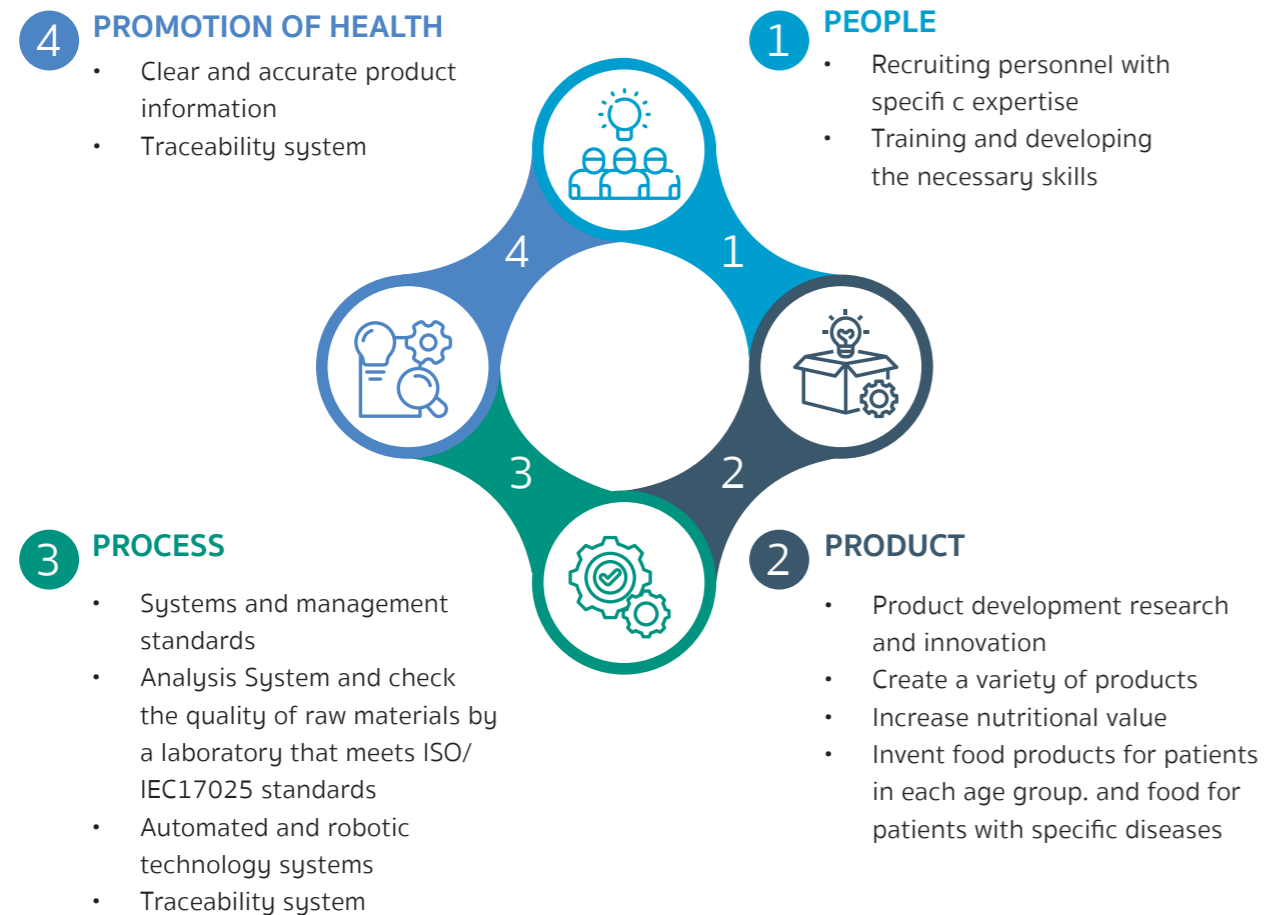
Organic fertilizer products with sales of



### MANAGEMENT GUIDELINES AND MANAGEMENT OF HEALTH PRODUCT INNOVATION

The health and well-being of all citizens in each country is an important issue for will help increase the limit capability of that country in the future, as well as reducing the burden of medical expenses at the national level, CPP, as an upstream company of agribusiness, recognizes that it is a part that can help alleviate such problems effectively. by using the potential of presenting products and services that promote quality of life promote the health and well-being of the people

Our company is committed to investing in research and development, operating according to international standards, controlling and monitoring quality throughout the value chain, and promoting understanding of good nutrition for society as a whole. We focus on increasing the capacity of our employees (People), developing processes based on international standards (Process), offering products for promote good health and well-being (Product), and promote understanding of health issues (Promotion of Health) by providing product information and initiatives.



### CASE STUDY

## Development Organic fertilizer C.P. Mor Din NT 009

Long-term use of large amounts of chemical fertilizers without improving the soil Make the soil acidic and the ability to absorb certain nutrients in plants is reduced and may affect the growth of some beneficial bacteria. Plants to not grow fully But most farmers solve the problem by using more chemical fertilizers. In addition to being beneficial It also increases production costs.



Research Center, Soil Quality Assurance and Fertilizer Conduct research and develop the organic fertilizer C.P. Mordin NT 009 that has been completely decomposed and fermented. With the beneficial microorganisms *Trichoderma asperellum* NST009 and *Bacillus subtilis* 9131B87 which have primary nutrients 1N-3P-3K, secondary elements Mg, Ca 0.5-1%, organic matter > 20%, creating immunity to related diseases. with root and stem systems Reduces the problem of root rot pathogens that accumulate in the soil, strengthens root formation and growth, and helps dissolve phosphorus that is fixed in the soil. Makes plants able to absorb and use it.

Organic fertilizer C.P. Mor Din NT 009 helps improve soil structure to make it friable, retains nutrients in the soil. and makes the soil hold water well so plants can absorb nutrients better And the organic fertilizer C.P. Mor Din NT 009 has living microorganisms. and is useful in organic fertilizer at not less than 1 hundred thousand cells per gram of fertilizer It acts to decompose plant residues in the soil after harvesting. Helps the soil be ready for the next production season.





**CASE STUDY**

**Bacillus bacteria in Organic fertilizers Increase efficiency in controlling root rot and stem rot disease, Myanma**

In the rainy season, outbreaks of root rot and base rot are often found in corn plants. Especially when the corn starts to bloom until the ear is stuck. This is the stage when corn plants are susceptible to this disease. In plots where root rot and stem rot outbreaks occur. In addition to the low quality of the corn, Some plots may be damaged up to 100%.

In the past, farmers in Shan State Myanmar Damaged by the outbreak of root rot and stem rot in corn as well. Because it is an area that receives a lot of rain. Therefore, in order to help farmers in 2020, the soil and fertilizer quality assurance research team. Thailand companies continuously research and develop prevention methods. Until it was found that if *Bacillus B87* was mixed with organic fertilizer Can help prevent root rot and stem rot.



The results of the experiment showed that plots using *Bacillus B87* mixed with organic fertilizer Disease outbreaks occurred in only 4% of the plots that were not used. Found an outbreak of disease at 10%, which the recommended rate of use is *Bacillus B87* 2 g. / 1 kg. of organic fertilizer. But because organic fertilizer mixed with *Bacillus B87* must be used up to 625 kg./ acre (or 2.53 rai) and farmers In Myanmar, organic fertilizer can be purchased for as little as 150 kg/acre. The team continues research and development. By testing the amount of microorganisms at 0, 2, 4, and 6 grams / 1 kg of organic fertilizer and testing a total of 5 locations in areas where root rot and stem rot outbreaks were occurring. in the Shan State area Myanmar

Average % of trees that fall due to root rot and stem rot.

No.	Experimental	% trees broken
1	Control	11.60
2	B87 2 g + Organic 1 kg	6.78
3	B87 4 g + Organic 1 kg	5.60
4	B87 6 g + Organic 1 kg	4.40



Corn stalks that fell due to disease

Corn stalks that do not fall off due to disease



The test results showed that *Bacillus B 87* at a rate of 6 grams/1 kg of organic fertilizer protected farmers' corn production that was damaged by root rot and stem rot disease. From the original damage of 440 kg./acre, damage occurred only 167 kg./acre, or equivalent to 4.4%. Compared to plots that do not use organic fertilizer with *Bacillus B87* (calculated from an average yield of 3,800 kg./acre). In 2022 the company has a goal of selling 7,000 tons of organic fertilizer mixed with *Bacillus B87*, which can help protect farmers' produce. Up to 46,000 acres



# OCCUPATIONAL HEALTH AND SAFETY

**GRI 103-1, 103-2, 103-3, 403-9, 403-10**



## OPPORTUNITIES AND CHALLENGES

The Company attaches importance to Safety Occupational Health and Environment, It is no less important than product quality. Therefore, every process must be safe. Do not affect the health of employees and does not affect the environment. Therefore, there is a process for hazard identification and risk assessment of all activities performed, including when there are new activities or new machines hazards must be identified and assess the risks first every time before starting work In order to know the dangers that will occur along with finding ways to improve and prevent.

### Goal 2030

## Zero Accident

Achieve zero lost time injury frequency rate.

### SUPPORTING THE SDGs



#### SDG 3

Good Health and Well-Being

3.4

Reduce mortality from non-communicable diseases and support well-being



#### SDG 8

Decent Work and Economic Growth

8.8

Protect labour rights and promote safe and secure working environments for all workers, including migrant workers

### KEY PERFORMANCE IN 2022

#### Safety Awards



Outstanding workplace safety, Occupational health and work environment.



Zero Accident Campaign (Campaign activities to reduce accident statistics from working to zero)

#### Lost time injury rate



#### Employee

no. per 1,000,000 working hours

7 people



#### Contractor

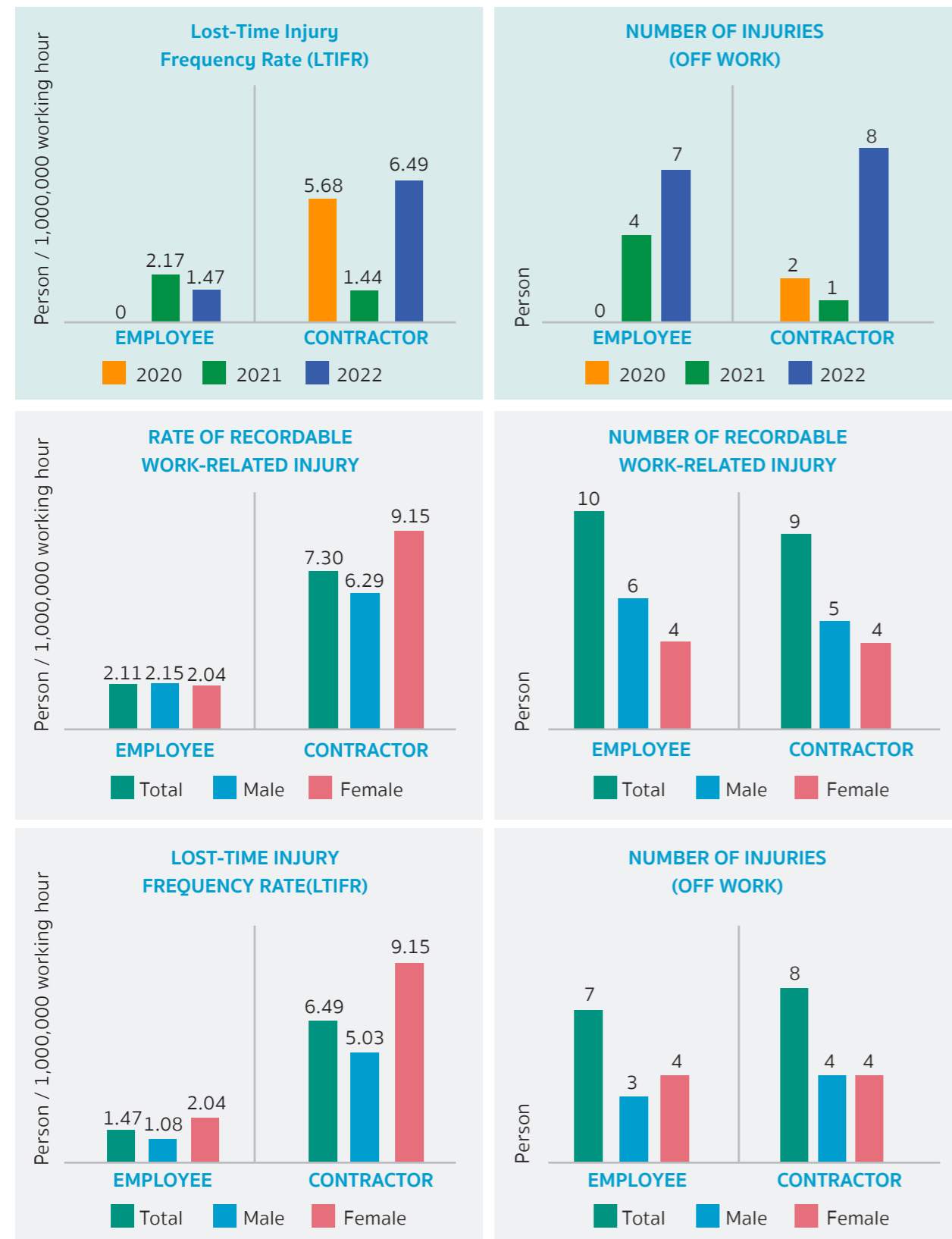
no. per 1,000,000 working hours

8 people



## OCCUPATIONAL HEALTH & SAFETY

### MANAGEMENT DASHBOARD



## OCCUPATIONAL HEALTH, SAFETY AND WORK ENVIRONMENT MANAGEMENT

### MANAGEMENT APPROACH

Crop Integration Business focuses on and prioritizes work safety by adhering to the care of employees, contractors, visitors. As well as stakeholders in the business as well as the supply chain, the Company has established a policy of safety, occupational health and work environment as a guideline and enhance the safety operations of the organization with guidelines for do as follows :

- 1

Safety, occupational health and working environment It is the duty and responsibility of the executives. and employees at all levels and consider the success of the operation as part of the performance evaluation.
- 2

Support the budget. and resources for the development of safety operations to allow all employees to participate in the implementation of the policy. Including communicating to related parties to acknowledge the results of the operation
- 3

Let employees at all levels receive training, knowledge, ability to work. to meet the standards of safety at work To realize the importance of having a good safety system to participate in the efficient use of resources. It is a culture of safety, occupational health and working environment.
- 4

Manage safety risks properly according to international standards. And integrate with all activities of business operations at all levels throughout the supply chain. for protection And reduce the impact from harm, reduce injuries, illnesses of employees. and those involved Including damage to reputation and property and does not affect external communities.
- 5

Comply with the laws related to safety, occupational health and working environment both nationally and internationally. local level and complies with international standards Requirements of customers and agencies.
- 6

Monitor and report effectiveness Management of safety, occupational health and working environment for executives at all levels to be continuously improved in accordance with the reporting format according to international standards

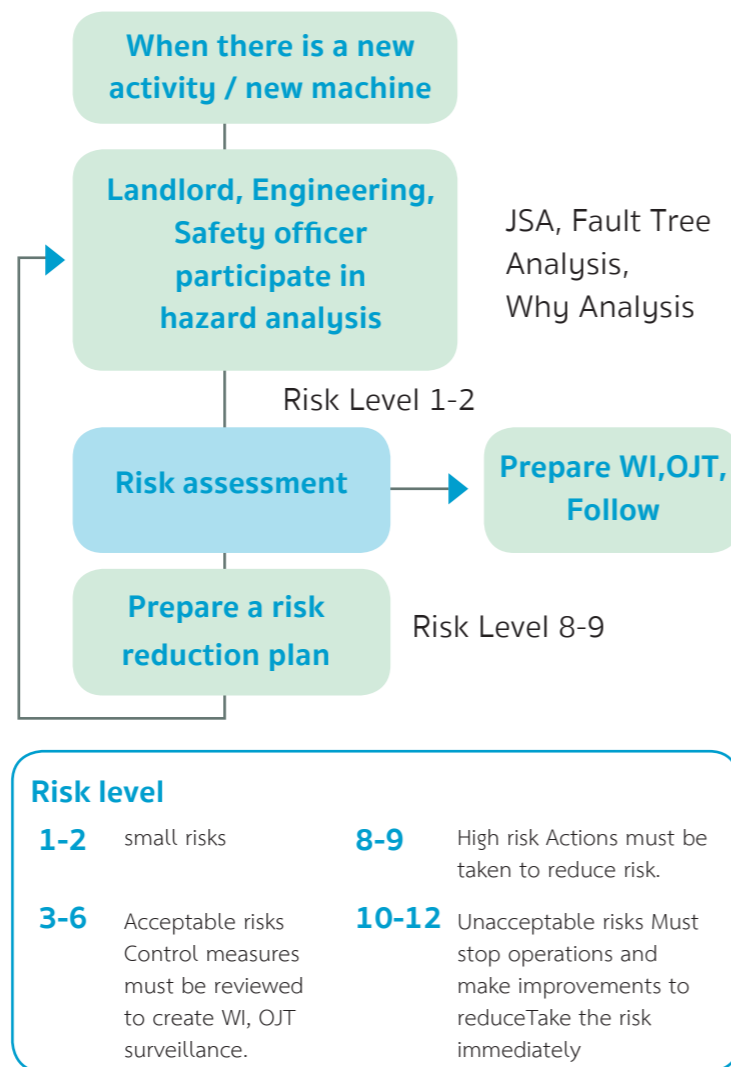
### ZERO ACCIDENT OPERATION STRATEGY

1. Upgrading the operational standards for safety, occupational health and the environment to be the same standard in every country (SHE STANDARD)
2. Occupational safety, health and environment contest for business groups through the CEO AWARDS project.
3. Outstanding Safety Establishment Contest Occupational health and working environment at the national level
4. Zero Accident Campaign Contest with NSO

### HAZARD IDENTIFICATION PROCESS AND ASSESS THE RISKS

The Company attaches importance to Safety Occupational Health and Environment, It is no less important than product quality. Therefore, every process must be safe. Do not affect the health of employees and does not affect the environment Therefore, there is a process for hazard identification and risk assessment of all activities performed, including when there are new activities or new machines hazards must be identified and assess the risks first every time before starting work In order to know the dangers that will occur along with finding ways to improve and prevent.

1. All executives are required to carry out hazard identification and risk assessment in all activities.
2. Together with supervisors, safety officers and engineering staff analysis of hazards using JSA tools, Fault Tree Analysis, Why Why Analysis.
3. Together with supervisors, safety officers and cotton engineering staff risk assessment according to the prescribed criteria.
4. Assessing risks at level 1-2, establishing safe working procedures (W) training to educate employees and an annual review (OJT) supervisor checks the compliance of safety procedures every day
5. Assessing risks at level 8-9, prepare plans to improve and reduce risks at level 3-6.



### CASE STUDY

## CPP Myanmar

### trains on safety knowledge

Charoen Pokphand Produces (Myanmar) Co., Ltd. places importance to safety, occupational health and the working environment. It also aims to be an accident-free organization (Zero Accident), so it has adopted various technologies and innovations. To raise the level of safety at work for employees Reduce accidents in the factory and reduce the injury rate of employees to the point of having to stop working. Organize campaign activities to create awareness and provide safety knowledge training to employees at all levels. To promote the well-being of employees and increase work efficiency according to the goals set.



Set and follow up on various operations within the office. Farms and factories According to the standards of the Charoen Pokphand Group and safety requirements Occupational health and working environment that has been specified by law Training is also organized to review such knowledge for relevant employees as follows :



October 26, 2022, forklift driving training for forklift drivers. and maintenance technician, Thilawa Factory, Yangon State, by Mr. Chumpol Thaka, Safety Manager Occupational Health and Working Environment from Thailand was the speaker and all 21 trainees were able to pass all forklift driving assessments.



December 1, 2022 Work safety training for organic fertilizer factory employees, Bago State, on by Mr.Wai Yan Soe, factory safety officer, was the lecturer. and there were 30 people receiving training.





**CASE STUDY** Training on safety within the factory



Charoen Pokphand Produces Co.,Ltd. places importance to safety, occupational health, and the working environment. With the goal of being an accident-free organization (Zero Accident), various technologies and innovations have been used in the work of employees. Reduce accidents in the factory and reduce the injury rate of employees to the point of having to stop working.

Organize campaign activities to create awareness and provide safety knowledge training to employees at all levels. To promote the well-being of employees as well as increasing work efficiency according to the goals set.



**Organizing training and monitoring the system**

Training	Seed Processing Plant Soi 19, 12	Chemical Fertilizer Packing and Mixing plant	Organic Fertilizer Plant
Training course to review general safety in the workplace and related laws ,Rules and welfare, promote energy conservation in the factory / annual work safety inspection.	●	●	●
General safety training course Safety regulations and related laws, new employees and before starting work.	●		●
General workplace safety training courses and according to risk factors and Contractor before starting work.	●	●	●
Training course to review safe driving.	●	●	●
Training course on safe forklift driving.	●	●	●
Training course on electrical safety / annual electrical system certification.	●	●	
Working in confined spaces.			
Training courses to create awareness about safety and 5S in a participatory way.	●		●
Annual firefighting training and fire evacuation drills.	●	●	●

**Awareness campaign activities**

Training	Seed Processing Plant Soi 19, 12	Chemical Fertilizer Packing and Mixing plant	Organic Fertilizer Plant
Safe driving campaign activities		●	●
Check car condition and motorcycle	●	●	●
Chemical spill training	●	●	●
Morning talk every Wednesday	●	●	●
Suggestion activities	●	●	●
Inspect the area and 5S activities	●		●
Contest and award for outstanding agencies in safety	●		●
Activities to meet supervisors and executives	●		
Answer safety questions from the information board.	●	●	





**CASE STUDY** Training on safety within the factory and office



Charoen Pokphand Agriculture Co.,Ltd. places importance to safety, occupational health, and the working environment. With the goal of being an accident-free organization (Zero Accident), various technologies and innovations have been used in the work of employees. Reduce accidents in the factory and reduce the injury rate of employees to the point of having to stop working.

Organize campaign activities to create awareness and provide safety knowledge training to employees at all levels. To promote the well-being of employees as well as increasing work efficiency according to the goals set



**Organizing training and monitoring the system**

Training	Rubber factory, Loei	Rice mill, Chainat	Trok Chan Office
Training course on working in confined spaces.	●	●	
Safety committee training course.	●	●	●
Training course on safety in working with electricity.	●	●	●
Training course on safety in using forklifts.	●	●	
Attitude training course and driving behavior	●	●	●
Safe driving training course (for motorcycles)	●	●	
Basic firefighting training course	●	●	●

**Awareness campaign activities**

Activities / Projects	Rubber factory, Loei	Rice mill, Chainat	Trok Chan Office
Stronger Club Project (Promoting health care Both exercise Eating and resting to promote proper health care. reduce illness)		●	●
Activities to practice basic fire extinguishing plans and fire evacuation.	●	●	●
Training activities - chemical spill emergency plan.	●	●	
KYT contest activities.	●		
Activities to measure the working environment	●	●	●
Annual electrical inspection and boiler inspection activities	●	●	●



# INNOVATION MANAGEMENT

**GRI 103-1, 103-2, 103-3**



## OPPORTUNITIES AND CHALLENGES

The business challenge in the 4.0 era is the transformation of technology innovates rapidly in order to be able to respond and comply with changing consumer behavior in the agroindustry, which needs to be improved and innovated, as well as a focus on social and environmental responsibility. Innovation is therefore one of Crop Integration Business priorities, both in terms of investment in infrastructure development. Human resource development in research and development and believe that it will help drive the business forward with sustainability in the mindset of rapid change Including creating value for society and the environment at the same time

<b>Goal 2030</b>	<b>50</b> Registered patents and petty patents	<b>100%</b>
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## SUPPORTING THE SDGs

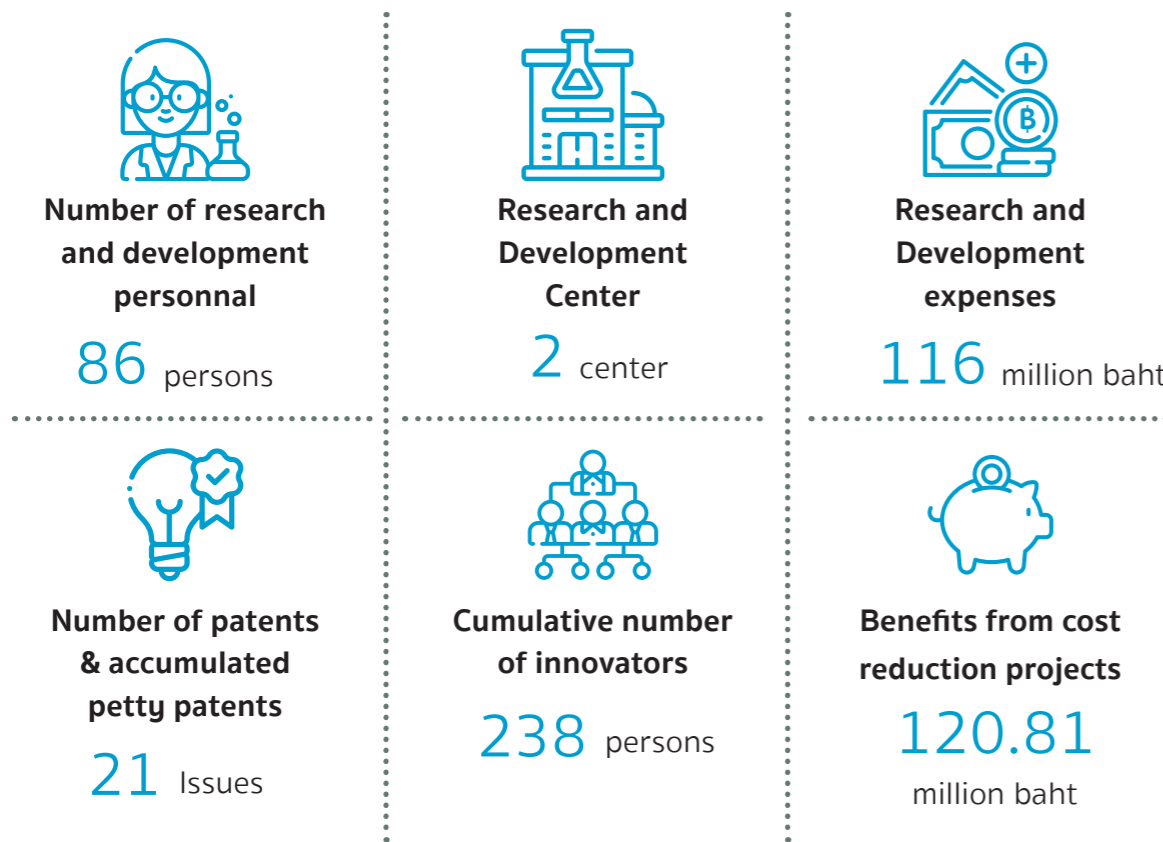
- SDG 8**  
 Decent Work and Economic Growth  
 8.2 Achieve higher levels of economic productivity through diversification and innovation
- SDG 9**  
 Industry, Innovation and Infrastructure  
 9.5 Increase research and technological capabilities of industrial sectors  
 9.B Support domestic technology development and industrial diversification
- SDG 17**  
 Partnership for the Goals  
 17.17 Support effective partnerships

## KEY PERFORMANCE IN 2022

- Number of registered patents and petty patents  
**21** patents
- Saving results from One Day Satisfaction Project  
**120.81** million baht
- Number of innovators who have invented innovation project Reduce costs and increase efficiency  
**238** people

## INNOVATION MANAGEMENT

### Research and development investment



## MANAGEMENT APPROACH

Support the changes that will enter the digital age or the 4.0 era, Crop Integration Business believes that Innovation will be an important tool that will keep us abreast of global changes or Mega Trends. Therefore, we have determined and implemented the company's innovation management framework, consisting of platform creation, personnel development, and organizational culture (People) process development (Process) including open innovation and management of intellectual property (Pipeline), the basis of which is the use of digital technology to transform the organization, to systematically drive innovation and is constantly evolving Aiming to be an organization-wide innovation organization

### CPP Innovation Diagram



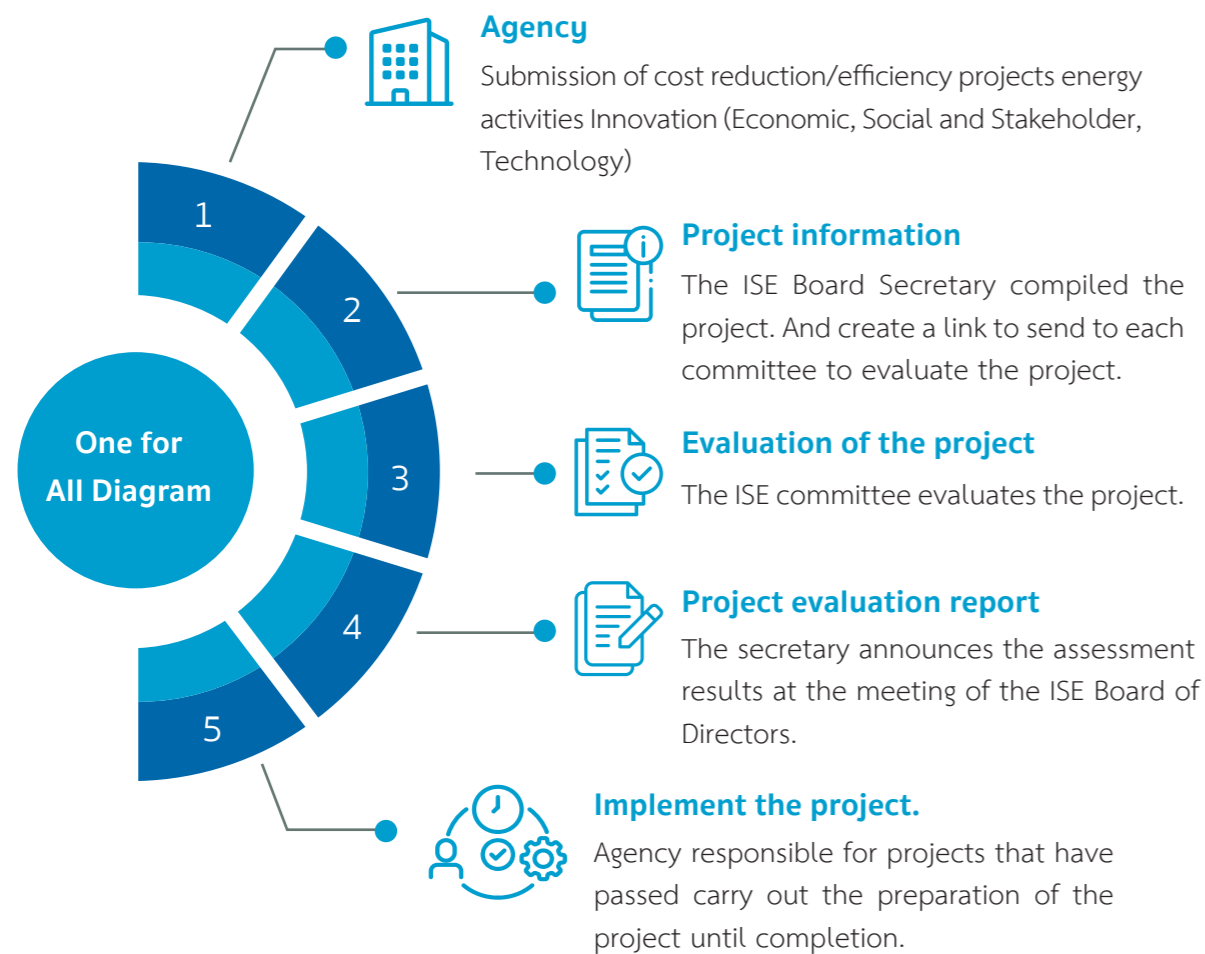
Note \*CPP Project is Cost Productivity Improvement Project.



### CREATING AN INNOVATION ORGANIZATION

Crop Integration Business importance to the creation of new things. To create opportunities and further innovation covering 3 areas: economy, technology and society. By focusing on employees to solve problems on their own. Therefore, a suggestion system (Suggestion) was created and incentives were created. by creating a platform for employees to present to the executives When employees have developed and become a culture to some extent. Next, the goal is for employees to work together so teamwork is set up. By using the concept of QCC System for employees to group together Solve more difficult problems Decisions are made between teams to achieve common solutions through a “one for all” program that encompasses efficiency, cost reduction and continuous improvement.

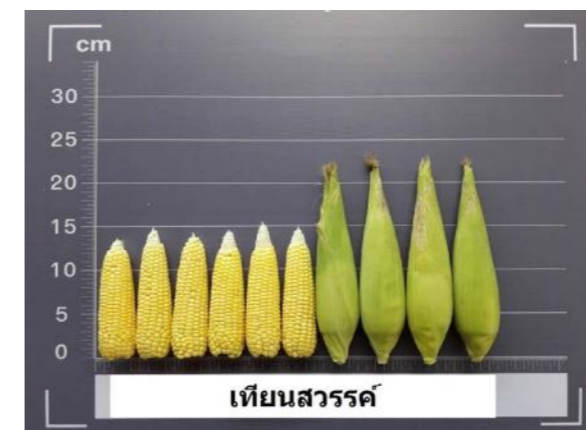
Emphasis on cross-functional collaboration, developed into an innovation system process, sent to the Group’s C.P. INNOVATION, at the business group level. Organized a forum for employees to show their potential in the CPP Award work contest with the objective of honoring innovators who invent works. and to share knowledge and exchange experiences of employees Outstanding works will be developed and elevated to the Charoen Pokphand Group Innovation Contest.



### CASE STUDY Breeding waxy corn “Thian Sawan”

In the past, farmers have lost opportunities and lost income while waiting to plant main crops. Research agency Development and innovation has improved and developed waxy corn varieties. It is a short-lived plant and is in high demand in the market. Until I got the Thian Sawan waxy corn variety. Harvest age is short, averaging 60 days. Uses little water, yields consistently and can be grown all year round. To provide an alternative for farmers while waiting to plant main crops.


Mostly waxy corn It is a native breed. The output is not consistent. To improve and develop the Thian Sawan waxy corn strain. Research, development and innovation agencies therefore use normal breeding methods. (Conventional Breeding) By breed Basic population model (mass selection) and history recording method (pedigree method) to systematically extract purebreds. By mixing yourself continuously step by step which took more than 5 years to develop.



Then crossbred between the purebred lines of the father and mother breeds. with different genetics Until a single hybrid variety (F1 Hybrids) has the desired characteristics. and produce high yields After that, repeated tests were carried out in irrigated areas. to assess potential and confirmed its adaptability in different environments for 7 years until getting the Tian Sawan corn variety.

Tian Sawan corn is a small, golden yellow cob with high nutritional value. In particular, vitamin A is a high carotenoid of 6.11 micrograms per gram. Helps promote eye health, skin, and prevent cancer. Including helping reduce dangers from sunlight. and reduce the risk of developing other diseases.



 **CP Innovation Awards 2022**  
Finalist for Chairman Awards



CASE STUDY

# CP.639

for areas behind rice fields

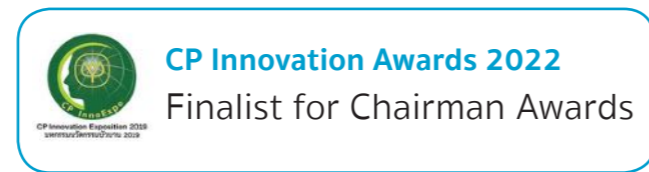


Current weather conditions make second-season rice farming is risk that the produce will be damaged. Due to water shortage during planting which corresponds to the middle of the dry season. The government therefore has a project to promote the cultivation of corn for animal feed in place of second rice farming. This is because growing corn for animal feed uses only 1/3 of the water used in second rice farming. and gives higher returns than growing rice In addition, the animal feed industry has a large demand for corn to feed animals. It also helps break the life cycle of rice diseases and insect pests.

Research agency Development and innovation Therefore, corn varieties were improved to feed animals. That can adapt well to rice fields, tolerates drought, and is suitable for harvesting with machines. Using normal breeding methods (Conventional Breeding) to select historical breeds (Pedigree Method) and systematically extract pure breeds. until it became a purebred with the desired characteristics It takes approximately 5 years to improve the purebred breed.



Then, crosses were made between genetically different parents. The test was repeated in rice fields during the dry season for a period of 7 years until the strain with the desired characteristics was C.P.639 corn, which is a high-yielding corn. The average harvest time is 100-110 days. Large pods, strong root system, good standing, responds well to fertilizer. Produces fresh produce up to 2,500 kg/rai and adapts well to rice fields, resistant to waterlogging, strong stems, suitable for using harvesting machinery.



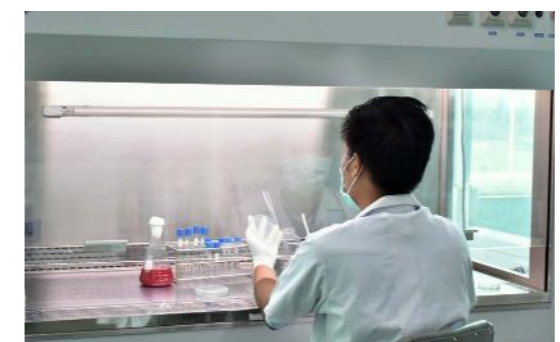
CASE STUDY

# Trichoderma TCP-10 is resistant to pesticides.

Root rot and stem rot are diseases caused by the Phytophthora fungus. that are difficult to eliminate Severe and causing damage to many economic crops such as durian, corn, chili, rubber, etc., causing farmers to lose opportunities. and income from damaged produce

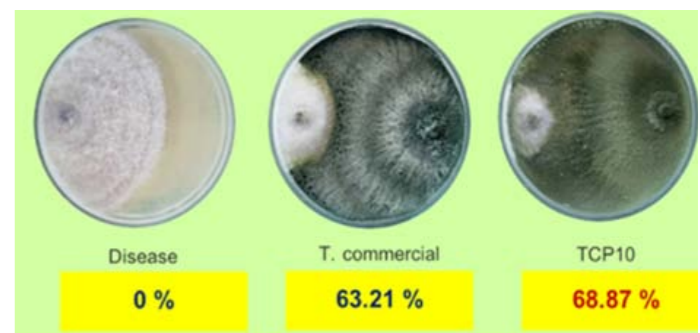
Microbial Research Team for Agriculture, Research Center, Soil Quality Assurance and Fertilizer Therefore, research and development of Trichoderma strains was made. That can reduce the growth of other fungi that cause plant diseases. Until the Trichoderma strain TCP-10 was obtained, which is effective in dissolving phosphate into a form that is beneficial to plants. And can inhibit or control the fungus *Fusarium* sp., the cause of root rot and stem rot in many economic crops such as corn, chili, etc.

Microbial research team Tested the effectiveness of Trichoderma TCP-10 in resisting pesticides, both fungicides and insecticides. It was found that the strain was able to resist the fungicide Metalaxyl as high as 100. % resistance to carbendazim was 11%, compared to commercial strains of Trichoderma that were only 55% and 1% resistant to both pesticides, respectively.



The result is Trichoderma fungus that can control the fungus that causes root rot and stem rot and helps dissolve nutrients into a form that is beneficial to plants. It also has the ability to resist chemical pesticides. It is an opportunity to expand the results of this fungal strain to use in a wider variety of crop cultivation areas. New product development is consistent with the 3-Benefits philosophy of the CP Group. is beneficial to the nation, farmers, and organizations.

**PD AWARD**  
Award category for outstanding cost reduction and efficiency improvement.





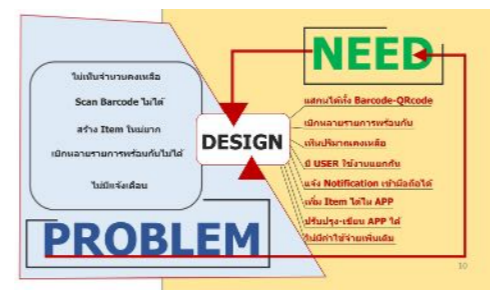
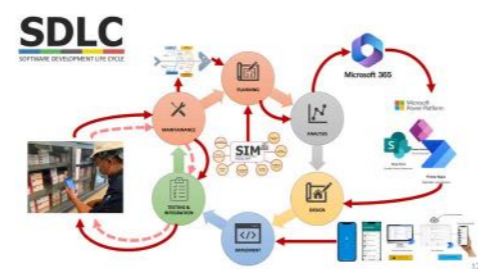
**CASE STUDY**

## CPP EN31 Project, Seed Processing Plant Soi 19

Using paper forms to pick up and receive materials Problems often arise from writing information, such as scribbles that are difficult to read, lost documents, etc. It is difficult to put data to use further. Even though this can be solved with Google Form for withdrawing and receiving materials, there is still difficulty and complexity in filling out information. The information was wrong.

From fishbone analysis Find the cause of the problem Translated into requirements as follows: Can scan both Barcode and QR Code, making multiple withdrawals at the same time. It's like ordering products through the 7-11 app, showing material information and remaining quantities, has separate users, can send notifications to mobile phones, has the function to add items, and can improve and write apps at no cost. Spend additional costs by using SDLC (Software Development Life Cycle) for SIM development.

Therefore, in order to increase the efficiency of the material picking-receiving system. Seed Processing Plant Soi 19 has implemented the Stock & Inventory Mobile App (SIM) system, which is an application and an important part of the EN31 Service Center system, connected to the purchasing system from Pantawanit. Helps increase the efficiency of disbursing and receiving materials in the engineering department. It is also connected to ADA to collect all data. To analyze and improve the care of machines to use them at their full efficiency.



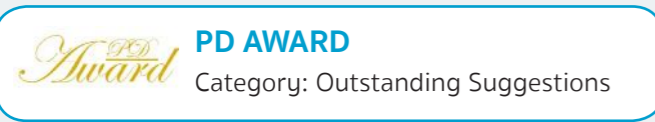
**Project results**

50% better usability Q(Quality) | Full functionality as required 100% Q(Quality)

Reduce the use of paper forms by 100% C(Cost), E(Environment)

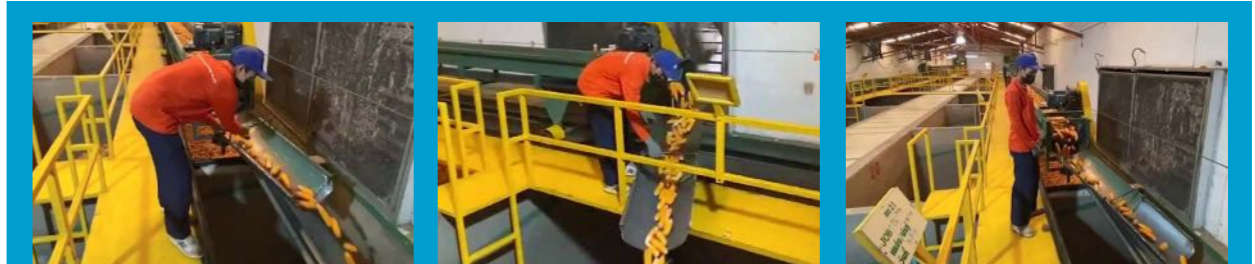
Speed Receive-withdrawal increased by 80% D(Delivery)

New item creation speed increased by 80% D(Delivery)



**CASE STUDY**

## Left-handed, right-handed project Seed Processing Plant Soi 19



### Left-handed, Right-handed project Easy to rock, no interruptions

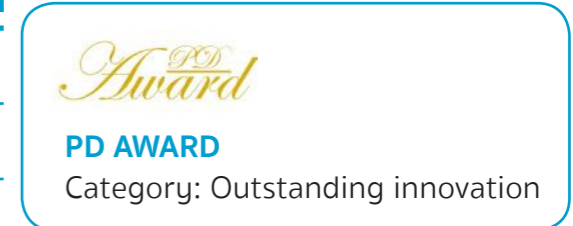
In the seed conditioning process Since selecting the pods until packing Found a problem of wastage in the production process. Because corn from the conveyor belt Cannot flow down to the corner of the stove In addition, the corn layers are not the same height throughout the oven. This caused the employees to use a plank to spread the corn ears. Let it go down to the corner of the stove.

Seed Processing Plant Soi 19 joined together to brainstorm ideas using Design Thinking as an analytical thinking technique. Solve problems for users and create innovation this time However, it was found that Prototype version 1 Still unable to transport the pods to the corner of the oven. Because the equipment is very high The team then gathered together the problems. and analyzed together again. To create a prototype version 2 that has a smooth surface, not heavy to hold, easy to adjust, and moveable.

Testing of the prototype version 2 found that the corn flowed well. Adjustable direction But because the board is long Makes movement uncomfortable So bring the problem back to brainstorm. and help analyze again To create a prototype version 3 that was raised near the conveyor exit, the slide rail was adjusted into two sections and provided a stable mounting point. which is a new device that can be moved left Or you can easily move to the right without any interruption. Importantly, it helps the pods to go down evenly throughout the stove continuously. Makes every ear of corn dry evenly.

It was found that the seed conditioning process was more efficient. As for employees, their job satisfaction increased by 80 percent. Moreover, the team also pays attention to environmental impacts. Therefore, materials are taken from equipment that is already in use. Let's create a prototype version 3.

	Original method	Left-handed, right-handed
Number of employees on the stove	4 people	2 people
shaking	100%	12.5%





## CASE STUDY Fireproof bibs reduce work risks.

Work characteristics of employees at the warehouse department Rubber factory, Loei Province That requires LPG gas to blow over plastic bags for a period of 4 hours continuously. Therefore there is a risk of fire. or flames hit the body Including flames splashing onto the clothes you wear.

To prevent and reduce the risk of fire accidents. in the work of employees performing their duties The rubber factory Therefore, an aluminized bib was created. that has heat and flame resistant properties for use as personal protective equipment Increase operational safety for employees.



### PD AWARD

Excellent project category  
Increase safety in the factory



## CASE STUDY BYPASS tire rolling machine reduces electricity bills.

Higher electricity costs This causes the rubber factory's electricity costs to be higher than the set target. The team therefore improved the wetline production process by making BYPASS rubber pressing machines from the original 4 machines required, reducing them to 3 machines without affecting quality and production capacity. Then lift the rubber roller CP03 and make a BYPASS tray to allow the rubber to flow continuously from CP02 to CP04.



The result is an investment of 5,000 baht to install a stainless steel BYPASS tray between the machines. Helps save electricity costs for the factory in the amount of 201,420 baht and saves maintenance costs in the amount of 50,000 baht, or a total savings of 246,420 baht.



### PD AWARD

Excellent project  
Category: increase efficiency and reduce costs

ลงทุน 5,000 บาท

ติดตั้งถาดสแตนเลส BYPASS ยางระหว่างเครื่องจักร

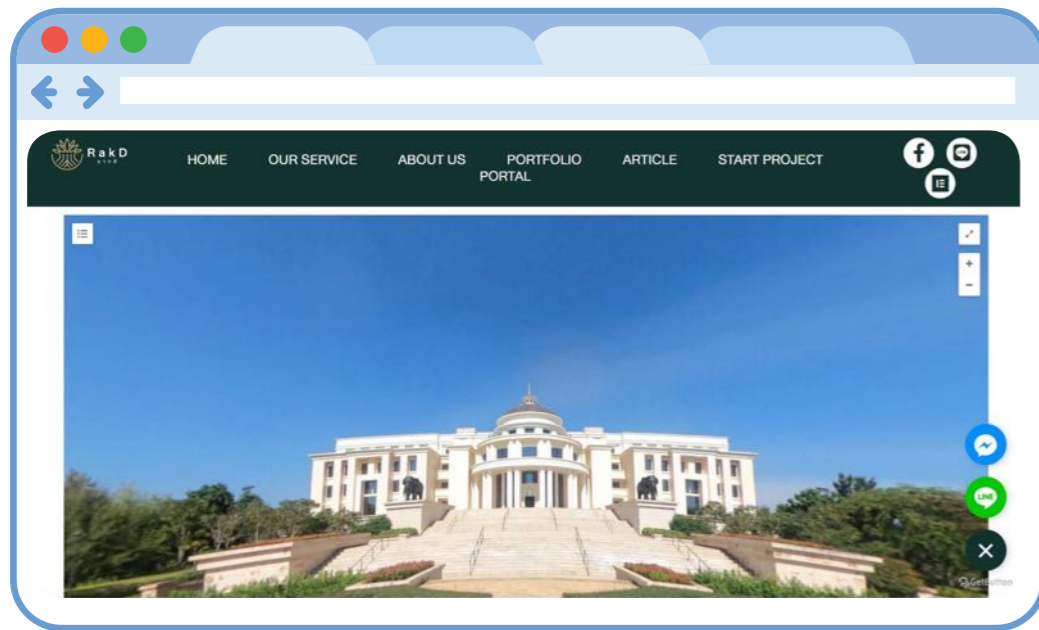
ลดค่าไฟฟ้ามอเตอร์ 75 แรงม้า ทำงาน 16 ชั่วโมง/วัน , จำนวน 300 วัน/ปี

### Results

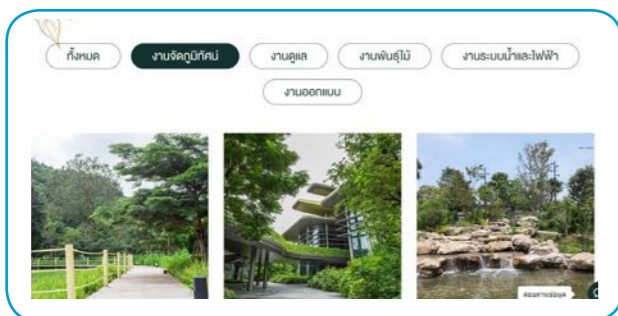
Received	Before	After
Quality (Dirt value < 0.16 ppm)	0.10	0.12
production capacity (tons/hour)	10	10
wetline electricity quantity (unit / ton)	33	31



**CASE STUDY** RAKD 360° Project



Besides the matter of format and garden design including the types of plants that are grown it will be important information that customers want to know. Scenery and atmosphere around the garden area it is another matter that customers often ask about. But because of the presentation of garden design work of the landscape industry business customers will see through pictures. Unable to view the entire 360 degree work.



IT team has therefore developed <https://www.rakd.net/rakd-360/> to allow customers to view garden design work through virtual reality technology (360° Panoramic Viewer) that can select and view various angles of the garden in detail. Allows customers to clearly see the gardening work before the actual construction. and can inform the architect to adjust and increase the design according to needs.

The RAKD 360° is a tool that helps the team understand their needs. and reach even more customers At the same time, it is also an innovation that helps in decision making. and enhance the good experience for customers After the garden design work was presented through the RAKD 360° website, it helped increase business sales.

**CASE STUDY** ONE DAY SATISFACTION PROJECT CHAROEN POKPHAND GROUP

Crop Integration Business set a goal to drive all employees Participate in initiatives, improvements, and creations of their own work. As well as being able to extend until it becomes an innovation through the Satisfied. One Day project. because I believe that the starting point of innovation is participation.

Our company encourages all employees to participate in striving for an innovative organization. One Day Satisfaction Project It is a project that focuses on creating an atmosphere, promoting and encouraging all employees to participate in creating innovation in the organization by Dr. Arch Taolanon, Senior Vice President Charoen Pokphand Group initiated the One Day Satisfaction Project. The idea came from the senior president, Mr. Dhanin Chearavanont, who taught the employees in C.P. Group. Everyone learns to be content with their present success for just one day. And tomorrow, always think of a better way.

From this concept, it leads to creating participation for all employees in C.P. Group. Participate in innovation by improving, changing and creating new things in the work that they are responsible for. as a basis for becoming an innovator It creates an atmosphere of true organization-wide innovation.

It is promoted through a points system when employees participate in their work improvement projects. Which employees can collect such points as personal points and when the score reaches the specified level Employees will be recognized as innovators at various levels.

Number of works

**One Day Satisfaction Project**

800 projects

**Total savings**  
120.81 million baht

Number of innovators

**assistant innovators**  
209 people

**Innovators**  
1-3  
29 people

# STAKEHOLDER ENGAGEMENT

**GRI** 102-21, 102-40, 102-42, 102-43, 102-44, 413-1

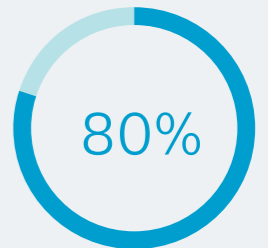


## OPPORTUNITIES AND CHALLENGES

The Board of Directors is confident that good corporate governance is an important factor for Charoen Pokphand Group in enhancing its competitiveness and leading Charoen Pokphand Group for sustainable growth, it also adds value to our stakeholders in the long term. Shows the presence. Management system that is efficient, transparent, verifiable. This helps build trust among stakeholders in the value chain.

### Goal 2030

Multi-stakeholder engagement surveys score positively



### SUPPORTING THE SDGs



#### SDG 16

Peace, Justice, and Strong Institutions

16.7 Ensure responsive, inclusive, participatory, and representative decision-making at all levels



#### SDG 17

Partnerships for the Goals

17.6 Enhance the global partnership for sustainable development

17.7 Encourage and promote effective partnerships

### KEY PERFORMANCE IN 2022

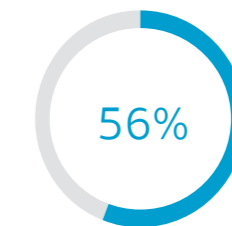


All companies Stakeholder groups are defined and looking for needs and expectations

100%

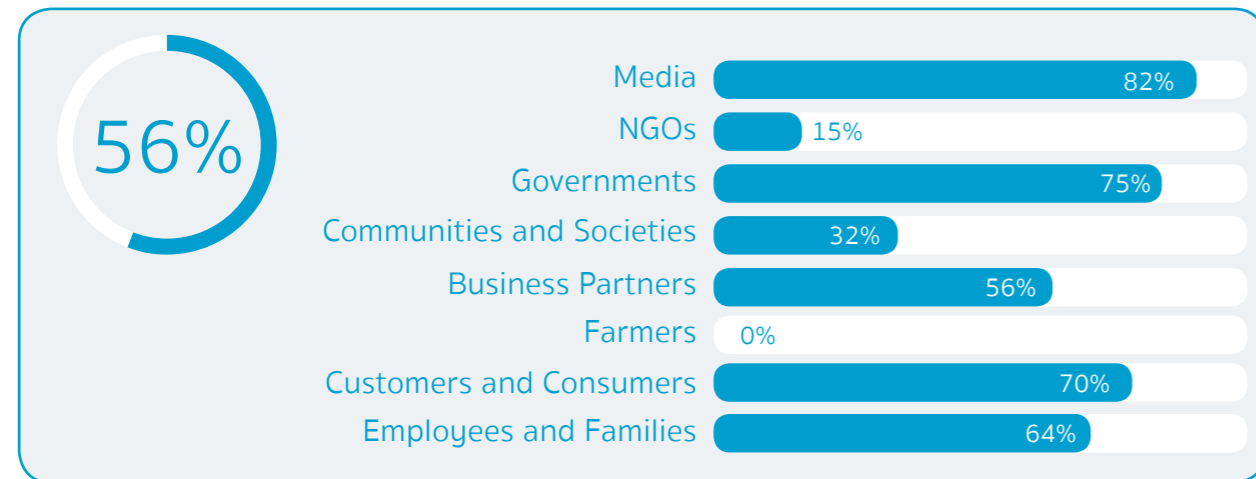


Engagement score of multi-stakeholder perception survey





### IMPORTANT PERFORMANCE RESULTS IN 2022



### STAKEHOLDER ENGAGEMENT FRAMERWORK



#### MANAGEMENT APPROACH

Crop Integration Business has announcing policies and considering stakeholders involved in business operations in the scope of each company. Also analyze the stakeholder relationship of the organization to reflect the business context in a comprehensive manner. CPP identifies that business operations throughout the value chain are involves direct and indirect stakeholders and analyzes issues that stakeholders have an impact and expect the organization, including the issues that the organization has impact and expect to stakeholders who the company has given importance and increasing the positive impact and reducing the negative impact to maintain the competitiveness to develop the growth potential of long term business.

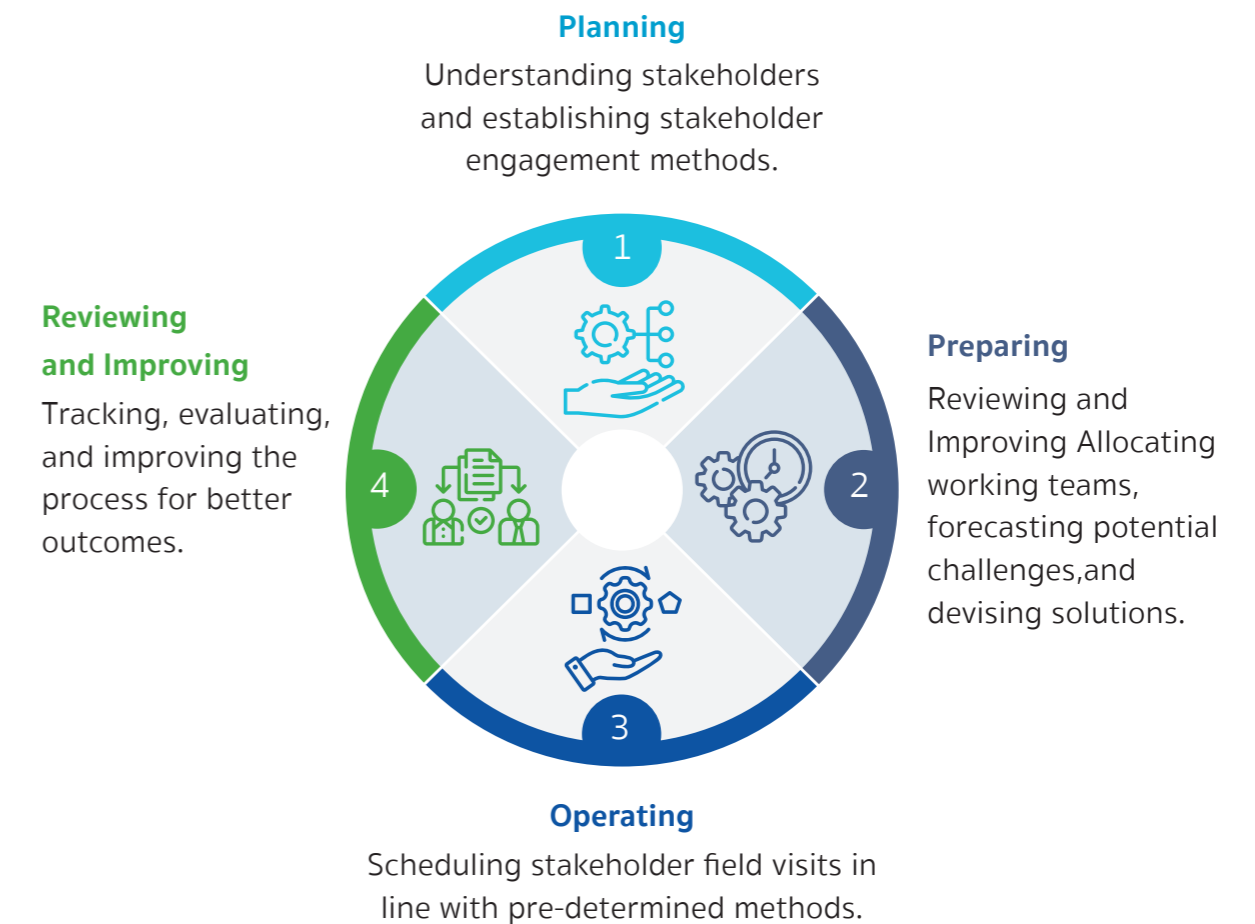
Our company determines how to engage with each group of stakeholders in order to communicate, manage and implement significant issues in formulating ways to meet stakeholders' needs and create consistent bonds across the organization.

### THE VOICE OF STAKEHOLDERS

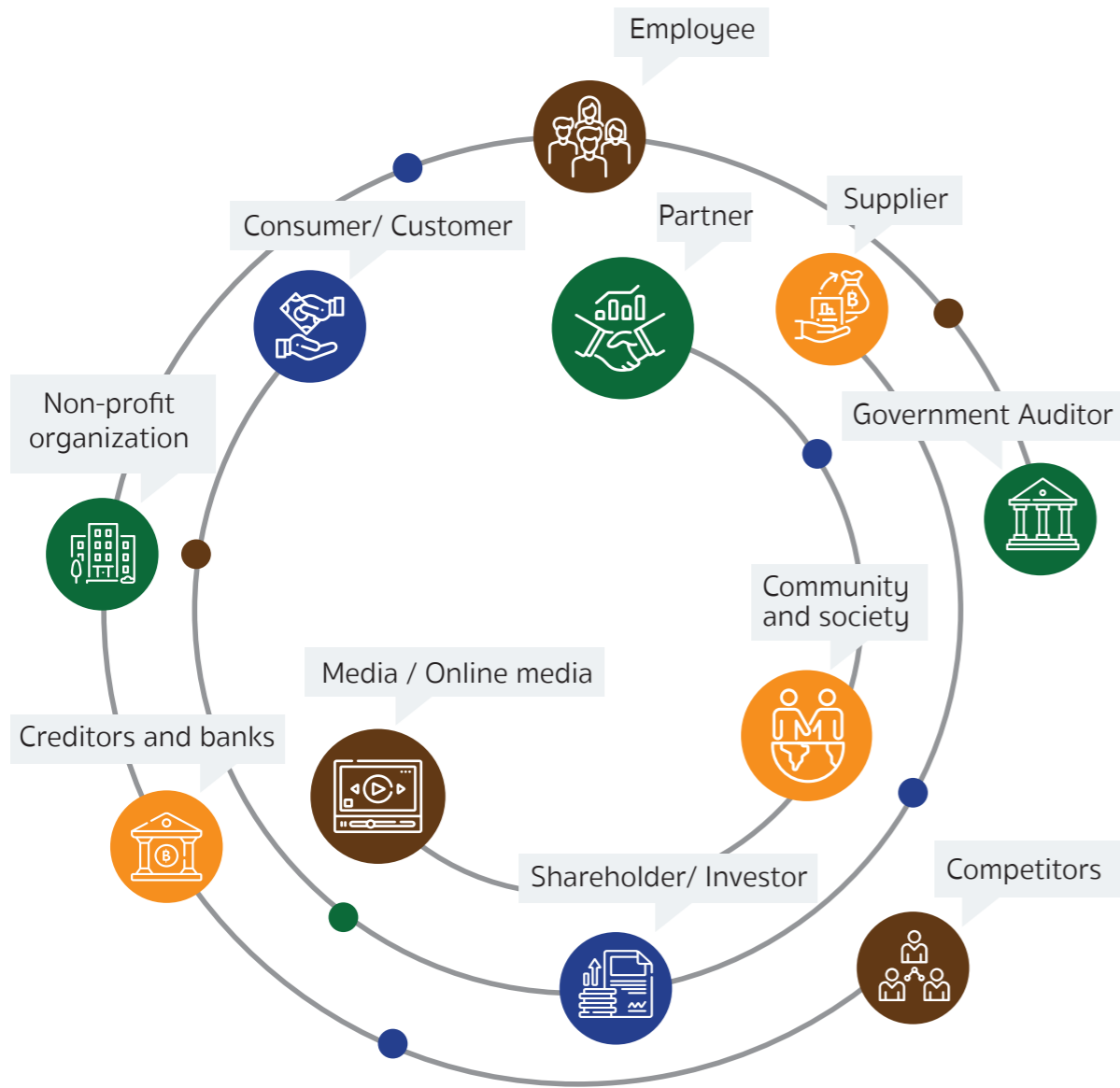
Crop Integration Business has compiled issues and opinions covering the economic, social and environmental dimensions of stakeholders, as well as prioritizing them. Stakeholders on the sustainable development of the significant issues have been applied in formulating ways to meet stakeholders' needs and create consistent ties across the organization

Building engagement with stakeholders in each area is considered the key to building the foundation for a sustainable organization. Stakeholders is a group of people who are positively and negatively affected by their business operations, both inside and outside the organization. CPP listens to stakeholders through a variety of channels that have analyzed those opinions and suggestions to understand expectations and needs before responding in a way that can manage issues that are important to both the business and all stakeholders appropriately.

### STAKEHOLDER ENGAGEMENT PROCESS



### FRAMEWORK FOR WORKING WITH STAKEHOLDERS



STAKEHOLDER GROUP	METHOD OF ENGAGEMENT	ISSUES OF INTEREST	MATERIALITY ISSUES	RESPONSE BENEFITS	BENEFITS RECEIVED BY STAKEHOLDER
Employee 	<ul style="list-style-type: none"> <li>Intranet, CPTG &amp; CROP Connect</li> <li>Mobile Applications</li> <li>E-mail and Social Media</li> <li>Meetings with executives</li> <li>Activities of the Welfare Committee and Safety Committee</li> <li>Satisfaction and engagement surveys</li> <li>Feedback and grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Compensation, benefits, and remuneration</li> <li>Career progression</li> <li>Work environment</li> <li>Occupational health and safety</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> <li>Human rights &amp; labor practices</li> <li>Leadership &amp; human capital development</li> </ul>	<ul style="list-style-type: none"> <li>Treat employees with respect for human rights principles</li> <li>Continuously develop employees' capability</li> <li>Retain good and talented employees</li> <li>Develop a human resources management system</li> <li>Comply with Thai labor standards</li> <li>Enact the Safety, Occupational Health and Workplace Policy and Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Employees receive appropriate training and development</li> <li>Leadership training and development</li> <li>Grievances and whistle-blowing management</li> <li>Assessments on safety, occupational health and work place environment</li> </ul>
Community and society 	<ul style="list-style-type: none"> <li>Sustainability Report</li> <li>Opinion survey and listening to recommendations</li> <li>Grievance channel</li> <li>Dialogues and regular visits</li> <li>Activities to promote quality livelihoods</li> </ul>	<ul style="list-style-type: none"> <li>Business impacts on societies, communities, and the environment</li> <li>Engagement in promoting community</li> <li>Livelihoods</li> <li>Fair complaints process</li> <li>Transparent and efficient communications on performance</li> </ul>	<ul style="list-style-type: none"> <li>Social impact</li> <li>Climate change management</li> <li>Water stewardship</li> <li>Ecosystem &amp; biodiversity protection</li> </ul>	<ul style="list-style-type: none"> <li>Control efficiency of the pollution prevention system</li> <li>Support to increase the quality of life and generate income for the community</li> <li>Leverage the Company's competitive advantages as tools to create positive impacts and mitigate negative impacts on societies</li> </ul>	<ul style="list-style-type: none"> <li>Initiatives that create values for society</li> <li>Climate change management</li> <li>Water stewardship</li> <li>Ecosystem and biodiversity protection</li> </ul>
Consumer/ Customer 	<ul style="list-style-type: none"> <li>Consumer center</li> <li>Feedback and grievance channels</li> <li>Customer surveys and interviews</li> <li>Meetings and site visits</li> <li>Websites, E-Mail and Social Media</li> </ul>	<ul style="list-style-type: none"> <li>Good product quality and suitable price</li> <li>Food Safety</li> <li>Product traceability</li> <li>Post-sale information about products and services</li> <li>Personal data privacy</li> </ul>	<ul style="list-style-type: none"> <li>Health &amp; well-being</li> <li>Ecosystem &amp; biodiversity protection</li> </ul>	<ul style="list-style-type: none"> <li>Develop products and services that meet quality and safety standards</li> <li>Help consumers understand products and services through product labeling, and protect customer data privacy</li> </ul>	<ul style="list-style-type: none"> <li>Commitment to quality production processes</li> <li>Product labels, website, and direct consumer hotline</li> <li>Raw material sourcing and traceability</li> </ul>



STAKEHOLDER GROUP	METHOD OF ENGAGEMENT	ISSUES OF INTEREST	MATERIALITY ISSUES	RESPONSE BENEFITS	BENEFITS RECEIVED BY STAKEHOLDER
<b>Partner</b> 	<ul style="list-style-type: none"> <li>Site visits and joint meetings</li> <li>Partner development training courses</li> <li>Supplier capacity-building projects, partnerships, and joint innovation development</li> <li>Assessments, consultations, and technical services</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Fair business practices</li> <li>Business Equality</li> <li>Supplier capacity-building</li> <li>Human rights and environmental impacts in the supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> <li>Responsible supply chain management</li> </ul>	<ul style="list-style-type: none"> <li>Continuously develop supplier partnership projects</li> <li>Develop criteria for supplier assessment according to the Sustainable Procurement Policy</li> <li>Communicate with suppliers to help them understand requirements</li> <li>Treat all suppliers equally and fairly according to business agreements / Business Code of Conduct</li> </ul>	<ul style="list-style-type: none"> <li>Supplier capacity-building</li> <li>Communications on the Supplier Code of Conduct</li> <li>Operations based on the foundations of ethics and transparency</li> </ul>
<b>Shareholder / Investor</b> 	<ul style="list-style-type: none"> <li>Meetings and roadshows</li> <li>Site visits to operational units</li> <li>Sustainability Report</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Governance</li> <li>Complete, transparent, and efficient performance disclosures</li> <li>Enhancing competitiveness and business direction</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Operate in compliance with laws, corporate governance principles, objectives, company's regulations, and decisions of the Shareholders</li> <li>Comply strictly with the creditor's conditions</li> <li>Listen to the recommendations and reflections from shareholders and investors</li> <li>Collaborate with relevant agencies to improve operational efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Good corporate governance</li> <li>Corporate sustainability management</li> </ul>
<b>Media / Online media</b> 	<ul style="list-style-type: none"> <li>Communications through all formats/channels Media visits to operational units</li> <li>Press conferences and regular media interviews</li> <li>Support and engagement in media activities</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> <li>Complete, transparent, and efficient performance disclosures</li> <li>Business impacts on societies, communities, and the environment</li> <li>Social projects</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> <li>Stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>Engage media to strengthen good relations</li> <li>Provide factual, useful, and timely information for Official communication to the public.</li> <li>Monitor news reports to inform future operational approach</li> </ul>	<ul style="list-style-type: none"> <li>Useful and timely information based on facts</li> <li>Useful and timely information based on facts</li> <li>Support and participate in media activities</li> </ul>

STAKEHOLDER GROUP	METHOD OF ENGAGEMENT	ISSUES OF INTEREST	MATERIALITY ISSUES	RESPONSE BENEFITS	BENEFITS RECEIVED BY STAKEHOLDER
<b>Government Auditor</b> 	<ul style="list-style-type: none"> <li>Meetings and visits on various occasions</li> <li>Collaboration and support for initiatives,</li> <li>Project development, and beneficial activities</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Compliance to relevant laws and regulations</li> <li>Being a model business for social and environmental responsibility</li> <li>Complete, transparent, and efficient performance disclosures</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Monitor and strictly comply with all relevant laws and operating guidelines</li> <li>Collaborate on and support initiatives, and develop projects and activities that will benefit the country</li> <li>Communicate and disclose performance in a complete, transparent, and efficient manner, and receive recommendations for improving operational plans</li> </ul>	<ul style="list-style-type: none"> <li>Good corporate governance</li> <li>Oversight of compliance across the Group</li> <li>Partnerships for sustainable development</li> </ul>
<b>Supplier</b> 	<ul style="list-style-type: none"> <li>Site visits and joint meetings</li> <li>Supplier development training courses</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Transparent and fair procurement contracts</li> <li>Organize capacity-building training courses</li> <li>Human rights and labor practices throughout the supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Good corporate governance</li> <li>Oversight of compliance across the Group</li> <li>Partnerships for Sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>Fair and transparent contracts</li> <li>Organize a course to increase the potential for supplier development</li> <li>Operate in accordance with human rights policy and labor practices throughout the supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Supplier capacity-building</li> <li>Communications on the Supplier Code of Conduct</li> <li>Operations based on the foundations of ethics and transparency</li> </ul>
<b>Competitors</b> 	<ul style="list-style-type: none"> <li>Meetings with third party organizations such as the Federation of Thai Industries</li> <li>News and information obtained through public media and forums</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with ethics of competition, laws, and trade regulations</li> <li>Equitable, transparent and fair competition</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to the rules/ethics of competition and establish a monitoring mechanism to ensure that there is no conduct associated with gaining trade secrets from competitors</li> <li>Prohibit any actions to defame competitors' reputation based on unfounded facts</li> </ul>	<ul style="list-style-type: none"> <li>Good corporate governance</li> <li>Anti-corruption</li> </ul>

STAKEHOLDER GROUP	METHOD OF ENGAGEMENT	ISSUES OF INTEREST	MATERIALITY ISSUES	RESPONSE BENEFITS	BENEFITS RECEIVED BY STAKEHOLDER
Non-profit organization 	<ul style="list-style-type: none"> <li>Regular feedback and dialogues</li> <li>Support collaboration through networks as appropriate</li> <li>Site visits to operational units</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Impacts of business operation on societies, communities, and the environment</li> <li>Social projects</li> <li>Complete, transparent, and efficient performance disclosures to the public</li> </ul>	<ul style="list-style-type: none"> <li>Human rights &amp; labor practices</li> <li>Social impact</li> <li>Ecosystem &amp; biodiversity protection</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate work locally to jointly address problems</li> <li>Listen to recommendations to inform determination of operational approach</li> <li>Communicate and disclose performance in a complete, transparent, and efficient manner, and receive recommendations for improving operational plans</li> </ul>	<ul style="list-style-type: none"> <li>Operations that uphold human rights and labor practices</li> <li>Value-added initiatives for societies</li> <li>Ecosystem and biodiversity protection</li> </ul>
Creditors and banks 	<ul style="list-style-type: none"> <li>Letters to creditors</li> <li>E-mail and Social Media</li> <li>Grievance channel</li> </ul>	<ul style="list-style-type: none"> <li>Pay in full and on time</li> <li>Complete, transparent, and efficient performance disclosures</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Provide accurate and complete financial information</li> <li>Comply with contract terms</li> <li>Strictly follow the conditions</li> <li>Pay off debts on time</li> </ul>	<ul style="list-style-type: none"> <li>Good corporate governance</li> <li>Anti-corruption</li> </ul>



## CASE STUDY CPP Volunteer Project

Our organization conducts business according to the mission of 3 benefits of the Charoen Pokphand Group. Ready to support executives and volunteer employees Under the team name CSR SPIRIT, integrated plant business, rice, transportation and services. Do activities that are beneficial to society and strengthening good relationships with communities in the area.



### Royal volunteer

Executives and volunteer employees CSR SPIRIT of Crop Integration, Rice, Transportation and Service Business, Charoen Pokphand Group in self-reliance learning base training New theory of agriculture and doing public work without expecting anything in return According to the royal volunteer guidelines “We do good deeds with our hearts” at Volunteer School Training Center 904 (Bang Khen)

CSR SPIRIT team that participated in the activity bestowed hat and scarf Complete with volunteer identification card Therefore, the power of CP volunteers has been gathered to do good deeds and benefit society in accordance with the determination of 3 benefits of the Charoen Pokphand Group.





### Community water management project According to the royal initiative.

Charoen Pokphand Produces Co.,Ltd. (CPP) and Charoen Pokphand Foods Pub Co., Ltd. (CPF) are private sectors that operate food and service businesses for all genders and ages with the goal of being the kitchen of the world. Driven on the basis of the corporate values of the Charoen Pokphand Group According to the determination of three benefits, that is, lastly beneficial to the nation, people, and organization.



CPP and CPF were given the opportunity to participate in the community water management project. According to the royal initiative by the Ministry of Education and the Office of the Vocational Education Commission The “Cholakorn” curriculum has been developed to provide opportunities for youth to learn the principles of community-based water management. Using water for agriculture underground lead bank Community wastewater management

The water management process according to the 3Rs principle is 1.Reserve, create a water source. 2.Reduce water storage, reduce water use estimates. With innovative technology 3.Reuse water treatment and reuse in the form of Bio gas according to the strategic plan for sustainability in all 12 areas of the C.P. Group, especially regarding water. In line with the United Nations Sustainable Development Goals in item 6: Clean Water and Sanitation, ensuring the availability of water. Sustainable water and sanitation management and No. 14 Life Below Water conserve and utilize the ocean and marine resources.



### Annual Kathina ceremony

Executives and employees of CSR SPIRITI, volunteers in the integrated plant business, rice, transportation and services. Create great merit at the “Kathina Ceremony 2022” event by jointly donating 3,994,847 baht to make merit at the Kathina Ceremony, along with offering robes, relics, and offering Thai Dhamma food to all 34 temples during the Kathin Festival 2022.



Our organization offers Kathin together every year. The objective is to create unity among employees, and strengthen good relationships with the community As well as continuing and upholding Buddhism to remain together with Thai society forever.







### CSR Term Break

Visit the conservation of natural resources and the environment at the Sea Turtle Conservation Center of the Royal Thai Navy. In addition to employees and their families, 10 families, a total of 45 people, applied to participate in the CSR Term Break activity, volunteering during the semester break. You will gain knowledge about sea turtles, and join in releasing a 4 month old sea turtle back to nature. Visit the HTMS Chakri Naruebet that controls and commands the fleet at sea To control air defense operations water fight and protect national interests at sea Including helping victims, and preserve the marine environment.

CSR Term Break participated in an arsenic therapy activity. Train your concentration and courage through horseback riding, of the paresthesia therapy center recon battalion Marine Corps To instill awareness of conservation of natural resources and the environment in employees' children and grandchildren, and use the school break to your advantage.



### CASE STUDY CPA&CPS Volunteer Project

Our organization conducts business according to the mission of 3 benefits of the Charoen Pokphand Group, and give importance to public benefit activities with communities surrounding the company's area under regular community projects To build good relationships with the community.



### Leftover project

The company acts as a mediator between employees, with the Baan Nokkamin Foundation Collect leftover items such as clothes, books, dolls, and various items of employees that are no longer in use, or there is more than necessary Donate to the Baan Nokkamin Foundation, to change those things It's tuition and food for the kids.

### Project Survey the impact on communities around the work area.

Our organization places importance on the communities surrounding our factories, and farms in every area doing "understanding projects Survey of community impacts around the work area" to listen to community opinions. Used to improve environmental management processes along with understanding the various operational measures of the company.

Support local activities both merit-making ceremonies and various traditional ceremonies in order to create Good relationship with the community and government agencies as well.







### Kindness Sharing Cabinet

COVID situation as a result, many communities have been affected economically and have lost income. Our organization has a concept of sharing kindness. Help those in need By bringing dry food and mangoes to 2 containers of sharing kindness and setting them up at Phanat Nikhom Market. To give to those who are in trouble and affected Take it back for family consumption. The project continues from 2020-2022.



### School development project

Children and youth are the future and hope of the country. Each year, the company organizes activities to bring volunteer employees to join in developing schools in the area. along with providing learning equipment and equipment for students as well as providing lunch and do learning-based recreational activities and fun with students.



### Old calendar, we request

Our organization is a medium for collecting old calendars. Give it to the environmental agency to forward to the National Foundation for Hungry People to produce as media or belle books. It will also be a learning dividend for the listeners. The loss of sight, perhaps, of the calendar also makes it more valuable to use resources wisely.



### CASE STUDY Myanmar Volunteer Project

#### Volunteers join in developing the beach



December 16, 2022, executives and volunteer employees, both Thai people and Myanmar from CPP Fertilizer Co.,Ltd. and CPP Myat Min Agro Co.,Ltd. totaling 230 people, joined the activity “Ngwe Saung Beach Cleaning Project, Ayeyarwady Division, Myanmar” to help clean up. and collect garbage at the said beach area During the New Year’s Eve festival and welcoming the New Year.







# HOME

## LIVING TOGETHER



Crop Integration Business realize the importance of environmental sustainability. The business is operated under the concept of using natural resources for the benefit of the value. Along with taking care of natural resources and the environment through various activities under the **Safe Thai Nature Project, Charoen Pokphand Group** with the following objectives:

1. To educate and instill consciousness in the youth and the community to live happily in harmony with nature.
2. To protect, suppress and proactively campaign for areas that are still intact. both at the area level and the overall picture of the country
3. To rehabilitate, reforest and preserve watersheds in damaged areas. by planting forests to suit that area, such as planting softwood trees Original solid wood flooring precious wood, rare wood wood to hold soil, absorb water and wood for animal feed
4. To encourage people to use the forest area as an area to make a living. Have a career path and have a good quality of life

The Strategy and action plan are implemented through supporting activities in various forms, namely educating and cultivating awareness of the people and the environment. Enhancing efficiency, suppressing the authorities, restoring reforestation, preserving watersheds in damaged areas, and promoting people who use forested areas as planting land to have a better career and quality of life. To achieve the vision of being an

organization that creates a positive contribution to the agricultural society through product and management innovations that improve the progress and security of food crops and energy crops to a global society on the basis of sustainable environment conservation under the framework of vision, mission and safety policy. Occupational Health, Environment, Energy and Efficiency, the following environmental sustainability goals consisting of



**Climate Resilience**



**Circular economy system**



**Maintenance of water resources**



**Protection of ecosystems and biodiversity**



**Responsible Supply Chain Management**



# CLIMATE RESILIENCE

**GRI** 103-1, 103-2, 103-3, 302-1, 302-3, 305-1, 305-2, 305-4, 306-2, 307-1



## OPPORTUNITIES AND CHALLENGES

The challenge of climate change impact, Crop Integration Business, Charoen Pokphand Group business has foreseen the opportunity from change to drive and support for all business groups.

Our company that is committed to trying to reduce greenhouse gas emissions and continuous monitoring measures. The company is committed to climate change management and contribute to reducing the impact on the environment. Adhering to the relevant international principles integrated with business operations principles that focus on the impact of climate change.

### Goal 2030

## NET ZERO

Reduce GHG emissions per revenues unit by **25%** compared to the base year 2020.

## SUPPORTING THE SDGs



### SDG 7

Affordable and Clean Energy

- 7.2 Increase substantially the supply of renewable energy in the global energy mix
- 7.3 Double the global rate of improvement in energy efficiency



### SDG 11

Sustainable Cities and Communities

- 11.6 Reduce the adverse per capita environmental impact of cities



### SDG 12

Responsible Consumption and Production

- 12.2 Achieve the sustainable management and efficient use of natural resources
- 12.3 Halve per capita global food waste
- 12.5 Substantially reduce waste generation



### SDG 13

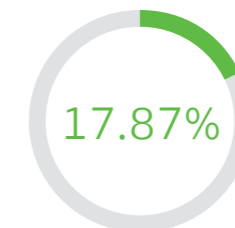
Climate Action

- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change

## KEY PERFORMANCE IN 2022



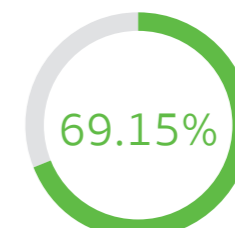
Reduce Greenhouse gas emissions per revenue compared to the base year 2020



Greenhouse gas emissions **53,816.67** Ton CO<sub>2</sub>e

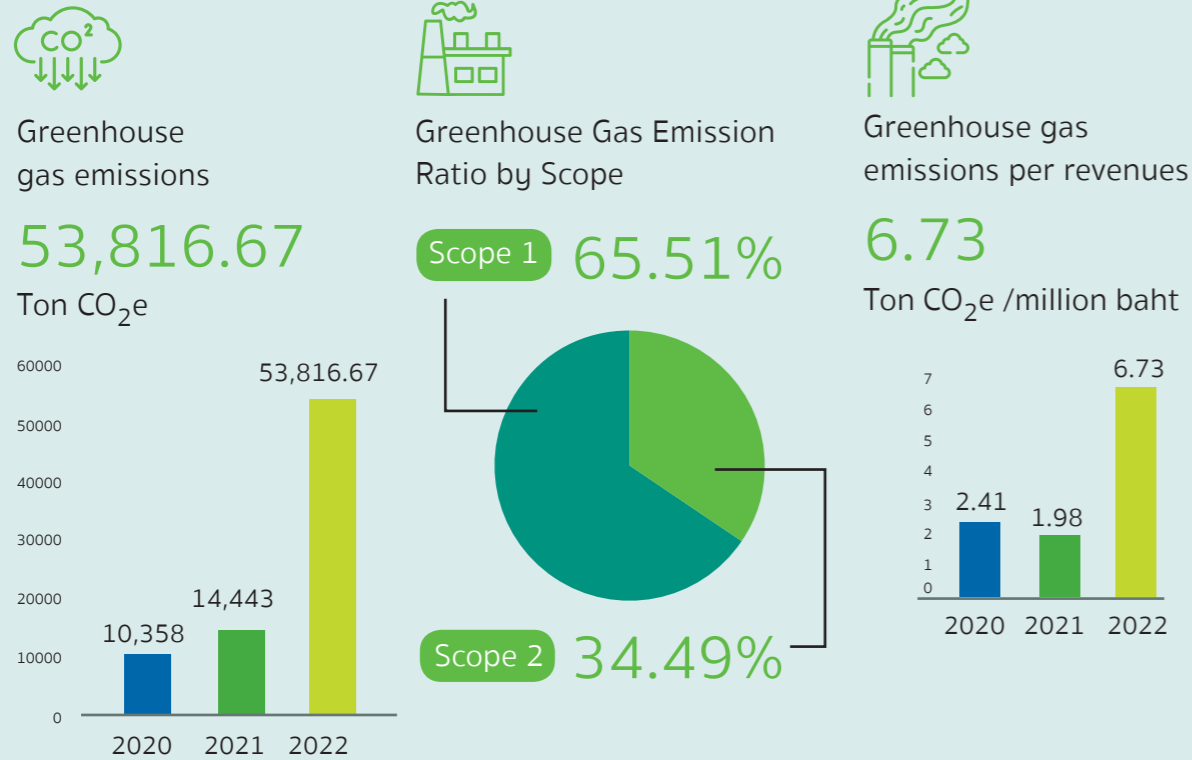


Proportion of renewable energy

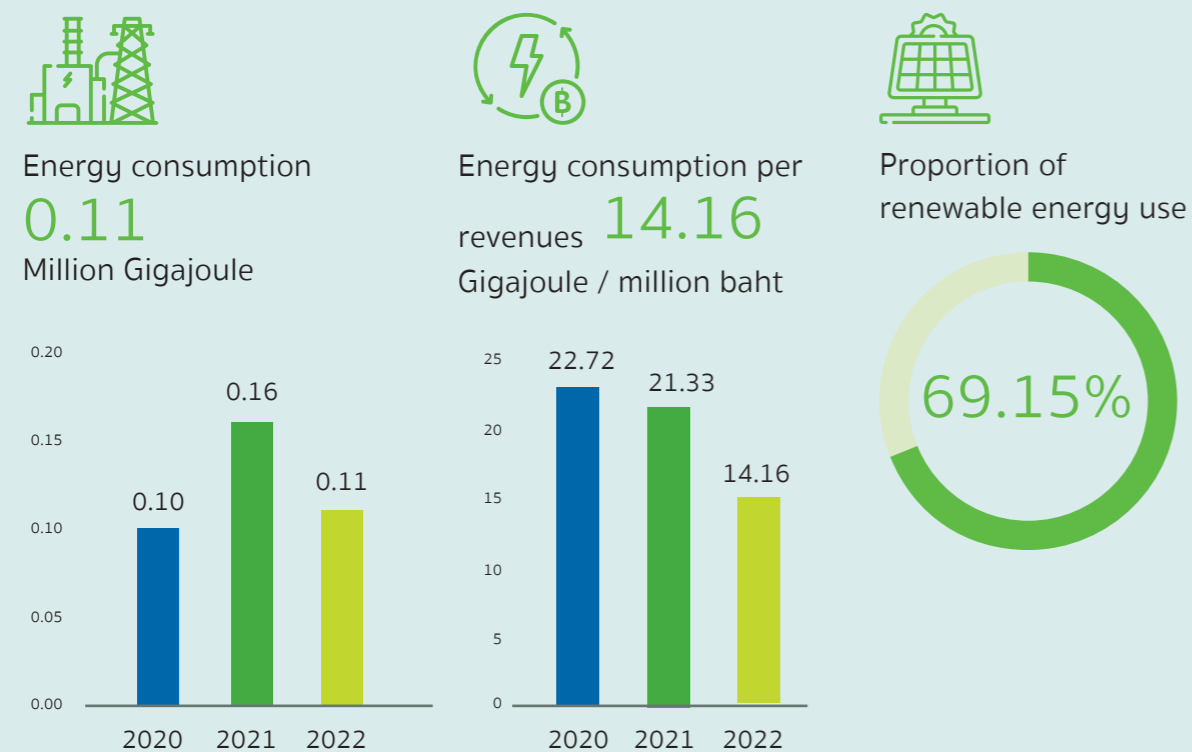


## 2022 PERFORMANCE

### GREENHOUSE GAS EMISSION



### ENERGY MANAGEMENT INFORMATION



## GREENHOUSE GAS MANAGEMENT

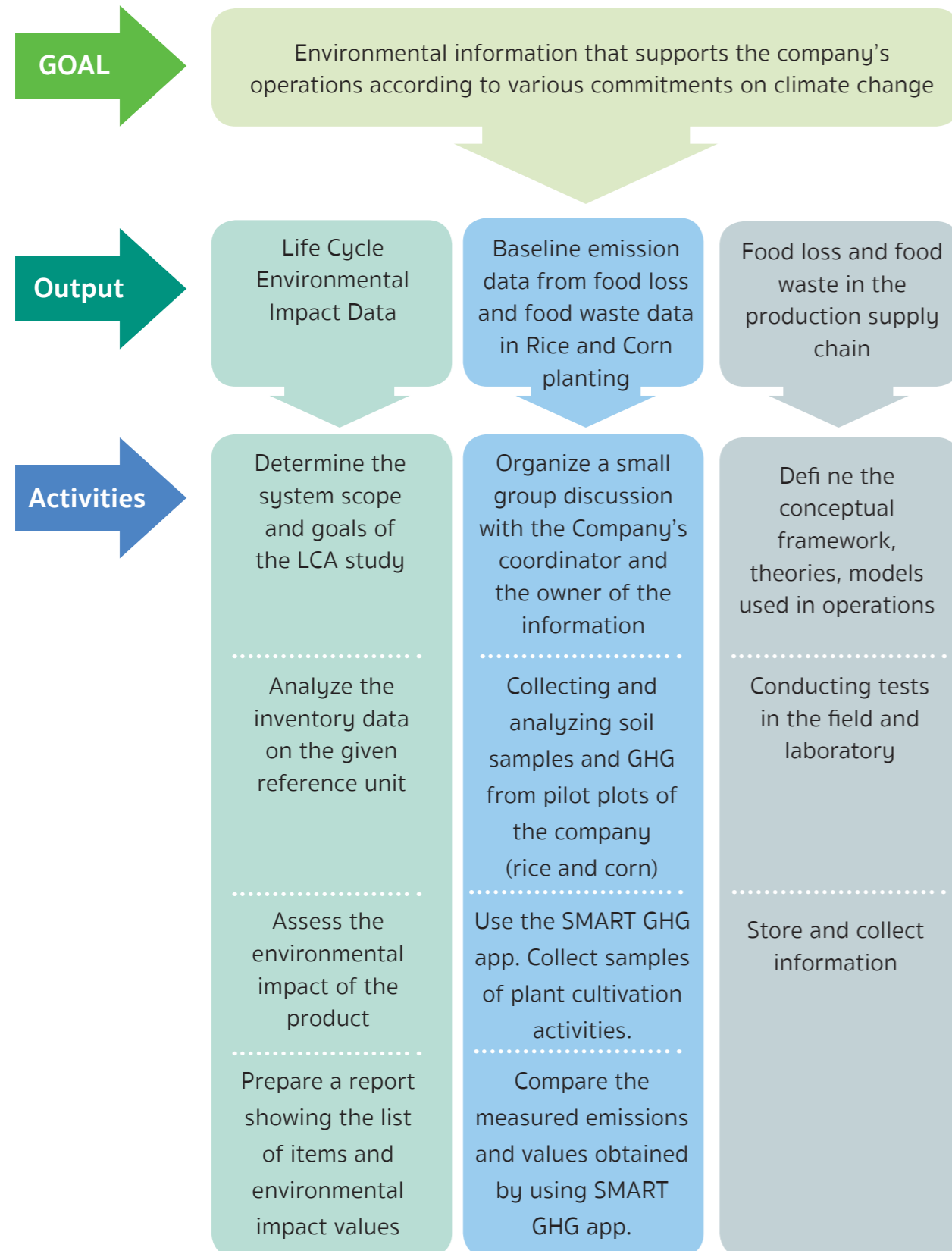
### MANAGEMENT APPROACH

Crop Integration Business Group recognizes the importance of balancing economic, environmental, social development and adhering to business operations for sustainable development. is to assess and give importance to environmental management throughout the business operation process. From research and product development raw material selection Production processes, including business development processes, are responsible for protecting and preserving the environment both inside and outside the workplace. Therefore, environmental guidelines have been established as follows:

- 1 Strictly comply with the principles of the company Code of Conduct as well as local and international laws related to environmental standards.
- 2 Environmental and social responsibility by focusing on the production process, tools, and business activities that have the same standard of practice that has the least impact on the environment and surrounding communities.
- 3 Ensure that environmental impacts from operations be monitored and continually improved efficiency by establishing clear objectives, targets and action plans and assessing environmental impacts for decisions on operations.
- 4 Encourage awareness and understanding of environment for employees, partners, and stakeholders by training.
- 5 Communicate policies and requirements to employees and partners.
- 6 Disclose an operational performance of environmental and reporting its outcome against with specified goals to any associated stakeholders.
- 7 The top management of the organization approves by signing approval to promulgation of the environmental policy to be used as a guideline throughout the organization.



## GUIDELINES FOR MANAGING GREENHOUSE GAS EMISSIONS



## ASSESSMENT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES ACCORDING TO TCFD

Crop Integration Business has in place a framework for managing climate change that covers our entire supply chain. We determine policies and targets that encompass energy efficiency, renewable energy use, waste management, and reductions in plastic packaging. We further assess climate risk and opportunities, conduct scenario analyses according to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and develop comprehensive risk management plans that include physical, technological, market, policy and regulatory, and reputational risks.

## CLIMATE CHANGE MANAGEMENT FRAMERWORK



### GHG REDUCTION TARGETS

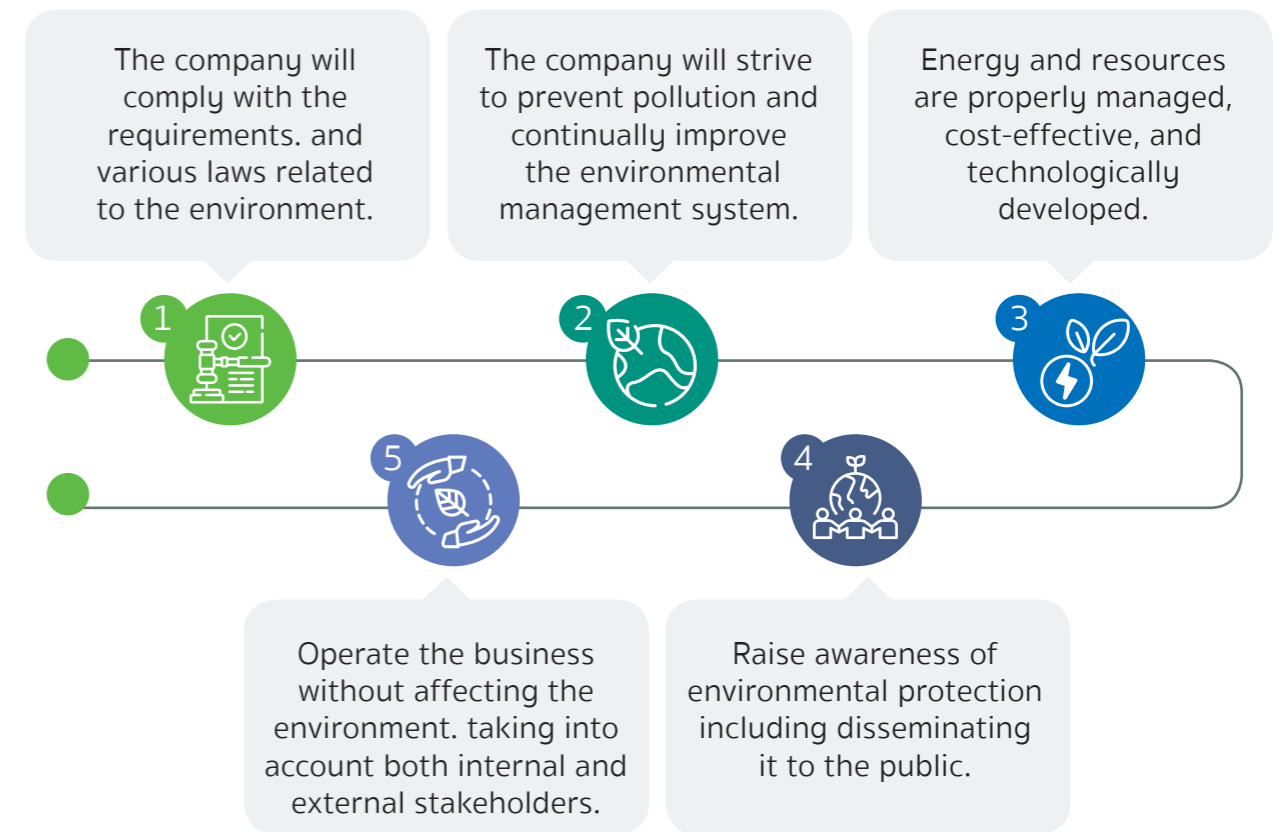
Business	Emission volume (equivalent to tons of carbon dioxide)	Emission volume (5% increase every year)	Emission volume (Kg.CO <sub>2</sub> equivalent) (Captured at 25% of total discharge volume)	Tree planting goals (trees) (Self Assessment) (1 tree can store 9.5 kg of carbon)	Tree planting goals (trees) (LESS/T-VER) (1 tree can store 100 kg of carbon)
CPP (Thailand)	4,069.81	6,313.6	1,578,403	166,174 (150,000)	15,784
Seed	-	-	-	(50,000)	5,000
Fertilizer	-	-	-	(50,000)	5,000
Promotion	-	-	-	(50,000)	5,000
CPP (Vietnam)	2,586.70	4,012.80	1,003,205	1,003,205	10,032
CPP*** (Myanmar)	235.38	555.1	138,753	138,753	1,387
CPP (India)	3,465.61	5,376.2	1,344,075	1,344,075	13,440
CPP (Total)	10,357.50	16,067.8	4,016,970	4,016,970	40,169
CPA/CPS	7,659.05	11,881.71	2,970,427	2,970,427	29,704



### ENVIRONMENTAL MANAGEMENT AND PREVENT POLLUTION

#### MANAGEMENT APPROACH

Crop Integration Business is committed to environmental management in a systematic way by considering factors affecting internal and external environmental management and analyzing them into strategic objectives and goals, managing risks to an acceptable level. by documenting show the implementation maintaining and continually improving according to the PDCA system in accordance with the requirements of the international standard ISO 14001 : 2015 with the announcement of the environmental policy as follows.



#### Environmental Performance Indicators

Factory	Compliance with Environmental Laws	Measurement results environmental quality	Environmental complaints from surrounding communities
Seed Processing Plant Soi 19	99.06%	100%	No complaints
Seed Processing Plant Soi 12	100%	100%	No complaints
Chemical Fertilizer Packing and Mixing plant	100%	100%	No complaints
Organic Fertilizer Plant	100%	100%	No complaints
Rubber factory, Loei	100%	100%	No complaints
Rice Mill, Chainat	100%	100%	No complaints





**ENERGY MANAGEMENT AND EFFICIENCY  
MANAGEMENT APPROACH**

Crop Integration Business realizes that energy conservation is important and it is the duty of all employees to work together to manage energy continuously and sustainably. Used as a guideline for crate operations and to promote the use of energy for efficiency and maximum benefits. Therefore, the policy is as follows:

- 1 Our organization will operate and develop an appropriate energy management system in accordance with the law, and other related regulations by stipulating that energy conservation is a part of the Company's operations.
- 2 Our organization will continually improve energy efficiency to suit the business, technology used and good practice guidelines.
- 3 Our organization will set plans and goals for energy conservation each year and communicate them to all employees to understand and act correctly.
- 4 Our organization regards energy conservation as the responsibility of the Executives and employees of the company at all levels to cooperate in implementing the specified measures, monitoring, auditing and reporting to the Energy Management Working Group.
- 5 Our organization will support personnel resources, budgeting, working time, training and participation in presentations to develop work in energy.
- 6 Executives and the Energy Management Working Group will review and update the Policy, Goals and Action Plans every year.





**CASE STUDY**

**Crop Integration, Rice, Transportation and Service Business**

**Announced to be a carbon neutral organization by 2030.**

Crop Integration, Rice, Transportation and Service Business intent aiming to be a carbon neutral organization by 2030 in accordance with the policy of the Charoen Pokphand Group. At the same time, the executives and volunteer employees joined together to plant trees Both wild trees and fruit trees such as rosewood, canna, mahogany, jackfruit and Nam Dok Mai mango, etc., totaling 507 trees on an area of 5 rai in the organic fertilizer factory area, Wang Muang District, Saraburi Province, in “GREEN HOME” project.



GREEN HOME Project is the planting of standing trees in the organization’s area. Began operating since 2020 and also joins with network partners in many areas to carry out perennial planting activities. and conserve important watershed forest areas of the northern and central regions through SafeThai Nature Project to take care of existing trees and plant 1.2 million perennial trees by 2025. Currently, more than 900,000 trees have been processed.

In 2022, the organic fertilizer production factory in Wang Muang District, Saraburi Province also received certification to support greenhouse gas reduction activities (LESS) from the Greenhouse Gas Management Organization (Public Organization) or TGO, in an area of old forest that has Perennial trees older than 10 years, an area of 251 rai, accounting for the amount of greenhouse gas storage of 7,125.55 tons of carbon (tCO2e) equivalent.



Area	Original wood (plant)	2020 (plant)	2021 (plant)	2022 (plant)	Total (plant)
<b>GREEN HOME (THAILAND)</b>					
1.CPP	50,000	2,208	2,567	2,067	57,872
2.CPA & CPS	83,353	260	280	381	84,276
3.CPI & Transport and Service	224	-	-	-	224



# Green Home Overseas.

Receiving the sustainability policy and perennial seedlings from the Green Home Project. In 2020, CPP Myat Min Agro Co., Ltd. and C.P. Seeds Vietnam Co., Ltd. began driving the home reforestation project. By planting standing trees in the factory area. and various farms It has also announced its intention to become a carbon neutral organization by 2030.



## Green Home CPP Myanmar

Executives and volunteer committee members, both Thai and Burmese, from CPP Myat Min Agro Co., Ltd., totaling more than 100 people, were able to jointly announce as usual whether the organization would become a carbon neutral organization in 2030.

By planting 1,000 trees. Trees include 700 tamarind trees and 300 acacia trees. On the area of Bony Farm, over 15.624 rai.



Area	Target (plant)	Original wood (plant)	2020 (plant)	2021 (plant)	2022 (plant)	Total (plant)
GREEN HOME (MYANMAR)	5,655	-	2,420	1,000	1,000	4,420



## Green Home CPP Vietnam

Executives and volunteer employees of C.P.Seeds Vietnam Co.,Ltd. have jointly announced the intention of heading towards being a Become a carbon neutral organization by 2030.

November 8, 2022, C.P.Seeds Vietnam Co.,Ltd joined with the Vocational College, Tuyen Quang Province, Northern Vietnam. Planted 1,000 elephant neem trees (Cay Lat) to increase green space. and a good environment for the community in the area.



Area	Target (plant)	Original wood (plant)	2020 (plant)	2021 (plant)	2022 (plant)	Total (plant)
GREEN HOME (VIETNAM)	5,655	600	1,700	1,000	1,000	4,300



# CIRCULAR ECONOMY

**GRI** 103-1, 103-2, 103-3, 306-1, 306-2, 306-3, 306-4, 306-5



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business is committed to work that focuses on careful resource management so that no part will be wasted products and materials are stored, reused, remanufactured and recycled as long as those resources are used in the most efficient way to create added value to the waste that occurs do not manage waste by landfill and develop new sustainable packaging design guidelines with the goal of companies in the business group

1



Reduce the amount of food waste to zero (Zero Food Waste)

2



No general waste disposal by landfill (Zero Waste to Landfill II)

3



All used plastic packaging can be recycled. reusable, reusable or biodegradable.

### Goal 2030

Zero food waste and waste going to landfill. and all plastic packaging used Can be recycled, reused or 100% biodegradable.

100%

## SUPPORTING THE SDGs



### SDG 11

Sustainable Cities and Communities

11.6 Reduce the adverse per capita environmental impact of cities



### SDG 12

Responsible Consumption and Production

12.2 Achieve the sustainable management and efficient use of natural resources

12.3 Halve per capita global food waste

12.5 Substantially reduce waste generation

## KEY PERFORMANCE IN 2022



Announcement of the circular economy policy food waste reduction policy and food waste sustainable packaging policy and waste management policy.



Modify waste data reporting according to GRI 306: WASTE (2020)



Create a baseline on the loss in the production supply chain. (Food Loss)



## WASTE MANAGEMENT

### MANAGEMENT APPROACH

Crop Integration Business places importance on the management of industrial waste and waste within the factory, therefore, has adopted the international standard system ISO 14001 : 2015 to manage the organization continuously since 2002. Waste management within the organization has been managed in a systematic way and in accordance with the legal requirements, operated according to the electronic authorization system (handling of unused materials) continuously causing the company to not have environmental complaints from surrounding communities.

### 2022 PERFORMANCE

	CPP	CPA
Total weight of waste generated	68.38* Ton	1,765.813 Ton
Waste management separated by methods		
1.General waste	67.38* Ton (98.54%)	1725.559 Ton
1.1 recycle	5.78* Ton	29.989 Ton
1.2 incineration	0.035* Ton	
1.3 Mixed into animal feed	47.99* Ton	1,431.98 Ton
1.4 landfill	13.58* Ton	22.432 Ton
1.5 Send for disposal to the local authority	-	89.67 Ton
1.6 Make fertilizer	-	151.488 Ton
2. Hazardous waste	1.36* Ton (1.98 %)	40.254 Ton
Other disposal	0.021* Ton	40.254 Ton
Burning does not convert into energy.	1.34* Ton	-
Volume of waste per income	-	-

**\*note**

- The waste management process employs waste disposal contractors who are licensed according to regulations in each country, including: Akkhi Prakan Public Company Limited, Better World Green Public Company Limited, Obkij Plastic Company Limited, In foreign countries, including Golden Dowa Eco-system Myanmar Co.,LTD , M/S.Sri Chandra Sekhara Enterprises ,Siam City cement (Vietnam) Limited (SCC-VN)
- Certificate of no environmental complaints from municipal agencies ,Provincial industry

### CASE STUDY

## Waste management in factories (CPP)

Charoen Pokphand Produces Co.,Ltd. has established policies to increase waste management efficiency. and reduce the amount of waste from the production process, including reusing waste as much as possible. By applying the principles of the circular economy to waste disposal. By supporting projects and activities to provide knowledge about waste management processes such as waste separation, recycling. and processing of agricultural raw materials etc. To make employees aware of the value and the maximum use of resources.



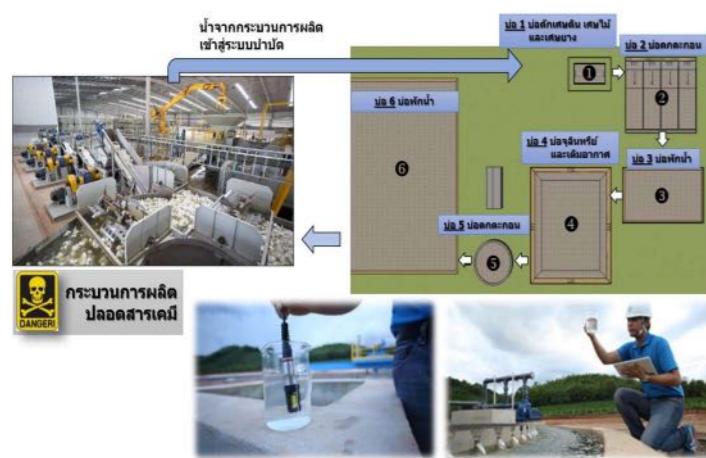
### Projects and activities to provide knowledge about waste management

Projects and activities	Seed Processing Plant Soi 19, 12	Chemical Fertilizer Packing and Mixing plant	Organic Fertilizer Plant
Environmental Waste Project	●		
Compost project that doesn't return to the pile	●		
Project to encourage farmers to produce cattle feed from cob dust.	●		
Project to produce fuel from corn cobs	●		
Project to reuse car washing water		●	
Zero waste project training activities			●
Campaign for garbage separation			●





**CASE STUDY** Waste management in factories (CPA)



Charoen Pokphand Agriculture Co.,Ltd. has established policies to increase waste management efficiency. and reduce the amount of waste from the production process, including reusing waste as much as possible. By applying the principles of the circular economy to waste disposal. By supporting projects and activities to provide knowledge about waste management processes such as waste separation, recycling. and processing of agricultural raw materials etc. To make employees aware of the value and the maximum use of resources.

**Projects and activities to provide knowledge about waste management**

Training	Rubber factory, Loei	Rice mill, Chainat	Trok Chan Office
Waste management project within factories / offices	●	●	
Waste separation project	●	●	●
Wet Scrubbers	●		
water treatment system	●		

**CASE STUDY**

CPP Myanmar and waste management

Charoen Pokphand Produces (Myanmar) Co., Ltd. has been established to increase the efficiency of waste management. and reduce the amount of waste from various production processes Including bringing waste back to use as much as possible. Therefore, the principles of the Circular Economy have been applied to manage waste in a complete manner. It also provides knowledge about waste management processes. and utilization of agricultural raw materials In order to use resources for maximum benefit.

**i** In 2022, water from dissolved chemical fertilizers was collected. Packed into 646 200 liter drums to be sent to the organic fertilizer factory for use in mixing the compost pile. and Boney Farm which is the company's seed production farm To be used to add nutrients to plants.





# WATER STEWARDSHIP

**GRI 103-1, 103-2, 103-3, 303-1, 303-3**



## OPPORTUNITIES AND CHALLENGES

Half of the world's people will suffer from water scarcity if the use of water continues to flow. Moreover, the World Economic Council argues that water is one of the most important environmental issues in the 2017. Maintaining the stability of natural resources, especially clean water, is a major concern for the private sector. Crop Integration Business Group give importance to and pay attention to water resource management as a fundamental factor for doing business, as well as supporting the Sustainable Development Goals

### Goal 2030

Reduce the amount of water used per unit of income by **30%** compared to base year 2020

## SUPPORTING THE SDGs

**SDG 6**  
Clean Water and Sanitation

- 6.3 Improved water quality through safe treatment and rec
- 6.4 Increased water use efficiency and ensure sustainable supply
- 6.5 Implement integrated water resources management
- 6.B Support the participation of local community in improving water and sanitation management


**SDG 12**  
Responsible Consumption and Production

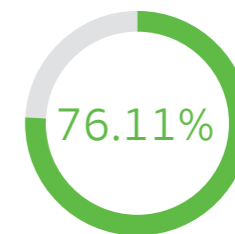
- 12.2 Achieve the sustainable management and efficient use of natural resources


**SDG 14**  
Life Below Water

- 14.1 Reduced marine pollution

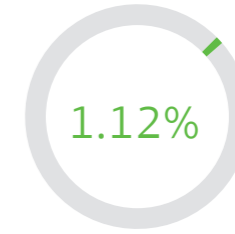
## KEY PERFORMANCE IN 2022


 Reduction of water per revenues of the amount of water used per revenue of the base year 2020



 Water consumption  
1.08 million cubic meters

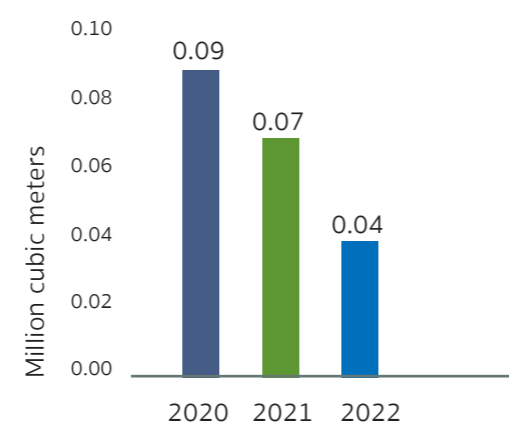
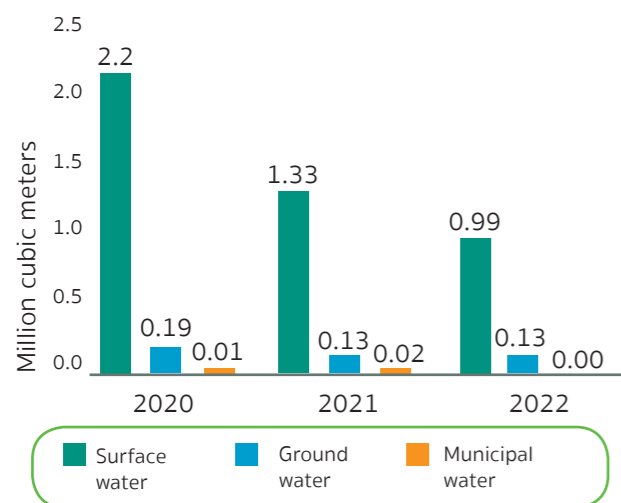
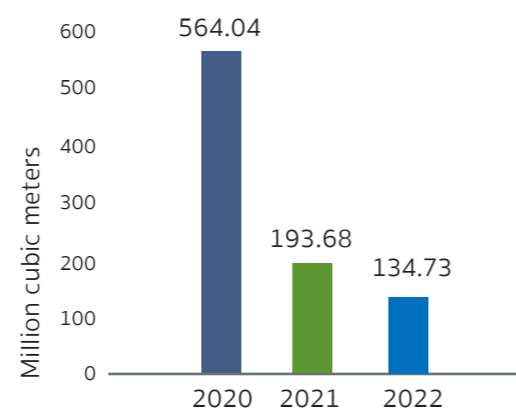
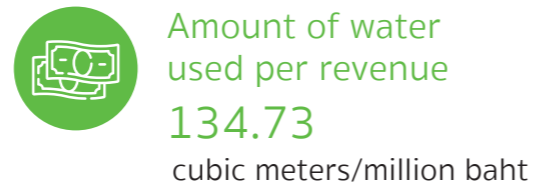
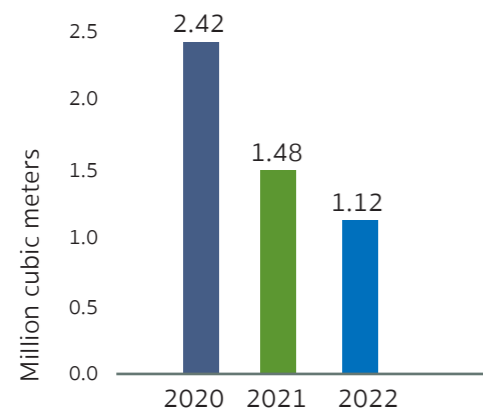
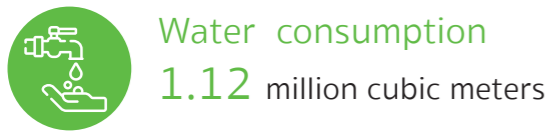
 Proportion of water being used



 Amount of water used per Revenue  
134.73 cubic meters/million baht

## WATER RESOURCE MANAGEMENT INFORMATION

### 2022 PERFORMANCE



## WATER CONSERVATION MANAGEMENT APPROACH

Crop Integration Business operates on water stewardship under the UN Global Compact and Water Stewardship policy, and the Water Stewardship Framework. These serve as guidelines, facilitating the business to achieve its strategic goal to assess water scarcity risk.

### WATER STEWARDSHIP MANAGEMENT FRAMEWORK

#### COMMITMENT

Take responsibility to enhance the efficiency of water usage and support water stewardship throughout the supply chain.

#### DEFINE TARGETS AND POLICY

Establish the Group's Sustainability Policy regarding the environment and the 2021 Sustainability Targets that reference water stewardship.

#### COMMUNICATE WITH STAKEHOLDERS

Communicate strategy and progress, as well as foster collaboration with external stakeholders.

#### ASSESS RISKS, OPPORTUNITIES AND IMPACTS

Assess and manage water risks holistically to encompass the physical risks, the quantity and quality of risks, the regulatory risks, and the Group's reputational risks.

#### IMPLEMENT

Implement water stewardship throughout the supply chain.

#### MEASURE

Monitor and analyze progress against targets to identify operational gaps to be improved.





## INTEGRATED WATER RISK ASSESSMENT

### Enabling a good water management plan throughout the supply chain

Crop Integration Business has developed a water resources risk assessment framework that is applied across all of its units and Business Groups. The assessment evaluates risk factors in various dimensions, including the volume of water withdrawal by organization, and baseline water stress levels. Our business has adopted the internationally-recognized Aqueduct Water Risk Atlas tool of the World Resources Institute (WRI) for use as our preferred assessment tool. The results of the assessment are ranked according to three levels of water risk and are then used to develop appropriate management plans.



### CASE STUDY

#### Drilling an artesian well

Water is an important factor in the agricultural sector. But not every area has enough water for cultivation. Therefore, in 2019, CPP Myat Min Agro Co., Ltd. has undertaken a project to drill an artesian well. To provide artesian well digging services For agricultural areas in Naypyitaw and Mandalay districts of FarmPro member farmers.



In 2022, a total of 106 artesian wells could be found, and when combined with the number of artesian wells that the company provided drilling services from 2019 - 2022, a total of 293 artesian wells were drilled, which can take care of a total of 1,465 acres (3,663 rai) of agricultural land.





**CASE STUDY**

**Safe Thai Nature Project  
join with Maejo University  
Ban Mae Pan San Kiang build a dam  
for conservation.**



Ban Mae Pan-San Kiang Community Chiang Mai Province A resource for learning about conservation work and developing environmentally friendly careers for other communities. Starting with developing water resources sufficient for agriculture throughout the year. Makes it possible to do a variety of agriculture. Have regular income Reduce dependency on resources from forests Importantly, today communities are the main mechanism for rehabilitating and conserving natural resources in the area.

In 2012, Safe Thai Nature Project and Maejo University listen to problems and obstacles. Exchange opinions with the Ban Mae Pan-San Kiang community Until the conclusion was reached that Solving social and environmental problems in Mae Chaem District We must begin by solving the problem of water for farming because water is life and is the heart of agriculture.

When working together to make a ridge pond and install a water pipe system from Bo Puang into farmers' plots. The community has agreed on rules and regulations for community water use. To prevent conflicts between members and prevent



impacts on other communities that share water. In every step, members must help brainstorm ideas, plan, take action, solve problems, and help plan career development both within and outside the agricultural sector.

All parties helped build the stone weir. and continuous maintenance and improvement of the water slowing weirs in the Mae Pan River area. In 2022, building a stone weir is a joint activity for the third year to store water in the Mae Pan River. Important water sources for communities in the area Return moisture to nature. Reduce the risk of forest fires and smog problems in surrounding areas. As well as helping communities manage water for consumption. Sustainable consumption and agriculture.



<b>2022</b>	Lay water pipes into <b>190</b> farmer plots.
<b>52</b> ponds	Usable area <b>1,200</b> rai



# ECOSYSTEM & BIODIVERSITY PROTECTION

**GRI** 102-9, 103-1, 103-2, 103-3, 304-2



## OPPORTUNITIES AND CHALLENGES

Crop Integration Business aware of the problems that arise and is committed to taking part in reducing impacts and protecting the integrity of biodiversity and ecosystems through the involvement of businesses and industry in Take care and minimize these effects. Our organization continues to assess the risks of global biodiversity by striving to conserve and utilize marine resources responsibly, protect, restore and support the use of terrestrial ecosystems, forests and natural diversity.

### Goal 2023

The number of areas that have been undertaken to protect and restore terrestrial ecosystems.

**100%**

## SUPPORTING THE SDGs



### SDG 6

Clean Water and Sanitation

6.6

Protect and restore water-related ecosystems



### SDG 14

Life Below Water

14.2

Reduced marine pollution

14.4

Sustainable fishing

14.5

Conserve coastal and marine area



### SDG 15

Life on Land

15.1

Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services

15.2

Halt deforestation, restore degraded forests

15.4

Ensure the conservation of mountain ecosystems

15.5

Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity

## KEY PERFORMANCE IN 2022



Number of ecosystem and biodiversity protection projects

**1** Project

(Safe Thai Nature Project)



Invest in the environment by Safe Thai Nature Project.


**6** Million baht





### MANAGEMENT APPROACH

Crop Integration Business believes that protection of ecosystems and biodiversity based on the equitable use of resources is the responsibility of all sectors of society, therefore, guidelines in line with the Rio Declaration on Environment and Development and the Convention on Biological Diversity are therefore formulated :

- 


**1** Participate responsibly to protect ecosystems and biodiversity in compliance with laws, regulations and international standards and set long-term goals to guide business operations as well as to cooperate with organizations working in conservation.

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**2** Reduce impacts on ecosystems and biodiversity along the supply chain by developing supply chain management practices. Responsible for preventing deforestation and ensuring guidelines are implemented effectively.

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**3** Ecosystem and biodiversity risk assessments are carried out to inform decision-making and effective risk management.

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**4** To promote awareness and understanding of ecosystem protection and biodiversity to employees, partners and key stakeholders by organizing training knowledge sharing or organizing campaign activities.

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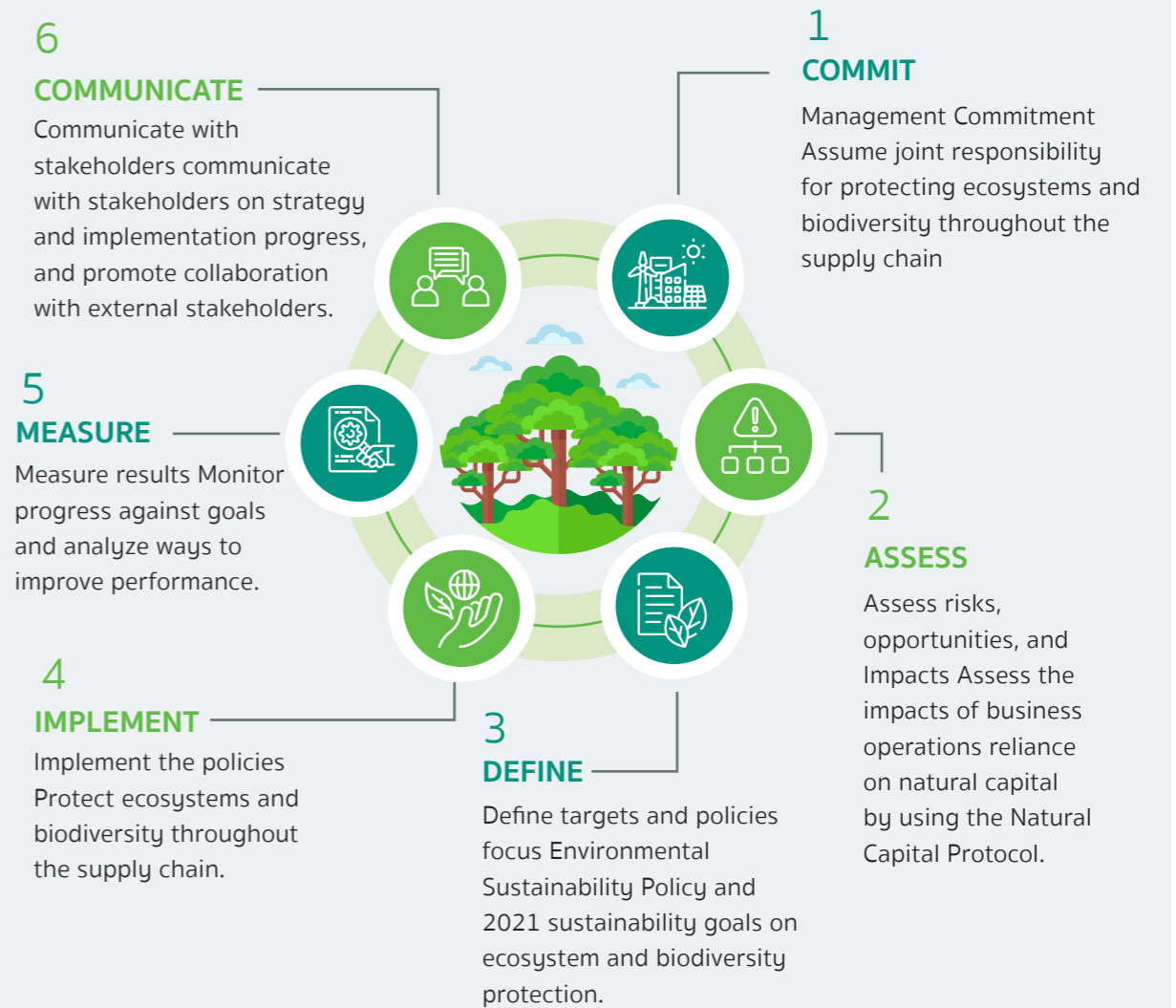
**5** Disseminate information and performance on the protection of ecosystems and biodiversity through Sustainability Reports. Charoen Pokphand Group to report the progress status of current operations against the targets identified to stakeholders.

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**6** Develop cooperation with government agencies, non-profit organizations(NGOs), educational institutions, community and other agencies to jointly solve ecosystem and biodiversity

### ECOSYSTEM AND BIODIVERSITY PROTECTION FRAMEWORK







**CASE STUDY**

**Solving the problem of wild animals leaving the area**

The situation of wild animals leaving protected areas in Thailand is likely to increase. Especially in the case of wild elephants leading to conflict between people and wild elephants. And as a result, wild elephants are at risk of being hunted. But there is no protected area that has experienced problems with wild animals leaving the protected area. Able to find ways to manage such problems with 100% success.

Problems with wild animals leaving the area of Huai Kha Khaeng Wildlife Sanctuary. There is a trend of increasing every year. In 2019, Safe Thai Nature Project together with Sueb Nakasathien Foundation support Huai Kha Khaeng Wildlife Sanctuary in solving the problem of wild animals



leaving the area as follows : collecting wildlife data, restoring wildlife habitats and food, supporting agricultural crop modification, public relations. Create understanding, set up a network to monitor wild animals outside the area. and the network pushing wild animals into protected areas and creating lines to prevent wild animals from leaving the area.

In 2022, support surveillance equipment such as warning devices, wildlife pushing kits, and camera traps to the Wildlife Coordination Center outside the area. Huai Kha Khaeng Wildlife Sanctuary. Both support the creation of a mobile public relations platform. To provide knowledge and engage local communities in solving problems. As well as creating a network to monitor and report incidents in the area. It also supports farmers change to growing plants that are not food for wild animals, such as pak kut, wild pak wan and herbs instead.



168 warning signs  
With 188 batteries

10 camera traps

Set up a network to monitor wild animals outside the area.

13 communities,  
5 people each

Organized 3 traveling forums to provide knowledge to 260 villagers.

Improving animal food sources in 2 areas

Improving 3 artificial aneurysms

Improving 400 water sources

Career change (Pak Kut) 13 houses





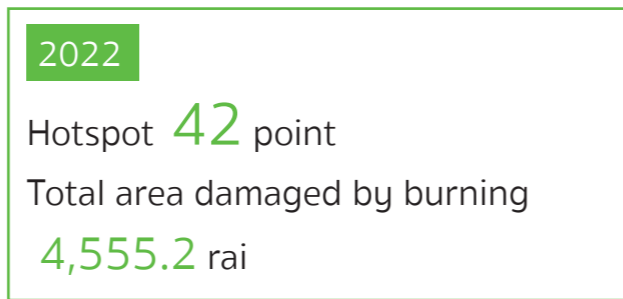
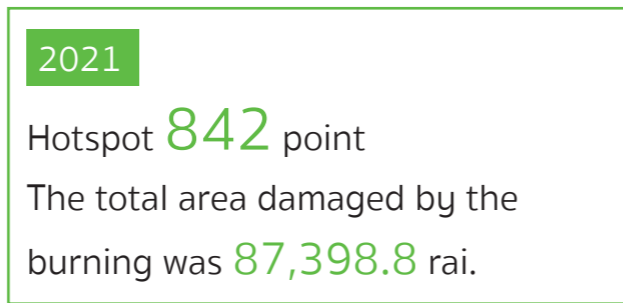
CASE STUDY

Using satellite imagery with the conservation of natural resources.

10 years ago, Safe Thai Nature Project protecting and caring for the forest in Sri Lanna National Park, Phrao District, Chiang Mai Province, by supporting technology and various equipment to increase the potential of officials to monitor and monitor various threats. But with an area of nearly 900,000 rai, there are only 60 park officials unable to cover the entire area. In 2020, Safe Thai Nature Project and Sri Lanna National Park jointly bring geographic information technology or satellite images used To increase the efficiency of natural resource and environmental management to keep up with the situation (real time) and cover more areas.

After taking information from satellite images such as wind direction and the location of forest fires Including areas damaged during the same period last year. To prepare and plan surveillance Manpower management, routes into the area Along with fuel management in the park's area, it was found that officials were able to reach disaster areas faster. and reduce the risk of danger to officials.

The project also provided food supplies such as rice, dry food, drinking water, etc. to 10 forest protection units of Sri Lanna National Park and volunteers in 11 sub-districts, Phrao District, Chiang Mai Province, in order to build morale for the working staff.



CASE STUDY

Restoring the ecosystem and create biological diversity Khao Sanam Phriang - Khlong Wang Chao with the economic forest process

Safe Thai Nature Project join with Sueb Nakasathien Foundation manage the ecosystem in the forest reserve and the western forest connection line for sustainable development, Kosamphi Nakhon District, Kamphaeng Phet Province, since 2020 with operational goals to restore the ecosystem and create biodiversity. Between Khlong Wang Chao National Park with Khao Sanam Phriang Forest Sanctuary Let the forests that were separated become reconnected. with the economic forest process Along with understanding how communities in the area have changed their careers from growing monoculture crops. It is a combination of farming. and planting forests to generate income

After visiting the area to understand the target communities of the project, 4 houses in Kosamphi Subdistrict, Kosamphi Nakhon District, Kamphaeng Phet Province, namely Ban Rai Phichit, Ban Nong Bua Samakkhi, Ban Nong Daen, and Ban Pang Khanun, all 4 houses had opinions. The same thing means choosing bamboo as the tree that represents the connection between the two forest ecosystems. Because the community can take advantage of bamboo. It is used as a support pole for longan trees, which is the main occupation of farmers in the area.

Bamboo is a plant that grows quickly. Easy to plant and grows well in all types of soil. It is also a source of food for many types of wild animals to use, such as wild boars, porcupines, barking deer, deer, and gaurs. They like to eat bamboo roots, bamboo leaves and young shoots. It is a food that wild elephants like.

The project aims to create a fragmented ecosystem in the form of forest patches (Stepping Stone) in all 7 zones, covering an area of 6,000 rai. Currently, operations are being carried out in Zone 3 and Zone 4 by planting a total of 16,000 trees, or equivalent to 14% of the project's target area.



# RESPONSIBLE SUPPLY CHAIN MANAGEMENT

**GRI 102-9, 103-1, 103-2, 103-3, 308-1, 308-2, 414-1, 414-2**



## OPPORTUNITIES AND CHALLENGES

Our company realize that the strength of the chain depends on the less strong chain link. For this reason, the company has become a part of Strengthening the strength of trade partners throughout the supply chain to strive for best practices in all dimensions, including economic, social and environment. CPP poses a great challenge in driving to bring about positive change. Cease or discourage, but on the contrary, remains determined to develop the potential of its trading partners even further. Together we will think together to build towards sustainability at the same time. In addition, CPP also supports the Sustainable Development Goals to develop countries in which the CPP has operated or invested in based on the Principle of Three Benefits.

### Goal 2030

**100%** Business groups with high-risk raw material traceability processes Including sustainability audits with high-risk trading partners.

## SUPPORTING THE SDGs



**SDG 4**  
Quality Education

4.4 Increase the number of youth and adults who have relevant skills, and promote Entrepreneurship



**SDG 8**  
Decent Work and Economic Growth

8.3 Promote development-oriented policies that support decent job creation, entrepreneurship



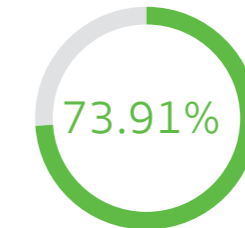
**SDG 9**  
Industry, Innovation, and Infrastructure

9.4 Upgrade infrastructure to make them sustainable, with increased resource-use efficiency and greater adoption of technologies

## KEY PERFORMANCE IN 2022



Determine Tier 1 are audited for sustainability.



## RESPONSIBLE SUPPLY CHAIN MANAGEMENT

### MANAGEMENT APPROACH

Crop Integration Business focuses on managing supply chain by defining management procedures as a guideline for all companies in the business to provide supply chain management go in the same direction in supply chain management, the business group starts from communicating manuals. Code of Conduct for Partners to all business partners for business partners to be aware of the policies and Expectations of the business and can work together continuously.



### RAISING AWARENESS AND RISKS

Crop Integration Business has received a policy from the Charoen Pokphand Group and is committed to raising awareness of responsible supply chain management. With major business partners first (Critical Suppliers). The principles used to classify the main trading partners are as follows:

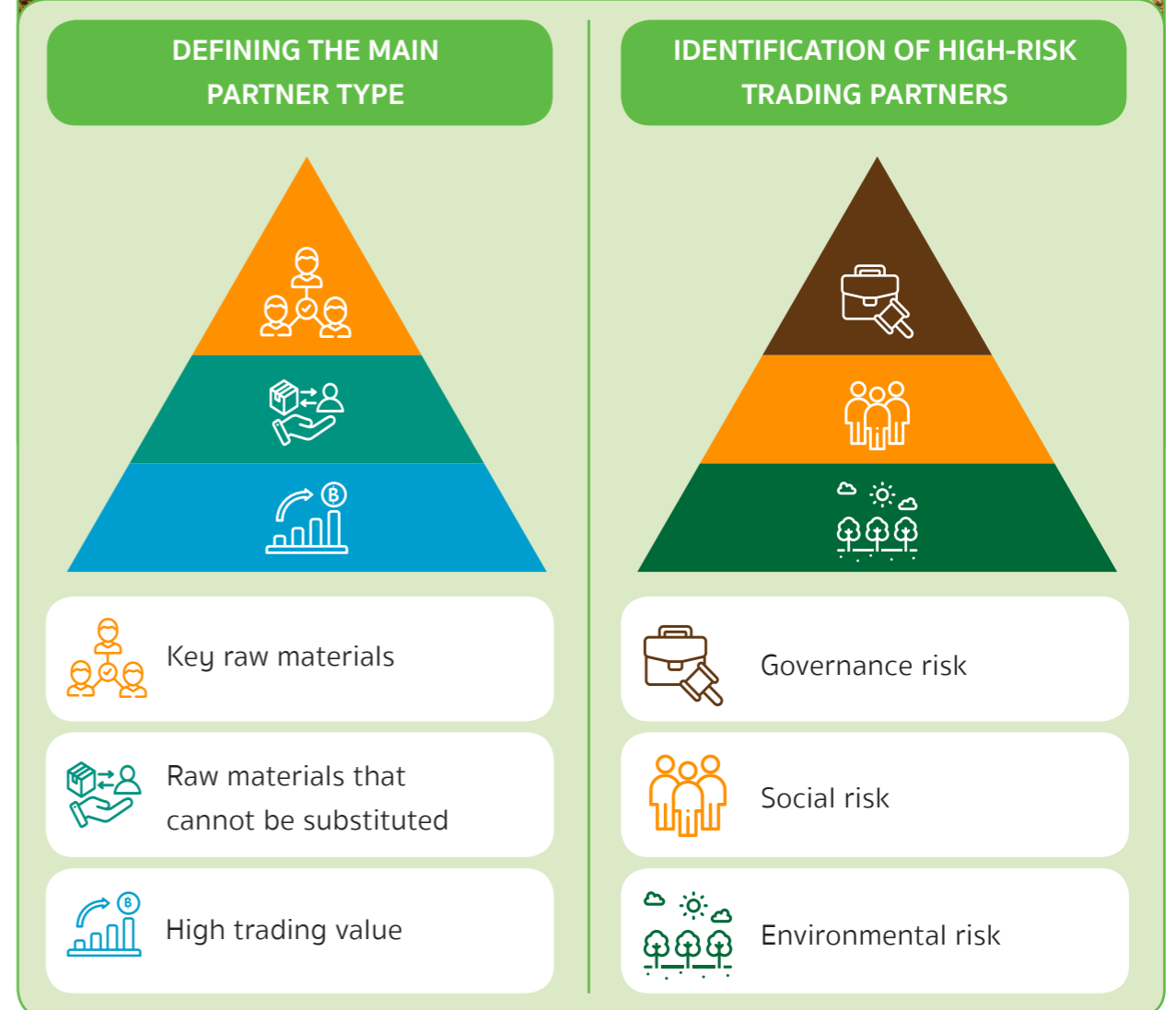
1. Suppliers of key raw materials.
2. Suppliers who are suppliers of key raw materials that cannot be substituted.
3. Partners with high trading value.



In addition, it was identified to find business partners who are at risk by assessing sustainability risks throughout the supply chain through two-dimensional assessment criteria, namely the severity of the impact, and the likelihood of risk, which the risk issue used in the assessment is taken from the channel. They are as follows:

- 1) News
- 2) Past Performance
- 3) Industry-related risk factors
- 4) Trends and potential risks in the future.

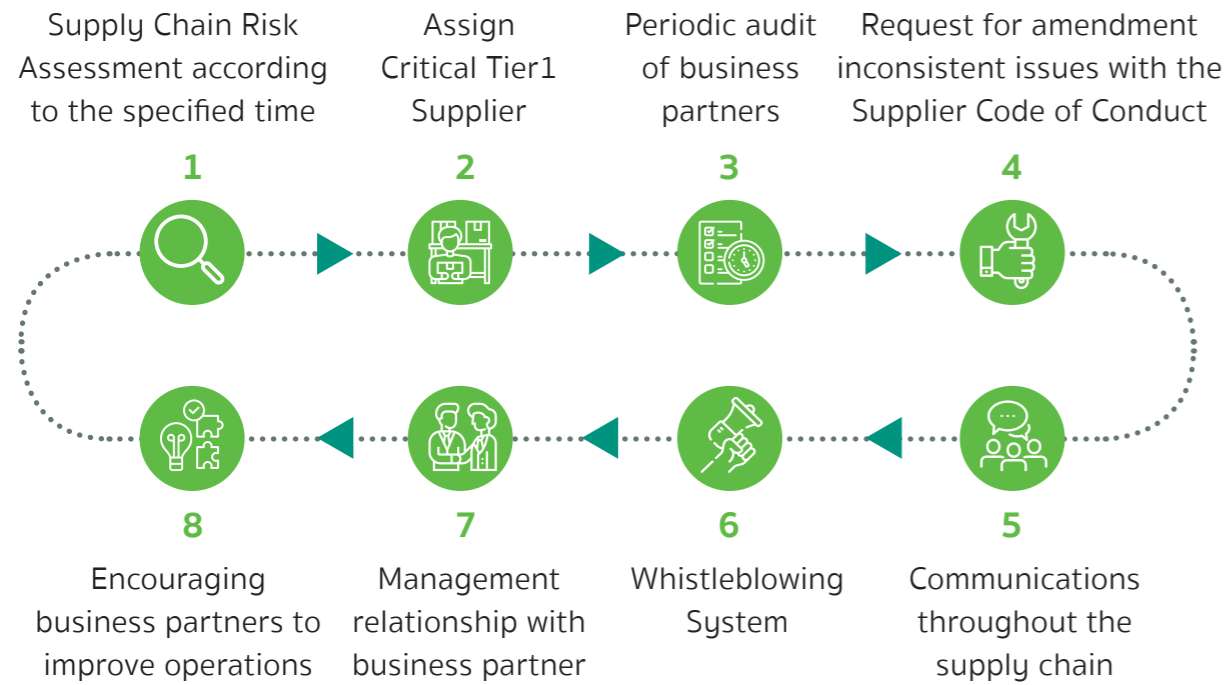
The risk assessment covers raw materials packaging groups and service providers who are not limited to only the 1st business partner (Tier 1) who directly buy-sell but also include other business partners (Non-Tier 1).



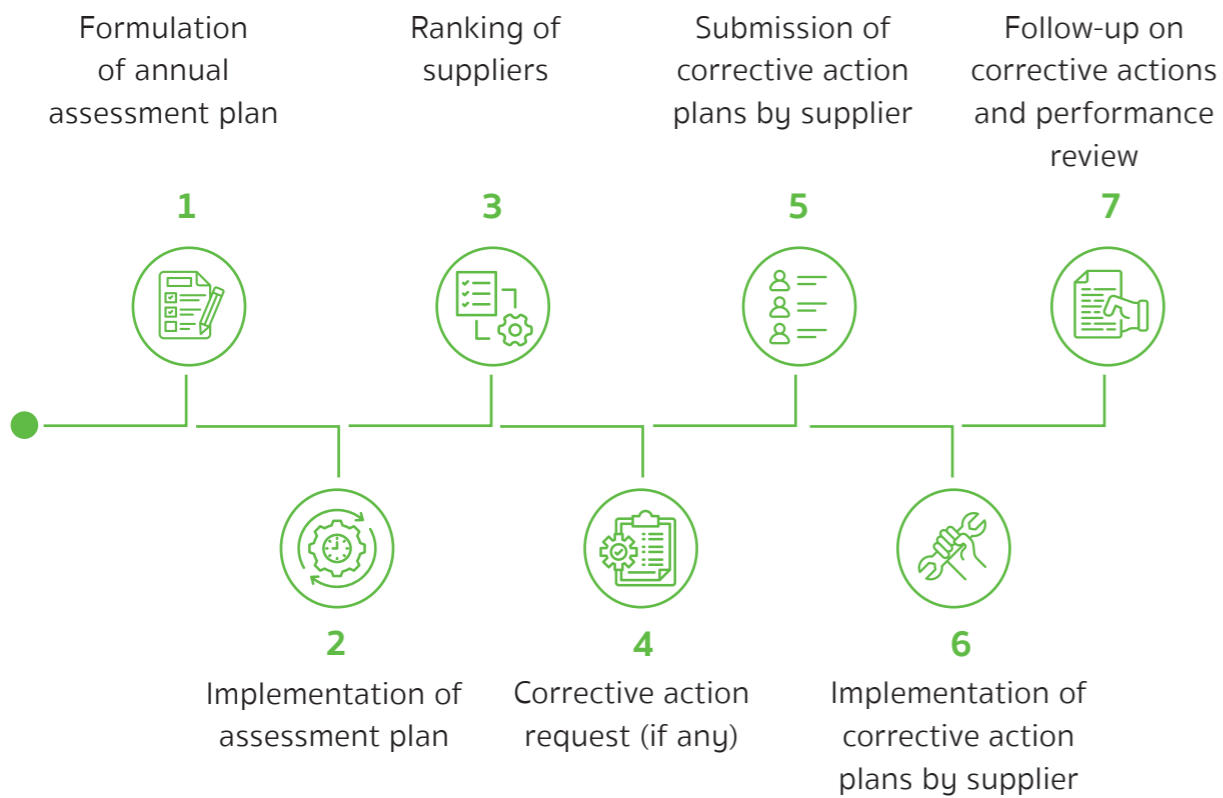


**CRITERIA FOR EVALUATING IMPORTANT SUPPLIERS.**

PROCEDURES AND PRACTICES FOR SUSTAINABILITY SUPPLY CHAIN MANAGEMENT



**SUPPLIER ASSESSMENT PROCESS**



**CASE STUDY** KEY SUPPLIER ASSESSMENT PERFORMANCE

Crop Integration Business set up a compliance audit committee to show commitment to conducting business as standards and operational guidelines. Ready to create a register of main business partners (Critical 1Tier Supplier) as well as set criteria for evaluating business partners and operating standards.



After grading assessment scores Both the preparation of a self-assessment (Self assessment) and the assessment of the auditors in order to follow and supervise in accordance with the established rules.

Critical Supplier 1 audit 2565 (၄၆၅)		
AUDIT PLAN	AUDIT ACTUAL	KPI > 80 %
19	13	68.42





# APPENDIX



## COMPANIES WITHIN THE SUSTAINABILITY REPORTING SCOPE

4 COUNTRIES

(Thailand, Myanmar, Vietnam, India)



### Thailand

Charoen Pokphand Produces Co., Ltd.  
Charoen Pokphand Seed Co., Ltd.  
Charoen Pokphand Agriculture Co., Ltd.



6 Research and Development Stations

12 Laboratories

**7**  
Seed Processing Plants

**4**  
Fertilizer Plants

**1**  
Rubber Plant

### Overseas Business

- CPP Fertilizer Co.,Ltd
- CPP Myat Min Agro Co.,Ltd
- C.P.Seeds Vietnam Co.,Ltd.
- C.P.Seeds (India) Pvt.,Ltd





## SUSTAINABILITY PERFORMANCE 2019-2022

Charoen Pokphand Produce Co.,Ltd. and companies in Crop Integration Business

GRI	Performance	Unit	2019	2020	2021	2022				
<b>ECONOMIC PERFORMANCE</b>										
G4-EC1	Revenues	Million Baht	4,525.96	4,289.81	7,290.70	7,996.44				
	Employee Benefits	Million Baht	539.06	553.77	166.84	55.46				
	Tax paid to the government	Million Baht	63.22	68.57	175.40	101.11				
	Investing in research and development	Million Baht	70.12	75.05	72.10	116.00				
	Community and Social Contribution	Million Baht	12.67	15.3	1.51	1.51				
<b>SOCIAL PERFORMANCE</b>										
<b>Employees</b>										
102-8	Total Employees	persons	805	1,012	4,892	2,183				
		Male / Female	475 / 330	628 / 384	3,668 / 1,224	1,499 / 684				
102-8	Separate by contract type	persons	790	828	3,858	2,183				
		Male / Female	462 / 328	514 / 314	2,784 / 1,074	1,499 / 684				
	Worker / Contractors	persons	15	184	1,034	50				
		Male / Female	13 / 2	114 / 70	884 / 150	39 / 11				
405-1	Separate by gender	%	59.00	62.00	72.16 %	68.67%				
		Male	41.00	38.00	27.84 %	31.33%				
		Female	96	70	563	353				
	Number of new hires	persons	54	42	46	24	-	-	244	109
		Male / Female	12.15	8.24	11.51	16.17				
Ratio of new hires	%	6.84	5.32	5.55	2.90	-	-	16.28	15.94	
	Male / Female									

GRI	Performance	Unit	2019	2020	2021	2022
401-1	Turn Over					
	Number of turn over	persons	94	95	345	317
		Male / Female	59 / 35	69 / 29	262 / 83	191 / 126
	Ratio of Turn Over	%	11.9	11.84	7.05	14.52
Male / Female		7.47 / 4.43	8.33 / 3.50	7.14 / 6.78	12.74 / 18.42	
404-1	Average of training hours for all employees	per person	4.99	7.30	5.24	18.50
404-1	Number of Employees completed sustainability Training	persons	705	828	4,892	2,183
<b>OCCUPATIONAL HEALTH AND SAFETY</b>						
DJSI 3.7.2	Injury Rate (IR)					
	Employees	Persons per 1,000,000 working hours	2.06	0.00	2.17	1.47
		Male / Female	3.38 / 0.00	0.00 / 0.00	1.90 / 2.54	1.08 / 2.04
DJSI 3.7.3	Worker / Contractors					
	Employees	persons	-	0	4	7
		Male / Female	- / -	0 / 0	2 / 2	3 / 4
	Worker / Contractors	persons	-	2	1	8
Male / Female		- / -	1 / 1	1 / 0	4 / 4	
403-9(a)	Rate of facilities as a work-related injury					
	Employees	Persons per 1,000,000 working hours	-	0.00	0.00	0.00
		Male / Female	- / -	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00



GRI	Performance	Unit	2019	2020	2021	2022
403-9(b)	Worker / Contractors	Persons per 1,000,000 working hours	-	0.00	0.00	0.00
		Male /Female	- -	0.00 0.00	0.00 0.00	0.00 0.00
403-9(a)	Number of facilities as a work-related injury					
	Employees	persons	-	0	0	0
		Male /Female	- -	0 0	0 0	0 0
403-9(b)	Worker / Contractors	persons	-	0	0	0
		Male /Female	- -	0 0	0 0	0 0
403-9(a)	Rate of High-consequence work-related injury (excluding facilities)					
	Employees	Persons per 1,000,000 working hours	-	0.00	0.00	0.00
		Male /Female	- -	0.00 0.00	0.00 0.00	0.00 0.00
403-9(b)	Worker / Contractors	Persons per 1,000,000 working hours	-	0.00	0.00	0.00
		Male /Female	- -	0.00 0.00	0.00 0.00	0.00 0.00
403-9(a)	Number of High-consequence work-related injury (excluding facilities)					
	Employees	persons	-	0.00	0.00	0.00
		Male / Female	- -	0.00 0.00	0.00 0.00	0.00 0.00
403-9(b)	Worker / Contractors	persons	-	0.00	0.00	0.00
		Male /Female	- -	0.00 0.00	0.00 0.00	0.00 0.00
403-9(a)	Rate of Recordable work-related injury					
	Employees	Persons per 1,000,000 working hours	-	2.78	2.71	2.11
		Male /Female	- -	4.86 0.00	2.84 2.54	2.15 2.04
403-9(b)	Worker / Contractors	Persons per 1,000,000 working hours	-	8.52	5.78	7.30
		Male /Female		9.53 7.03	6.18 4.82	6.29 9.15

GRI	Performance	Unit	2019	2020	2021	2022
403-9(a)	Number of Recordable work-related injury					
	Employees	persons	-	5	0	10
		Male /Female	- -	5 0	3 2	6 4
403-9(b)	Worker / Contractors	persons	-	3	4	9
		Male /Female	- -	2 1	3 1	5 4
403-9(a)	Number of Fatalities as a result of Work-related ill health					
	Employees	persons	-	0	0	0
		Male /Female	- -	0 0	0 0	0 0
403-9(b)	Worker / Contractors	persons	-	0	0	0
		Male /Female	- -	0 0	0 0	0 0
403-9(a)	Number of cases of recordable work-related ill health					
	Employees	persons	-	0	0	0
		Male /Female	- -	0 0	0 0	0 0
403-9(b)	Worker / Contractors	persons	-	0	0	0
		Male /Female	- -	0 0	0 0	0 0

**Note :**

- \*In 2022 The data was collected from 4 countries as follows: Thailand, Vietnam, India and Myanmar
- The severity level of an injury is calculated from the number of absent work days. Injury Rate (IR) = [Total number of injuries at all levels (during the reporting period) X 1,000,000 hours worked] / Total number of hours worked (during the reporting period).
- Lost Time Injury Rate (LTIR) = [Total number of lost time injuries (during the reporting period) X 1,000,000 hours worked] / Total number of hours worked (during the reporting period).
- Lost Day Rate (LDR) = [Total number of lost days (during the reporting period) X 1,000,000 hours worked] / Total number of hours worked (during the reporting period)





## SUSTAINABILITY PERFORMANCE 2019-2022

Charoen Pokphand Produces Co.,Ltd. and companies in Crop Integration Business.

GRI	Performance	Unit	2019	2020	2021	2022
<b>ENVIRONMENT PERFORMANCE</b>						
<b>ENERGY</b>						
302-1(e)	Total Energy Consumption	Gigajoules	96,254.11	50,299.67	155,519.25	113,263.91
302-1(a)	• Fuel Consumption	Gigajoules	26,570.26	15,216.33	65,937.09	13,320.53
302-1(b)	• Renewable energy	Gigajoules	40,938.78	13,347.01	42,901.23	78,316.34
302-1(c)	• Electricity Consumption	Gigajoules	28,739.06	21,736.00	46,680.92	21,627.05
302-3(a)	Energy intensity value per unit of income	Gigajoules / Million bath	21.27	11.73	21.33	14.16
<b>GREEN HOUSE GAS (GHG) EMISSION</b>						
305-2(a)	Total Green House gas (GHG) emission	Ton CO <sub>2</sub> eq	6,649.84	10,357.51	14,443.21	53,816.67
305-1(a)	Green House gas (GHG) emission (Scope 1)	Ton CO <sub>2</sub> eq	2,059.10	1,165.64	5,794.46	35,253.34
305-2(a)	Green House gas (GHG) emission (Scope 2)	Ton CO <sub>2</sub> eq	4,590.74	2,904.17	8,648.75	18,563.32
302-4	GHG emissions intensity ratio	Ton CO <sub>2</sub> eq	4,326.30	2,811.35		
305-4(a)	Greenhouse gas cost per income	Ton CO <sub>2</sub> eq / Million bath	1.47	2.41	1.98	6.73
<b>WATER</b>						
303-5	Water consumption	Million m <sup>3</sup>			1.41	1.08
303-3(a)	Total volume of water withdrawn	Million m <sup>3</sup>	1.76	2.89	1.48	1.12

GRI	Performance	Unit	2019	2020	2021	2022	
303-3(c)	• Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million m <sup>3</sup>			1.48	1.12	
	• Surface water	Million m <sup>3</sup>	1.54	2.42	1.33	0.99	
	• Ground water	Million m <sup>3</sup>	0.21	0.19	0.13	0.13	
	• Municipal water supplies	Million m <sup>3</sup>	0.01	0.02	0.02	0.003	
	Other water (>1,000 mg/L Total Dissolved Solids);	Million m <sup>3</sup>			0.0012		
	• Surface water	Million m <sup>3</sup>			-		
	• Ground water	Million m <sup>3</sup>			-		
	• Municipal water supplies	Million m <sup>3</sup>			0.0012		
	303-4 (b)	Total of water being used	Million m <sup>3</sup>	0	0.01	0.02	0.02
	303-4 (a)	Total of water discharge	Million m <sup>3</sup>	0.18	0.09	0.07	0.04
GHG emissions intensity ratio		Million m <sup>3</sup>		564.00	193.68	134.73	
<b>WASTE</b>							
306-3 (a)	Total weight of waste generated	Ton	591.35	616.94	678.34	487.67	
	• Total weight of hazardous waste generated	Ton	5.95	11.96	3.15	6.40	
	• Total weight of hazardous waste generated	Ton	585.4	604.98	678.34	481.28	
306-4 (a)	Total weight of waste diverted from disposal	Ton			572.94	438.95	



GRI	Performance	Unit	2019	2020	2021	2022
306-4 (b)	Total weight of hazardous waste diverted from disposal	Ton			0.01	0.37
	• Preparation for reuse	Ton			0.01	
	• Recycling	Ton			-	0.37
306-4 (c)	Total weight of non-hazardous waste diverted from disposal	Ton			572.93	438.57
	• Preparation for reuse	Ton			9.91	0.34
	• Recycling	Ton			189.58	25.17
	• Composting; (Not Included food waste)	Ton			171.95	180.70
	• Feed Material	Ton			201.48	232.35
	• Constuction Material	Ton			-	
306-5 (a)	Total weight of waste directed to disposal	Ton			105.4	48.73
306-5 (b)	Total weight of hazardous waste directed to disposal	Ton			3.14	6.02
	• Incineration (with energy recovery).	Ton			-	5.33
	• Incineration (without energy recovery).	Ton			2.35	
	• Landfl ling.	Ton			0.67	0.70
	• Other disposal operations	Ton			0.12	
306-5 (c)	Total weight of non-hazardous waste directed to disposal	Ton			102.25	42.71
	• Incineration (with energy recovery).	Ton			-	0.04
	• Incineration (without energy recovery).	Ton			0.10	

GRI	Performance	Unit	2019	2020	2021	2022
	• Landfl ling.	Ton			102.16	42.67
	• Other disposal operations.	Ton			-	
	Waste generated intensity ratio	Ton/ Million baht		0.14	0.09	0.06
<b>PLASTIC PACKAGING</b>						
	All plastic packaging	Ton		700.02	-	
	Biodegradable plastic packaging	Ton		475.73	-	
	Recyclable plastic packaging	Ton		224.28	-	
	*Category Mono Layer					

**Note:**

- Calculations are based on GRI G4 (EN3) Sustainability Reporting.
- Amount of fuel energy used = sum of each type of fuel used X calorific value of each type of fuel (measurement unit: gigajoules per month)
- CONVERSION FACTOR based on Thailand’s annual energy report Department of Alternative Energy Development and Efficiency
- Electric power consumption = Sum of the amount of electrical energy used. (kWh) X 3.6 (measurement unit: gigajoules per month)
- Total amount of energy used = exhausted energy + renewable energy + electrical energy consumption (measurement unit: gigajoules per month)
- Energy intensity per income covers non-consumed energy such as diesel fuel, renewable energy such as rice husks and internal electricity only.
- Emission calculations GHG emissions Scope 2 (Scope 2) have been recalculated using the emission factor using the following reference values:
  - Thailand according to the Energy Policy and Planning Office ministry of energy (<http://www.eppo.go.th/index.php/en/en-energystatistics/co2-statistic>)
  - Myanmar, referenced from <https://united4efficiency.org/country-assessments/myanmar>
  - Vietnam, referenced from [https://www.iges.or.jp/en/publication\\_documents/pub/data/en/1215/IGES\\_GRID\\_EF\\_v10.10\\_20210223.xlsx](https://www.iges.or.jp/en/publication_documents/pub/data/en/1215/IGES_GRID_EF_v10.10_20210223.xlsx)
  - India, referenced from [https://www.iges.or.jp/en/publication\\_documents/pub/data/en/1215/IGES\\_GRID\\_EF\\_v10.10\\_20210223.xlsx](https://www.iges.or.jp/en/publication_documents/pub/data/en/1215/IGES_GRID_EF_v10.10_20210223.xlsx)
  - \*Greenhouse gas emissions reporting covers CO2, CH4 and N2O, calculated and displayed in terms of the Global Warming Potential (GWP) set by the Intergovernmental Panel on Climate Change 2006 ( IPCC) while the coefficient Greenhouse gas emissions (Emission Factor) based on data from IPCC and Thailand Greenhouse Gas Management Organization. (Public Organization) (GRI G4-EN 15, EN 16)
  - • The value of greenhouse gas concentration per income covers the volume. GHG emissions Scope 1 (Scope 1) and Scope 2 (Scope 2) (GRI G4-EN 18)
  - Total water consumption collected from meter/billing receipt/groundwater usage report.
  - The amount of general waste and the amount of hazardous waste stored within the company are the total amount of waste for the past year (G4-EN23).
  - Total amount of waste generated Including only the amount of general waste and hazardous waste generated each year by the amount of waste stored within the company each year Calculated from accumulated waste in the current year – accumulated waste in the past year (G4-EN23)
  - Information on waste disposal methods is obtained from the disposal method confirmation from the waste disposal operator or from the waste disposal invoice (G4-EN23).





**GRI CONTENT INDEX :**  
GRI 102: GENERAL DISCLOSURES

DISCLOSURES	CHARTER	OMISSION/NOTE	EXTERNAL ASSURANCE
<b>Organizational Profile</b>			
102-1	Name of the organization	<ul style="list-style-type: none"> <li>Our Business</li> <li>About this Report</li> </ul>	-
102-2	Activities, brands, products, and services	<ul style="list-style-type: none"> <li>Our Business</li> </ul>	-
102-3	Location of headquarters	<ul style="list-style-type: none"> <li>Business Overview</li> </ul>	-
102-4	Location of operations	<ul style="list-style-type: none"> <li>Business Overview</li> <li>Our Business</li> </ul>	-
102-5	Ownership and legal form	<ul style="list-style-type: none"> <li>Our Business</li> </ul>	-
102-6	Markets served	<ul style="list-style-type: none"> <li>Business Overview</li> <li>Our Business</li> </ul>	-
102-7	Scale of the organization	<ul style="list-style-type: none"> <li>2021 Highlights</li> <li>Business Overview</li> </ul>	-
102-8	Information on employees and other workers	<ul style="list-style-type: none"> <li>Appendix</li> </ul>	-
102-9	Supply chain	<ul style="list-style-type: none"> <li>Responsible Supply Chain Management</li> </ul>	-
102-10	Significant changes to the organization and its supply chain	<ul style="list-style-type: none"> <li>About this Report</li> </ul>	-
102-11	Precautionary Principle or approach	<ul style="list-style-type: none"> <li>Climate Change Management</li> <li>Water Stewardship</li> </ul>	-
102-12	External initiatives	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> </ul>	-
102-13	Membership of associations	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> </ul>	-
<b>Strategy</b>			
102-14	Statement from senior decision-maker	<ul style="list-style-type: none"> <li>Message from the President</li> <li>Message from the CEO</li> </ul>	-

DISCLOSURES	CHARTER	OMISSION/NOTE	EXTERNAL ASSURANCE
102-15	Key impacts, risks, and opportunities	<ul style="list-style-type: none"> <li>Message from the President</li> <li>Message from the CEO</li> <li>Our Business</li> <li>Climate Change Management</li> <li>Water Stewardship</li> </ul>	
<b>Ethics and Integrity</b>			
102-16	Values, principles, standards, and norms of behavior	<ul style="list-style-type: none"> <li>Six Core Values</li> <li>C.P. Excellence</li> </ul>	
102-17	Mechanisms for advice and concerns about ethics	<ul style="list-style-type: none"> <li>Corporate Governance</li> </ul>	
<b>Governance</b>			
102-18	Governance structure	<ul style="list-style-type: none"> <li>Sustainability Governance</li> <li>Corporate Governance</li> </ul>	
102-20	Executive-level responsibility for economic, environmental, and social topics	<ul style="list-style-type: none"> <li>Sustainability Governance</li> </ul>	
<b>Stakeholder Engagement</b>			
102-40	List of stakeholder groups	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> </ul>	
102-41	Collective bargaining agreements	<ul style="list-style-type: none"> <li>Human Rights and Labor Practices</li> </ul>	
102-42	Identifying and selecting stakeholders	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> </ul>	
102-43	Approach to stakeholder engagement	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> </ul>	
102-44	Key topics and concerns raised	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> </ul>	
<b>Reporting Practice</b>			
102-45	Entities included in the consolidated financial statements	<ul style="list-style-type: none"> <li>Our Business</li> <li>Reporting Boundary</li> </ul>	
102-46	Defining report content and topic Boundaries	<ul style="list-style-type: none"> <li>Materiality Assessment</li> </ul>	✓
102-47	List of material topics	<ul style="list-style-type: none"> <li>List of Material Issues</li> </ul>	✓



DISCLOSURES	CHARTER	OMISSION/NOTE	EXTERNAL ASSURANCE
102-48 Restatements of information		<ul style="list-style-type: none"> <li>In 2022, we discontinued reporting GRI 308-2 and GRI 414-2 as our supplier audit program is set to be completed by 2022. We will report the abovementioned GRI indicators again once the result of the program has been confirmed.</li> </ul>	
102-49 Changes in reporting		<ul style="list-style-type: none"> <li>About this Report</li> </ul>	
102-50 Reporting period		<ul style="list-style-type: none"> <li>About this Report</li> </ul>	
102-51 Date of most recent report		<ul style="list-style-type: none"> <li>About this Report</li> </ul>	
102-52 Reporting cycle		<ul style="list-style-type: none"> <li>About this Report</li> </ul>	
102-53 Contact point for questions regarding the report		<ul style="list-style-type: none"> <li>Materiality Assessment</li> <li>About this Report</li> </ul>	
102-54 Claims of reporting in accordance with the GRI Standards		<ul style="list-style-type: none"> <li>About this Report</li> </ul>	
102-55 GRI content index		<ul style="list-style-type: none"> <li>GRI Content Index</li> </ul>	
102-56 External assurance		<ul style="list-style-type: none"> <li>Appendix</li> </ul>	

## SPECIFIC STANDARD DISCLOSURES

GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
<b>Economic Performance</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary		<ul style="list-style-type: none"> <li>Sustainability Milestone</li> </ul>	
	103-2 The management approach and its components		<ul style="list-style-type: none"> <li>Sustainability Milestone</li> </ul>	
	103-3 Evaluation of the management approach		<ul style="list-style-type: none"> <li>Sustainability Milestone</li> </ul>	
GRI 201: Economic Performance	201-1 Direct economic value generated and distributed		<ul style="list-style-type: none"> <li>2022 Highlights</li> </ul>	
<b>Indirect Economic Impacts</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary		<ul style="list-style-type: none"> <li>Social Impact</li> <li>Education</li> <li>Innovation</li> </ul>	
	103-2 The management approach and its components		<ul style="list-style-type: none"> <li>Social Impact</li> <li>Education</li> <li>Innovation</li> </ul>	
	103-3 Evaluation of the management approach		<ul style="list-style-type: none"> <li>Social Impact</li> <li>Education</li> <li>Innovation</li> </ul>	
GRI 203: Indirect Economic Impacts	203-1 Infrastructure investments and services supported		<ul style="list-style-type: none"> <li>Social Impact</li> <li>Education</li> </ul>	
	203-2 Significant indirect economic impacts		<ul style="list-style-type: none"> <li>Social Impact</li> <li>Education</li> <li>Innovation</li> </ul>	
<b>Anti-corruption</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary		<ul style="list-style-type: none"> <li>Corporate Governance</li> </ul>	
	103-2 The management approach and its components		<ul style="list-style-type: none"> <li>Corporate Governance</li> </ul>	
	103-3 Evaluation of the management approach		<ul style="list-style-type: none"> <li>Corporate Governance</li> </ul>	
GRI 205: Anti-Corruption	205-2 Communication and training about anti-corruption policies and procedures		<ul style="list-style-type: none"> <li>Corporate Governance</li> </ul>	





GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
<b>Energy</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Climate Change Management		
	103-2 The management approach and its components	• Climate Change Management		
	103-3 Evaluation of the management approach	• Climate Change Management		
GRI 302: Energy	302-1 Energy consumption within the organization	• Climate Change Management • Appendix		✓
	302-3 Energy intensity	• Climate Change Management • Appendix		
	302-4 Reduction of energy consumption	• Climate Change Management • Appendix		
<b>Water</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Water Stewardship		
	103-2 The management approach and its components	• Water Stewardship		
	103-3 Evaluation of the management approach	• Water Stewardship		
GRI 303: Water and Effluents	303-1 Interactions with water as a shared resource	• Water Stewardship		
	303-2 Management of water discharge-related impacts	• Water Stewardship		
	303-3 Water withdrawal	• Water Stewardship • Appendix		✓

GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
	303-4 Water discharge	• Water Stewardship • Appendix		✓
	303-5 Water consumption	• Water Stewardship • Appendix		✓
<b>Biodiversity</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Ecosystem & Biodiversity Protection		
	103-2 The management approach and its components	• Ecosystem & Biodiversity Protection		
	103-3 Evaluation of the management approach	• Ecosystem & Biodiversity Protection		
GRI 304: Biodiversity	304-3 Habitats protected or restored	• Ecosystem & Biodiversity Protection		
<b>Emissions</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Climate Change Management		
	103-2 The management approach and its components	• Climate Change Management		
	103-3 Evaluation of the management approach	• Climate Change Management		
GRI 305: Emissions	305-1 Direct (Scope 1) GHG emissions	• Climate Change Management • Appendix		✓
	305-2 Energy indirect (Scope 2) GHG emissions	• Climate Change Management • Appendix		✓



GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
	305-4 GHG emissions intensity	<ul style="list-style-type: none"> <li>Climate Change Management</li> <li>Appendix</li> </ul>		
<b>Wastes</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	<ul style="list-style-type: none"> <li>Circular Economy</li> </ul>		
	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Circular Economy</li> </ul>		
	103-3 Evaluation of the management approach	<ul style="list-style-type: none"> <li>Circular Economy</li> </ul>		
GRI 306: Waste	GRI 306-3: Waste generated	<ul style="list-style-type: none"> <li>Circular Economy</li> <li>Appendix</li> </ul>		✔
	GRI 306-4: Waste diverted from disposal	<ul style="list-style-type: none"> <li>Circular Economy</li> <li>Appendix</li> </ul>		✔
	GRI 306-5: Waste directed to disposal	<ul style="list-style-type: none"> <li>Circular Economy</li> <li>Appendix</li> </ul>		✔
<b>Supplier Environmental Assessment</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	<ul style="list-style-type: none"> <li>responsible supply chain management</li> </ul>		
	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>responsible supply chain management</li> </ul>		
	103-3 Evaluation of the management approach	<ul style="list-style-type: none"> <li>responsible supply chain management</li> </ul>		
GRI 308: Supplier Environmental Assessment	308-1 New suppliers that were screened using environmental criteria	<ul style="list-style-type: none"> <li>responsible supply chain management</li> </ul>		

GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
<b>Employment</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	<ul style="list-style-type: none"> <li>Human Rights and Labor Practices</li> </ul>		
	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Human Rights and Labor Practices</li> </ul>		
	103-3 Evaluation of the management approach	<ul style="list-style-type: none"> <li>Human Rights and Labor Practices</li> </ul>		
GRI 401: Employment	401-1 New employee hires and employee turnover	<ul style="list-style-type: none"> <li>Appendix</li> </ul>		
<b>Occupational Health and Safety</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
	103-3 Evaluation of the management approach	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
GRI 403: Occupational Health and Safety	403-1 Occupational health and safety management system	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
	403-2 Hazard identification, risk assessment, and incident investigation	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
	403-3 Occupational health services	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
	403-4 Worker participation, consultation, and communication on occupational health and safety	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		
	403-5 Worker training on occupational health and safety	<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>		





GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
	403-6 Promotion of worker health	• Occupational health and safety		
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	• Occupational health and safety		
	403-9 Work-related injuries	• Human Rights and Labor Practices • Occupational Health and Safety • Appendix		✓
	403-10 Work-related ill health	• Human Rights and Labor Practices • Occupational Health and Safety • Appendix		✓
<b>Training and Education</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Leadership and Human Capital Development		
	103-2 The management approach and its components	• Leadership and Human Capital Development		
	103-3 Evaluation of the management approach	• Leadership and Human Capital Development		
GRI 404: Training and Education	404-1 Average hours of training per year per employee	• Appendix		

GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
<b>Human Rights Assessment</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Human Rights and Labor Practices		
	103-2 The management approach and its components	• Human Rights and Labor Practices		
	103-3 Evaluation of the management approach	• Human Rights and Labor Practices		
GRI 412: Human Rights Assessment	412-1 Operations that have been subject to human rights reviews or impact assessments	• Human Rights and Labor Practices		
<b>Local Communities</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Social Impact • Health and Well-being • Education • Water Stewardship • Ecosystem & Biodiversity Protection • Responsible Supply Chain Management		
	103-2 The management approach and its components	• Social Impact • Health and Well-being • Education • Water Stewardship • Ecosystem & Biodiversity Protection • Responsible Supply Chain Management		



GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
	103-3 Evaluation of the management approach	<ul style="list-style-type: none"> <li>• Social Impact</li> <li>• Health and Well-being</li> <li>• Education</li> <li>• Water Stewardship</li> <li>• Ecosystem &amp; Biodiversity Protection</li> <li>• Responsible Supply Chain Management</li> </ul>		
GRI 413: Local Communities	413-1 Operations with local community engagement, impact assessments, and development programs	<ul style="list-style-type: none"> <li>• Social Impact</li> <li>• Health and Well-being</li> <li>• Education</li> <li>• Water Stewardship</li> <li>• Ecosystem &amp; Biodiversity Protection</li> <li>• Responsible Supply Chain Management</li> </ul>		
<b>Supplier Social Assessment</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Ecosystem & Biodiversity Protection		
	103-2 The management approach and its components	• Ecosystem & Biodiversity Protection		
	103-3 Evaluation of the management approach	• Ecosystem & Biodiversity Protection		
GRI 414 Supplier Social Assessment	414-1 New suppliers that were screened using social criteria	• Ecosystem & Biodiversity Protection		

GRI	DISCLOSURES	CHAPTER	OMISSION/NOTE	EXTERNAL ASSURANCE
<b>Product and Service Labelling</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Health and Well-being		
	103-2 The management approach and its components	• Health and Well-being		
	103-3 Evaluation of the management approach	• Health and Well-being		
	417-1 Requirements for product and service information and labeling	• Health and Well-being		
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	• Health and Well-being		
<b>Healthy and Affordable Food</b>				
GRI 103: Management Approach	103-1 Explanation of the material topic and its Boundary	• Health and Well-being	• Innovation	
	103-2 The management approach and its components	• Health and Well-being	• Innovation	
	103-3 Evaluation of the management approach	• Health and Well-being	• Innovation	





# LRQA Independent Assurance Statement

## Relating to CHAROEN POKPHAND PRODUCE CO., LTD. AND CHAROEN POKPHAND AGRICULTURE CO., LTD. AND SUBSIDIARIES IN THE CROP INTEGRATION BUSINESS Sustainability Report for the calendar year 2022

This Assurance Statement has been prepared for CHAROEN POKPHAND PRODUCE CO., LTD. AND CHAROEN POKPHAND AGRICULTURE CO., LTD. AND SUBSIDIARIES IN THE CROP INTEGRATION BUSINESS. in accordance with our contract but is intended for the readers of this Report.

### Terms of engagement

LRQA (Thailand) Ltd. was commissioned by CHAROEN POKPHAND PRODUCE CO., LTD. AND CHAROEN POKPHAND AGRICULTURE CO., LTD. AND SUBSIDIARIES IN THE CROP INTEGRATION BUSINESS (CP CROP) to provide independent assurance on its Sustainability Report 2022 “the report” against the assurance criteria below to a moderate level of assurance and at the materiality of the professional judgement of the verifier, using AccountAbility’s AA1000AS v3<sup>1</sup>, where the scope was a Type 2 engagement.

Our assurance engagement covered CHAROEN POKPHAND PRODUCE CO., LTD. AND CHAROEN POKPHAND AGRICULTURE CO., LTD.’s subsidiaries in Thailand only includes the integration crop business and specifically the following requirements:

- Evaluating CP CROP’s adherence to AA1000 AccountAbility Principles (2018) of Inclusivity, Materiality, Responsiveness, and Impact.
- Confirming that the report is in accordance with:
  - GRI Standards (2021)
- Evaluating the reliability of data and information for only the selected indicators listed below: <sup>1</sup>
  - *Environmental:*  
GRI 302-1 Energy consumption within the organization, GRI 303-3 Water withdrawal, GRI 303-4 Water discharge, GRI 303-5 Water consumption, GRI 305-1 Direct (scope 1) GHG emissions, GRI 305-2 Energy indirect (scope 2) GHG emissions, GRI 306-3 Waste generated, GRI 306-4 Waste diverted from disposal and GRI 306-5 Waste directed to disposal.
  - *Social:*  
GRI 403-9 to 10 Work-related injuries and ill health.

Our assurance engagement excluded the data and information of CP CROP’s subsidiaries within Thailand where it has no operational control, all operations, and activities outside of Thailand and suppliers and any third-parties mentioned in the report.

LRQA’s responsibility is only to CP CROP. LRQA disclaims any liability or responsibility to others as explained in the end footnote.

CP CROP’s responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of CP CROP.

### LRQA’s Opinion

Based on LRQA’s approach nothing has come to our attention that would cause us to believe that CP CROP has not, in all material respects:

- Met the requirements above
- Disclosed reliable performance data and information as no errors or omissions were detected
- Covered all the issues that are important to the stakeholders and readers of this report.

The opinion expressed is formed on the basis of a moderate level of assurance and at the materiality of the professional judgement of the verifier.

**Note:** The extent of evidence-gathering for a moderate assurance engagement is less than for a reasonable assurance engagement. Moderate assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a moderate assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

<sup>1</sup> GHG quantification is subject to inherent uncertainty.



### LRQA’s approach

LRQA’s assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing CP CROP’s approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this by interviewing CP CROP’s management who engage directly with stakeholder groups as well as reviewing documents and associated records.
- Reviewing CP CROP’s process for identifying and determining material issues to confirm that the right issues were included in their report. We did this by benchmarking reports written by CP CROP and its peers to ensure that sector specific issues were included for comparability. We also tested the filters used in determining material issues to evaluate whether CP CROP makes informed business decisions that may create opportunities which contribute towards sustainable development.
- Auditing CP CROP’s data management systems to confirm that there were no significant errors, omissions or mis-statements in the report. We did this by reviewing the effectiveness of data handling process, and systems, including those for internal verification. We also spoke with key people in various departments responsible for compiling the data and drafting the report.
- Visited CP CROP’s operations as business representative (Fertilizer plants in Ayutthaya) to sample performance data and information for the selected specific standard disclosures to confirm its reliability.

### Observations

Further observations and findings, made during the assurance engagement, are:

- Stakeholder inclusivity: We are not aware of any key stakeholder groups that have been excluded from CP CROP’s stakeholder engagement process. CP CROP has addressed the key stakeholder group’s opinion regarding their impacts.
- Materiality: We are not aware of any material issues concerning CP CROP’s sustainability performance that have been excluded from the report. CP CROP has processes for identifying and determining material issues based on a set of unbiased criteria and qualitative impact valuation.
- Responsiveness: CP CROP has addressed the concerns of stakeholders in relation to transition plan for climate change. However, we believe that future reports should disclose safety practices and improvement in all CP CROP operations.
- Reliability: Data management systems are well defined, but the implementation of these systems varies across CP CROP’s operational facilities.
- Impact: CP CROP has addressed impacts valuation of an agriculture products, food loss and climate change related.

### LRQA’s standards, competence and independence

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

This verification is the only works undertaken by LRQA for CP CROP and as such does not compromise our independence or impartiality.

Opart Charuratana  
Lead Verifier

Dated: 10 September 2023

On behalf of LRQA (Thailand) Ltd.  
No.9, G Tower Grand Rama 9, FL. 30, Room H14,  
Rama 9 Rd., HuayKwang, Bangkok, 10310, THAILAND

### LRQA reference: BGK0000865B

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**CROP INTEGRATION BUSINESS**

## SUSTAINABILITY REPORT 2022

Charoen Pokphand Produces Co., Ltd. ,  
Charoen Pokphand Agriculture Co.,Ltd.  
and companies in Crop Integration Business.  
Charoen Pokphand Group.







## SUSTAINABILITY REPORT 2022

Charoen Pokphand Produces Co., Ltd. ,  
Charoen Pokphand Agriculture Co.,Ltd.  
and companies in Crop Integration Business.  
Charoen Pokphand Group.

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