



Charoen Pokphand Foods Public Company Limited

# Sustainability Report 2021



PUT OUR **HE**♥**RT** INTO FOOD





# Contents

## Overview

02

CPF at a Glance

04

Our Business Worldwide

06

Message from  
Our Chairman and Our CEO

10

Awards, Recognitions  
and Sustainability  
Assessment

12

CPF, a Leading  
Food Innovation Organization

## CPF 2030 Sustainability in Action

15

CPF 2030  
Sustainability Strategy

16

From Materiality  
to Strategy

18

CPF 2030  
Sustainability Goals  
Driving Structure

20

CPF Strategic Plan  
Years 2021-2030 and  
Our Contribution to  
UN SDGs

24

Our Commitment  
Against Targets

## Sustainability Performance

26

Food Security

52

Self-Sufficient Society

86

Balance of Nature

## Appendix

121

About This Report





# CPF at a Glance

The Company operates integrated agro-industrial and food business as follows:



## Feed Business

production and distribution of animal feed.



## Farm and Processing Business

animal breeding, farming and primary meat processing.



## Food Business

production of semi-cooked and cooked products as well as ready-to-eat meals, and food distribution channels, including restaurants.



## Animal Feed Production

developed the feed production innovation along with the environmental care while minimizing any impact on the community. The Company provides support to local agricultural production and puts in place the traceability system for raw materials to enhance transparency and to build trust among stakeholders.

## Farming and Processing

Advanced and eco-friendly technology are adopted throughout the farming process while the animal welfare is maintained in accordance with the global standards to deliver safe and quality products in line with the internationally recognized requirements and regulations.

## Food Production

Valued addition is constantly enhanced for processed food products and ready-to-eat food with top quality and good nutrition for healthiness at affordable price. Modern innovation is applied to ensure eco-friendliness as well as full traceability throughout the production process.

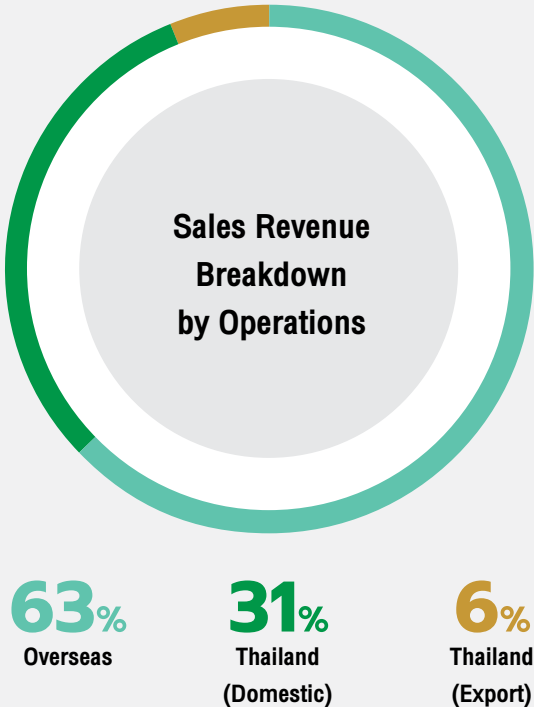
Ensuring CPF’s sustainability with the sales revenue of THB **512,704** million

Ensuring shareholders’ sustainability with the dividend\*\* of THB **5,467** million

Ensuring the country’s sustainability with the tax\* amount of THB **8,282** million

Ensuring employees’ sustainability with the compensation and welfare of THB **58,309** million

\* Income Tax Paid is from the Statements of cash flows in Consolidated Financial Statements of Charoen Pokphand Foods PCL. (CPF) and its subsidiaries.  
\*\* The Board of Directors Meeting on 25<sup>th</sup> February 2022 reached a consensus to propose to the 1/2022 Annual General Meeting of Shareholders, that a dividend payment for the Company’s 2021 performance made to the shareholders at THB 0.65 per share or a total value of THB 5,467 million be considered.



## Business Operations

### Thailand Operations

Operates an integrated agro-industrial and food business for domestic distribution and export to more than 40 countries around the world.

### Overseas Operations

Operates agro-industrial and food businesses in 16 countries outside Thailand, namely Vietnam, China including Republic of China (Taiwan), United Kingdom, United States, India, Malaysia, Philippines, Russia, Cambodia, Turkey, Laos, Poland, Belgium, Sri Lanka and investment in Canada and Brazil.



CPF Worldwide

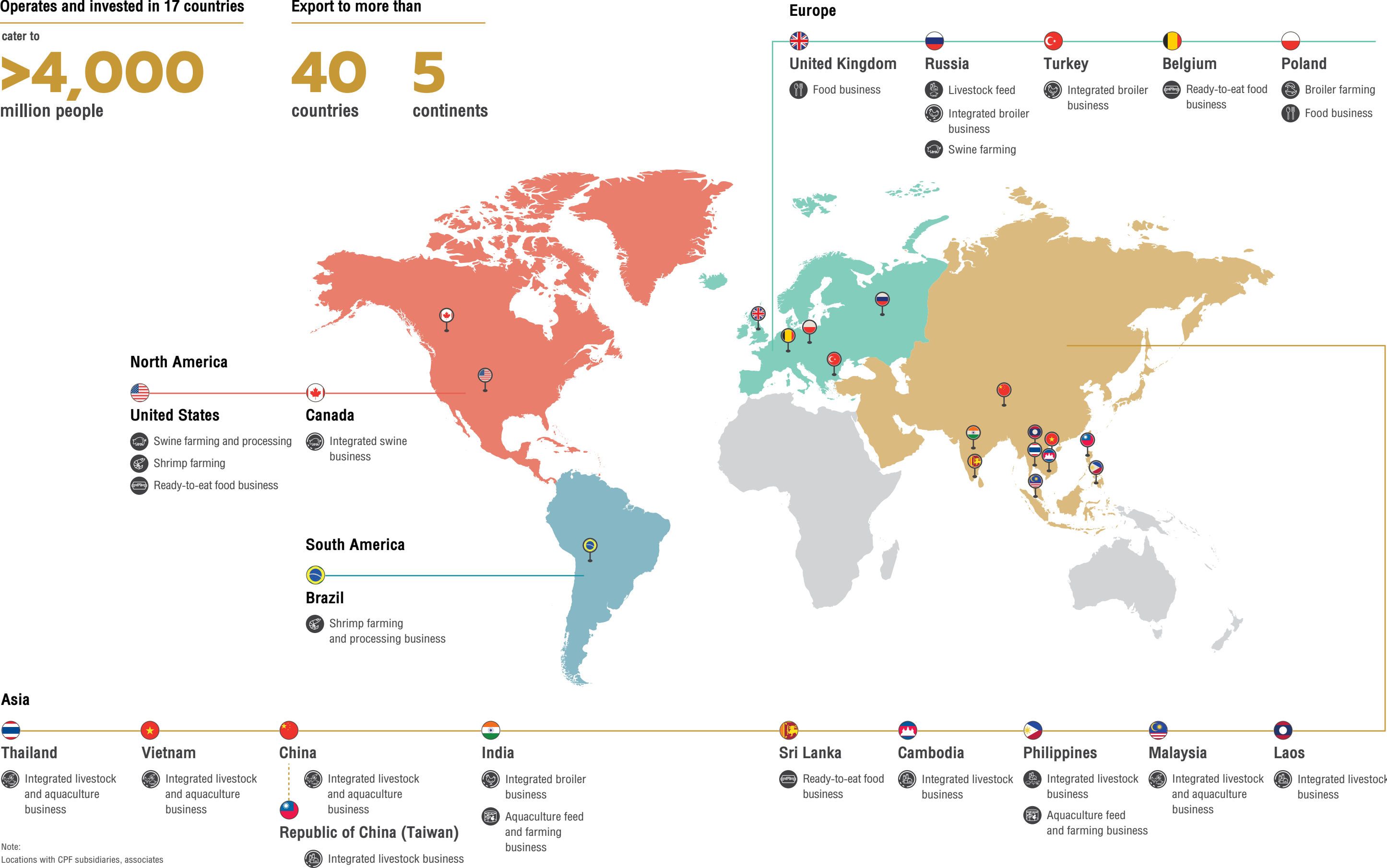
Operates and invested in 17 countries

cater to  
**>4,000**  
million people

Export to more than

**40**  
countries

**5**  
continents



Note:  
Locations with CPF subsidiaries, associates  
and joint venture companies' production operations.





Photo from the real place: Khao Phraya Doen Thong project, Lopburi province

**Mr. Soopakij Chearavanont**  
Chairman

**Mr. Prasit Boondoungprasert**  
Chief Executive Officer

## Message from Our Chairman and Our CEO

The situation of Coronavirus 2019 or COVID-19 which has seriously affected the global community throughout the past two years is a catalyst for people of all ages to use and become engaged in digital society in responding to a new decade that moves towards a more innovative and technological economy. In the meantime, limiting the global temperature rise to lower than 1.5 degrees Celsius compared to a pre-industrial baseline is the global agenda that will lead to changes in the manufacturing sector's decarbonization and consumer involvement in climate change solutions.

To serve as a good citizen of the country and the world society and to welcome dynamics of change that are expected in the Decade of Action, CPF has proclaimed **CPF 2030 Sustainability in Action** that aims to create positive changes in daily business operations and directly supports the 17 Sustainable Development Goals of the United Nations. CPF has promoted and implemented its 9 Ambitions under the 3 Pillars: Food Security, Self-Sufficiency Society and Balance of Nature on the basis of good corporate governance. We have placed importance on research, development and creation of **nutrition** innovations, created added value to food products, continuously focused on healthy foods and good nutrition, and provided distribution channels in accordance with consumer behaviour. In addition, CPF has

established effective resource management by employing **automation** and **digitization** to systematically collect and analyze data to reduce business risks and increase efficiency, resulting in the production that emits lowest greenhouse gas emissions, which, in turn, ensures food security through low-carbon manufacturing, maintains quality of life and employee safety, and supports farmers, suppliers and society to grow together.

In these challenging circumstances, ensuring food security is one of the most significant factors that supports the world to overcome this crisis. Therefore, CPF has planned to comprehensively manage the markets in 17 countries by strictly implementing preventive measures in the production and work processes to ensure safety. We have ensured safety and sanitized work environments for our employees in the production bases around the world. We have also coordinated with the government of each country and taken the prescribed actions to take care of CPF employees and their families as well as Thai people living in that country. With regard to public health of the production base in Thailand, CPF has provided vaccines to employees, along with building a field hospital to accommodate infected green, yellow and red level patients, and setting up a system to connect to hospitals for red level patients.



In addition, CPF has contributed to food security for Thai society. Since 2020, through the **"CPF's Food from the Heart against COVID-19 Project"** and the **"CP Merging Hearts to Fight against COVID-19 Project,"** we have delivered millions of packs of ready-to-eat foods to medical personnel and the public, as well as millions of bottles of drinking water and healthy drinks together with fresh food ingredients and seasonings to main hospitals, field hospitals, vulnerable groups, vaccination centers, proactive COVID-19 testing checkpoints, waiting centers and agencies for more than 500 locations across the country. Moreover, we have been organizing similar activities in other countries in which CPF has invested, such as Vietnam, Cambodia, Laos, Philippines, Turkey, USA, and Russia.

Furthermore, CPF has joined forces with Charoen Pokphand Group and more than 100 partners such as foundations, volunteer groups, civil society, and media organizations to carry out the **"Krua Pan Im, Merging Hearts to Fight against COVID-19 Project"** to deliver two million boxes of hot and ready-to-eat lunch boxes. The first million boxes have been provided by small restaurants in Bangkok and its vicinity, while the other million have been provided by CPF. The aim was to distribute foods to affected communities and to alleviate suffering of people who lack income and those who represent the unemployed groups, vulnerable groups, quarantined groups and home isolation and treatment groups, while at the same time supporting small restaurant businesses.

CPF's efforts to drive a sustainable business based on good corporate governance continued to be recognized in 2021. We were listed in the 2021 Dow Jones Sustainability Emerging Markets Index (DJSI – Emerging Markets) and the FTSE4Good Emerging Index for the seventh and fifth consecutive years, respectively. The Stock Exchange of Thailand included CPF in the 2021 Thailand Sustainability Investment (THSI) Index. We also received the 2021 Outstanding Human Rights Model Organization Award for Large Organization from the Ministry of Justice, and the "Excellent" Award in the 2021 Low Carbon and Sustainable Business Index (LCSi) Assessment from the Thailand Greenhouse Gas Management Organization (Public Organization). Additionally, we were awarded the 11<sup>th</sup> Asian Excellence Awards 2021; Best Investor Relations Company and Best CSR Company by the Corporate Governance Asia, the leading Hong Kong and Asia media focusing on economic and corporate governance issues. All of these reaffirm our commitment to conducting businesses with social and environmental responsibility, adhering to principles of good governance and focusing on building food security for the global society.

The achievements of sustainable development of CPF resulted from commitment, determination, and dedication of all CPF executives and employees who are ready to take part in propelling the sustainability goals towards actions in line with United Nations Sustainable Development Goals (SDGs). These allow CPF to be take part in building quality society and happiness, along with preserving natural resources and environment to maintain a balance, all of which bring about the global sustainability.

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**On behalf of the Board of Directors and all executives and employees, we would like to extend our sincere gratitude to investors, communities, business partners, suppliers, farmers, financial supporters, private organizations, the public sector and all other related parties for taking part in inspiring, developing and supporting our sustainable growth journey.**

**We pledge that we will conduct our businesses on good governance principles, with consideration towards social and environmental balance, and continue to stand with our country and citizens while fulfilling our role as the sustainable **"Kitchen of the World"**.**



**Mr. Soopakij Chearavanont**  
Chairman















**Mr. Prasit Boondoungprasert**  
Chief Executive Officer

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Awards, Recognition and Sustainability Assessment

Sustainability	
<p>Member of <b>Dow Jones Sustainability Indices</b> Powered by the S&amp;P Global CSA</p>	<p><b>DJSI 2021:</b> A Member of the Dow Jones Sustainability Index; Emerging Market, in the Food Products Industry</p>
<p><b>Sustainability Award</b> Silver Class 2021 <b>S&amp;P Global</b></p>	<p><b>The Sustainability Yearbook 2021:</b> S&amp;P Global Silver Class Sustainability Award</p>
<p> <b>FTSE4Good</b></p>	<p><b>FTSE4Good Index:</b> A Member of the FTSE4Good Emerging Indexes</p>
<p><b>MSCI</b> </p>	<p><b>MSCI ESG Indexes:</b> Participated in the Sustainability Assessment for the Food Products Industry</p>
<p>  </p>	<p><b>SET Awards 2021:</b></p> <ul style="list-style-type: none"><li>Listed on the Thailand Sustainability Investment (THSI)</li><li>Highly Commended Sustainability Awards: Sustainability Excellence</li></ul>
<p> </p>	<p><b>Thaipat Institute:</b></p> <ul style="list-style-type: none"><li>Listed on the ESG100</li><li>Sustainability Disclosure Awards 2021: Award Level</li></ul>
<p> </p>	<p><b>Vietnam Business Council for Sustainable Development (VBCSD):</b> CSI100 certification and one of the top ten companies in the manufacturing sector with the most outstanding sustainability performance in Vietnam</p>
<p> </p>	<p><b>Asian Excellence Award 2021:</b> Asia's Best CSR award</p>
<p></p>	<p><b>The Asset ESG Corporate Awards 2021 – Gold Award for ESG</b></p> <ul style="list-style-type: none"><li>Best CEO Award in the Agro &amp; Food business</li><li>Gold Award for ESG</li></ul>

Corporate Governance	
	<p><b>Corporate Governance Report of Thai Listed Companies 2021 (CGR):</b> Excellent CG Scoring</p>
	<p><b>A member of the Thai Private Sector Collective Action Against Corruption (CAC)</b></p> <ul style="list-style-type: none"><li>CAC Change Agent Award 2021</li><li>CAC Certified</li></ul>
 	<p><b>Asian Excellence Award 2021:</b> Best Investor Relations Company</p>
Food Security	
	<p><b>SET Awards 2021:</b> Outstanding Innovative Company Awards: Business Excellence for “Chiva Pork”, High-Fat Pork with High Omega-3</p>
	<p><b>National Innovation Awards 2021 by the National Innovation Agency (Public Organization)</b> Outstanding Innovation Organization Award 2021 (Large Organization; Honorary Award)</p>
Self-Sufficient Society	
	<p><b>HR Asia, Asia's HR Magazine:</b> HR Asia Best Companies to Work for in Asia Awards 2021</p>
	<p><b>Human Rights Awards 2021:</b> Outstanding Human Rights Award 2021 in the Category of Large Business Organization</p>
Balance of Nature	
	<p><b>CDP 2021:</b> Climate Change – C, Water Security – B-, Forests – BBB</p>
	<p><b>Low Carbon and Sustainable Business Index (LCSI) by Thailand Greenhouse Gas Management Organization or TGO:</b> "Excellent" Award for the Year 2021</p>



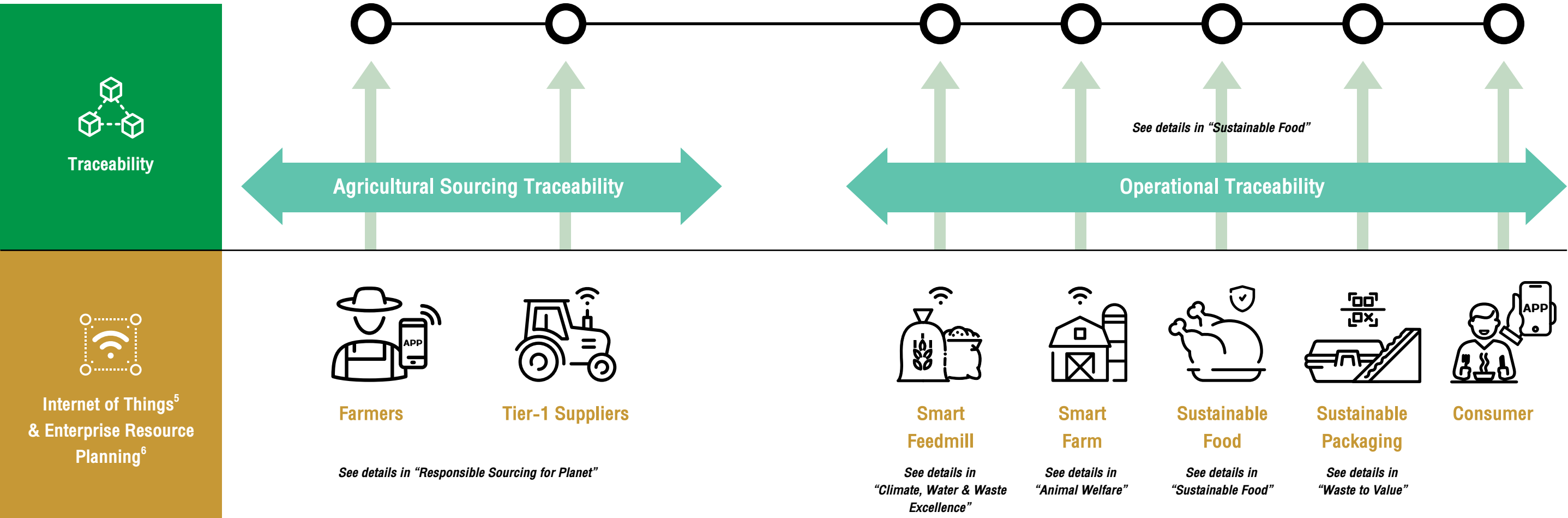
# CPF, a Leading Food Innovation Organization Promoting Sustainable Food Security with Modern Technology

CPF is committed to researching and developing innovations to create foods with high nutritional value for consumers of all ages. The Company has applied digital systems including blockchain<sup>1</sup> in traceability practice throughout the supply chain; starting from raw material procurement to consumer product delivery in a fast and more efficient manner, which display food product details in a digital form to ensure product safety. Thus, it can be ensured that the raw materials used in the production are not sourced from areas of deforestation, nor do they involve forced labour.

CPF has also adopted and integrated digital technology, robotics<sup>2</sup>, automation<sup>3</sup>, and artificial intelligence<sup>4</sup> into

the production and transportation processes to ensure efficient use of raw materials, water and energy. In addition, CPF's Smart Farm System is operated to enhance production efficiency and promote animal welfare in a closed farming system that is clean and hygienic, enhancing health of animals which then ensures safe raw materials and thus positive impacts on consumer health.

With technology, science and innovation, CPF will continue to produce sufficient amounts of foods to meet consumer demands at reasonable prices and to generate sustainable food security.



<sup>1</sup> A blockchain is a tamper-resistant distributed ledger that is used to validate and store digital transactional records. No single authority is responsible for maintaining a Blockchain. Instead, computers in a peer-to-peer (P2P) network each store a copy of the ledger and transactions are verified through a decentralized consensus mechanism.

<sup>2</sup> Robotics is the engineering and operation of machines that can autonomously or semi-autonomously perform physical tasks on behalf of a human. Typically robots perform tasks that are either highly repetitive or too dangerous for a human to carry out safely.

<sup>3</sup> Automation is the creation and application of technologies to produce and deliver goods and services with minimal human intervention. The implementation of automation technologies, techniques and processes improve the efficiency, reliability, and/or speed of many tasks that were previously performed by humans.

<sup>4</sup> Artificial intelligence (AI), also known as machine intelligence, is a branch of computer science that focuses on building and managing technology that can learn to autonomously make decisions and carry out actions on behalf of a human being.

<sup>5</sup> An Enterprise Resource Planning system (ERP system) is an information system that incorporates enterprise-wide internal and external information systems into a single unified solution. ERP systems aim to streamline business processes.

<sup>6</sup> The Internet of Things (IoT) is a computing concept that describes the idea of everyday physical objects being connected to the internet and being able to identify themselves to other devices and send and receive data. The IoT is significant because an object that can represent itself digitally becomes something greater than the object by itself. No longer does the object relate just to its user, but it is now connected to surrounding objects and database data. When many objects act in unison, they are known as having "ambient intelligence."



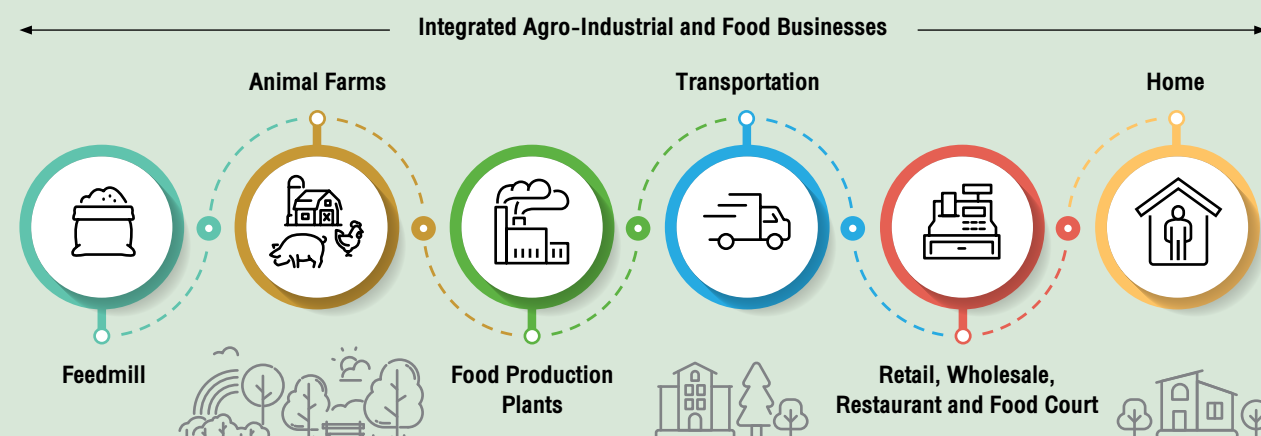
## CPF 2030 SUSTAINABILITY IN ACTION

### The Sustainable Food System<sup>1</sup> for the World

is a system that can deliver safe food which is full of nutrition and is sufficient for everyone while still being able to maintain the natural balance in order to ensure food security in the next generations. The sustainable food system must be:

- Creating economic benefits (economic sustainability);
- Useful and creating value for broader society (social sustainability); and
- Not causing environmental impact, or creating positive impact on nature (environmental sustainability).

### CPF Food System Value Chain

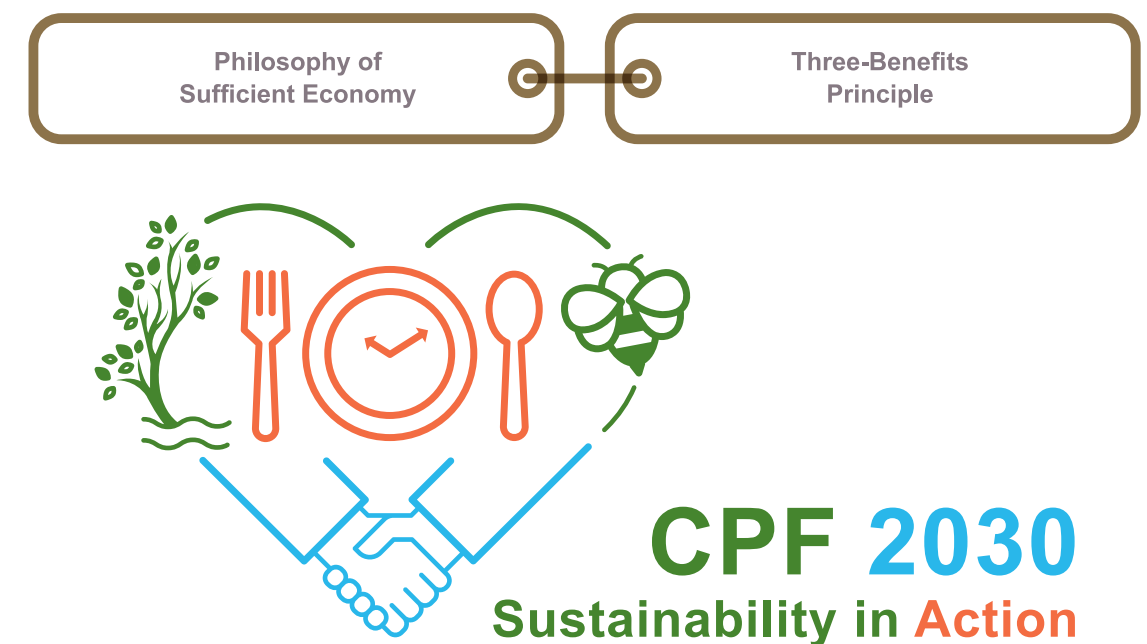


<sup>1</sup> Sustainable Food Systems – Concept and Framework, FOA, 2018.

## CPF 2030 Sustainability Strategy

### Sustainability in Action

CPF drives its corporate sustainable development under **CPF's Sustainability Strategy "CPF 2030 Sustainability in Action"** which has been developed from the three pillars towards sustainability comprising **"Food Security, Self-Sufficiency Society, and Balance of Nature"**. CPF demonstrates its commitment to create value for society, restore balance of nature including soil, water, and forests, which is an important starting point of food production under the Sufficiency Economy Philosophy and our "Three-Benefit" core principle based on good corporate governance. CPF also supports the United Nations Sustainable Development Goals and the ten principles of the United Nations Global Compact.



**FOOD SECURITY**

**Sustainable Food**

**Responsible Marketing**

**Animal Welfare**

**SELF-SUFFICIENT SOCIETY**

**Human Rights**

**Lifelong Learning**

**Social Impact**

**BALANCE OF NATURE**

**Climate, Water & Waste Excellence**

**Responsible Sourcing for the Planet**

**Waste to Value**

**Sustainability Governance**

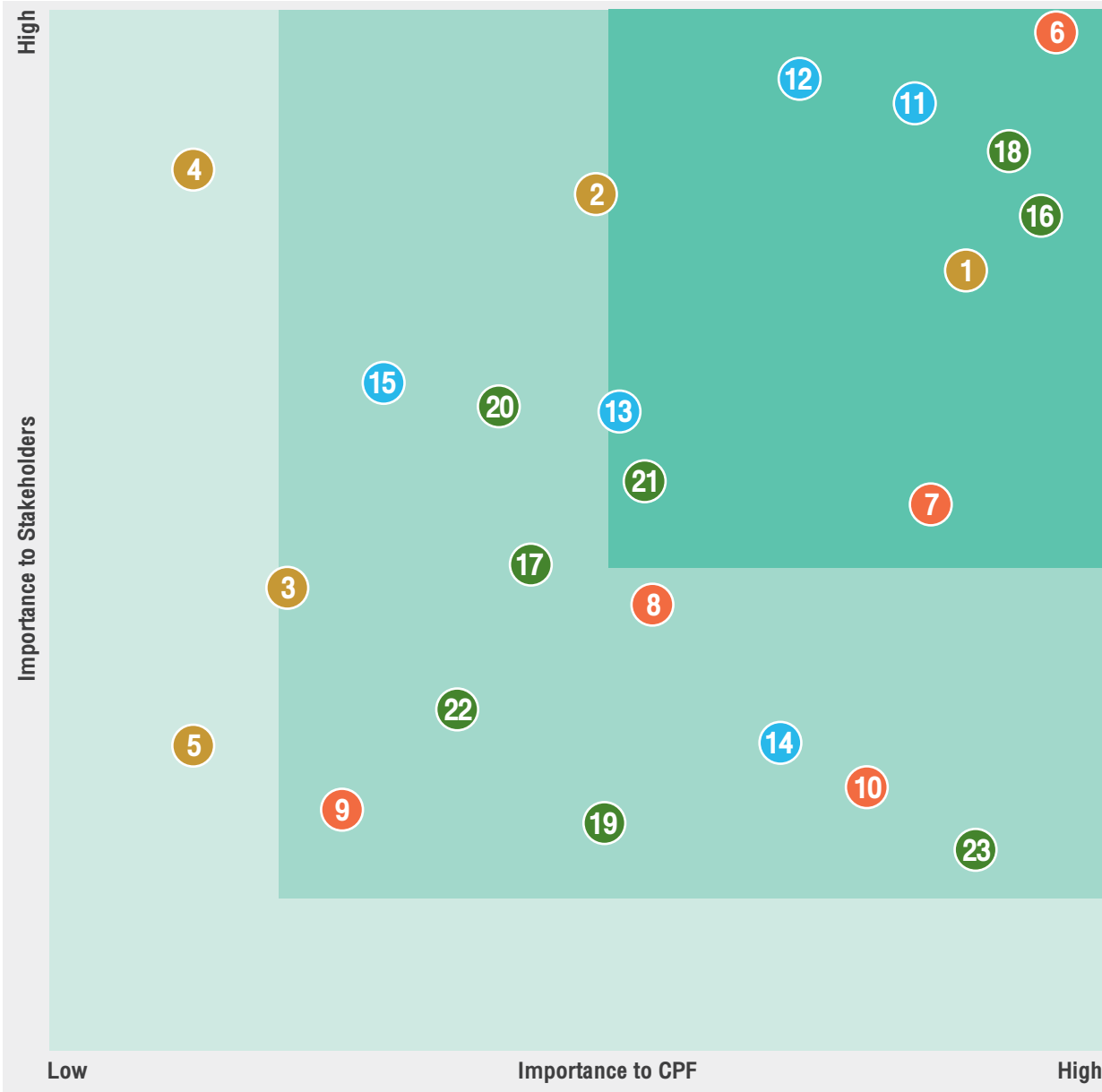
**UN SDGs & Ten Principles of UN Global Compact**



# From Materiality to Sustainability Strategy

Twenty-three material issues obtained from the sustainability survey that are important to internal and external stakeholders and have significant impacts on the business, in conjunction with a consideration on the new normal emerging from the changing context after the spread of COVID-19, are used to formulate a new sustainability strategy comprising three pillars and nine ambitions.

## Materiality Boundary



## Response to Material Issues

Low	Moderate	High
For issues of low interest to stakeholders, responsiveness and management shall be made according to routine procedures and disclosure of information as necessary.	For issues of moderate interest to stakeholders, there shall be determination of duties and responsibilities of units, set the KPIs and monitor the performance and in order to be responsive and to closely manage such issues.	For issues of high interest to stakeholders, high-ranking executives shall give priority, set the KPIs and monitor the performance in order to efficiently respond to the issues and closely manage the issues.

		Boundary							
Ambitions	Material Issues	Agriculture	Suppliers	CPF Operations			Transportation	Retail	Consumers
				Feed	Farm and Processing	Food			
 Sustainability Foundation	1. Governance and Risk Management	●	●	●	●	●	●	●	●
	2. Ethics and Compliance		●	●	●	●		●	●
	3. Data Privacy and Security	●	●	●	●	●	●	●	●
	4. Stakeholder Engagement and Transparency	●	●	●	●	●	●	●	●
	5. Systemic Disasters and Geopolitical Events	●	●	●	●	●	●	●	●
 Food Security	6. Food Quality and Safety	●	●	●	●	●	●	●	●
	7. Innovation and Technology	●	●	●	●	●		●	●
	8. Health and Nutrition	●	●	●	●	●		●	●
	9. Responsible Marketing and Product Labelling				●			●	●
	10. Animal Welfare				●				●
 Self-Sufficient Society	11. Human Rights and Labour Practices	●	●	●	●	●	●	●	●
	12. Employee Well-Being, Health and Safety		●	●	●	●	●		
	13. Organizational Culture and Management			●	●	●			
	14. Talent Management			●	●	●			
	15. Community Development and Support	●	●	●	●	●		●	
 Balance of Nature	16. Climate Change Management	●	●	●	●	●	●	●	●
	17. Energy Management		●	●	●	●	●	●	
	18. Water Management	●	●	●	●	●			
	19. Waste Management			●	●	●		●	
	20. Responsible Sourcing	●	●	●	●	●			
	21. Biodiversity and Ecosystems	●	●	●	●	●	●	●	●
	22. Circular Economy and Packaging			●	●	●		●	●
	23. Food Loss and Food Waste				●	●	●	●	●

Details regarding materiality assessment and stakeholder engagement are available at [www.cpfworldwide.com](http://www.cpfworldwide.com); Topic: "Sustainability"; Subjects: "Materiality Assessment" and "Stakeholder Engagement"

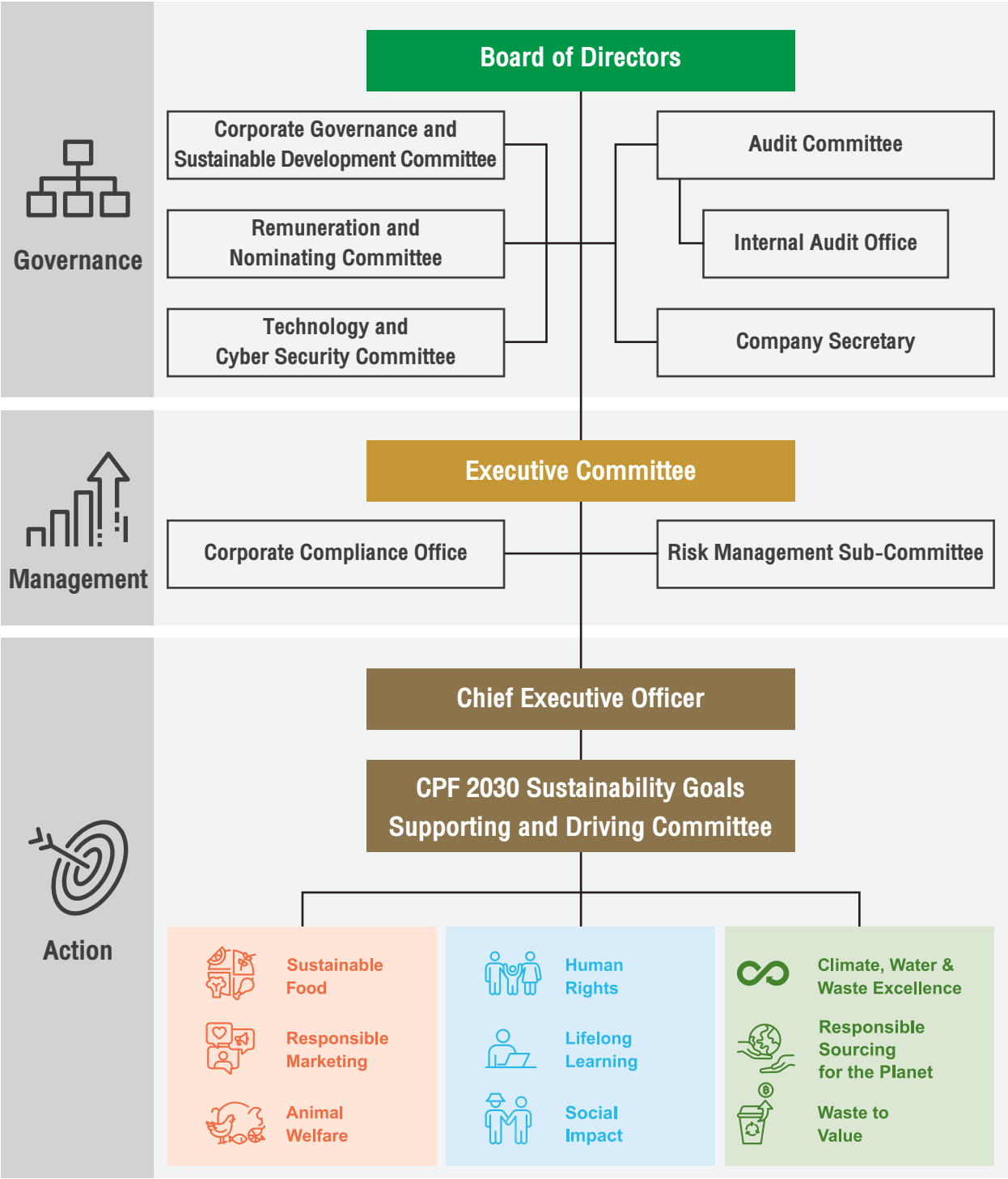




# CPF 2030 Sustainability Goals Driving Structure

Sustainability implementations are under the leadership of Chief Executive Officer, Mr. Prasit Boondoungprasert. CPF has clearly identified executives or working groups responsible for each commitment in order to continuously drive implementation processes to achieve the set goals, all of which are governed by the Board of Directors comprising sub-committees as follows:

- The Corporate Governance and Sustainable Development Committee
  - The Remuneration and Nominating Committee
  - The Technology and Cyber Security Committee
- The Audit Committee
  - The Executive Committee



Executives responsible for each ambition are as follows:  
As of 31<sup>st</sup> December 2021

CPF 2030 Sustainability  
in Action



**Mr. Prasit Boondoungprasert**  
Chief Executive Officer  
Chair of CPF 2030 Sustainability Goals  
Supporting and Driving Committee

## Food Security



**Dr. Sommai Tachasirinugune**,  
Executive Vice President  
Product Research & Development,  
Head of Ambition – Sustainable Food



**Ms. Anarkawee Chooratn**,  
Senior Vice President  
Corporate Marketing,  
Head of Ambition –  
Responsible Marketing



**Dr. Payungsak Somyanontanagul, D.V.M.**,  
Vice President  
Farm Standard and Regulatory,  
Head of Ambition – Animal Welfare

## Self-Sufficient Society



**Ms. Pimonrat Reephattanavijitkul**,  
Chief People Officer,  
Head of Ambition –  
Human Rights & Lifelong Learning



**Mr. Wuthichai Sithipreedanant**,  
Senior Vice President  
Corporate Sustainable Development,  
Head of Ambition – Social Impact

## Balance of Nature



**Mr. Peerapong Krinchai**,  
Executive Vice President  
Corporate Engineering,  
Head of Ambition –  
Climate, Water & Waste Excellence



**Mr. Siripong Aroonratana**,  
Chief Operations Officer  
Livestock Business,  
Head of Ambition –  
Responsible Sourcing for the Planet



**Mr. Pairoj Apiruknosit**,  
Executive Vice President  
Aqua Integrated Business Thailand Area  
Waste to Value Ambition,  
Sponsor for Food Loss  
Sub-Working Group



**Mr. Sathit Sangkanarubordee**,  
Chief Operating Officer  
Five Stars & Restaurant Business,  
Waste to Value Ambition,  
Sponsor for Food Waste  
Sub-Working Group



**Mr. Narerk Mangkeo**,  
Executive Vice President  
Sausage and Ready-to-Eat Food Business,  
Waste to Value Ambition,  
Sponsor for Sustainable Packaging  
Sub-Working Group



# CPF Strategic Plan Years 2021-2030

## CPF 2030 Sustainability Strategy by Ambitions

## Reporting Framework (GRI Standards)

Food Security				
	Food Security			
	Sustainable Food	Delivering food products of highest quality and safety, and supporting a sustainable food system through green products	<ul style="list-style-type: none"><li>Economic Performance</li></ul>	<ul style="list-style-type: none"><li>Investing on R&amp;D and open innovation</li><li>Development of green products</li><li>Operations in line with international best practice safety standards</li><li>Ensuring regulatory compliance throughout value chain</li></ul> <div></div>
	Responsible Marketing	Supporting healthy diets by delivering products with improved nutritional value	<ul style="list-style-type: none"><li>Marketing and Labeling</li></ul>	<ul style="list-style-type: none"><li>Improving and expanding nutrition labelling</li><li>Increasing availability and sales of healthy products</li><li>R&amp;D of new healthier and nutritious products</li><li>Engagement with communities</li><li>Increasing partnership on sustainable diets</li></ul> <div></div>
	Animal Welfare	Following best practices for protecting physical and mental welfare of animals through maintaining appropriate living conditions, good hygiene, comfortable dwelling and sufficient food and water	<ul style="list-style-type: none"><li>Animal Welfare</li></ul>	<ul style="list-style-type: none"><li>Creating good raising environment for farm animals</li><li>Reduction of antibiotics usage</li><li>Providing training</li></ul> <div></div>
Self-Sufficient Society				
	Self-Sufficient Society			
	Human Rights	Upholding fundamental rights of individuals in accordance with international standards and country laws by focusing on employees, supply chain and consumers	<ul style="list-style-type: none"><li>Human Rights Assessment</li><li>Employment</li><li>Diversity and Equal Opportunity</li><li>Occupational Health and Safety</li></ul>	<ul style="list-style-type: none"><li>Conducting human rights due diligence</li><li>Managing human rights related complaints received through grievance mechanisms</li><li>Reporting the performance</li><li>Managing gender diversity throughout all function level</li><li>Creating inclusion working culture</li><li>Protecting and taking care of employee health, safety and well-being</li></ul> <div></div>
	Lifelong Learning	Enhancing CPF's work culture, workforce management, and supporting tools for employee satisfaction in order to hire, manage, develop and retain the right people with the right skills	<ul style="list-style-type: none"><li>Training and Education</li></ul>	<ul style="list-style-type: none"><li>Providing training</li><li>Offering scholarship and upskills training</li><li>Implementing human capital development programs and initiatives</li></ul> <div></div>
	Social Impact	Engaging communities through initiatives which support smallholder farmers, community education, strengthen food and nutrition security, and develop local economy	<ul style="list-style-type: none"><li>Indirect Economic Impacts</li><li>Local Communities</li></ul>	<ul style="list-style-type: none"><li>Purchasing local goods and services</li><li>Donating for charities</li><li>Assessing impact of CSR in and after process</li><li>Initiating community projects, focusing on good agricultural practices or increase incomes</li></ul> <div></div>
Balance of Nature				
	Balance of Nature			
	Climate, Water & Waste Excellence	Limiting climate change impacts, efficiently managing energy, water resource and waste and maximize natural resource to its best capacity	<ul style="list-style-type: none"><li>Energy</li><li>Water and Effluents</li><li>Emissions</li><li>Waste</li></ul>	<ul style="list-style-type: none"><li>Accelerating decarbonization</li><li>Encouraging carbon removal</li><li>Focusing on freshwater management</li><li>Engaging with suppliers</li><li>Reducing operational waste</li></ul> <div></div>
	Responsible Sourcing for the Planet	Sourcing raw materials, products or services from business partners in compliance with relevant laws and regulations, and with consideration of social and environmental impacts, and engaging with supply chain partners to promote sustainable business practices	<ul style="list-style-type: none"><li>Biodiversity</li><li>Suppliers Environmental Assessment</li><li>Suppliers Social Assessment</li></ul>	<ul style="list-style-type: none"><li>Ensuring that suppliers comply with relevant policies, laws and regulations</li><li>Sourcing key agricultural raw materials that are traceable back to plantation/sources</li><li>Ensuring that key agricultural raw materials are deforestation-free</li><li>Conducting conservation, protection, and restoration of mangrove forests and watershed forests in strategic areas and increasing green area in operations</li><li>Creating partnerships in supply chain on responsible sourcing</li></ul> <div></div>
	Waste to Value	Managing the environmental, social, health and safety impacts of our business in support of a circular economy	<ul style="list-style-type: none"><li>Waste</li></ul>	<ul style="list-style-type: none"><li>Reducing food loss, surplus food, and food waste</li><li>Investing on innovation related to food waste and sustainable packaging</li><li>Increasing the use of sustainable materials for packaging</li></ul> <div></div>

CPF has determined strategic plans to drive sustainability covering 10-year period from 2021 to 2030, which link to the GRI Standards and the United Nations Sustainable Development Goals (SDGs).



## Key Actions during 2021-2030

## UN SDGs Supporting



# CPF's 2021 Sustainability Performance to Support the United Nations' Sustainable Development Goals (SDGs)



## People Improving Quality of Life

**1 NO POVERTY**

Employment prospect and quality of life of **14,700** farmers and small entrepreneurs were improved

**2 ZERO HUNGER**

**1,769,138** of children, youth and vulnerable people had access to safe and nutritious food

**3 GOOD HEALTH AND WELL-BEING**

**40%** of new products were developed to promote better health and more nutrition

**4 QUALITY EDUCATION**

**100%** of employees in Thailand operations underwent trainings related to corporate sustainability

**5 GENDER EQUALITY**

**34%** of executives in Thailand operations were female



## Planet Protecting Our Planet

**6 CLEAN WATER AND SANITATION**

**44%** of water was reused or recycled

**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**

**124,114** tons of food loss were used for alternative purposes

**13 CLIMATE ACTION**

Greenhouse gas emissions of **1,483,000** tons of CO<sub>2</sub>e were reduced due to low-carbon products

**14 LIFE BELOW WATER**

Conservation, protection and rehabilitation areas included **2,388** rais (382 hectares) of strategic mangrove forest areas

**15 LIFE ON LAND**

Conservation, protection and rehabilitation areas included **8,691** rais (1,391 hectares) of strategic areas of upstream forests and establishments



## Prosperity Creating Prosperity

**7 AFFORDABLE AND CLEAN ENERGY**

**27%** of total energy used was renewable energy

**8 DECENT WORK AND ECONOMIC GROWTH**

**70%** of employees in Thailand operations benefited from improvements based on suggestions given to the Welfare Committee of the Workplace

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

Total expense on research and development was THB **1,820** million

**10 REDUCED INEQUALITIES**

**726** employees were persons with disability

**11 SUSTAINABLE CITIES AND COMMUNITIES**

Paper and plastic used in food packaging were reduced by **1,561** tons



## Peace Building Peace

**16 PEACE, JUSTICE AND STRONG INSTITUTIONS**

CPF did not have any litigation related to fraud, corruption, giving and receiving bribes, and monopoly or trade barrier



## Partnership Partnering for Collaboration







**17 PARTNERSHIPS FOR THE GOALS**






Participated in the “Food Reform for Sustainability and Health (FReSH) Project” with the World Business Council for Sustainable Development (WBCSD) as the mainstay) and joined the Seafood Business for Ocean Stewardship (SeaBOS)





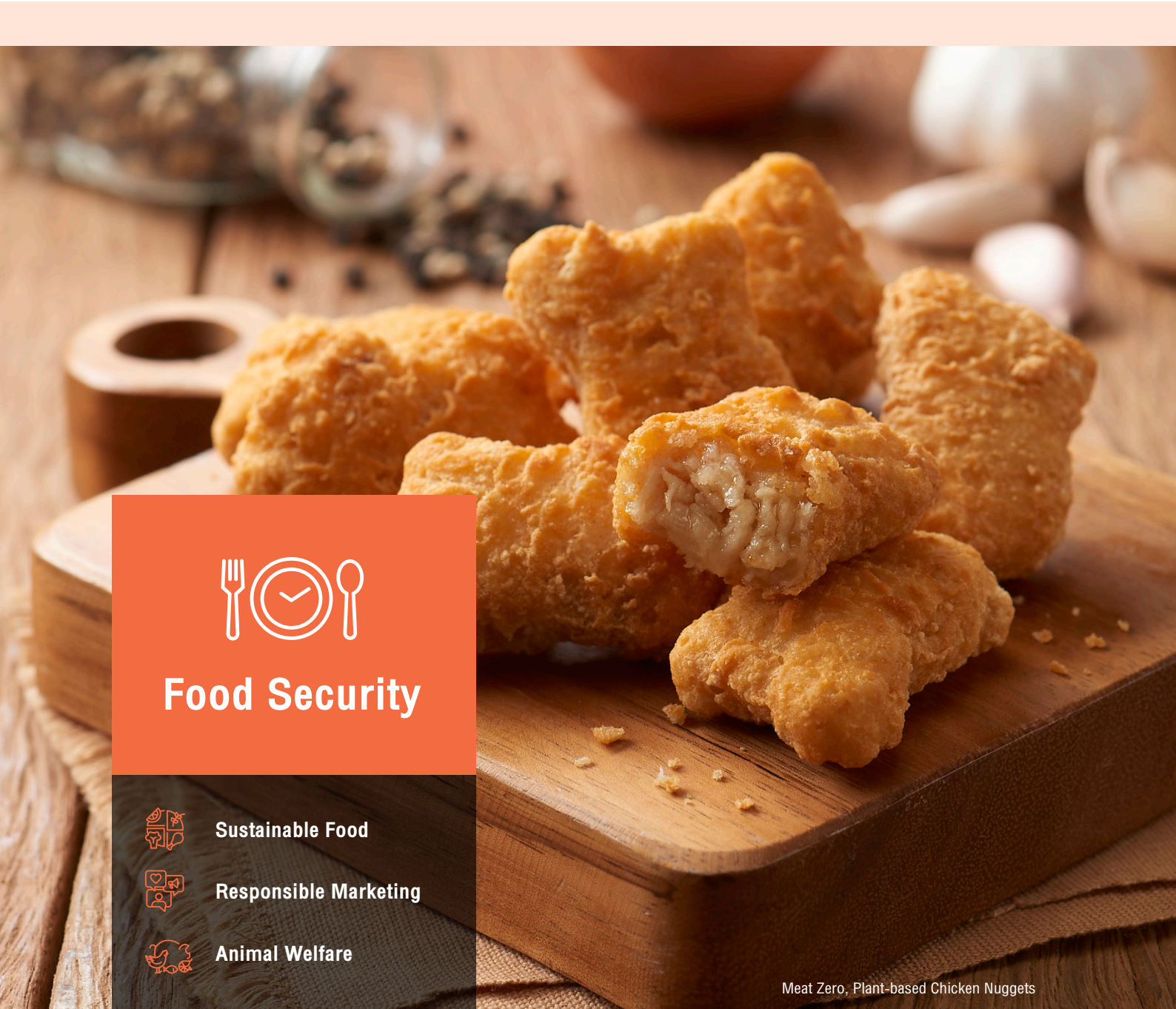
Our Commitment against Targets

Food Security		Goal Establish food security with products that promote health and improve quality of life for consumers		
		2030 Target	Performance	Progress (%)
	<b>Sustainable Food (Thailand Operations)</b>			
	• 40% of the revenue shall derive from green products	40%	33%	83%
	• No food products recall	0	0	100%
	<b>Responsible Marketing (Thailand Operations)</b>			
	• Reach 35 million consumers per day with healthy foods and beverages	35 Million	9 Million	26%
	• 50% of our new products are developed to be healthier and more nutritious	50%	40%	80%
	<b>Animal Welfare</b>			
	• 100% of sows raised in group gestation pen housing system	100%	27.18%	27.18%
	• Increase production capacity of cage free egg by 30% per year based on year 2020 (With total production capacity of 12 million eggs in 2020 With total production capacity of 30 million eggs in 2021)	30%	150%	500%
	• 100% environmental enrichment for broiler	100%	64.87%	64.87%
Self-Sufficient Society		Goal Create positive social impact in the lives of employees and individuals throughout our value chain		
		2030 Target	Performance	Progress (%)
	<b>Human Rights</b>			
	• 100% conduct human rights due diligence once every 3 years, including risk assessment and impact assessment in high risk areas of own operations	100%	100%	40%
	<b>Lifelong Learning</b>			
	• 3 million hours of education and training for employees	3 Million hours	1,331,688 hours	44.39%
	<b>Social Impact</b>			
	• Improve 3,000,000 livelihoods in communities connected to our business activities	3 Million livelihoods	2,450,737 livelihoods	82%

Balance of Nature		Goal Take action towards positive environmental impact throughout our value chain		
		2025 Target	Performance	Progress (%)
	<b>Climate, Water &amp; Waste Excellence</b>			
	• 25% of direct and indirect GHG emissions per production unit to be reduced compared to the base year 2015 (Thailand Operations)	25%	18%	72%
	• 30% of water withdrawal per production unit to be reduced, compared the base year 2015 (Thailand Operations)	30%	43%	145%
		2030 Target	Performance	Progress (%)
	• 200,000 tons of carbon dioxide sequestration from conservation and reforestation projects in strategic areas and green area in CPF operations (Thailand Operations)	200,000 tons	11,392 tons	6%
	• Zero waste to landfill and incineration	0 tons	22 tons (Thailand Operations)	On Progressing
	• To set science-based target for GHG emissions reduction (Scopes 1, 2 and 3)	-	On Progressing	On Progressing
	• Support all tier-1 suppliers identified as high water impact to have water management plans in place	100%	On Progressing	On Progressing
	<b>Responsible Sourcing for the Planet</b>			
	• 100% of key raw materials are traceable	100%	25% (Thailand, Vietnam, China*, India, Philippines, Laos, Cambodia, and Malaysia Operations)	25%
	• Increase 20,000 rais (3,200 hectares) of conservation, protection, and restoration of mangrove forests and watershed forests in strategic areas (Thailand Operations)	20,000 rais	11,079 rais (1,773 hectares)	55%
	• 100% of key raw materials from deforestation-free areas	100%	On Progressing	On Progressing
	<b>Waste to Value</b>			
	• Zero food waste from operations	0 tons	On Progressing of the Data Collection	On Progressing of the Data Collection
	• 100% of plastic packaging for food products to be recyclable or reusable or compostable	100%	99.9% (Thailand Operations)	99.9%

\* China Operations covered the raw materials sourced by Feed Ingredients Trading Business Group only.





Ensuring food security with products that promote health and improve quality of life for consumers



**Innovation and Technology:** the beginning of innovation that can lead to improvement and economic, social and environmental benefits



**Animal Welfare:** raising animals with care and allowing for display natural behaviors to ensure quality and safety for consumers



**Healthy and Sustainable Health:** aiming to promote consumption for good health of people and the planet by creating food that can serve as medicine through environmentally friendly production processes



**Voice from the Dining Table:** conducting surveys on consumer demand, and designing and modifying products to meet consumer demand



Sustainable Food

2030 Target (Thailand Operations)

**40%**  
of sales revenue are from  
CPF green revenue

**NO**  
food products recall



“ CPF places importance on research and development in order to utilize science, technology and innovation to develop nutritious foods for consumers of all ages. CPF also ensures efficient production and transportation processes, which reduce waste and contribute to building a sustainable food system for our planet. ”

Dr.Sommai Tachasirinugune  
Executive Vice President in Product Research and Development  
Head of Ambition – Sustainable Food



The United Nations aims to end hunger and malnutrition by 2030. However, there are several challenges that will prevent it from achieving goals, for instance, epidemics, conflicts, inclement weather, and economic slowdown<sup>1</sup>. As the world's population continues to rise and is expected to reach 9.7 billion by 2050<sup>2</sup>, it can further cause vulnerability of global food security. Building a sustainable food system is therefore an urgent matter. CPF as a leading integrated agro-industrial and food business, thus, applies sciences, innovations and technologies to produce quality and safe foods that are chemical free and contain sufficient nutrients for all ages with accessible prices, all of which contribute to sustainable food security.

<sup>1</sup> 2021 The state of food security and nutrition in the world “Transforming food systems for food security, improved nutrition and affordable healthy diets for all”, Food and Agriculture Organization of the United Nations, Rome, 2021, ISSN 2663-807X (online).  
<sup>2</sup> United Nation, World Population Prospects 2019, June 2019.



Management Approach

- **Declarations of Policy and Commitment:** declaring the commitment under the CPF Healthier Choice Principles, the Health and Nutrition Policy and other related policies.
  - **Research and Development:** developing alternatives or new methods for solving problems or improving quality of works covering animal feed, animal farming and food products.
- **Being an Innovative Organization:** collaborating with the public sector, the private sectors, and startups in order to create new innovations, as well as fostering a work environment that encourages innovations to enhance work efficiency and effectiveness.
  - **Compliance with International Rules and Best Practices:** raising food safety standards throughout the organization's food production chain.

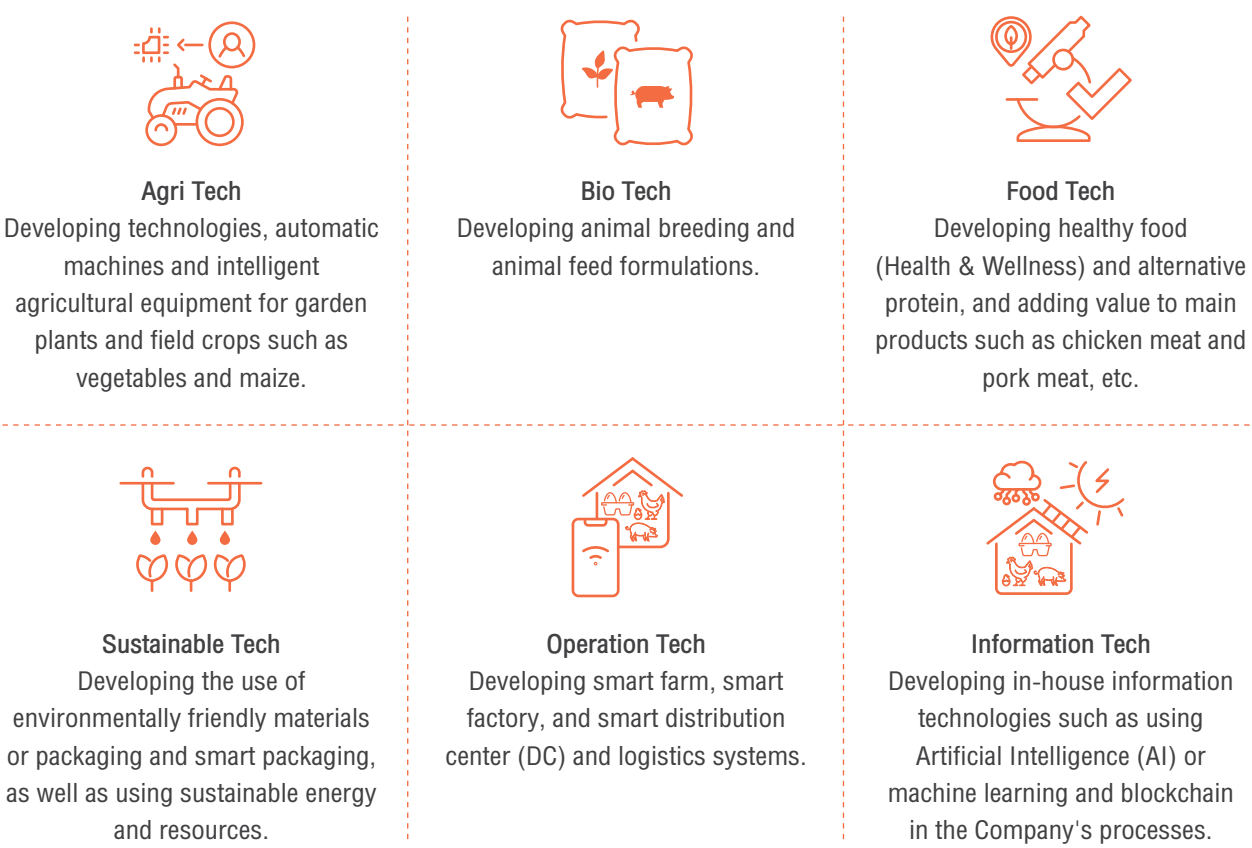
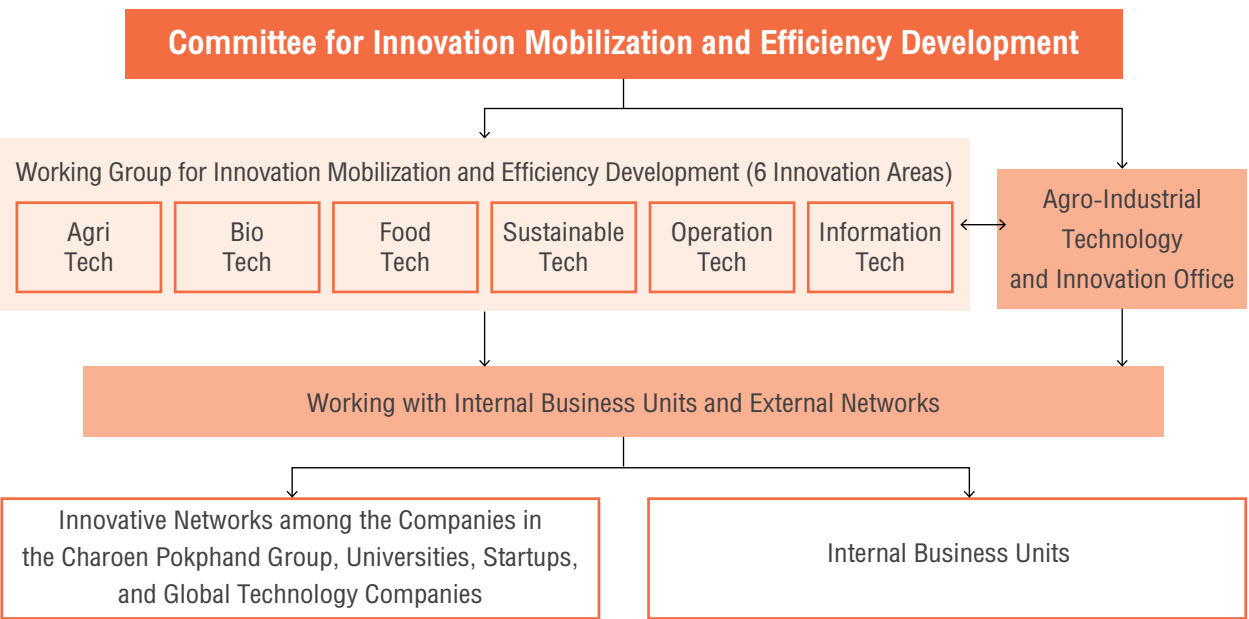
Implementation

Nurturing Corporate Culture for Innovation

In 2021, CPF established “CPF Committee and Working Group for Innovation Mobilization and Efficiency Development” and also applied the global innovation management standard: ISO56002 while focusing on research and development of six major technologies and innovations as shown in the picture below. CPF is aiming to be a systematic innovative organization, increase revenue and work efficiency, reduce costs throughout the value chain, and create a culture of continuous improvement for personnel at all levels.

The Committee implements tasks under four main objectives as follows:

1. **To become the innovative organization** – creating an atmosphere and support all employees to explore and create innovative projects that can be applied in the organization and lead to development and production of new products and services.
  2. **To leverage innovations for driving business** – driving CPF's businesses and operations to achieve highest efficiency by using modern technologies and innovations.
3. **To build a global innovation network and ecosystem** – gathering CPF's knowledge, experts and innovations, as well as creating cooperation in innovation development among organizations in the network.
  4. **To be a corporation for professionals and talents** – becoming an institution embracing talents and good people by developing personnel skills to ensure their qualities and abilities that meet requirements of today's business and the tech world, as well as attracting experts and talents to join the organization for further organizational development.



Cooperation for Innovation

CPF Food Research and Development Center has cooperated with a wide range of sectors domestically and internationally to conduct research and development of food innovations that meet requirements of the economic, social and environmental sectors, which include:

1. The public sector, including

- 
  - **Government agencies:** cooperating with the Program Management Unit Competitiveness (PMUC) supervised by the Office of National Higher Education Science Research and Innovation Policy Council, to conduct research and development of local foods produced from local plants for elders in communities, and to gain knowledge on development of foods that are suitable for elders, which enable local elders to have delicious and healthy foods as well as reduce the country's burden on health care costs in the long term.
- 
  - **Educational units and hospitals:**
    - conducting research on healthy foods and beverage products with universities and hospitals such as Chulalongkorn Hospital, Ramathibodi Hospital, Mahidol University, Srinakharinwirot University and Mae Fah Luang University.
- 
  - conducting research with Prince of Songkla University in order to promote medicinal plants such as cannabis and hemp.



## 2. The private sector, including

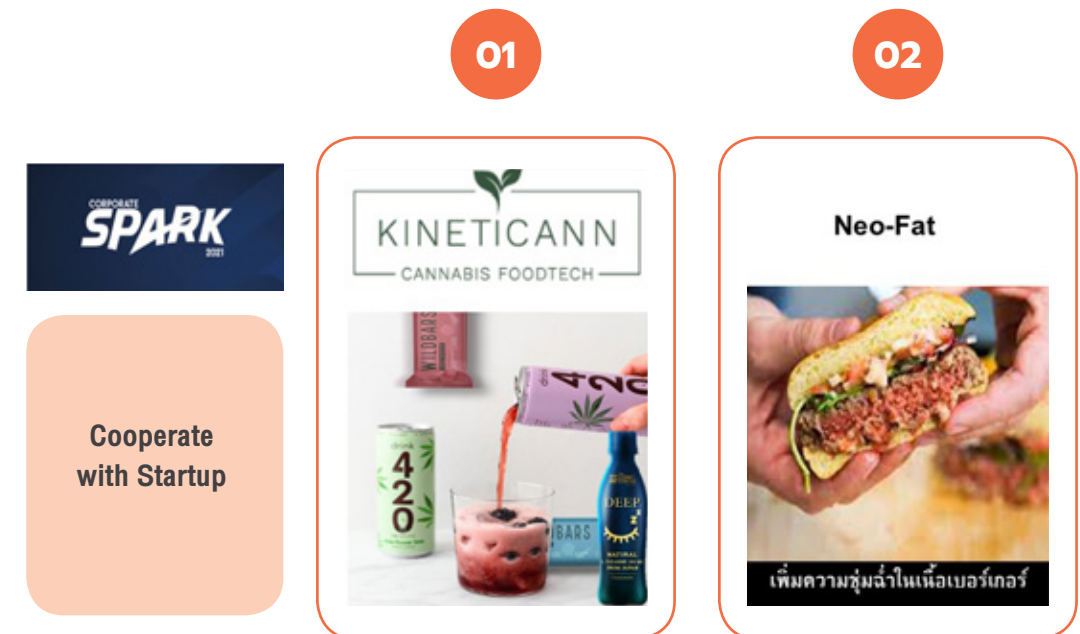
- **PROVEG Asia:** CPF together with a network of world-class food producers had supported PROVEG Asia in organizing a regional food innovation challenge across Asia under the theme of development of plant protein as Asian-style one-dish meals in order to build immunity and protect the environment. This support is aimed at encouraging students, researchers and young food developers to further expand startup businesses in the future. CPF had jointly coached the teams being selected, by providing advice and providing support on problem solving to achieve the projects' goals. The team that won the first place was the Food Tech Chula team, Chulalongkorn University, with the product concept entitled “the Marble Booster”, the 100 percent plant-based wagyu with a fibrous structure similar to animal muscles and special features for immune system boost. The team that won the second place was the TempMie team from Indonesia, with the concept of healthy instant noodles for the vegan consumer group.



- **Asia-Pacific Agri-Food Innovation Summit:** CPF was a sponsor for the event, organized in Singapore from 16 to 18 November 2021, as Innovation Challenge Partner who participated in forming questions and judging a competition to generate ideas which can be used to develop plant-based meat products, and selected 3 finalists to develop products with CPF. The Company expects that the continued support to this activity will contribute to creative idea generation for innovative product development and build CPF's brand awareness.



- **Corporate Spark 2021 Project:** The project, organized by the National Innovation Agency (Public Organization) or the NIA, Ministry of Science and Technology, is a startup incubation initiated in Israel, from which the CPF Food Research and Development Center has selected two startups to participate in research and development of plant-based foods and beverage products, covering development of product prototypes and research supports to commercialization, which shall strengthen CPF's innovations.



## Outstanding Food Innovations in 2021

**BIFIO Probiotic Plus** is an immune system-boosting food that rebalances intestinal flora. It contains 5 strains of “probiotics” microorganisms that have been studied and researched in Asian people and “prebiotics”, a great food of probiotics.

- ✓ The intestines digest and absorb nutrients, control the excretory system, support functioning of the nervous system and hormones, and stimulate the immune system.
- ✓ The largest immune system in the body is in the intestines accounting for seventy percent.
- ✓ “Good Health Starts with a Healthy Gut”.
- ✓ The product received awards from various institutions.

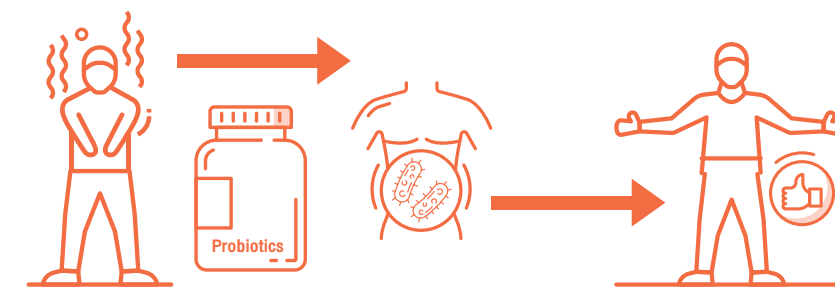


“Chevajit Awards 2021” under the categories of Innovation Reader's vote and Guru's pick



Bronze Medal Award from the National Research Council of Thailand (NRCT), Ministry of Higher Education, Science, Research and Innovation (TSU), at the Research Expo 2021

## Probiotics Benefits





Egg and Kurobuta Pork Congee; healthy breakfast that is full of beneficial nutrients.

- ✓ Made from 100 percent jasmine rice grits simmered with poached egg and egg white.
- ✓ Enhancing aroma and texture by adding vegetable broth, onion, garlic and coriander root.
- ✓ Smooth and soft, easy to eat, easy to swallow, egg in every bite.
- ✓ Topping with kurobuta pork sautéed in lard until it is soft and fragrant.
- ✓ Full of protein that help repair worn-out tissues.
- ✓ Feeling full for longer; “full of delicious food with worthwhile nutrition”



Plant-Based Meat Substitute, “Meat Zero” by CPF Food Research and Development Center together with foreign experts

- ✓ Invented plant-tec innovation, a technique for creating a taste that tastes like real meat; “plant as delicious as meat”.
- ✓ Ready-to-cook food and ready-to-eat food.
- ✓ Made from 100 percent plants, without meat as an ingredient.
- ✓ 0 percent cholesterol.
- ✓ Meeting requirements of flexitarian and health lover groups.
- ✓ Available now in Thailand, Singapore and Hong Kong.
- ✓ With a target to export to other countries in 2022.



Moving towards Food Safety Culture

Recognizing the importance of food quality and safety, CPF therefore continually strives to create a food safety culture within the organization for employees, by creating behavior and instilling awareness of safe food production for consumers through a variety of activities such as Morning Talk, Food Safety on Tour and the LINE food safety application.



Morning Talk Activity



Food Safety on Tour Activity

In 2021, CPF adopted the **Influencer Plus** strategy to drive the creation of food safety culture to include the organization's operations more comprehensively in the face of the COVID-19 pandemic. CPF deployed motivations and capabilities of people, society and organizations as forces to drive behavioral change in order to achieve specified results. In addition, the Empowering Change Team organized weekly huddle meetings to stimulate behavioral adjustments and monitor performance according to predetermined goals, including granting rewards to motivate teams that performed well.



Influencer Plus Team



Huddle Meeting

Improving Food Quality and Safety throughout the Process

International Standard Certification for Food Quality and Safety in 2021 throughout the production chain (Thailand operations)



Feed Business

- Livestock feed mills: GMP, HACCP, ISO9001 and AI Compartment<sup>3</sup> (only farms for export)
- Aquaculture feed mills: GMP, HACCP and BAP (only shrimp feed mills)
- Pre-Mixed production plants: FAMI QS<sup>4</sup>



Farm-Processing Business

- Layer, broiler, duck and swine farms: GAP
- Broiler and duck farms for export: Genesis GAP/Lloyd's Register Poultry Scheme
- Aquaculture farms: GAP/CoC (Department of Fisheries) and BAP (only shrimp farms for export)
- Egg sorting plant for export: GMP and HACCP
- Basic meat processing plants: GMP



Food Business

- Basic chicken and duck meat processing plants: HACCP, ISO9001, Genesis GAP/Lloyd's Register Poultry Scheme and BRC Global Standard for Food Safety
- Food production plants<sup>5</sup>: GMP and HACCP
- Food processing plants from chicken, eggs, duck, pork and shrimp for export: ISO9001
- Food production plants from chicken, eggs, duck and shrimp for export: BRC Global Standard for Food Safety

100%  
of plants  
and farms  
are standard  
certified.

<sup>3</sup> AI Compartment is Avian Influenza Compartment standards used in poultry, established by the Department of Livestock Development.

<sup>4</sup> FAMI QS is referred to Feed Additives and Pre-Mixtures Quality System.

<sup>5</sup> Food processing plants over semi-cooked and cooked meat products manufacturing plants, and processed products or ready-to-eat products manufacturing plants.



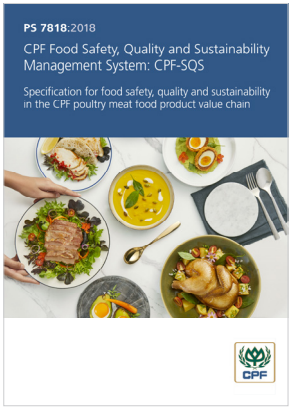
CPF Food Standard

CPF Food Standard is an operational standard for quality management, food safety and sustainable food production for poultry meat products, under the vision of being the "Kitchen of the World", that strives to produce and distribute food all over the world with the same standard and supports the Company on managing risks more effectively.

CPF started the CPF Food Standard Project in collaboration with the British Standards Institution (BSI) to establish a quality and food safety management and sustainable food production system throughout the Company's production processes (feed, farm and food business). This is set to be a standard for our productions throughout the world. The standard has been integrated with a number of international operational standards that we have been certified:

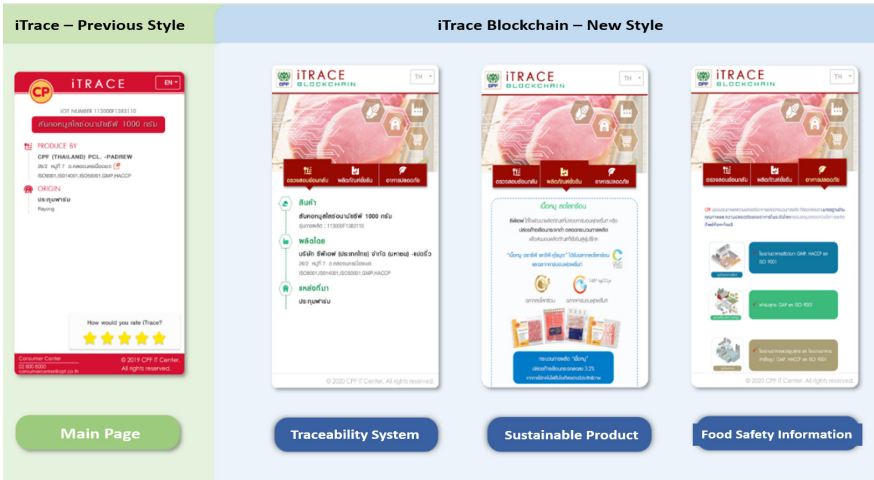
- International food standards such as CODEX, ISO9001, ISO22000
- National and international regulations
- Customers' requirements such as BRC and Genesis GAP

CPF has set the goal of being certified by the third party and of further expanding to cover all factories' broiler export businesses and duck meat businesses by 2022 in order to consistently deliver good products to consumers.



CPF Digital Product Traceability System

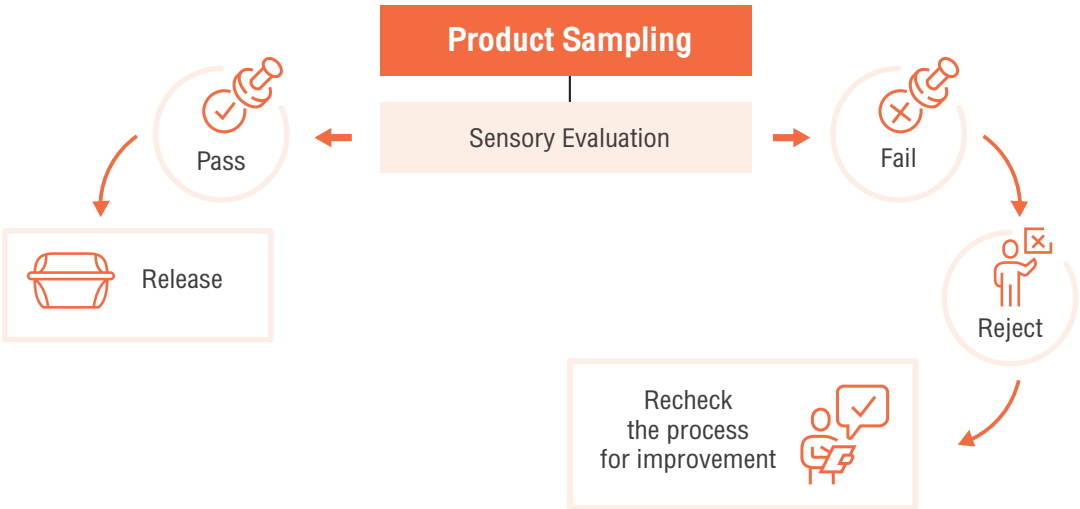
In 2021, CPF implemented a digital product traceability system in the production chain that covered 100 percent of the broiler, duck, pork and shrimp products of Thailand operations as planned. It is in the process of implementation on instant food products, sauces, egg processing products and bread. Moreover, **blockchain technology** was under the name: **"iTrace Blockchain"** to enhance the traceability system in order to build customer and consumer trusts. In addition to enabling consumers to trace the origin of purchased products, such as meat processing plants and animal farms, consumers can also receive more information such as sustainable product information and food safety information.



CPF Digital Product Traceability System

Product Quality Inspection by Sensory Testing

One method of CPF's product quality tests is sensory testing or taste testing. Tasters have to pass the selection criteria to ensure the same standards throughout the organization. Tasters daily teste product samples from the production, as well as compare them with the standard samples by observing appearances, smelling and tasting to test various aspects such as colour, smell, taste, texture, appearance and foreign matter, to ensure confidence in products before delivering the products to consumers.



Process of Product Quality Inspection by Sensory Testing



Product Recall

In **2021**, CPF's recall of product that might affect public health was **zero**.

CPF Green Revenue

CPF is committed to producing green products which refer to products that have been certified and have received environmental labels, such as Carbon Footprint Label and Carbon Footprint Reduction Label, or products that have undergone sustainability impact assessments according to international standards, to promote continual reduction of environmental impact caused by the Company's products. The Company has been conducting carbon footprint assessments on products since 2009 by applying the principles of product life cycle assessment in accordance with the international standards; ISO14040, ISO14044 and ISO14067. Currently, there are more than 790 products that have been undergone the carbon footprint assessments and certified with the Carbon Footprint Label, and more than 30 products are low-carbon products that have been certified with the Carbon Footprint Reduction Label by Thailand Greenhouse Gas Management Organization (Public Organization) or TGO. The low-carbon products include broiler feeds, live broiler chickens, live ducks, fattening pigs, fresh chicken meat, fresh duck meat and fresh pork meat products. Due to continuous improvement of production process efficiency, which covers research and development of animal feed to ensure suitable nutrition for growing animals at different ages as well as energy efficiency optimization and the use of renewable energy in the production, CPF's production processes and acquisition of raw materials have continuously reduced greenhouse gas (GHG) emissions and produced low-carbon products.

2030 Target (Thailand Operations)

**40%**

of the sales revenue shall derive from green products (CPF Green Revenue)



Performance in 2021

**33%**

(THB **62,567** Million) of the sales revenue derived from green products



Number of products that have received the Carbon Footprint Reduction Label

more than **30** products



"Sustainable Chicken Meat Products" Project

CPF together with BASF SE, an innovative feed additives manufacturer, has conducted eco-efficiency analysis on fresh and cooked chicken products through a product sustainability assessment software system in accordance with the international standards; ISO14040, ISO14044 and ISO14045, in order to develop animal feeds that are suitable for animal species and growth at different ages, including improving animal health and reducing loss of animals due to illness or death. All this results in efficient use of resources, reduction of waste and lower GHG emissions throughout the product life cycle, which leads to a sustainable food production system.





Responsible Marketing

2030 Target (Thailand Operations)

Reach  
**35 million**  
consumers with healthy foods  
and beverages per day

**50%**  
of our new products  
are developed to be healthier  
and more nutritious



“CPF is not only dedicated to research and development of food products, but also committed to promoting healthy diet and raising consumer awareness on sustainable consumption by providing consumers with nutritional and specific information as well as food packaging management in order to promote responsible trading.”

**Ms. Anarkawee Chooratn**  
Senior Vice President in Corporate Marketing  
Head of Ambition – Responsible Marketing



Responsible Marketing Ambition

Unhealthy food is the cause of 8 million premature deaths worldwide each year, and it is expected to cause a global economic crisis as a result of the increasing healthcare costs related to non-communicable diseases (NCDs) expected at over USD 1.3 trillion per year by 2030<sup>1</sup>. In Thailand, the public sector spends THB 302,367 million per year for the treatment of the non-communicable diseases<sup>2</sup>. As a leader in the integrated agro-industrial and food businesses, CPF is committed to alleviating and solving this problem by developing food products with high nutritional value that meet requirements of consumers of all ages. In addition to this, we aim to promote responsible trading by displaying product labels to support consumers' decision-making.

<sup>1</sup> 2021 The state of food security and nutrition in the world “Transforming food systems for food security, improved nutrition and affordable healthy diets for all”, Food and Agriculture Organization of the United Nations, Rome, 2021, ISSN 2663-807X (online).  
<sup>2</sup> Department of Disease Control - Campaigning for World Diabetes Day 2021 to Raise Awareness of Inclusive Diabetes Care and Treatment, Division of Non-Communicable Disease, Department of Disease Control, Ministry of Public Health, 12 November 2021.



Management Approach

- **Policy Formulation and Commitment:** declaring the commitment under the CPF Healthier Choice Principles, the Health and Nutrition Policy and other related policies.
- **Promoting Healthy Nutrition:** developing new healthy products which are full of good nutrition and appropriate for each age group.
- **Raising Awareness** promoting nutrition knowledge, health and well-being, while communicating accurate, clear and adequate nutritional Information of the products.
- **Ensuring Access to Food:** enhancing access to nutritious foods and sustainable consumption through a variety of channels at reasonable prices.





Implementation

Healthy Products

Thailand is placing great effort on decreasing the high premature death rate resulting from non-communicable diseases which stands at over 300,000 cases per year<sup>3</sup> by 25 percent by 2025, a target set by the World Health Organization (WHO), and by one-third by 2030 set as the Sustainable Development Goals (SDGs) by the United Nations<sup>4</sup>. Although the current mortality trend continues to decline, pursuing these international goals is still very challenging for Thailand. This is also coupled with the COVID-19 pandemic situation that has continued for more than 2 years. Thus, we see consumers now focus on nutritional value in order to take care of their health and take more preventive

action against diseases as well as to live a longer life. CPF is therefore determined to develop foods, suitable in terms of nutritional health and nutrient needs for various age ranges and different body conditions in accordance with the CPF Healthier Choice Principles”. CPF Food Research and Development Center has adopted modern technology and innovation in order to comply with the guidelines of the United Nations for developing healthy food products. CPF is aiming to increase better health food products by 50 percent by 2030 (Thailand operations) to contribute to sustainability of the world's population health.

Better Health Products

Type	Quantity (Product)	Product Sample	
Less sodium (less than 600 milligrams per serving*)	11		
Reduced saturated fat (not more than three grams per serving*)	11		
		Garlic and Chili Tender Chicken Breast	Shredded Tender Chicken Breast















\* Compared to recommended daily intakes for Thai people aged 6 years and over (Thai Recommended Daily Intakes: Thai RDI) from energy requirement of 2,000 kilocalories per day.  
<sup>3</sup> Faculty of Nursing, Mahidol University, Increase Personnel Potential and Decrease NCDs in COVID-19 Era, Krungthep Turakij, 10 January 2022.  
<sup>4</sup> Cancer Ranks First in Four NCDs, Post Today, 9 January 2022.



Products Promoting Nutrition, Health and Wellness

In 2021, CPF introduced new products developed to promote nutrition, health and wellness, which were equivalent to 40 percent of the total new products of the year. Moreover, we also took part in promoting access to health products among over 9 million consumers (Thailand operations).

Samples of Products Promoting Nutrition, Health and Wellness

Brand	Samples of Products		
Meat Zero (plant-based meat alternatives)			
	Plant-Based Ground Beef	Plant-Based Crispy Pork	Plant-Based Chicken Nugget
U Farm (meat derived from animals completely raised without antibiotics)			
	Streaky Pork	Pork Striploin Steak	Lard
CP Pacific (fresh shrimp products from standardized farming process)			
	Chilled Shrimp	Frozen Boiled Shrimp	
CP Delight (delicious, calorie-controlled)			
	Shrimp Wonton Soup with Vegetables		
Inno-Weness (healthy drinks)			
	IMU Kiz, Snow Mushroom Drink for Kids	Five-Things, Herbal juice mixed with 5 types of vitamins	
CP (meat sausages with no flour addition and tar free)			
	Classic Sausage	Spicy Sausage	Cheese Sausage

Consumer Health Promotion Cooperation

CPF recognizes that disease prevention is the key to overcoming diseases, particularly avoiding risky behaviours and creating an environment that fosters health-care behaviours through new initiatives to create behavioural change, such as campaigning and enhancing knowledge. In addition, it is important to focus on cultivating a foundation of good health from a young age to ensure the country’s sustainable future.

Raising Awareness and Enhancing Knowledge to Promote Consumer Health

**Fresh, clean, chemical-free products and 100 percent safe with innovative probiotics:** CP swine, chicken and shrimp are fed with probiotics (good microorganisms) which help create balance and boost the immune system in the intestines which accounts for 70 percent of the total immunity in the body, resulting in disease risk reduction and thus reduced use of antibiotics for treatment. As a result, there is no residue in animals. As meats are from animals raised without growth hormones or red meat accelerator, consumers can be 100 percent confident because “good health starts on your plate”.

- ✓ CP fresh chicken, 100 percent chemical-free, safe, fed with 9 species of probiotics.
- ✓ CP fresh pork, 100 percent chemical-free, safe, fed with 8 species of probiotics.
- ✓ CP Pacific shrimp, fresh, sweet, and dense flesh, only blanching is enough to offer unveil its full flavor.



**Premium Products with Innovative Super Food:** swine and chickens are raised with super food in closed farms in accordance with animal welfare principles, to make them healthy and reduce risk of diseases. All swine and chickens are certified NSF antibiotic-free throughout raising periods. Benja Chicken is fed with brown rice, making chicken flesh aromatic, soft, juicy and safe, with zero percent of hormone and no genetically modified organisms (GMOs). Cheeva Pork is produced from swine that are fed with feed containing flax seed, deep sea fish oil and natural seaweed that are rich in omega 3 and trans-fat-free.



**Plant-based Meat Alternatives with Meatless Meat Innovation:** the product provides meat-like texture and real-meat taste and nutrition, but completely free of antibiotics, hormones, GMOs, and cholesterol. The products are also contained in eco-friendly packaging.



**Tar-free Sausage Products with Smoke-Filtering Innovation:** produced from high quality pieces of meat without flour addition, through a continuous automatic production process which includes automatic storage of raw materials, that identifies raw material information by using RFID (Radio-Frequency Identification) system to sort raw material use, production, and arrangement of products in Asia’s first automated warehouse, under cooling temperature control throughout the production. The smoke system with tar removal technology produces good quality smoke that allows the production process to ensure quality aroma, colour, and taste, all of which is possible without tar which is considered as a carcinogen. Nitrite content is strictly monitored to ensure that the nitrite content of CP sausages remains lower than that prescribed in the criteria of the Food and Drug Administration (FDA) of Thailand, the US FDA and the World Health Organization (WHO). Consumers can be confident that CP sausages are clean and safe, and can be traced back to every step in the production process.





Healthy food and beverage products with special techniques: developed based on nutritional needs of each age range, for example:

✓ **Smart Soup Chicken Soup with Pumpkin and Egg** is instant blended food that can be used as liquid food for patients with tube feeding or elderly groups who have occlusion or swallowing problems. Chicken soup with pumpkin and egg can be drunk instead of a drink or as a supplement between meals to replace main meal. It is ready to eat and can be stored at room temperature for 12 months. It contains protein from chicken breasts and eggs, and is full of vitamins, minerals and nutrients, so it is easy to digest and easily-absorbed. Developed using the standard formula of Ramathibodi Hospital, Smart Soup Chicken Soup with Pumpkin and Egg helps strengthen immunity and enable faster recovery in patients with its smooth texture allowing ease of consumption.



✓ **Natural Snow Mushroom Drinks, IMU and IMU Kiz:** containing high beta-glucan from natural mucus produced by mushrooms with high fiber without bleach, which can be easily absorbed through intestinal walls. Natural snow mushroom drinks help nourishing white blood cells, enhancing immunity, maintaining healthy body, recovering health quickly, and reducing risk of illnesses. The drinks also contain hyaluronic acid to nourish lung fluid and moisturize skin, as well as polysaccharides that help relieving dry cough and lowering sugar and cholesterol levels in blood, with low calories.



Collaboration with Stakeholders to Support Sustainable Consumption and Food Systems

In 2021, CPF collaborated with the stakeholders including the private sector as well as leading national and global research institutes in order to develop products that promote sustainable consumption and support the world's sustainable food systems. More than 250 consumer research studies had been conducted, which led to various products through innovations to meet consumer requirements with attention to details in every production process from upstream to downstream operations. Therefore, CPF places importance on all groups of people in society comprising employees, consumers, communities, and business partners, as well as the environment, in order to drive the world's sustainable food systems.














As a member of the World Business Council for Sustainable Development (WBCSD) since 2015, CPF joined the “Positive Consumption” working group under the Food Reform for Sustainability and Health (FReSH) Project in 2021, with the goal of jointly contributing to good nutrition, reducing environmental impact and conducting responsible marketing communications throughout the food industry's value chain.



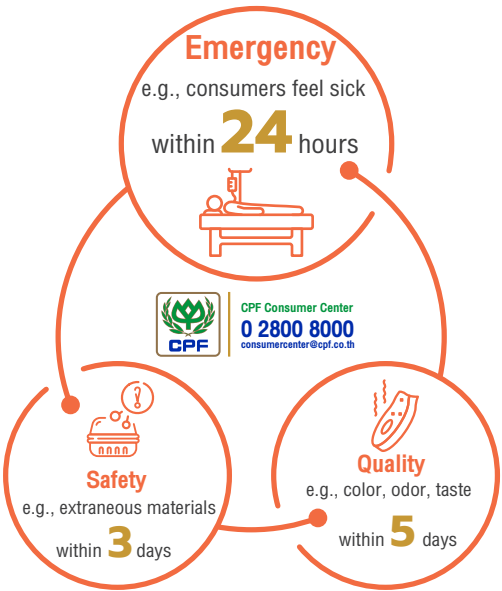
Communication for Sustainable Consumption

Product Labels

CPF places importance on communicating accurate, clear and sufficient information about products and services to support consumers' decision-making, which includes packaging management for environmental pollution reduction.

Type	Example
Nutritional Information	Products under trademark  provide important nutritional information in foods as required by law. <div></div>
Guidelines Daily Amount	One-dish main meal products requiring refrigeration or freezing throughout the shelf period, under the trademark  provide nutritional information on energy, sugar, fat and sodium, which can contribute to non-communicable diseases. <div></div>
Specific Information	Products provide additional ingredient and nutritional information, such as allergen information and halal mark. <div></div>
Healthier Choice Symbol	A simple logo enables consumers to choose better nutritious food products and make purchasing decisions faster. <div></div>
Additional Information	Products provide information on how to use, store and handle packaging after use. <div></div>





Consumer Feedback

CPF focuses on customer and consumer resonances. Thus, we collect consumer data in order to develop innovations to provide quality products and meet highest consumer satisfaction. CPF has a wide range of communication channels to invite opinions and answer inquiries from customers and consumers, such as direct contact with the Company, CPF Consumer Center, email, websites and social networks such as Facebook and online forums.



Consumer Center

CPF Consumer Center serves as a comprehensive service center providing information, receiving complaints and service issues, and ordering and delivering the Company's products. Procedures for handling complaints are based on three timeframes according to the severity of issues. The CPF Consumer Center shall refer complaints to relevant authorities and follow up on the outcomes of investigations until customer complaints are resolved. For complaints received through other channels, such complaints will be forwarded to the CPF Consumer Center for further actions.



Animal Welfare

2030 Target

100%

of sows raised in group  
gestation pen housing system

Increase production capacity  
of cage free egg by

30%

per year based on Year 2020

100%

environmental  
enrichment for broiler



CPF focuses on raising animals according to the Five Freedoms by selecting good breeds and applying technology to manage farms and create good environment, which shall prevent animals from illnesses and diseases, and thus reduce the need for antibiotics. Moreover, probiotics have been developed for animal husbandry to ensure sustainable animal well-being from the inside out, resulting in safe meat for consumers.

Dr. Payungsak Somyanontanagul, D.V.M.  
Vice President in Farm Standard and Regulatory  
Head of Ambition - Animal Welfare



Animal welfare directly contributes to food safety and quality. Raising animals in the condition that promotes their health and welfare offers a number of benefits to consumer health, as well as reducing hunger from deficiency of protein from meat<sup>1</sup>. Veterinarians and animal care professionals thus play an important role in protecting this food system since 60 percent of human pathogens spread from animals and 20 percent of the world's meat protein is lost from the food system due to epidemics<sup>2</sup>. In addition, antimicrobial resistance has become a global concern. If this problem is not tackled urgently, it is estimated that millions of people worldwide will die from bacterial infections, which is equivalent to over USD 100 trillion of economic damages<sup>3</sup>. CPF is committed to continuous improvement of our operation to ensure that it is animal-friendly following the Five Freedoms Principles. We also apply Farm Biosecurity practices to our farm management. We have established the Animal Welfare Committee to drive our “Animal Welfare Policy and Long-Term Targets on Animal Welfare” and the Antimicrobial Resistance Committee to promote “Global Vision for Antimicrobial Use Stewardship in Food Animals.” These approaches have been applied throughout the entire operations and are traceable.

<sup>1</sup> Animal Welfare and the United Nations Sustainable Development Goals, Keeling et al., Frontiers in Veterinary Science, Volume 6, Article 336, 10 October 2019.  
<sup>2</sup> Global health risks and tomorrow's challenges, One Health, the World Organisation for Animal Health, www.oie.int/onehealth.  
<sup>3</sup> Review on Antimicrobial, 2014: <https://amr-review.org/>



Management Approach

- **Declarations of Policy and Commitment** under the Five Freedoms Principles to ensure ethical animal farming to which all animals are entitled in compliance with producing and trading partner countries’ laws, rules, regulations and requirements.
- **Research and Development** of innovative animal feed and animal farming that are efficient, of high quality and ethical according to the Animal Welfare Principles.
- **Support and Promotion** to help encourage our business partners as well as contracted farmers to promote animal welfare according to our policies and requirements.
- **Audit** by internal and external independent agencies to ensure proper and humane animal treatment, as well as to welcome advice on opportunities for operational development.
- **Building Cooperation and Alliance Networks** including business partners, government agencies, civil society organizations, research and academic institutions and other stakeholders to raise awareness on animal welfare as well as to collaboratively develop good practices in animal farming based on the Animal Welfare Principles.

Implementation

Animal Farming according to Animal Welfare Principles

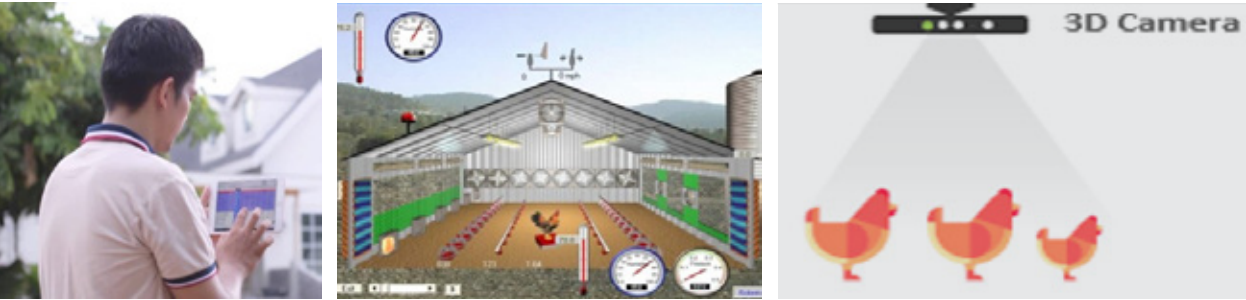
CPF is committed to elevating animal welfare in our operations and to raising employee awareness to support our endeavour. We have clear policies, manuals, and standard operating practices on animal welfare and have integrated an internationally accepted framework, known as the ‘Five Freedoms’, into our management of livestock farming in the operations in all countries. CPF requires top management of each business line in each country to oversee the management of animal welfare, to establish an animal welfare committee for each country that operates the animal farm business and to provide experts of each business line to strictly perform duties and promote animal welfare, all of which are carried out in accordance with CPF's policies and guidelines covering both CPF's farms and farms of the farmers in the contract farming project. Moreover, meetings of the Animal Welfare Committees of every country are also held via teleconference at least twice a year to exchange information and knowledge, and to review the Animal Welfare Policy, in order to ensure that the organizations, the farmers under the Contract Farming Project and all suppliers involved in CPF's meat protein products have

implemented animal welfare in compliance with Thailand's laws, rules, regulations and requirements as well as the regulations of European Union of which its member countries are key trading partners, customer requirements, and international animal welfare standards.

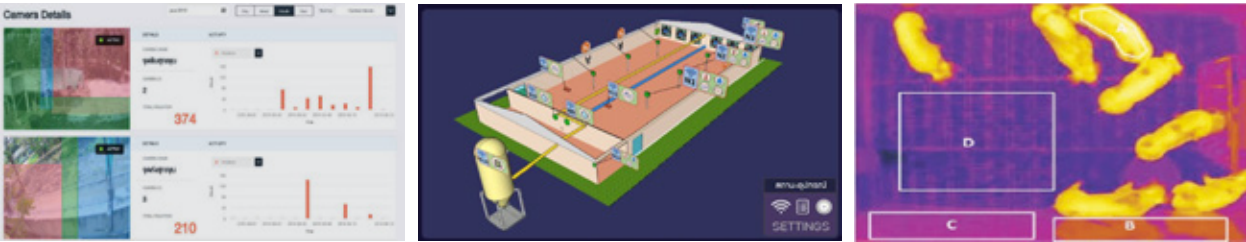
Research and Development

Research and development is an important step that contributes to continuous implementation and development of animal welfare. Apart from research and development, CPF has also placed importance on the use of modern and environmentally friendly technologies to drive its operations. The "Smart Farm" system has therefore been integrated with CPF's animal farming business. A vast amount of online information being collected by the Company has resulted in **big data** to be used for analysis and processing. CPF has also adopted **blockchain technology** to build and raise the level of confidence in a wide range of information. The smart farm system does not only support farm and animal welfare management, but the system also enables tracking, training and sales.

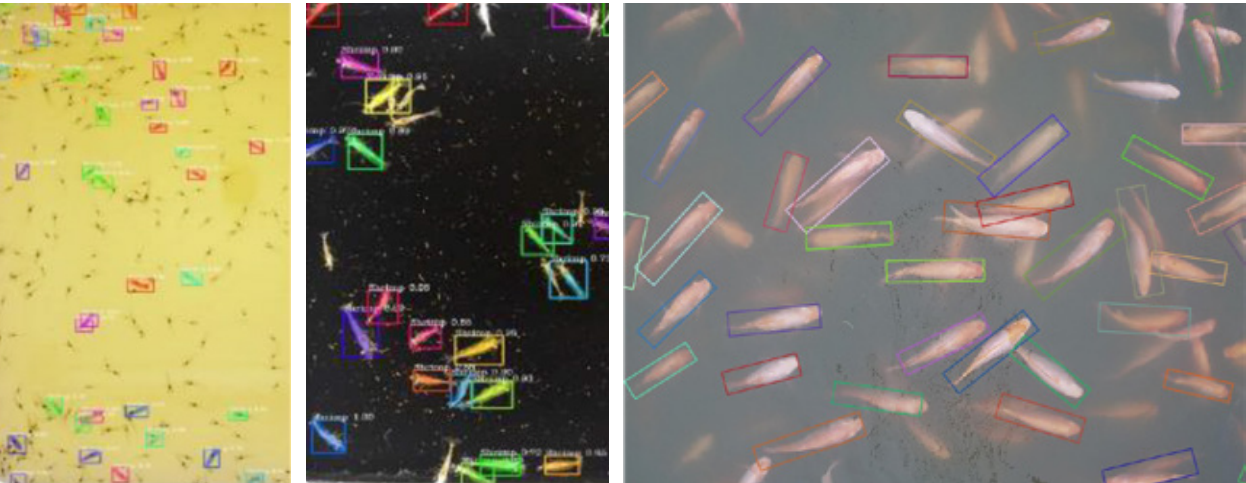
- **Smart Chicken Farm** to transform work process to workflow automation which increases farming efficiency, and improves quality level and health of animals, by managing farms and animals with Internet of Things (IoT) technology that displays real-time results and data analysis.



- **Smart Swine Farm** to control farm and biosecurity with automation technology, look after animal health and farming results by using cameras and Artificial Intelligence (AI), automatically control feed quantity and feed order, connect to sales, logistics and accounting systems; and analyze and manage farming via mobile device.



- **Smart Aquaculture Farm** to enhance supply chain value by adopting technologies to increase production efficiency, reduce waste, and manage farm and data, including planning production and transportation to meet market demand, and using image processing technology and machine learning to increase production potential.





Support and Transfer of Knowledge

CPF's teams of veterinarians and experts transfer knowledge and expertise on animal farming to farm supervisors, animal husbandry, relevant staff and all types of farmers under the Contract Farming Project to ensure correct understanding on animals' physical characteristics, habits and needs, in order to ensure proper treatment on animal health and body according to the animal welfare principles. This makes it possible to control, manage and prevent adverse effects before they emerge and cause serious damage. Particularly, CPF has placed great importance on prevention of epidemics in poultry, swine and aquaculture such as Avian Influenza and African Swine Fever (ASF). Therefore, CPF has organized trainings to provide knowledge to farmers in order to raise awareness about importance, severity and consequences of the epidemics, as well as surveillance and preventive measures, especially control of farm entry and exit which may be the contact point where carriers of disease can contaminate the production process.

CPF recognizes that biosecurity is the key to keep farms free from animal diseases and human diseases such as COVID-19 and thus transfers technology and automation systems to improve safety of farmers' swine farms under the Contract Farming Project such as the auto feeding system that helps reduce human labour and the need for people to enter swine housing. In 2021, CPF transferred remote monitoring technology with CCTV system, enabling farmers to look after swine anywhere, anytime, including seeing the inside of the housing and observing initial symptoms of swine. Farmers are able to consult with the Company's team at any time through the LINE application as well. This limits the entry of people into swine housing, which greatly reduces disease risk caused by people to swine. Moreover, biogas system has been installed to reduce odors and produce biogas; a form of clean energy, for generating electricity consumed in farms. It greatly reduces the cost of electricity. In addition, some farms have also used solar cell systems concurrently. The transfer of such technological knowledge does not only improve the production of quality swine that are free from human and animal diseases, but it also boosts productivity and helps create smart farmers, all of which lead to farmers' sustainable success.



Technology transfer to farmers under the Contract Farming Project for supporting smart farmers

Audit

All CPF's animal farms and those of farmers in the Contract Farming Project in every country undergo audits at least once every three years and are certified livestock production standards by livestock development authority of each country. Furthermore, there are other audits and a variety of international standard certifications to ensure consumers that meat protein products supervised by the Company are derived from animals that have been raised under advanced animal welfare support, such as:

Certified Advanced Animal Welfare		
Broiler chicken		Thailand: LR Farm First, QS Standard, Global GAP, RWA (Raised without Antibiotics) Malaysia: Agri Food & Veterinary Authority of Singapore (AVA)
Meat duck		Thailand: Genesis GAP (Good Agricultural Practices)
Layer chicken		Thailand: Cage-free Eggs Standard
Swine		Thailand and Vietnam: Global GAP Thailand: RWA (Raised Without Antibiotics), ASF Free Farm
Shrimp		Thailand and Vietnam: BAP (Best Aquaculture Practices), ASC (Aquaculture Stewardship Council)

According to CPF's commitment to animal welfare management as aforementioned, it is assured that all fresh food products and processed meat products under the Company's brands and customers' brands, which are distributed in the domestic market and exported to foreign countries, are derived from quality and hygienic farms, and guaranteed consumer product safety.

Raising Swine According to the 3Ts Principle (No Testicles, No Teeth Clipping, and No Tail Docking)

CPF is committed to reducing painful procedures performed on swine in the global swine industry, and therefore has participated in the 3Ts-Alliance (Teeth, Tails and Testicles) Project organized by the World Animal Protection since 2019. This implementation emphasizes reducing, avoiding and stopping physical alterations in forms of castration in male swine, teeth clipping and tail docking. Moreover, CPF also jointly supports research on consumer behaviour towards reducing pain in swine.



Participation in Reducing or Stop Painful Procedures on Swine in the Global Swine Industry of the Company in 2021






3Ts	Operations Participated	Proportion (percentage)
No Testicles	Thailand, Republic of China (Taiwan), Cambodia	5.96
No Teeth clipping	Thailand, Republic of China (Taiwan)	34.46
No Tail docking	Thailand, Republic of China (Taiwan), Philippines	0.42

100 percent of Republic of China (Taiwan) operations have stopped clipping/grinding piglets' teeth since 2019, while 69 percent of all piglets in Thailand operations have not undergone ear notching.

Welfare Outcome Measures (WOMs)

CPF has measured results of animal welfare promotion of all types of animals raised in Thailand and Overseas operations in order to assess if animals have been in states of advanced welfare according to the animal welfare principles, which directly affects animals' physical and mental health.

Measuring Results of Animal Welfare Promotion throughout CPF's Global Value Chain

	Welfare Outcome Measures (WOMs)	Performance		
		2019	2020	2021
Broiler chicken 	Transport Livability, %	99.80	99.80	99.76
Meat duck 	Transport Livability, %	n/a	99.83	99.84
Layer chicken 	Transport Livability, %	99.89	99.90	99.98
Swine 	Sow Livability*, %	94.20	95.80	95.73
Shrimp 	Black Scar Lesion, %	n/a	n/a	2.09






\* An average of swine survival rate is at 87 percent<sup>4</sup>.

<sup>4</sup> 2021 Sow mortality analysis, Bradley Eckberg, MataFarms/SMS, Feb 3<sup>rd</sup> 2022.

Promoting Animal Welfare in the Value Chain

CPF has assessed the animal welfare implementations of its key products throughout the global value chain to create consumer confidence on animal protein derived from animals that are treated with care.

Assessing the Animal Welfare Performance of Key Products across the Global Value Chain in 2021

Product made from	Animal welfare promotion	Production capacity
Broiler chicken 	Enhancing physical environment, %	64.87
Meat duck 	Enhancing physical environment, %	100
Layer chicken 	Raising in a cage-free housing system, million eggs	30.09
Swine 	From sows raised in group gestation pens, %	27.18
Shrimp 	From female shrimps without eyestalk ablation, tons	6,402

In addition, the production capacities of broilers raised with stocking density of less than or equal to 30 kg/m<sup>2</sup>, layers raised in a cage-free housing system, and female shrimps without eyestalk ablation were 31.68 percent, 0.96 percent and 6.47 percent, respectively. Thailand operations' production capacities of layers raised in the cage-free housing system was 21.79 million eggs, and those of broilers raised in enhanced physical environment and sows raised in group gestation pens were 89.77 percent and 52.52 percent, respectively. Placing efforts to promote advanced welfare for farm animals in line with the organization's commitments,

policies and long-term goals for animal welfare, CPF has invested in research and development as well as in small-farm trials to ensure that treatment methods of farm animals do not cause side effects or other detrimental effects on animal welfare. Then, CPF shall set plans for implementing such methods at all farms without affecting the Company's business in terms of cost and production capacity, for the ultimate purpose of delivering quality meat protein products that are free of pesticides, safe and traceable in every process from farm to consumer plates.

Animal Welfare Cooperation Network

CPF has been a member of the World Business Council for Sustainable Development (WBCSD) since 2015. In 2021, CPF jointly established the Responsible Meat Initiative (ReMI) sub-working group under the Food Reform for Sustainability and Health (FReSH). The members include over 14 leading organizations worldwide, which have a collective goal to promote responsible protein production and consumption throughout the food value chain in eleven aspects, four of which are directly related to responsible animal

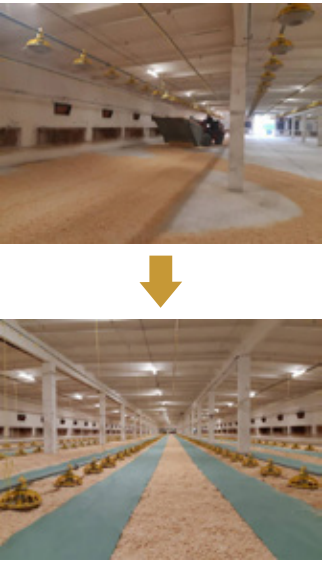
farming, namely animal welfare, antimicrobial intervention and animal health, animal nutrition and demand for responsibly produced pork. On October 28, 2021, Dr. Payungsak Somyanontanagul, D.V.M., the Chairman of the CPF Animal Welfare and Responsible Use of Antibiotics Committee was the representative to jointly launch the world's first ReMI working group through an online conference, with the aim to drive the reform project on sustainable food production to promote good health.



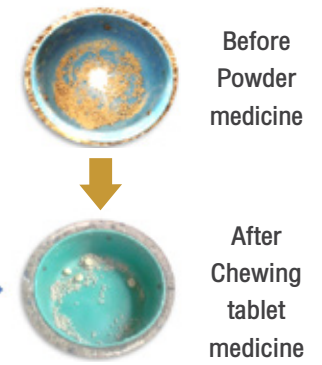


Animal Welfare Innovation

In 2021, CPF created and developed innovations to enhance animal welfare promotion throughout the global supply chain, with the realization that good health begins with healthy dishes, therefore, farm animal well-being lies at the heart of business.



- **Sawdust bedding in animal housing:** The broiler business in Russia operation had experienced footpad dermatitis which occurred to a lot of broilers. Therefore, it began to use sawdust bedding in broiler housing. Subsequently, inflammation of the soles of the feet of broilers reduced from 90 percent to 20 percent. However, the use of sawdust bedding causes many obstacles such as a large amount of sawdust waste, possibility of pathogen contamination, high production cost and long preparation time. In addition, the production volume of this farm is quite large and constantly increasing. As a result, this advanced animal welfare promotion is not yet fully accomplished. Nonetheless, CPF is still focusing on good animal welfare implementations to achieve goals.



- **Snacks for piglets:** Diarrhea in piglets could be found after birth, the use of antibiotics for treatment is therefore essential in accordance with animal welfare principles. The injection is the most effective form of treatment; however, it still causes pain in piglets. The swine business in Thailand operations therefore developed and tried using a form of medication that mixes powder medicine with feed instead of injections. It was often found that piglets did not eat the feed and thus did not receive full treatment doses. The medication was then further developed into the form of powder medicine mixed with feed, moulded into small cubes, and mixed with milk to attract piglets. This is consistent with sucking behaviour of piglets at this age and the animal welfare principles.

Responsible and Prudent Use of Antibiotics

CPF recognizes that improper use of antibiotics in animals have tremendous impacts on the animals, their caretakers, consumers and the environment. It could especially create antimicrobial resistance and antibiotic residues in animal products, all of which have proven to be global challenges. CPF is therefore committed to the responsible and prudent use of antibiotics as a single practice for all livestock businesses in every country, covering the Company's farms and those under the Contract Farming Scheme. The use of antibiotics must be for therapeutic uses to maintain

animal welfare under veterinary prescription only and must be:

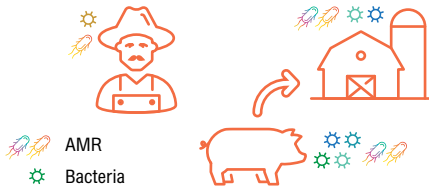
- free from human-only antibiotics;
- free from shared-class antibiotics which are medically important to humans, used as a growth promotor; and
- free from hormones used as a growth promotor.

In 2021, the Company conducted research and development on the responsible use of antibiotics which included the followings:

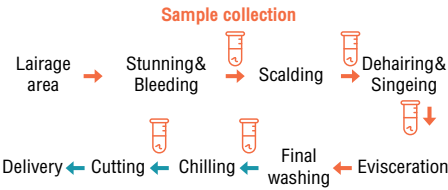
- **Study of antibiotic resistance in *Escherichia coli* (*E. coli*) from intestinal samples from sick chickens:** The intestinal samples from sick chickens were collected and examined at the broiler business' laboratory in Cambodia operation. The samples were tested by broth micro-dilution technique to check on *E. coli*'s resistance to six types of antibiotics. It was found that the resistance to each type of antibiotics was different as follows: Tetracycline 96.69 percent, Ampicillin 93.33 percent, Kanamycin 46.67 percent, Colistin 40 percent, Gentamicin 40 percent and Amoxicillin/Clavulanic Acid 13.33 percent. It was assumed that antibiotic resistance might be caused by the use of such antibiotics in the farming process. Thus, the Company formulated strategies and procedures to rigorously control the use of antibiotics to reduce antibiotic resistance.



- **Longitudinal monitoring reveals persistence of colistin resistant *Escherichia coli* on a swine farm following cessation of colistin use:** A follow-up study on mobilized colistin resistance (*mcr*-1) genes found in *E. coli* from personnel, swine and the environment of a sample farm in the swine business of Thailand operations, that has had a policy to stop using colistin since 2017. The data showed that no mobilized colistin resistance genes were found in the farm's personnel, but they were found in swine and the farm environment in lower quantities (additional detail is available in Longitudinal monitoring reveals persistence of colistin-resistant *Escherichia coli* on a pig farm following cessation of colistin use, Nwai Oo Khine et al., 2021).



- **Study, detection and monitoring of extended-spectrum beta-lactamase producing *Escherichia coli* (ESBL):** A joint research between Chulalongkorn University and the swine business of Thailand operations, to identify risk points and set up guidelines for reducing contamination of antibiotic-resistant bacteria in each step of swine slaughtering process in slaughterhouse.



- **Study of dynamics of antibiotic resistance genes in aquaculture:** through the cooperation of the Department of Microbiology, Faculty of Medicine, Siriraj Hospital, Mahidol University and aquaculture business of Thailand operations. Samples of Nile tilapia or red tilapia, snapper, shrimp and biofloc collected from the Company's aquaculture were compared to natural fish and shrimp that were close to the sample group to study translocation of antibiotic resistance genes in aquaculture.

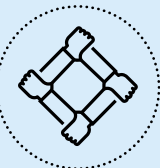






Farmer in the Ban Sup Ruang Sai Project, Chaiyaphum Province, Thailand

Create positive social impact in the lives of employees and individuals throughout our value chain



Adhering to Principles of Human Rights as The Basis of Business Operations: formulating strategies to enable processes that take human rights into account throughout the value chain by complying with three principles, namely Protect, Respect and Remedy



Being a Learning Organization: focusing on development of skills and potentials of employees, employees' children, students, and the general public, in order to create future personnel who can create good value for society



Creating Good Work Experience: having strong corporate culture, inspiring people to achieve good results, enhancing corporate engagement, and attracting talents to CPF in a sustainable manner



Measuring Social Positive Outcomes: promoting well-being of people, providing career support, generating local income, and building networks to make positive impact on society, thus resulting in stable self-reliance



Human Rights

2030 Target



100%

Conduct human rights due diligence once every 3 years, including risk assessment and impact assessment in high risk areas of own operations



“Respect for human rights is a fundamental principle in business operation that complies with good corporate governance, which ensures equality and prevents human rights violation of individuals both outside and within the organization – thoroughly covering internal staff, suppliers and external communities.”

Ms.Pimonrat Reephattanavijitkul  
Chief People Officer  
Head of Ambition – Human Rights



Manufacturing businesses often see high labour turnover rates and constant demand for labour to ensure business continuity and corporate growth. More than 3 billion people worldwide have been given employment opportunities. However, a handful of workers are under unfair employment practices, work in unsafe work environment, confront health risks and are in poverty despite being employed<sup>1</sup>. Employment rates, thus, are not an indication that people in society will have a better quality of life. There are also reports of slavery and human trafficking which are important global issues. The pandemic situation of the COVID-19, moreover, has caused the global unemployment rate to rise which is expected to reach 207 million people by 2022, 21 million people higher than 2019<sup>2</sup>. CPF thus recognizes and places importance on respecting human rights and labour rights throughout the supply chain, which includes CPF's employees and workers, and business partners. CPF is committed to strengthening the foundation of fair and equitable human resources management which is in line with the United Nations Guiding Principles (UNGP) and the International Labour Organization (ILO), and encourages business partners to implement or apply the management approach in their business operations.

<sup>1</sup> ILO: World Employment and Social Outlook: Trends 2019 (2019).  
<sup>2</sup> ILO: World Employment and Social Outlook: Trends 2022 (2022).



Management Approach

- **Declarations of Policy and Commitment:** declaring commitment and overseeing human rights by implementing the Company's policies related to human rights and labour practices in order to tangibly demonstrate commitment to combating against violations of human rights law and labour practices.
- **Fostering Respect for Human Rights through Policies and Communication:** fostering respect for human rights within the organization through relevant policies and communicate these policies to employees and business partners to strengthen the management of human rights and labour practices.
- **Human Rights Due Diligence:** implementing human rights due diligence regularly on a three-year basis to identify and improve human rights management and labour practices, and to mitigate potential negative impacts that may arise.
- **Receipt of Complaints:** providing employees with channels for grievances and complaints or reporting tips related to malpractice or misconducts, and investigating issues in order to effectively manage and take corrective actions.
- **Monitoring and Disclosure of Operating Results:** closely monitoring human rights and labour practices in order to strengthen human rights and labour practices, and transparently disclosing such results to the public through various channels.
- **Review for Improvement:** improving management plan in order to address impacts and solve arising issues effectively.

Implementation

Respecting and Upholding Human Rights

Human Rights Training

In 2021, 100 percent of CPF employees under CPF's establishments in Thailand operations and overseas operations attended online and offline human rights trainings.

Training by CPF Training Center

Thailand Operations				
Course	Number (person)	Percentage	Number (hour)	
Basic Governance	Employees and Workers	63,273	100*	118,953
Personal Data Protection Act	Employees	24,580	100*	12,290
Occupational Safety, Health and Environment for New Employee at Factory and Farm	Employees	2,622	100*	15,732
Overseas Operations				
Basic Governance	Employees and Workers	50,044	100	50,044

\* 100 percent of target group

This year, CPF in collaboration with the Labour Protection Network Foundation (LPN) organized a remote interactive training on human rights for selected 384 foreign employees who never attended this training before. This training is organized annually by LPN Foundation, and data show that 89 percent of employees from 63 percent previously now have better understanding about human rights.



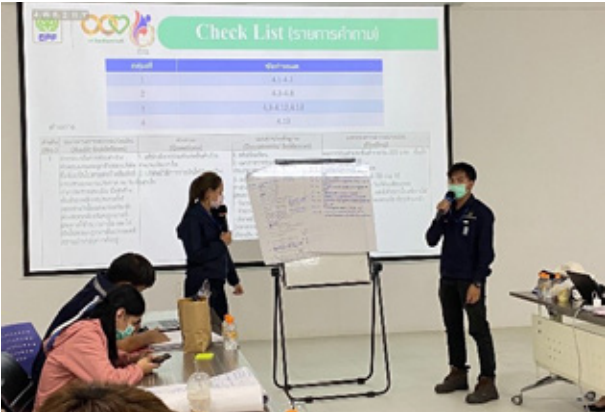
Human rights remote interactive training organized by LPN Foundation

CPF has applied the Thai Labour Standards (TLS) which is the social responsibility requirements for voluntary business organizations, as the norm for treatment of workers to demonstrate social responsibility in line with the current situation, labour laws, and other relevant international standard requirements. This elevates the Company's labour management to the international labour standards. This has been CPF's practice since 2015 by adhering to two main requirements:

1. Labour management system which is a quality management which helps ensure quality treatment of workers in accordance with the requirements as well as continuous and sustainable development.
2. Labour rights and protection which are the bases of the current applicable labour law and additional terms included in the commercial terms (referenced from the International Labour Organization Conventions).

The Company has organized both online and offline programs to educate employees on the Thai labour standards, which include two programs for executives, the TLS 8001 Committee members, and employees as follows:

1. Alterations of Thai labour standards requirements; TLS 8001-2020 and relevant laws.
2. Alterations of Thai labour standards requirements; TLS 8001-2020, relevant laws and internal audit techniques.



Alterations of Thai labour standards requirements; TLS 8001-2020 and relevant laws in the form of online and offline training by internal speakers





Alterations of Thai labour standards requirements; TLS 8001-2020, relevant laws and internal audit techniques training by internal speakers

In addition, the Company has several measures to protect workers such as:

- Assessment of suppliers and subcontractors
- Working hours and breaks
- Protecting female workers who are pregnant, while time spent feeding during work counts as working time
- Ensuring safe and healthy working environment
- Preventing sexual assault, sexual abuse or sexual harassment
- Preventing workplace violence
- Organizing activities to promote quality of life among employees according to international principles
- Promoting and passing on good practices to suppliers in order to jointly eliminate the use of illegal labour



(For additional details, please see the Annual Report 2021, Part 1 (3) Driving Business towards Sustainability).

CPF has been certified with the labour standards by Bureau of Labour Standards Development, Ministry of Labour, and external auditing units such as TUV SUD (Thailand) Company Limited and SGS (Thailand) Company Limited. This year, the Company received a royal trophy from Her Royal Highness Princess Maha Chakri Sirindhorn as its Pathio shrimp hatchery, Chumphon Province, was granted Thailand Labour Management Excellence Award.



The Royal Trophy Award from Her Royal Highness Princess Maha Chakri Sirindhorn: Pathio shrimp hatchery, Chumphon Province, Thailand, Labour Management Excellence Award



Welfare Committee in the Workplace

CPF supports participation of employees of all levels and all nationalities, and all diverse and vulnerable groups in terms of gender, race, religion and people with disabilities, in applying for the position of the member of the Welfare Committee in the Workplace, and in voting independently to elect committee members via transparent processes. The Welfare Committee in the Workplace is deemed another communication channel between employees and the Company, to raise awareness and respect for human rights and equalities of all employees at all levels and from all races, and to express views, opinions, suggestions and complaints through elected representatives. The Company increases the number of the Welfare Committee members from the legally required minimum of 5 to

the legally allowed maximum of 17 at each workplace based on size. If the election results do not cover diverse and vulnerable groups as aforementioned, the Company shall make a comprehensive selection of sub-committees to represent employees in such groups. The subcommittees are responsible for presenting their problems and suggestions to the Welfare Committee prior to meetings with the executives who represent the Company.

At present, the Company (Thailand operations) has a total of 113 committees with a total of 734 members, comprising 609 Thai employees and 125 foreign employees (proportion 83:17), while including 404 female and 330 male (proportion 55:45).

Employment

CPF has established a clear employment policy and continued to focus on employment and operation in strict accordance with laws and international labour standards as prescribed in the Employment and Labour Management Policy, the Foreign Worker Recruitment in Thailand Policy, the Non-Discrimination and Anti-Harrassment Policy, and the Diversity and Inclusion Policy which are in alignment with CPF's business principles that place importance on employee care and fair treatment on the basis of respect for human rights and international human rights standards including the Universal Declaration of Human Rights (UDHR) of the United Nations (UN) and the Declaration on Fundamental Principles and Rights at Work of the International Labour Organization (ILO), as well as the labour laws of the country in which CPF conducts businesses, criteria according to international standards to which CPF has adhered, the Company's Management Policy and customer requirements. CPF also encourages business partners to comply with the laws and international labour standards which are in line with the Company's Sustainable Sourcing Policy and

Supplier Guiding Principle, in order to have an effect on integrated practices to drive towards sustainable operational goals together.

CPF has employed foreign employees according to Memorandums of Understanding (MOU) on the employment of foreign employees signed by the government of Thailand and neighboring countries, directly through legal labour recruitment agencies in countries of origin to ensure that the processes and costs of hiring employees from the countries of origin are accurate and transparent while all employees, be they foreign or Thai, are to be treated equitably and equally.

In addition, CPF has clearly defined the responsibility for recruiting expenses of foreign employees. The employees are responsible for personal expenses such as passport fees, and CPF is responsible for recruiting costs occurred in the countries of origin and all expenses occurred from borders to workplaces in Thailand, which includes visa fees, work permit fees, and additional expenses during the COVID-19 pandemic, etc.



Diversity and Inclusion Management

CPF values and places importance on differences and diversity of opinions, employee skills and experience because CPF believes that diversity can enhance employees' abilities to drive the Company sustainably. CPF has established policies and guidelines to promote organizational diversity with the goals of protecting employees at all levels and promoting zero tolerance on all forms of discrimination due to characteristics of a person or a group in respect of race, nationality, lineage, skin colour, origin, belief, religion, social status, sexual orientation, gender, age, physical anatomy, disability or infirmity, language used, political ideas, marital status or any other information that causes discrimination. Moreover, CPF also prevents abuse and harassment of any kind, whether such behaviour has a sexual connotation or not. This principle has been applied domestically and internationally to employees at all levels.

CPF has integrated the United Nations' Sustainable Development Goals (UN SDGs) as part of its human resource strategy to drive the Company toward the sustainable goal of gender equality. The 2030 goal includes precipitating equal numbers and compensation rates of female and male employees at the same level of position. In 2021, CPF paid the similar average compensation between female employees and male employees in Thailand operations at the non-management level with the ratio of 1:1.17.

CPF's guidelines for promoting compliance with the Diversity and Inclusion Policy are as follows:

Leaders shall

- Be acutely attentive to different opinions of others,
- Encourage employees to express their opinions constructively,
- Enhance work environment and mutual respect in order to be able to coexist on the basis of differences, and
- Adhere to the principles of non-discrimination and equal opportunity which include providing proper commendations to employees.

CPF also has a policy to encourage employees from all sectors to join as members of the Welfare Committee of the Workplace which is a representative group of employees from all levels and lines of work, to provide opportunities for employees to give suggestions to the Company on improvements of welfare, work environment, complaints and inappropriate labour management, such as putting in place crosswalks to enhance safety within the establishment and creating dining and resting areas during work hours within the establishment. The Welfare Committee shall receive opinions and consider such issues in order to make necessary adjustments and apply them within the organization. In 2021, 70 percent of CPF's employees in all Thailand operations already benefited from the improvements according to the recommendations given to the Company's representatives. In addition, CPF also additionally supports activities or facilitates foreign employees on the issue of language difference, such as announcements and interpretations for foreign employees in the workplace.

Labour Protection Network Foundation (LPN)

CPF together with the Labour Protection Network Foundation (LPN) have driven the promotion of human rights within the organization through the signing of a memorandum of understanding for four consecutive years. This year, we still placed importance on promoting human rights with good labour practices in accordance with the principles of human rights, managing human rights issue, caring for employee health and safety, and organizing human rights training which covered the labour protection law regarding occupational health and safety at the workplace for employees, along with continuing the "Labour Voices Hotline by LPN" project that ensured a neutral organization that listened to the voices of all employees. The Labour Voices Hotline helps the Company to acknowledge employees' problems or suggestions in order to align the Company's measures with the principles of human rights in a timely manner. In addition, the cooperation with the LPN Foundation, which is a civil society organization that specializes in protecting and promoting the rights of foreign employees in the country, reinforces CPF's commitment to promoting human rights and improving the quality of life of employees, which ensure that employees have equal access to the rights.

Additionally, this year's cooperation also included planning, implementation, and verification of ethical employment processes, as well as encouraging recruitment agencies in the countries of origin to ensure that foreign employees were accurately, transparently and responsibly recruited when the government allowed foreign employees to enter the country during the COVID-19 outbreak. We also organized focus group activities with foreign employees at the dormitories to enhance understanding and cooperation on disease prevention practices in the workplace and residence, and invited employees to voice their concerns and suggestions in order to promote employee well-being and safe work practices, and to allow harmonization and reconciliation within the organization.

With the ongoing COVID-19 outbreak over the past 2 years, CPF has been providing ready-to-eat food products and fresh eggs to LPN Foundation. The food products are included in the survival kits to be distributed as part of COVID relief to foreign employees who have been continuously affected by the situation in various areas since 2020.



LPN CPF contributed to COVID relief for foreign employees and vulnerable groups through LPN Foundation



Human Rights Complaint Management

In 2021, CPF received the total of 4 issues concerning human rights complaints through the Labour Voices Hotline by LPN. All were from foreign employees, with details as follows:

- One telephone call was about the employee's misunderstanding in respect to the reason for dismissal. After fact checking, it was found that the employee had violated preventive measures against the spread of COVID-19 under the bubble & seal system, with which all employees are required to strictly comply. The LPN Foundation and the Company had jointly clarified to the employee that such action might cause serious damage to the Company. Therefore, the Company was obliged to act in accordance with the work regulations. In addition, the Company has made announcements emphasizing that all employees must acknowledge and be aware of the seriousness of consequences as a result of measure violation.

- One telephone call was about a concern of an employee when there was a failure to conduct a transaction at the bank and the employee was informed by the bank that the the identity document had expired. It was found that the bank was unaware of the government's easing measures which extended the period for foreign employees to legally stay and work in the Kingdom of Thailand during the COVID-19 outbreak. The Company had made announcements to inform all foreign employees to thoroughly acknowledge and understand the easing measures.
- Two telephone calls were about employees' compensation. During the COVID-19 situation, work processes had been adjusted in accordance with various disease control measures, which affected the preparation of documents relating to payment of wages. The Company had investigated and took corrective action immediately upon notification, including adjusting the document processing and data entry to be more precise.

Human Rights Due Diligence

In 2021, CPF reviewed the human rights due diligence (HRDD) process for every domestic business of the Company in Thailand. The review took into account all diversity groups, racial and religious minorities considered as vulnerable groups, and groups of persons with disabilities and children. The human rights due diligence comprised 7 salient human rights issues, namely employment conditions, employee health and safety, community health and safety, personal information, use of illegal labour (such as child labour, forced labour and foreign labour) in the supply chain, health and

safety of suppliers and contractors, standard of living and community safety in the supply chain. This review has been conducted annually since 2016, whereas the human rights due diligence is conducted every 3 years. Currently, the Company has already prepared and planned for the human rights due diligence of 2022 as well as the human rights impact assessment (HRIA), all of which shall be disclosed to the public in 2022 (Additional details are available on the Company's website: Human Rights Due Diligence).



“Because employees are heroes ... CPF is a safe food producer that must contribute to maintain food security for the country and employees play an important role in food production ... In the situation of COVID-19 outbreak, all employees are sacrificed who come out to work for the public, therefore, we must ensure that they are safe and secure in their work.”

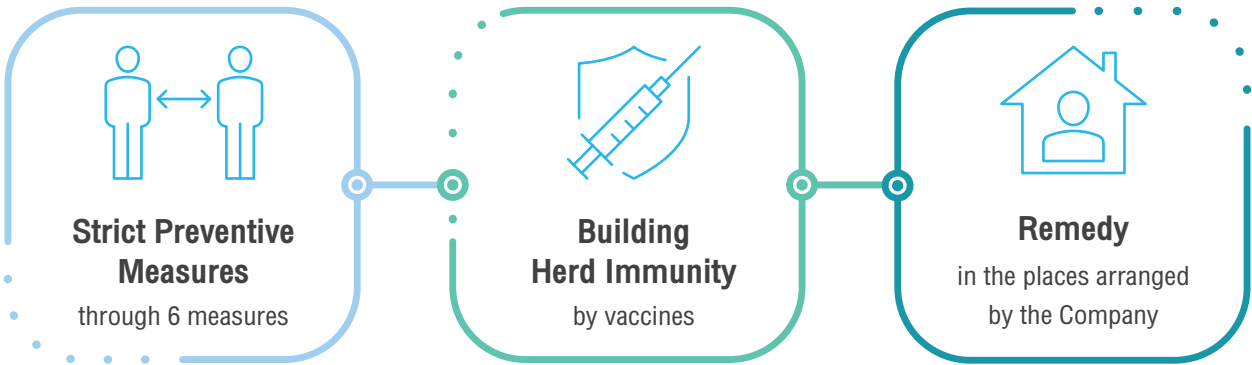
**Mr. Prasit Boondoungprasert**  
Chief Executive Officer

CPF received a plaque and an honour certificate: Outstanding Human Rights Award 2021 for Large Business Organization, from the Prime Minister as the Company had been outstanding in all aspects of operations according to the principles of human rights and the Company's commitment to systematically integrating the principle of universality of human rights throughout its supply chain. CPF has placed importance on employees and all stakeholder groups, by treating them equitably, earnestly and continuously without discrimination. CPF also conducts audits and evaluation, and encourages business partners and farmers in the supply chain to apply good practices in order to promote upholding of human rights according to international standards. Particularly, the Company's potential can be showcased as a pilot organization which passes on, carries on, and builds on the knowledge and experience in human rights for a wide range of organizations in order to achieve tangible results that lead to sustainable social development.

Occupational Health and Safety

Employee Care during the COVID-19 Outbreak

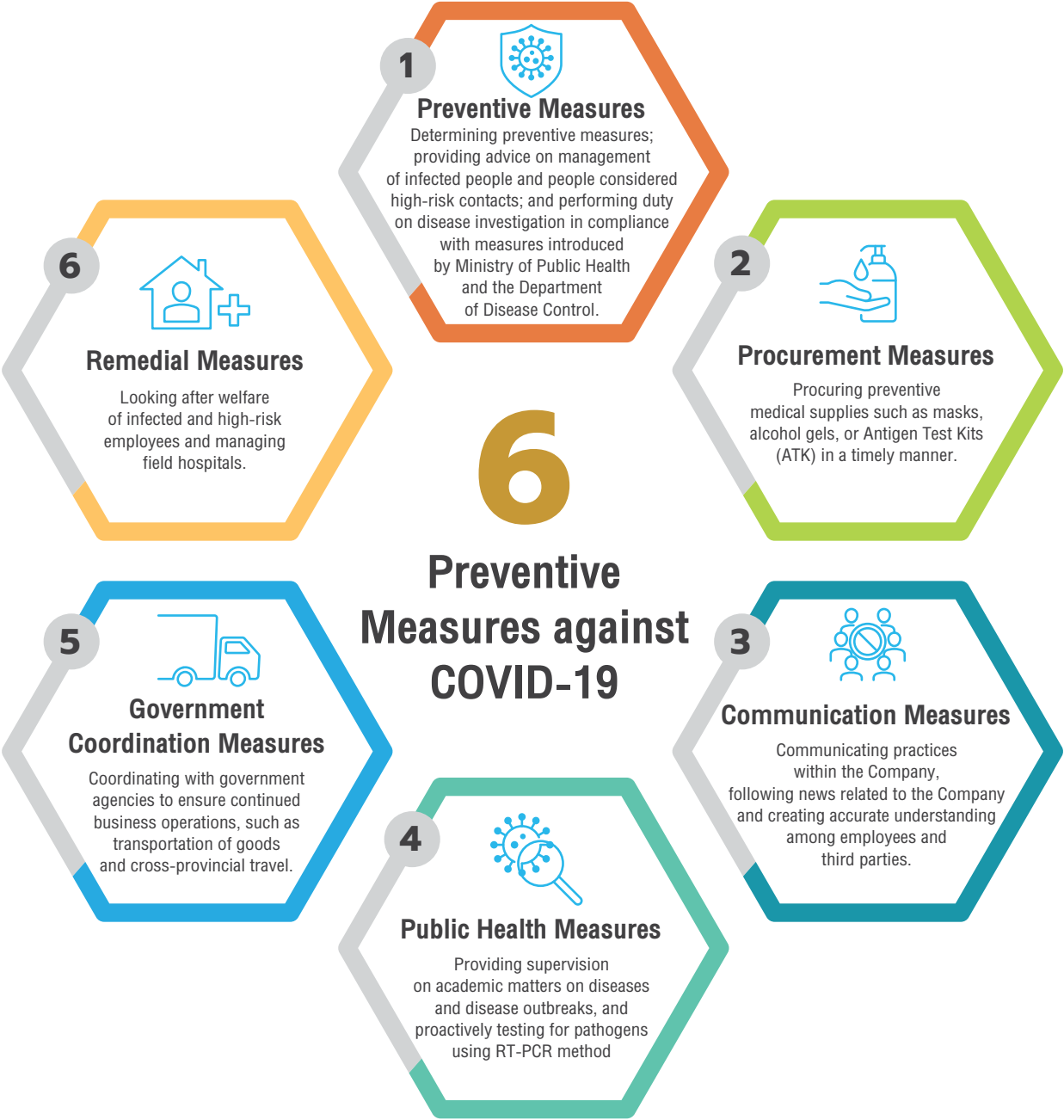
CPF gives priority to employee health, safety and well-being. Therefore, CPF has prepared and implemented intensive measures to monitor, guard against and prevent the spread of the pandemic.





Strict Preventive Measures

CPF has established the Center for Preventing the Spread of COVID-19 and 26 Coordinating Centers covering all business units within Thailand operations. Safety officer teams are stationed at the coordination centers, monitoring compliance with factories' measures. Sub-centers have also been set up in factory areas to ensure operational flexibility and monitor the situation. Six measures have been introduced and implemented:



To prevent impacts on health of employees and family members as well as the Company's business operations, CPF has conducted knocked door audit at the business units and remote audit (On and Off Site Audit) to ensure that the prevention of the disease outbreak is strictly and effectively implemented. The strict implementation of measures has resulted in successful management of the prevention of COVID-19 as reflected through CPF's certification of hygienic standards: "IPHA – Industrial and Production Hygiene Administration" covering its 61 factories, which is the highest number among industrial plants nationwide.

Building Herd Immunity

CPF has procured and purchased vaccines to build herd immunization for all employees in the production and support functions since November 2021, to ensure continuous stability of food production processes and enhance consumer confidence in the hygiene and safety of the Company's products.

Remedy

Although CPF has implemented intensive preventive measures, more than 10,300 of its employees have been confirmed to have COVID-19. CPF has put great effort to control the spread of the disease by immediately conducting a process of screening patients for treatments at hospitals or hospitels arranged by the Company, or Saraburi and Nong Chok field hospitals built by the Company with up to 780 beds. The process also includes isolating high-risk contacts for symptomatic observation and periodic screening using RT-PCR and ATK. In addition, CPF has also provided 24-hour CPF COVID-19 Hotline to answer all questions or concerns from employees about COVID-19 as the Company is concerned about the physical and mental health of all employees.

Occupational Safety, Health and Work Environment Projects

With awareness and focus on occupational health, safety, and work environment of employees and contractors, CPF therefore implements various projects to ensure that employees and contractors can work safely, with details as follows:

Safe Think Safe Act Project

The Layer Business has applied the principles of behavior-based safety to reduce speeding behavior in order to reduce the Company's car accident statistics, which include assessing risky behaviors and communicating to employees who are in at-risk groups, along with organizing training courses that focus on driving attitudes and behaviors and mandating participation in a 21-day behavioral observation program, in which a supervisor is involved in the behavior assessment once a week. An incentive reward has been introduced to lower risky driving behavior. As a result of the program implementation, the number of at-fault car accidents decreased by 16 percent compared to 2020.



Wearing a Full Body Safety Harness and a Lifeline with 2 Hooks

Preventing Falls from Heights Project

In 2020, due to accidents related to working at height, the Livestock Feed Business set more stringent operating standards to prevent accidents, with details as follows:

1. Installing roof walkways and lifeguard anchor points in every area.
2. Installing standard slope ladders or scaffolding for climbing up the roof and coming down.
3. Implementing a full body safety harness and a lifeline with 2 hooks for operators.
4. Using internationally standard-certified equipment for working at heights.
5. Ensuring expertise and experience in working at heights among contractors.



Roof Walkway



SMART SHE Project

The Livestock Feed Business has adopted digital platforms such as sensors and Internet of Things (IoT) to create systems that support the operations relating to safety, health and environment (SHE) to improve efficiency and keep track of SHE information, so that SHE can be followed up and monitored at all times. This implementation is divided into three parts:

**SAFETY:** controlling high-risk work tasks by implementing a measure of safety checks through Smart Work Permit Application, which increases work efficiency to ensure safety and reduce paper usage.

**HEALTH:** assessing work environment through real time sensors which help monitor work environment that may cause occupational diseases.

**ENVIRONMENT:** measuring quality of environment inside factories, such as qualities of air and effluent before discharging to communities, as precautions to control impacts which may occur to communities.

Information gained from all three parts is managed on Smart SHE Platform that displays data in the form of a dashboard which can be accessed on computers and smart phones in real time, enabling access to information anywhere, anytime. There is also an instant notification when an abnormality is found.



SMART SHE System

Employee Health Promotion

Employees are the key force in running business. CPF therefore pays attention to and takes good care of health and well-being of its employees, along with implementing projects to promote employee health and well-being.

Happiness, Physical Health and Healthy Heart Project

The Livestock Feed Business has carried out activities to encourage employees to stay healthy through exercising and eating good and beneficial foods, by establishing health clubs, arranging exercise areas, providing in-house stadiums and fitness rooms as well as sports equipment. In addition, there are sports competitions between work units, for example, CPF Running Club and football competition.



Inter-Unit Sporting Events

Clean and Organic Vegetables Project

The project is implemented to encourage employees working at animal farms in Thailand, Vietnam, and Laos operations to grow organic vegetables for consumption in order to promote good health among employees through clean and safe foods.

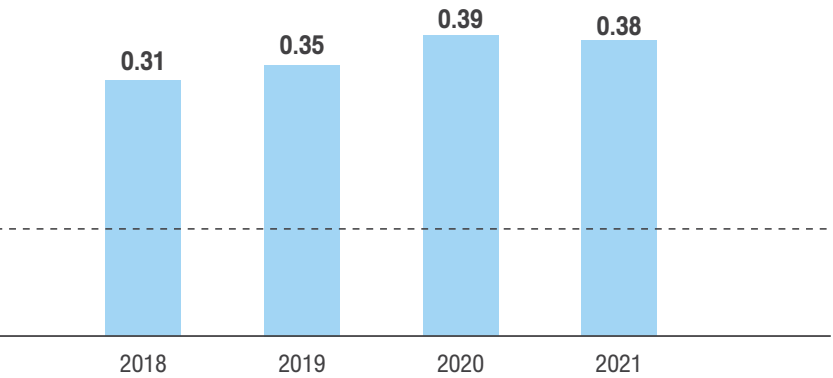


Organic Vegetable Gardens in the Company's Animal Farm Areas

Performance in 2021 (Thailand Operations)

Lost Time Injury Frequency Rate of Employees

Unit: Cases per 200,000 man-hours



**2025 Target**  
**0.12 cases**  
**per 200,000 man-hours**

In **2021** Major causes of work-related injuries - Employees and Contractors:

1. Being cut or stabbed by sharp object;
2. Being pinched or pulled by object;
3. Being injured by falling object
4. Crashed or collided with object; and
5. Falling or slipping

The number of fatality as a result of work-related injury for employee and contractor

**0** persons

Despite CPF's efforts to prevent accidents during work, in 2021, four employees were involved in accidents: pinched or pulled by objects, cut or stabbed by sharp objects, and collisions with objects, causing injuries that have let their bodies unable to restore to original states within 180 days. To prevent future recurrences, the Company had urgently investigated root causes and formulated corrective solutions and measures, for example,

- Checking equipment and work areas to ensure safety before starting work every time,
- Modifying equipment to prevent accidents related to employees being pinched or pulled by machines and being cut or stabbed by sharp objects,
- Strictly enforcing the regulations on personal protective gear based on the risks of each type of work, and
- Increasing frequency of employee and contractor trainings on machine operation.





Lifelong Learning

2030 Target



3 million hours  
of education and training  
for employees



“CPF is committed to creating good work experiences for employees and aims to be a learning organization to provide integrated care for employees throughout their periods of employment with CPF. Skills and knowledge necessary for becoming future workforce will be developed to enhance value of every employee in the organization, all of whom are the key to driving sustainability and passing on the organizational values to the outside society.”

Ms.Pimonrat Reephattanavijitkul  
Chief People Officer  
Head of Ambition – Lifelong Learning



The current global situation is changing rapidly due to advancements in technologies and innovations that constantly emerge, and the impact of the COVID-19 pandemic. As a result, business conduct guidelines have changed, and competitive rate for quality employment in the market has increased. The Company therefore has to improve its human resource management strategy and organizational structure accordingly, as well as increase strength and happiness within the organization to ensure that employees are ready to deal with changes in a timely manner.

Management Approach

- **Being a Learning Organization:** focusing on developing personnel skills and potential in order to equip employees with skills to operate in the midst of changing organizational context, and expanding learning opportunities to employees' families, business partners and people in society.
- **Managing 'Talents':** keeping highly qualified employees with the organization and attracting talents to the organization, as well as planning employee career paths, along with succession plan for replacement of key positions to support sustainable business expansion.
- **Corporate Culture and Engagement:** creating a strong corporate culture with morality and ethics under the 6 values of the "CPF WAY." The Company has placed great importance on shaping employees at all levels to have awareness, understanding, acceptance, and implementation of the corporate values. The Company has also focused on improving employee engagement through the CPF@Heart Project in order to enable employees to generate positive outcomes and organizational goals.
- **Manpower Management:** developing work structures and analyzing human resource management approaches to be in line with a business continuity plan, by using in-depth data analysis to make decisions and to efficiently create a business plan.

Implementation

Being a Learning Organization

Technologies and innovations play important roles in the current global situation, causing rapid changes as well as unprecedented skills and an increase of competitive employment. CPF, therefore, strives to be a learning organization that encourages employees to everlastingly develop their skills and potential.

The Company also recognizes a great opportunity to encourage students and people who can potentially become vital workforces in the future to gain knowledge, skills and potential that sustainably meet the business requirements.

Employee Development

CPF is committed to developing employees by enhancing their knowledge, skills and abilities in every aspect to meet requirements of the targeted organizational structure and manpower. CPF has set individual development plans (IDP) to ensure that all employees are ready to perform both present and future tasks quickly and effectively. In this regard, employee learning and development programs have been established and are divided into 4 important areas as follows:

1. **Fundamental Program** consists of basic courses necessary to creating awareness and understanding of duties and responsibilities, which include Compliance with Laws, Rules and Regulations, Corporate Governance, Code of Conduct, Disciplinary Action, and Occupational Health and Safety Work, as well as courses such as Organizational Sustainability Development and Preparation for Digital Workforce.

2. **Future Skills Development Project** that focuses on developing digital literacy of employees, which includes hard skills such as Data Analytics and Robotics, and soft skills such as Design Thinking and Agile. The development programs comprise 4 levels covering basic to advanced levels for laying foundations and enhancing employees' skills in using digital technology in each target group. Moreover, various courses in other areas are offered that helps develop knowledge and future skills, improve job-specific skills to develop essential work skills, and foster a global vision and synergy among employees to accommodate the organizational growth in the future. In 2021, CPF trained more than 22,000 employees on digital literacy to build digital foundation. CPF has joined forces with True Digital Academy, with more than 600 employees participating, creating 47 data analysts from 10 projects through Data Analytics Boot Camp by analysing real business problems and proposing



plans worth more than THB 300 million per year. In addition, the project has been further developed to create information experts including 100 data analysts and 50 junior data scientists in the following year, to support manpower planning in the digital era.

- 3. **Leadership Development Program** aims to develop leadership skills among supervisors, managers at all levels and executives. The program has been developed to ensure readiness in systematically developing teamwork and management skills. In addition, talents have been selected to participate in the Leadership Development Program for selecting personnel to strengthen the business, being prepared for internal growth and supporting the organization towards sustainable growth. More than 1,000 employees have participated in the Leadership Development Program.
- 4. **Technical Development Program** promotes technical skills and knowledge management of each business unit in order to comply with the same system and standard by establishing Technical Academy based on professional groups, creating mutual learning and knowledge sharing society through the Learning Community to develop knowledge and skills that are truly in line with responsible tasks, and enhancing

employees' abilities to ensure their readiness for the business growth, that changes rapidly. In 2021, CPF established Technical Academy for 9 business units, and the initiative will expand to all 27 business units in 2022.

In addition, CPF has recognized the importance of fostering a corporate culture of sustainable learning and therefore creates an atmosphere that supports lifelong learning through a variety of learning formats known as hybrid training. The training includes on-line, on-site, on-ground and on-demand formats tailored to suit each learning course which emphasizes lifelong learning, implementation and development. For example, self-learning through e-Learning, live learning through virtual training, group coaching and on-the-job training. Particularly given the current situation, CPF has provided an opportunity for employees to adjust work styles to suit their functions, and supports self-learning anywhere, anytime through the learning platform called “Im-Ru” that provides employees with internal and external access to knowledge and skill developments, and on-demand learning with more than 900 courses. As of 2021, CPF have encouraged employees to attend training courses and develop their potential, averaging 14 hours per person per year (Thailand Operations).



Digital Platform “Im-Ru” Where Employees Can Take Classes to Enhance Their Knowledge and Develop Skills Anywhere, Anytime on Computers, Tablets, and Mobile Phones



Examples of CPF People Manager; One among the Important Future Skills, and Leadership Development Program

Development of Learning Society

CPF has continuously provided educational support to students, employees and children of employees with aim to help them meet future work requirements.

- **Scholarship Program for Employees and Their Children:** providing opportunities on accelerating human resources development and building personnel with future skills to expand business in important fields that are beneficial to the country and that still face labour shortages. In 2021, 80 scholarships were awarded to undergraduate and graduate students studying domestically and abroad.

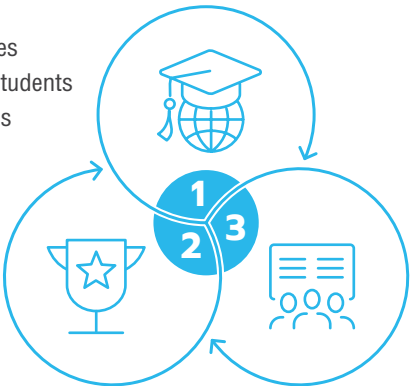
- **New Personnel Development Project** in collaboration with a network of higher education institutions from both the public and private sectors domestically and internationally to jointly develop students' potential and ensure that their knowledge, abilities and experiences meet requirements of the labour market, as well as generating understanding and improving essential business and future skills, along with creating graduates who can be important forces to drive the country in the future through joint developments of a wide range of training programs, research studies and activities that lead to actions, which in turn strengthens human resources, the future, and networks as follows:

Building People

through the program development that create experimental learning opportunities with hands-on practice, in order to develop students and their knowledge, abilities and experiences that meet labour market needs.

Building the Future

through the research and development that opens the door for students and faculty members to further expand their knowledge through joint research and application of research results in the business world, as well as providing students with opportunities to build their future by working with CPF.



Building Networks

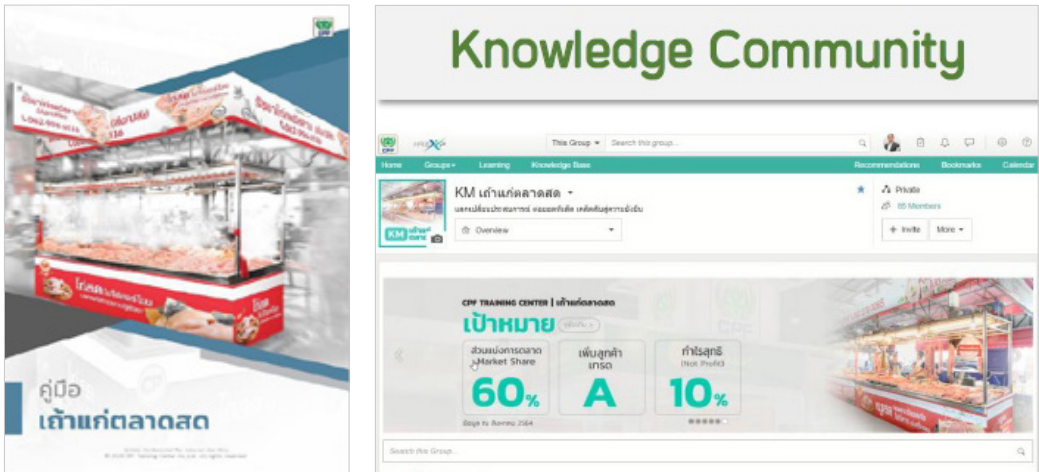
through various activities and projects that strengthen good relations between higher education institutions and CPF which lead to wider collaboration.



- ✓ **Building People** through the program development in order to create experimental learning opportunities with hands-on practice, such as the Young Agribusiness Entrepreneur pilot program in collaboration with Prince of Songkla University in 2021 and the Master's degree in Food Science pilot program with Mae Fah Luang University in 2022.
- ✓ **Building the Future** through the research and development that opens the door for students and faculty members to further expand their knowledge through joint research and application of research results in the business world such as a research study on the black soldier fly with Chiang Mai University, a research prototype using radiation to screen fertilized eggs with Suranaree University of Technology, and a research study on genetic improvement of cannabis with Kasetsart University.
- ✓ **Building Networks** through various activities and projects that lead to wider collaboration, such as the Virtual Hackathon competition with the 42 Bangkok, a coding school under the supervision of King Mongkut's Institute of Technology Ladkrabang, which was an initiative activity that led to collaboration which aims to tackle programmer shortages in Thailand; and CPF Young Software Developer, a pilot project in collaboration with Kasetsart University and King Mongkut's University of Technology North Bangkok, to create young software developers by allowing students to develop software based on CPF's real business issues, resulting in learning and solutions that can be applied in practice.

In addition, CPF has also continuously provided internships, cooperative education and bilateral projects. In 2021, CPF recruited 231 students from 33 institutions. 38 percent of students from these projects have been offered employment at CPF.

- **Promoting Knowledge for Students and Teachers in Educational Institutions:** driving development and improving quality of Thai education for sustainable development through the CONNEXT ED project established in 2016 and other school development programs. 65 experts of the businesses operated by CPF have served as the Company's volunteer school partners delivering knowledge on animal farming and production of good quality, hygienic and safe foods for consumers. The partners also help develop students and teachers in 296 schools under CPF's care. The training is hands-on and is conducted in schools. Therefore, students can access essential nutrients and generate income as well.
- **Promoting Knowledge to Enhance Work and Create Careers for People:** transferring knowledge to create careers for those who are interested in doing business with CPF, and building communities that can share knowledge by utilizing knowledge management of the CPF Training Center, including sharing knowledge with farmers in the contract farming on animal farming, animal tending and preventing animal diseases according to animal welfare principles, as well as promoting knowledge, understanding and important laws and regulations to develop business partners' abilities, all of which enhance operations from the beginning of the supply chain (Additional details are available in "Balance of Nature" under the ambition: "Responsible Sourcing for the Planet").

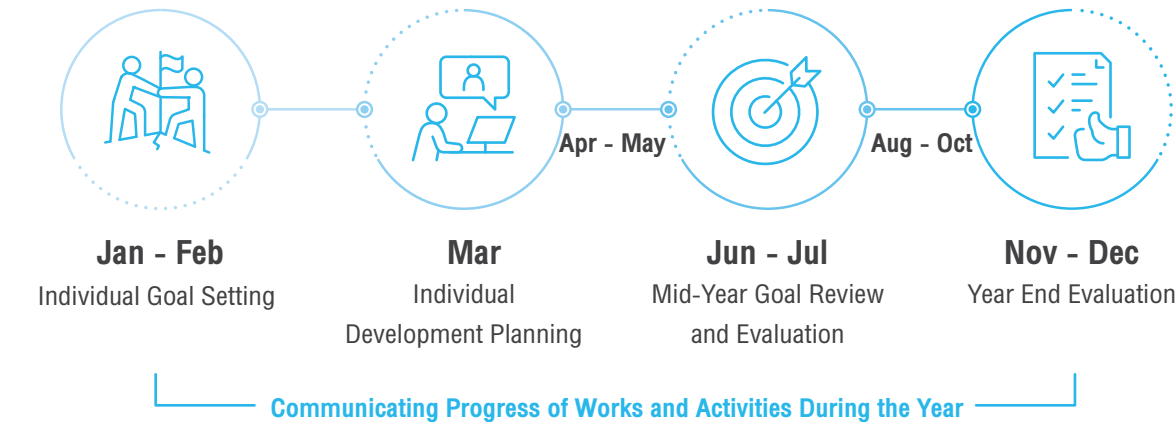


Examples of Knowledge Management for Career Creation for Outsiders

'Talents' Management

CPF has placed importance on performance management to attract and retain talents to work and grow with CPF, which is a mechanism that enhances sustainable competitiveness with a goal of becoming a "High Performance Organization". CPF has determined guidelines for annual employee performance review and development planning for systematic growth, which comprise clear goal indicators that are in line with the corporate strategic goals. CPF also promotes the achievement of employee performance goals through continuous and consistent self-improvement. In 2021, all CPF employees received their annual performances and career development review.

Annual Performance Management



Career Growth Opportunity

CPF focuses on supporting employee growth paths that match employees' abilities and individual developments in order to create good work experience, self-development for a happy life and organizational engagement, resulting in performing works and developing the organization towards sustainable growth. Under the "Chance for Change Program", employees are given opportunities to manage their career path by themselves through applying for vacancies within the organization. As employees have understood CPF's business and have been familiar with the corporate culture and values, this program therefore provides employees with opportunities to learn and develop skills and abilities for the right job positions, which lead to new skills and experiences from works in which employees are interested. This also encourages talents

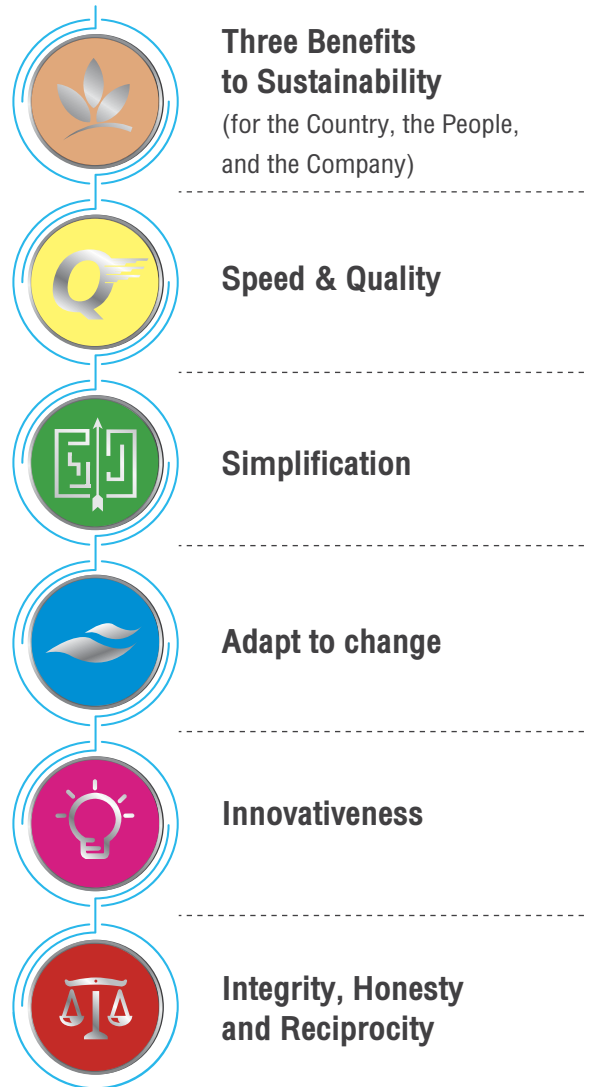
The annual performance review is used as a basis for the reward program for employees, which incentivizes employees to perform duties as the program rewards employees whose performances are good. This has led to consistent improvement in performance. In addition, CPF places emphasis on continuous development of employee performance through coaching and feedback, and provides opportunities on professional growth and cross-professional growth to employees who possess appropriate abilities and skills.

to be working and growing together with the organization in the long term. In 2021, the proportion of employees being admitted to open positions filled by internal candidates was approximately 65 percent of the positions opened for applications in 2021.

In addition, CPF promotes the "Refer-a-Friend" Project, which has been initiated for employees to recommend friends to work with CPF. This enables new referred employees to adapt to the corporate culture well, resulting in employee engagement and increased job satisfaction. This project implementation corresponds to a lower turnover rate and becomes the most efficient channel with a success rate of about 3:1, meaning that if there are 3 applicants being interviewed, 1 out of the 3 can be successfully recruited to join CPF.



## Organizational Culture and Engagement



CPF is committed to operating in accordance with the **6 values of the “CPF WAY”** which comprises (1) Three Benefits to Sustainability (for the Country, the People and the Company), (2) Speed and Quality, (3) Simplification, (4) Adapt to Change, (5) Innovativeness, and (6) Integrity, Honesty and Reciprocity.

The Company has adhered to principles of corporate culture according to **3P Corporate Culture Framework** as follows:

1. ‘Process’ includes a systematic process and an effective communication process that can transfer knowledge, experience and corporate vision to employees at all levels;
2. ‘People’ includes CP Ambassadors and CPF working groups who drive a wide variety of activities as well as providing opinions on activities related to the formation of corporate culture; and
3. ‘Platform’ represents two-way communication and learning systems that properly support communication, effectively create knowledge and proactively welcome employee feedback.

In 2021, CPF raised a level of cultivating its core value to be recognized and acknowledged, and put it into practice in operations. The Company implemented the **CP LOVE Platform** to improve communication efficiency, boost compliments, welcome employees' opinions and encourage good deeds according to the CPF Way.

- **Loyalty:** promoting atmospheres of appreciation among employees, supporting products and services, conducting oneself according to the corporate values, fostering love and pride, and making employees feel special and important, which result in corporate and product engagements.
- **Omnichannel:** communicating through all channels within the organization and to the public about great corporate stories in order to keep the public well-informed and protect the organization.

- **Volunteer:** creating engagement with employees at all levels through various projects regarding good deeds and earth and environment protection, aiming to promote career opportunities as well as generating jobs and incomes to raise community well-being according to the Three-Benefit Principle.
- **Education and Empowerment:** setting up a group of more than 300 CP ambassadors who were considered the organization's change agents in order that they could obtain accurate information through training/learning courses, and display desirable behaviour and adopt digital transformation to accommodate changes.

In the past year, the Company had initiated “**Showing Appreciation for Good Work Right Away without Delay**” **Project** as one of the projects promoting employee constant recognition or on-spot reward. Employees and superiors were able to show their appreciations

through CPF Connect when their colleagues performed according to CPF Way. The employees then would be rewarded with CP Value Points which could be accumulated and redeemed for products and services that meet their requirements.



Examples of Communication Promoting Expression of Admiration and Cultivation of Core Value ‘CPF Way’ to build senses of love and pride in CP, employees can use CP Value Points obtained when being appreciated by colleagues to exchange products and services that are exclusive for employees at stores that meet employees’ lifestyles

In addition, appreciation activities could be implemented in a wide variety of ways, such as showing appreciation for good deeds through sustainability promotion projects, namely the “**Empty Plate, Save the Planet**” **Project** with the goals of reducing food waste and greenhouse gas emissions, and the “**Forest in the City**” **Project** aimed to increase green areas, which in turns helps enhance the well-being of community members who help planting seedlings and take care

of the project. Employees eligible to participate in both projects based on their interests can earn **CP Value Points** by sharing photographs as required by the projects through social media channels to create acknowledgement and pride, and encourage employees to participate in more activities, which is part of overall corporate engagement (Additional details are available in “Balance of Nature” under the ambition: “Climate, Water and Waste Excellence” and “Waste to Value”).



CPF has a procedure and communication channels used to transfer organizational knowledge, information, policies, experiences and vision as well as benefits and various kinds of information to employees at all levels. The Company, together with the CP Ambassadors as communication representatives from business units, emphasizes colleague participation in order to drive corporate change and ensure that all employees obtain accurate information and are treated equally and thoroughly.

In the past year, CPF developed the **HR-eXp** system and **CPF Family** which are effective communication platforms supporting two-way communication at work,

generating knowledge and welcoming employees' opinions so that employees can easily adapt themselves since the first working day at CPF. The platforms promote better work experience in line with the work from home policy during the current situation pandemic and hybrid work in the future.

Employees can access the system via mobile phones and it still supports on the activities, so that employees can build good relationships among each other on the online platform, along with creating a culture of appreciation to foster bonds among supervisors and colleagues.



Examples of Internal Communication or CPF Family, and Communication Images and Media Showing How-to of Using HR-eXp System

## Enhancing Employee Engagement

Since 2018, CPF has continuously conducted employee engagement surveys and analysed the survey results to determine areas that had been handled well and those that need improvement at the corporate and department levels. The Company has set action plans to enhance employee engagement by promoting participations of business units' representatives to learn and study the survey results, as well as taking part in the preparation of action plans as they are the Change Agents playing important roles in creating change, communicating within the responsible departments, driving activities and following up on

various issues, all of which have been implemented to achieve success determined in the action plans which are based on factors affecting the corporate engagement. The Company aims to increase its employee engagement from 71 percent to 74 percent in 2022 after implementing the action plans.

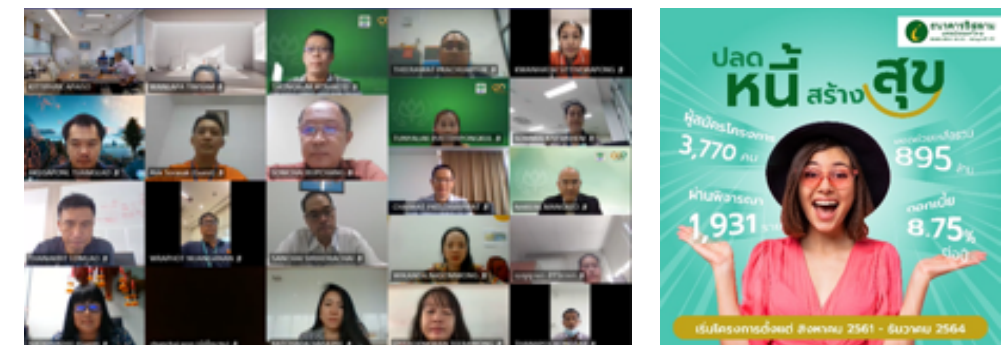
To achieve 2022 goals, the Company has organised activities to build employee engagement under the **CPF@Heart Project** which includes two subprojects; **CPF We Care** and **CPF Love&Share**, with details as follows:

**CPF We Care** focuses on four main areas: Care for Benefits, Care for Career, Care for Culture, and Care for Well-Being.

### 1. Care for Benefits: focusing on activities concerning employee welfare and compensation

#### Example

- Debt relief programs to help ensure happiness and reduce employees' debt.
- Information on the scholarship programs for employees and employees' children.



Example: The Launch of The Debt Relief Project to Ensure Happiness, Reduce Employees' Debt, Improve Employees' Quality of Life, and Promote Knowledge on Financial Planning and Financial Discipline

### 2. Care for Career: focusing on employees' career advancement

#### Example

- Creating understanding on plan and goal setting, and personal development.
- Creating understanding on career planning.
- Employee development projects in various fields to promote necessary knowledge and skills.
- Promoting the use of "Im-Ru" platform for self-improvement and exchange of knowledge in various fields.



### 3. Care for Culture: promoting culture

#### Example

- Showing appreciations to colleagues as soon as they do good deeds (On-Spot Reward).
- Focusing on work atmosphere that promotes giving suggestions, not directions in order to provide opportunities to the new generation so that they can try to do new things instead of following old practices.

### 4. Care for Well-Being: focusing on employee well-being

#### Example

- Projects promoting employee well-being both at work and at home, such as massages, “Hang on and Smile” to reduce symptoms of office syndrome.
- Guideline and supports for employees during the situation of COVID-19, such as giving king of bitters extract capsules and antigen test kits (ATK) to executives and employees.
- Self-protection measures during the COVID-19 outbreak, such as COVID-19 vaccines supplied by the Company or the Social Security, and free masks through the Masks for All Project.
- Flu vaccines for employees during the epidemic season.



CPF Love&Share focuses on providing benefits and discounts to employees and their families, activities showing and forwarding love through social media, and establishing CPF ambassadors.

#### Example

- Collaborating with True to offer True special privileges and True products for employees and their families, such as TrueMove H network's special packages, True Internet and telephones with special prices.
- Providing simple knowledge in a timely manner to keep pace with the Company's business operations, such as antibiotic-free fresh meat products, CP fresh eggs, CP Pacific Shrimp fresh, sweet, firm, delicious by just blanching.



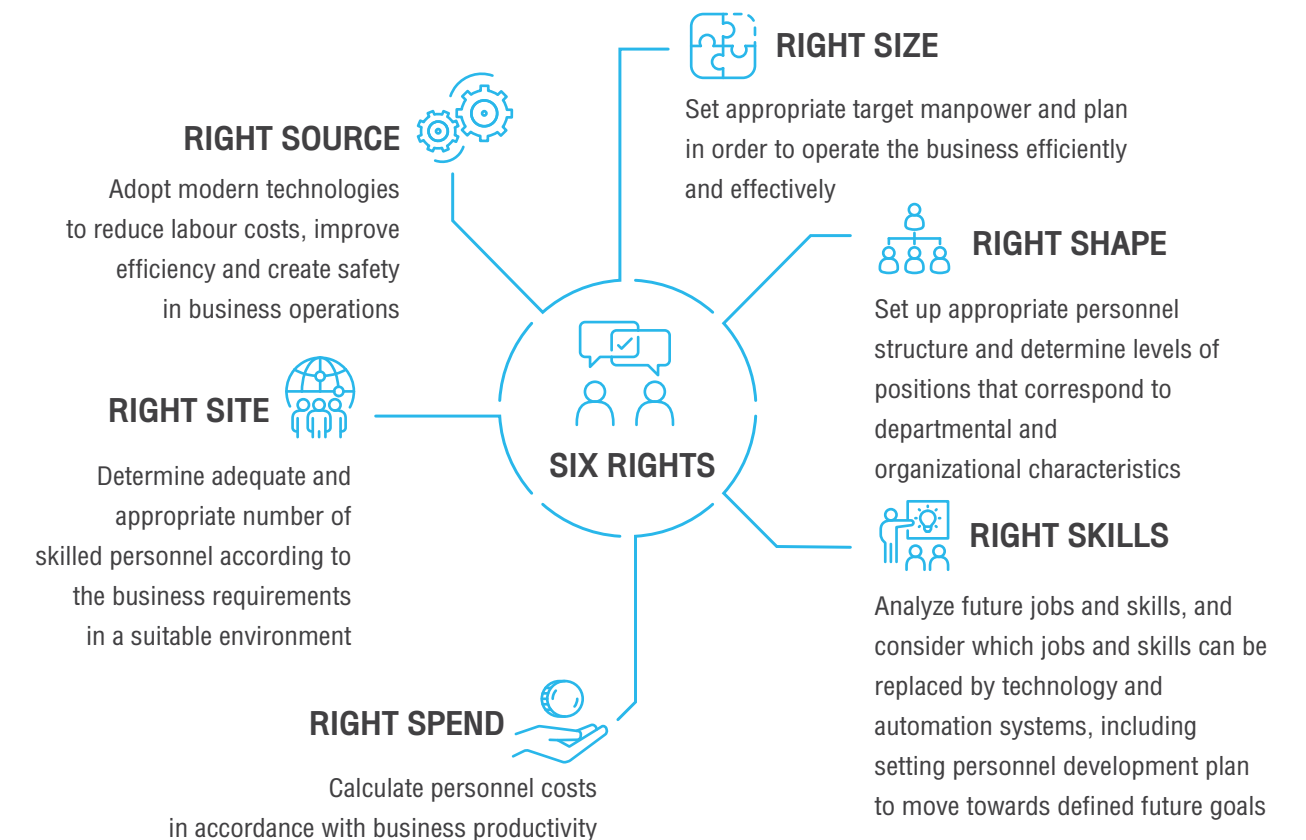
### Establishment of Employee Clubs

Additionally, in the past year, CPF also established employee clubs and carried out activities for employees having mutual interest in contributing to society and the public through 15 employee clubs relating to recreation, career promotion, sports and health, and social activities. Employees can choose to join the clubs according to their interests, which creates good relationships between the management and employees, as well as providing employees with opportunities to exchange perspectives and accept difference in opinions, leading to positive working environment and happy life that in turn positively affect employee engagement as well.



### Workforce Management

Toward becoming a technology and innovation-driven organization, CPF has introduced a technological tool for strategic workforce planning to analyze and create workforce management plans that can meet its vision, mission and strategic goals. In addition, the **6 Rights Principles by Korn Ferry**, a global organizational consulting firm, have been systematically applied in the strategic workforce planning as well.





The Company has planned to manage strategic manpower to achieve a balance between:

- **Demand Planning** in terms of quantity and quality that are appropriate for each unit in the organization according to the business plans, including targeting productivity that can be measured, such as income per employee and employee cost per income.
- **Supply Planning** by analyzing current manpower data such as turnover rate and retirement.

All principles and data are combined with the use of technology system in order to set formats for manpower planning throughout the Company's processes and simulate scenarios according to business assumptions. CPF has continuously assessed the strategic manpower planning and applied the analysis results to relevant departments such as Recruitment Department and Human Development Department.

In addition, CPF has promoted the concept of Modular Organization to enable employees from various units or work groups to implement projects mutually, by applying agile principles to promote agile working and readiness to adapt to change in a timely manner.

It also aims to foster open teamwork allowing the team members to learn and accept each other, and to be decentralized and flexible. In 2021, CPF promoted working in the format of Modular Organization through projects related to innovations and productivity improvement, Tao Kae Project, and other Cross-Functional Projects.

The Modular Organization concept has introduced employees to new skills allowing them to quickly respond and cope with changing conditions due to internal and external factors. The employees can work efficiently and also continue to create innovations and drive the organization towards sustainable success.

In the past year, over 12,000 employees had opportunities to learn to work according to the Modular Organization format through more than 6,000 projects. The Company is determined to expand the Modular Organization working format continuously as one of the key indicators, which demonstrates its determination on driving this issue.



## Social Impact

### 2030 Target



Improve  
**3,000,000** livelihoods  
in communities connected to our business activities



“CPF places emphasis on holistic social development, promotes well-being, and enhances knowledge and skills needed by communities, as well as supporting suppliers towards better achievements and preparedness for current and future challenges.”

**Mr. Wuthichai Sithipreedanant**

Senior Vice President in Corporate Sustainable Development  
Head of Ambition – Social Impact



Social Impact  
Ambition

Poverty and social inequality have remained challenging issues that affect quality of life and well-being of people worldwide. Moreover, due to the ongoing situation of COVID-19 outbreak over the past 2 years, smallholder farmers who produce agricultural raw materials are one group of people who are facing a difficult situation including problems caused by climate change, low production prices and increased production costs<sup>1</sup>. In addition, small business entrepreneurs, accounted for 90 percent of global business operations with employment rate contributing to more than 50 percent of global employment<sup>2</sup>, is another group that faces these challenges. Meanwhile, the world is entering an aging society and the number of vulnerable social groups due to various crises is increasing<sup>3</sup>. As CPF's business operations are linked to many smallholder farmers and small business entrepreneurs, CPF recognizes its role of its participation in managing social and environmental issues, by placing importance on developments of farmers and small business entrepreneurs as well as vulnerable groups in order to enhance well-being, increase necessary knowledge and skills, and support business partners and communities to be prepared for current and future challenges. CPF believes that a genuine commitment to improving the quality of life is a starting point that leads to change, resulting in sustainable outcomes.

<sup>1</sup> Unsung Heroes: How Small Farmers Cope with COVID-19, International Trade Center, April 2020.

<sup>2</sup> Small and Medium Enterprises (SMEs) Finance, The World Bank, January 2022.

<sup>3</sup> World Population Ageing 2020 Highlights, United Nations Department of Economic and Social Affairs, Population Division.



Management Approach

- **Declarations of Policy and Commitment:** conducting business with social and environmental responsibility, aiming for sustainable growth.
- **Ensuring Engagements:** engaging with partners, farmers and community members, by listening to their problems and requirements as well as participating in developing operational guidelines that positively affect people’s lives.
- **Providing Support and Promotion:** deploying organizational potential which includes resources, personnel, and knowledge to support partners, farmers and community members in order to create positive impacts and mitigate negative impacts in societies.
- **Building Cooperation and Alliance Networks:** collaborating with alliance networks throughout the Company’s value chain, including related stakeholders, to jointly develop operational guidelines that promote the improvement of community quality of life.

Implementation

Community Support

Supporting Income Generation

- **Supporting smallholder farmers**  
CPF places importance on smallholder farmers who are the cornerstones of the country’s economy. Therefore, CPF supports project initiatives to promote smallholder farmers’ animal farming under contract farming to improve farmers’ quality of life. It started with the broiler farming promotion project in 1975 which has been further expanded to pig farming, layer farming, meat duck farming and aquaculture farming, to create the country’s sustainability which is in line with the ‘Three-Benefit Principle’, namely benefits to the country (every country in which CPF has invested), the people, and the Company. In 2021, CPF contributed to income generations of more than 9,400 smallholder farmers from the operations in Thailand, Vietnam, Turkey, Cambodia, Laos, India, Philippines and Malaysia.
- **Supporting communities around the establishments**  
CPF places importance on participation among factories, farms and communities, and therefore engages with stakeholders by using community tools such as geo-social mapping, building dialogues to explore community requirements and set promotion plans, creating community engagement, and improving quality of life, all of which enable harmonious coexistence between communities and the Company’s establishments. In 2021, Thailand operations adopted 263 community requirements to develop into various projects including the CPF Growing Happiness, Growing Futures Project to promote good nutrition in children and youth studying in schools around factories and farms, Creating and Maintaining Community’s Way of Happiness Project, Community Drinking Water Project, and Eggshell Fertilizer for Community Project, all of which are part of CPF’s effort to promote community quality of life. Moreover, CPF has supported more than 7,000 communities in the operations in Thailand, Vietnam, Turkey, Cambodia, Laos, India, Philippines and Malaysia, such as the Chicken Herd with Red Scarfs Project in Vietnam, and Growing Clean and Non-toxic Vegetables Project in Laos.
- **Supporting small business entrepreneurs**  
CPF is committed to continuously improving people’s quality of life by providing small business entrepreneurs with opportunities to start their own businesses with small investing budgets through Tao Kae Lek Project including Five Star Business, Pork Shop, Star Coffee, Chao Sua Duck, Iron Pan, CP Fresh Shop and Fresh Market Refrigerator. In 2021, the number of small business entrepreneurs from the operations in Thailand, Vietnam, Turkey, Cambodia, Laos, India, Philippines and Malaysia were more than 5,300.



Support Income Generations of Smallholder Farmers



Support Income Generations of Small Business Entrepreneur



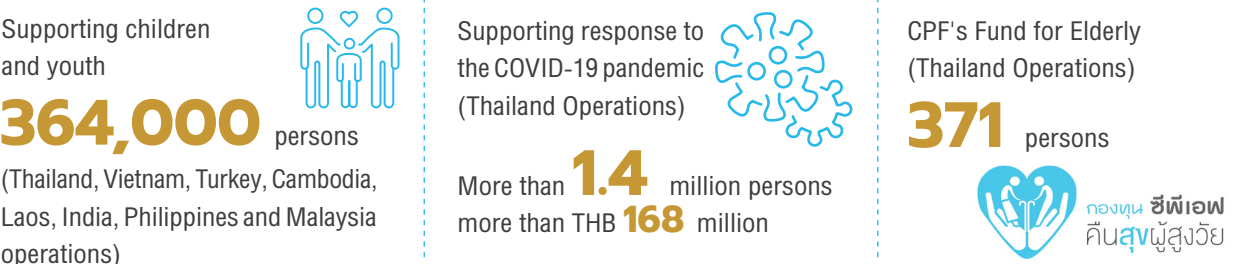
Support Income Generations of Communities around the Establishments

Supporting Vulnerable Social Groups

CPF recognizes the importance of food hygiene, particularly for those who are considered vulnerable social groups, including children, youth, elderly and socially disadvantaged individuals. During the COVID-19 outbreak, many families lost their incomes as many were laid-off and became unemployed. CPF, therefore, has imparted abilities and expertise of its employees to children and youth studying in schools around the establishments, so that they could learn the practice of layer chicken and fish farming, and growing home-grown vegetables in order to use farm produce for

lunch at schools. CPF has also been promoting produce processing and selling within communities as a way to increase income. This project also promotes access to nutritious food and helps reduce malnutrition among school-age children who are the country’s future.

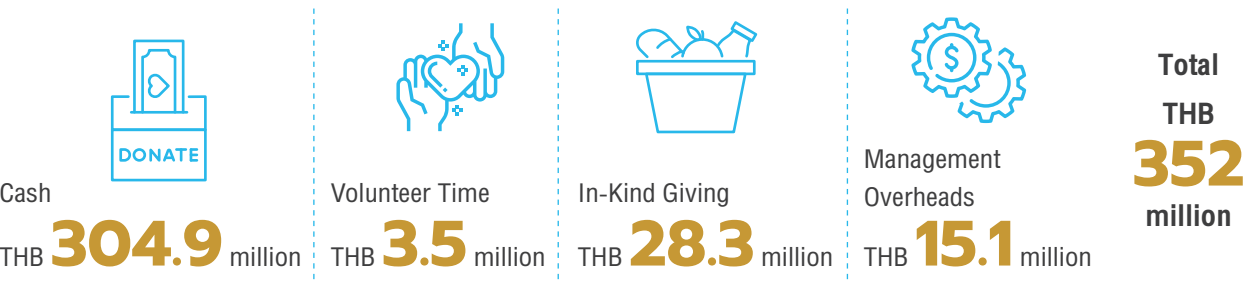
In addition, CPF has also joined in adding support continuously with nutritious foods for elders and victims of COVID-19 pandemic, through **CPF’s Fund for Elderly Project, CPF’s Food from the Heart against COVID-19 Project** and **Krua Pan Im Project**, and many more.



Supporting Community and Social Activities

CPF is committed to supporting activities that benefit communities and societies, by using the organizational potential to create positive impacts on societies through various activities and projects. In 2021, CPF Thailand operations had supported societies in the form of

charitable donation (7 percent), investing in community support (62 percent), and giving supports through commercial activities (31 percent). The forms of social support are different according to activities as follows:



Measuring Social Performance

CPF’s CSR-in-Process

Farmers in the contract farming program are deemed CPF’s key stakeholders according to the concept of **Farmers are Life Partners**. Therefore, CPF’s ultimate goal is to create career stabilities and generate incomes and well-being for farmers, which also helps to promote the country’s economic stability and the world’s food security. CPF has continuously developed a farm model in the project promoting fattening pig contract farming. At present, it has received the status of a green farm, which requires public hearing to obtain testimonies

from communities and must be located in an area with sufficient natural water resources to avoid negative impact on the surrounding communities. A biogas system has been installed to treat pig manure and water used for raising pigs in order to reduce odors and methane released into the atmosphere. With the goal of zero discharge of water, treated water will then be used to fertilize trees. As a result, communities and farms can coexist harmoniously.

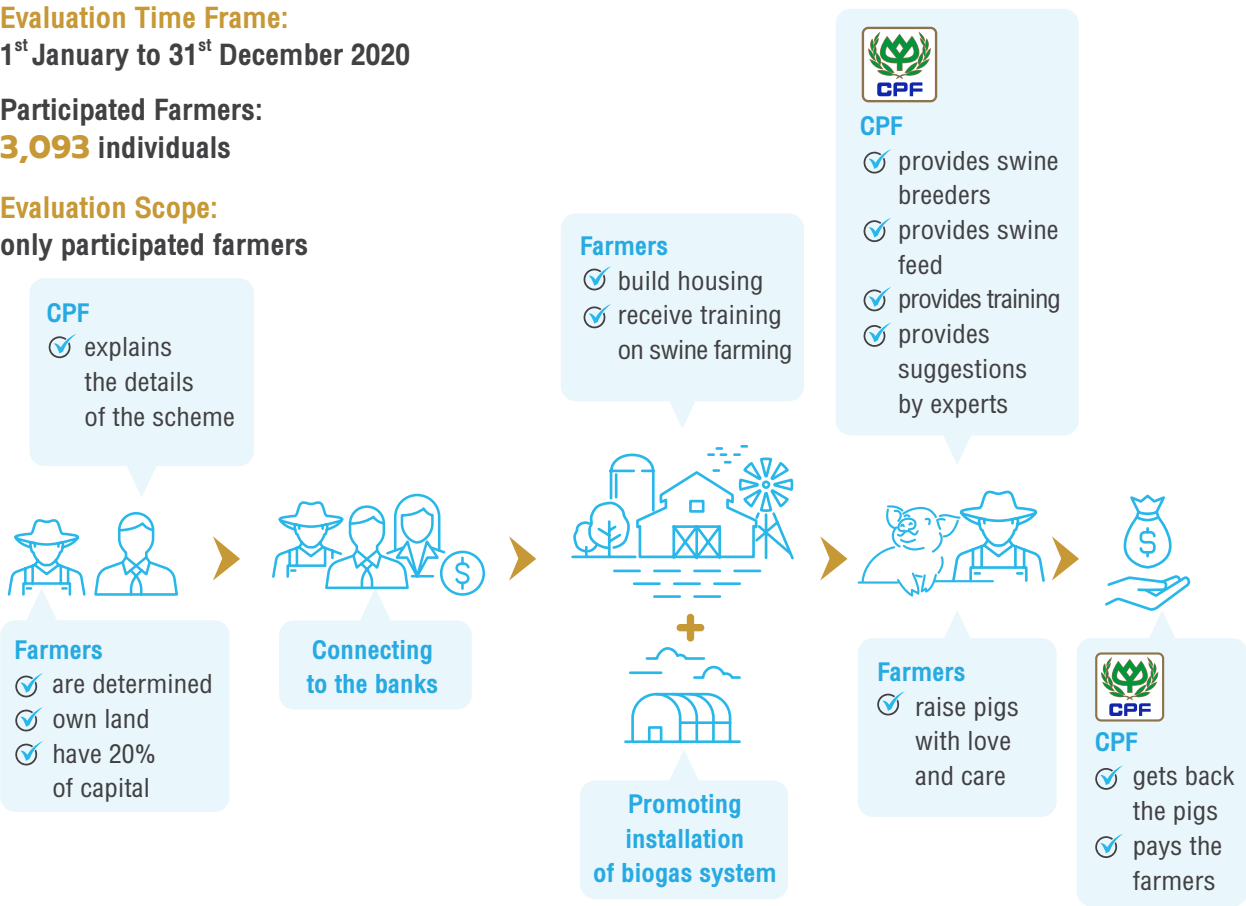


The Process for Participating in the Income-Guaranteed Contract Farming of the Fattening Pigs Scheme

Evaluation Time Frame:  
1<sup>st</sup> January to 31<sup>st</sup> December 2020

Participated Farmers:  
3,093 individuals

Evaluation Scope:  
only participated farmers



In 2021, CPF conducted Social Return on Investment (SROI) on the Income-Guaranteed Contract Farming of the Fattening Pigs in order to manage social achievements derived from the project implementations in terms of costs, benefits and risks, as well as compare them to investment opportunities in various fields to ensure efficient and effective resource and budget allocations. The calculations have been verified by LRQA (Thailand) Limited. According to assessment results, farmers in the project received the 4.28 times social return on investment (SROI) with a total social achievement value of THB 4,574 million.



Economic Achievement: THB 4,144 million (91%)

The top 3 returns are as follows:

1. Farmers have reduced risk of damage from raising pigs by THB 1,365 million compared to running their own business as entrepreneurs.
2. After deducting various investments, farmers have received the total of THB 1,097 million in returns from raising pigs with CPF.
3. Farmers have credit to apply for loans from banks or funding sources. As a result, the financial cost has been reduced by THB 667 million.



SROI  
4.28  
Times  
(THB  
4,574  
Million)

Social Achievement: THB 376 million (8%)

The top 3 returns are as follows:

1. Farmers have improved their quality of life in terms of children's access to education, valued at THB 156 million.
2. Farmers have had more time with their families, valued at THB 118 million
3. Farmers have improved relationships with communities, valued at THB 61 million.



Environmental Achievement: THB 54 million (1%)

The top 3 returns are as follows:

1. Farmers have reduced chemical contamination in their farmland soils, valued at THB 40 million.
2. Farmers have reduced greenhouse gas (GHG) emissions with the implementation of the biogas systems, valued at THB 14 million.
3. Farmers have created odor which affect nearby areas, valued at THB 310,000.



Additionally, CPF's Income-Guaranteed Contract Farming of the Fattening Pigs Scheme also helps strengthen the country's economy in other areas as follows:

Strengthening suppliers in the pig farming system

- Transportation companies (596 companies) generated the revenues of THB 536 million.
- Pharmaceutical companies (51 companies) generated the revenues of THB 690 million.
- Construction companies (186 companies) generated the revenues of THB 883 million from building housing and closed-system farms for farmers.
- Banks (1,698 branches) received, as income, interests on loans of THB 259 million from farmers participating in the project.
- Local government agencies received income of THB 17 million from swine business taxes collected from farmers.

Strengthening farmers with access to bank funding

- Instead of borrowing from non-bank financial institutions, 55 percent more farmers are able to increasingly access bank loans accounting for THB 3,703 million in loan value.
- The reduction of interest by THB 667 million significantly affects financial costs.
- Due to the project implementation, 93 percent of farmers feel less stressed about debt repayment.



The social impacts derived from the project implementation are also consistent with 9 out of 17 goals in the United Nations' Sustainable Development Goals (UN SDGs) as follows:



CPF's CSR-after-Process

CPF is dedicated to forest conservation and rehabilitation, along with promoting job creation for the surrounding communities, under the key projects including **CPF Grow-Share-Protect** Mangrove Forestation Project which was first implemented in 2014 and further developed into community-based ecotourism in Samut Sakhon and Rayong provinces, **CPF Rak Ni-Ves at Phraya Doen Thong Mountain Project** which has been implemented since 2016, **Community Career Promotion Project**; **Freshwater Fish Breeding and Nursery in Order to Release Fishes to Pa Sak Jolasid Dam**, and **Growing Chemical-free Vegetables Project** at Lopburi Province. Two projects have been developed as long-term strategic

implementations, resulting in continuous operations. Forest areas have been restored to serve as food sources for the communities, creating occupational groups with additional income. CPF therefore has assessed the economic, social and environmental impacts according to the Natural Capital Protocol Principles and the Social & Human Capital Protocol Principles of the World Business Council on Sustainable Development (WBCSD). The assessment information has been certified by LRQA (Thailand) Limited. It was found that all 5 projects resulted in **the real value of more than THB 8 million**.

Economic Impact



Community members having a better life due to increased income from tourism, wages derived from community employment, and distribution of natural products, as well as an increase of stable foods for communities, totalling economic value of more than THB 24 million\*

Social Impact



Community members' improved qualities of life in terms of social quality, participation in forest conservation and rehabilitation, and gathering of members for activities and knowledge dissemination, totalling social value of more than THB 5 million\*

Environmental Impact



More fertile mangrove forests which prevent coastal erosion and serve as natural nurseries for aquatic animals; healthier terrestrial forests which help restoring the environment for communities, increasing fish populations in dam ecosystems. The two healthier forests help sequester carbon dioxide in the environment, totalling environmental value of more than THB 5 million\*

\* Before deducting operating costs of the projects.







Balance of Nature

Climate, Water & Waste Excellence

Responsible Sourcing for the Planet

Waste to Value

The use of solar-energy from rooftop solar and floating solar systems installed in Korat Ready-to-Eat Food Production Plant

Take action towards positive environmental impact throughout our value chain

Climate Change  
Mitigation and adaptation to future climate change, crucial for agricultural and food industries

Water Resource  
Effective risk management of water resources, enabling businesses to continuously operate and peacefully coexist with community and society

Circular Economy  
Integrating the principles of circular economy throughout the value chain, allowing for maximum use of valuable resources without environmental pollution

Biodiversity  
Zero deforestation and practicing responsible sourcing to protect biodiversity and ensure the world's future food security



Climate, Water & Waste Excellence



2025 Target

25%

of direct and indirect greenhouse gas (GHG) emissions per production unit to be reduced compared to the base year 2015 (Thailand Operations)

30%

of water withdrawal per production unit to be reduced compared to the base year 2015 (Thailand Operations)

2030 Target

200,000 tons

of carbon dioxide (CO<sub>2</sub>) sequestration from conservation and reforestation projects in strategic areas and green area in CPF operations (Thailand Operations)

Zero

waste to landfill and incineration

To set science-based target for GHG emissions reduction (Scopes 1, 2 and 3)

Support all tier-1 suppliers identified as high water impact to have water management plans in place



CPF is dedicated to fully and efficiently managing resources such as raw materials, water resources and energy in accordance with the principles of circular economy, including setting strategies allowing the organization to move forward to achieving a net-zero emissions target, which also helps save costs and creates sustainable environmental balance.

Mr. Peerapong Krinchai  
Executive Vice President in Corporate Engineering  
Head of Ambition – Climate, Water & Waste Excellence



Earth's surface temperature is likely to rise at least 1.5 °C by 2040, and without drastic measures for reducing CO<sub>2</sub> and GHG emissions, the world's surface temperature will increase by more than 1.5 °C within this century compared to 1850-1900<sup>1</sup> or before the industrial revolution. Effects of climate change are already evident worldwide, such as sea level rise, reduced farmland, floods, droughts and extreme weather, which frequently and severely occur and affect food security. Therefore, CPF, a leading listed integrated agro-industrial and food business, is committed to its responsibility to contribute to mitigating climate change, as well as adapting and taking proactive measures to accommodate short-term and long-term changes to ensure sustainability of the world's food production systems.

<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC), Climate Change 2021: The Physical Science Basis, Working Group I Contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change; October 2021.



Management Approach

- **Establishing Safety, Health, Environment and Energy Vision, Mission and Policy (CPF SHE&En Standard):** conducting assessment in accordance with SHE&En standards, and place emphasis on training and performance appraisals by applying SHE KPIs System throughout the year.
  - **Risk and Opportunity Awareness:** analyzing and assessing risks, opportunities and effects of the Company's business operations on climate change, water consumption and waste, as well as preparing a risk management plan.
- **Mitigating Impact by Applying Innovations and Technologies:** creating and developing innovations and technologies in order to become a net-zero emissions organization, and mitigating environmental impacts by introducing the circular economy concept as a guideline for resources optimization.
  - **Building Engagement:** working with various stakeholders to enhance resource management and environmental impact management at both the Company and industrial levels.

Implementation

Climate Change Management

It is crucial that CPF assess risks and opportunities relating to climate change in order to keep its business operations in line with the changing global situation caused by climate change. The Company has adopted the Recommendation of Taskforces on Climate-related Financial Disclosure (TCFD) as guidelines for assessing risks and opportunities relating to climate change, as well as for disclosing climate risk information to investors and stakeholders in order to enable them to analyze the Company's ability to cope with climate risks.



See details of  
CPF TCFD  
Report

CPF Guidelines for Becoming a Net-Zero Emissions Organization

CPF is aiming to set its GHG emission target in accordance with the Science-Based Targets Initiative (SBTi), which is in line with the Paris Agreement on limiting global temperature increasing to 1.5 °C by deploying technologies and innovations. CPF's guideline for becoming a net-zero emissions organization comprises two parts as follows:

Part 1 Decarbonization

- **Improving Production Efficiency:** choosing equipment and machinery that consume low energy and offer high production efficiency to reduce fuel consumption and waste generation in the production process.
  - **Deploying Innovations and Technologies to Improve the Production Process:** utilizing automated and robotic production systems controlled by Artificial Intelligence (AI) and Internet of Things (IoT), as well as decreasing procedures and process times of productions in order to reduce factories' energy consumption.
  - **Promoting Renewable Energy Usage:** eliminating use of coal and reducing use of fossil fuels such as fuel oil and other fuels, and increasing proportion of use of renewable energy, for instance biomass, biogas and solar.
- **Increasing Business Opportunities from Low-Carbon Products:** continuously developing products that respond to requirements of environmentally conscious customers and consumers, such as animal feed products, low-carbon meats, and plant-based proteins, etc.
  - **Building Factories and Farms of the Future:** designing factories and farms by taking into account low energy consumption and ability to recycle available resources in order to reduce waste externally released.

Part 2 Carbon Removal

- **Supporting Zero Deforestation:** declaring goals on zero deforestation by 2030 for all CPF's businesses and direct suppliers of agricultural raw materials such as maize, fishmeal, palm oil, soybean and cassava as the Company recognizes the effects of deforestation on biodiversity and soil carbon losses.
- **Reforestation and Afforestation:** restoring and conserving forests (terrestrial and mangrove forests) as well as increasing green areas by planting trees within the operations with the goal of sequestering accumulated 200,000 tons of CO<sub>2</sub>, covering an area of 20,000 rais (3,200 hectares) by 2030.

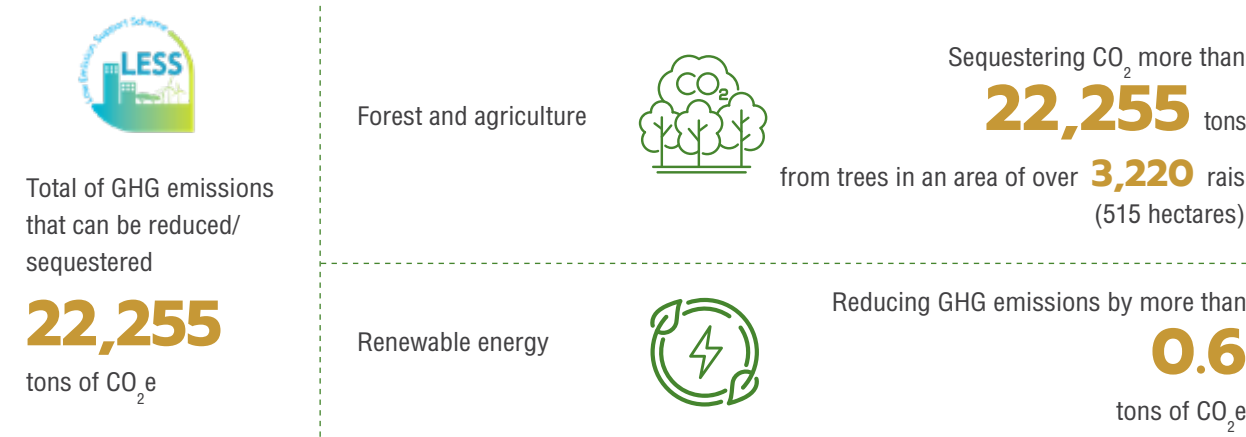
In addition, CPF also explores new technology opportunities to become a net-zero emissions organization, such as use of energy from wind turbines and sourcing of alternative energy sources, as well as carbon capture, utilization and storage (CCUS).

Supporting Mechanisms for GHG Emissions Reduction

Energy consumption and waste management are major contributors to climate change. Therefore, CPF has implemented projects to increase energy efficiency, managed manure and wastewater, and promoted renewable energy, for instance, biodiesel, biogas and solar to continuously reduce GHG emissions. CPF has registered for Thailand Voluntary Emission Reduction Program (T-VER) with Thailand Greenhouse Gas Management Organization (Public Organization) or TGO. Details of the implementations are as follows:



Moreover, CPF has been awarded a certificate from TGO for the Low Emission Support Scheme (LESS) Project in the category of forestry and agriculture, for the CPF Rak Ni-Ves at Phraya Doen Thong Mountain Project, green area in farms and factories and renewable energy from solar energy project. Details are as follows:



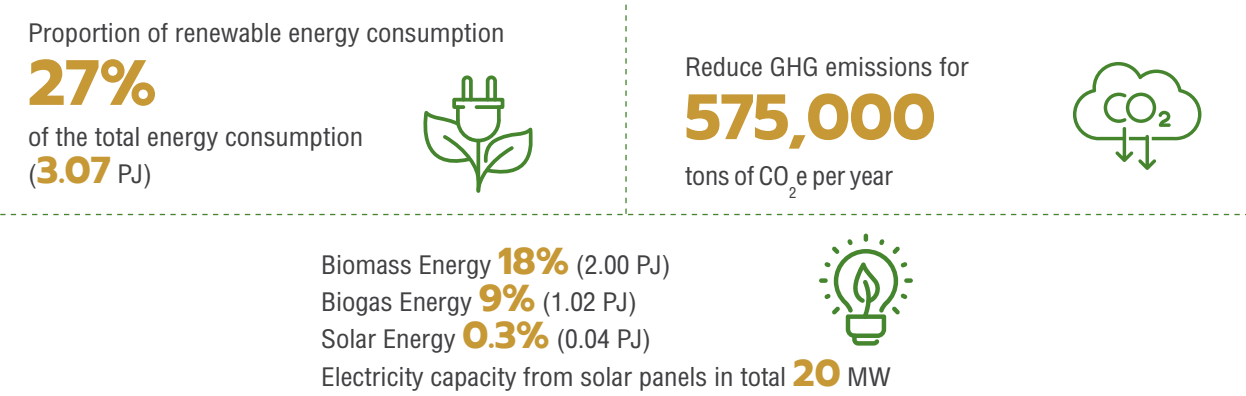


Cooperation in Climate Change Adaptation within the Supply Chain

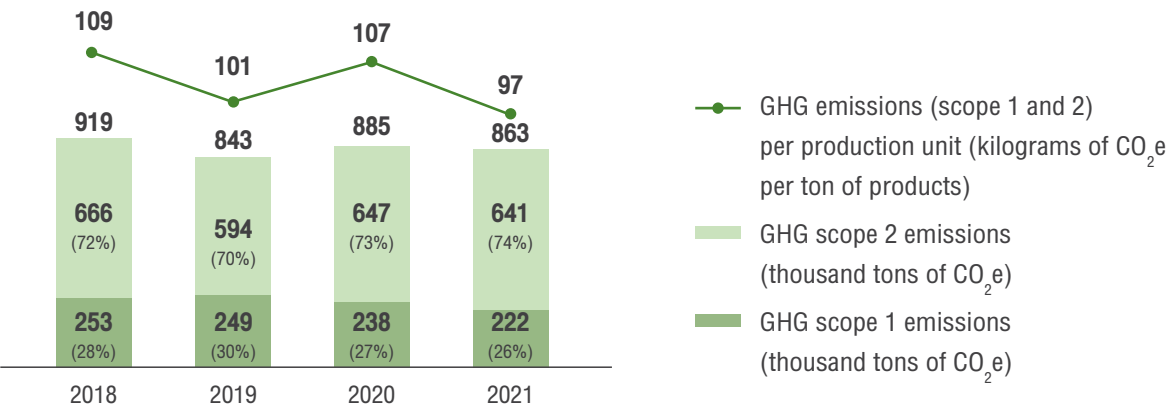
CPF has applied a maize traceability system to trace back to planting plots to ensure that maize, a key raw material in the Company's animal feed production, originates from non-deforestation area. CPF has also implemented "Self-Sufficient Farmers, Sustainable Corn Projects" to raise awareness and understanding among maize farmers and improve agriculture which, in turn, increases productivity while reducing the impact

on climate change, adjusts fertilization to suit the areas and growth of maize, promotes use of organic fertilizers instead of chemical fertilizer and growing of ground cover crops, and reduces tilling or stubble burning. In 2021, more than 11,150 farmers participated in the projects, covering the total area of over 250,000 rais (40,000 hectares).

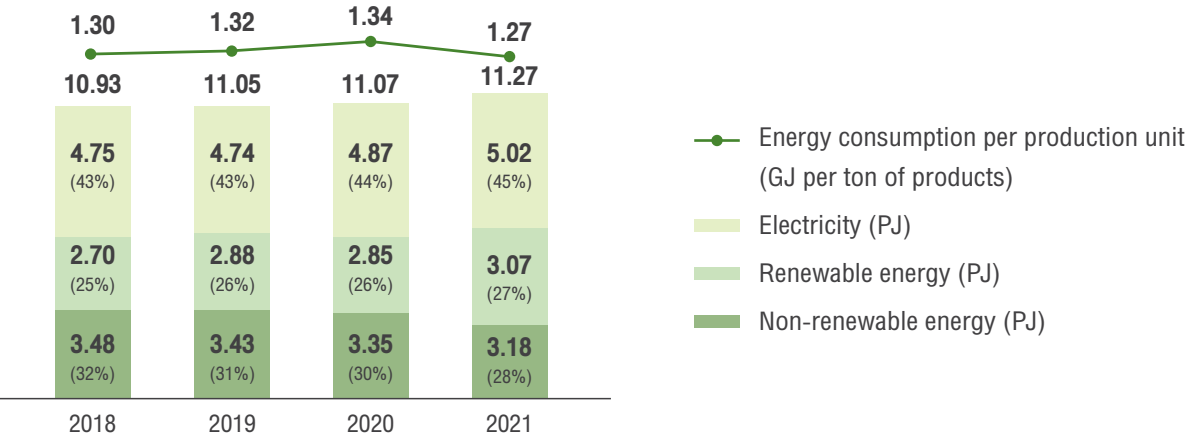
Key Performance in 2021 (Thailand Operations)



Direct and Indirect GHG Emissions (Scope 1 and 2)

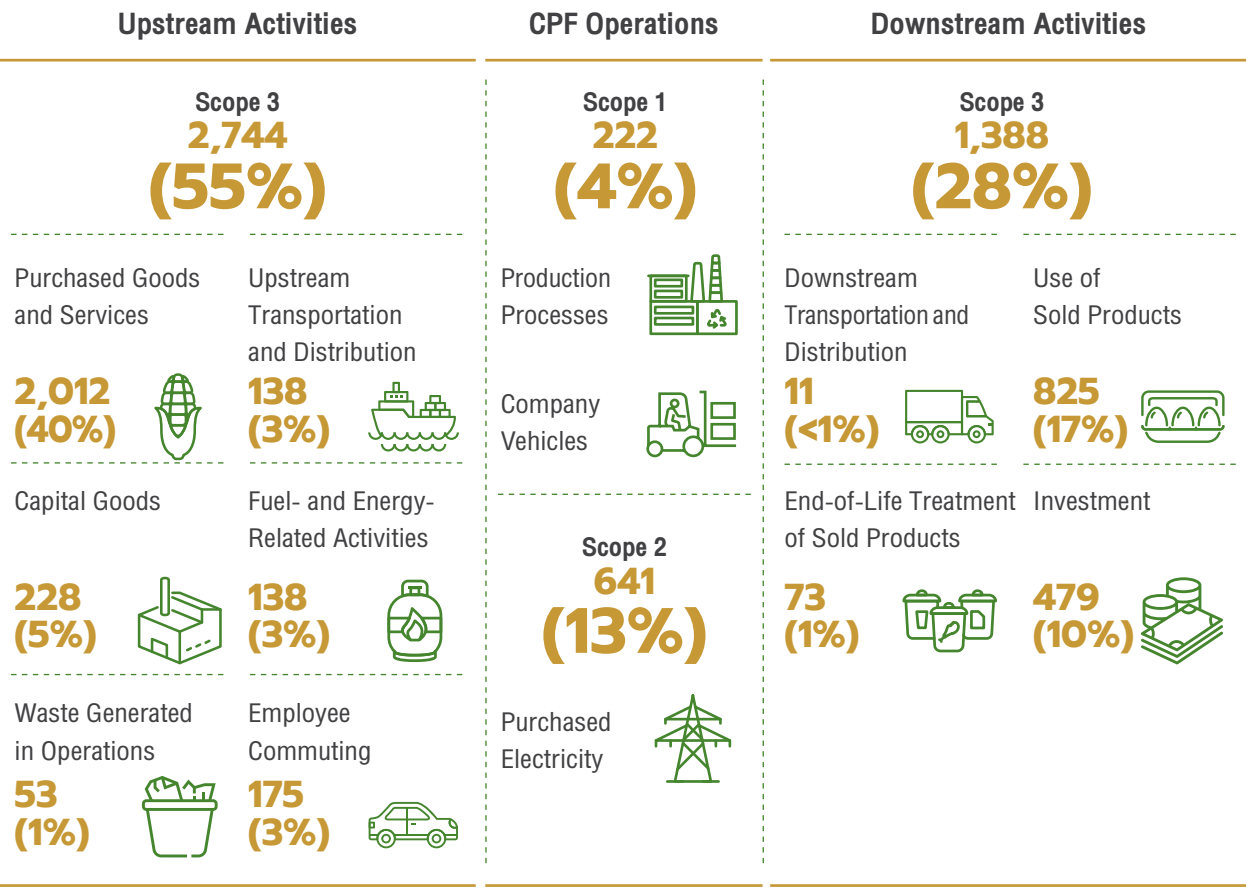


Energy Consumption

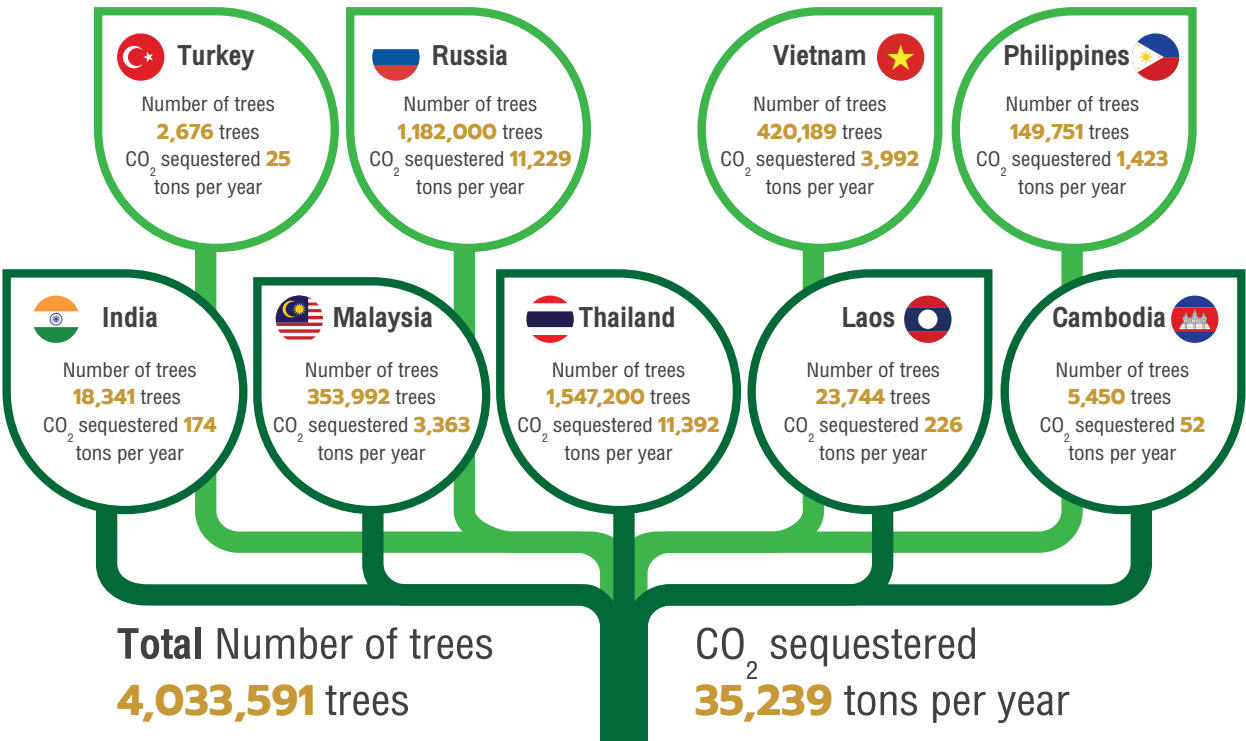


Direct and Indirect GHG Emissions; Scope 1, 2 and 3

Unit: Thousand tons of CO<sub>2</sub>e



CO<sub>2</sub> Sequestration by Forests (Terrestrial and Mangrove Forests) Conservation, Protection and Restoration and Tree Plantation in Green Area within the Operations\*



\* The amount of CO<sub>2</sub> sequestered is calculated from the number of trees multiplied by values of carbon sequestration of slow growing native trees and mangroves; the reference is from the Manual of Plant Potential for Promotion under the Clean Development Mechanism Project in the Forest Sector by TGO and Faculty of Forestry, Kasetsart University, 2011.






Water Stewardship

CPF recognizes increasing severity of drought and drought frequency. Moreover, operating complete an integrated agro-industrial and food business constantly requires water resources. The Company, therefore, places importance on selecting locations of its establishments on the basis of management of risks relating to essential utilities, coupled with water efficiency planning. The Company uses water in the production processes, such as water used in steam boilers of the animal feed business, water used for animal husbandry and as condenser water in animal housing of the animal farming and meat processing businesses, water used in cooling systems, and tools and equipment cleaning systems of the food business.

Water Risk Assessment

CPF assesses water risks on a yearly basis based on each unit's database of volume of water withdrawal, coupled with baseline water stress of watersheds in which CPF's units are located by using the Aqueduct Water Risk Atlas developed by the World Resources Institute (WRI), all of which help the Company prioritize the water management at the unit level as follows:

Water Risk Level	Baseline Water Stress	Management
<div>HIGH PRIORITY</div>	High and Extremely High	<div><div>1. Setting targets for short-term and long-term water withdrawals for each unit of production as well as continuing to follow up on results.</div><div>2. Preparing water reserves and reserving water for future use.</div><div>3. Continuously increasing water efficiency according to the 3Rs principles.</div><div>4. Evaluating impacts and setting a plan to reduce the impacts of effluent released from the unit to public water sources.</div><div>5. Preparing a Business Continuity Plan (BCP) to withstand severe water shortage crisis.</div><div>6. Conducting opinion surveys to gather feedback from of water users and surrounding communities.</div></div>
<div>PRIORITY</div>	Moderate - High	<div><div>1. Setting targets for short-term and long-term water withdrawals for each unit of production as well as continuing to follow up on results.</div><div>2. Preparing water reserves and reserving water for future use.</div><div>3. Continuously increasing water efficiency according to the 3Rs principles.</div><div>4. Evaluating impacts and setting a plan to reduce the impacts of effluent released from the unit to public water sources.</div></div>
<div>MONITORING</div>	Low and Low - Moderate	<div><div>1. Preparing water reserves.</div><div>2. Continuously increasing water efficiency according to the 3Rs principles.</div><div>3. Continuously monitoring the on amount of water withdrawn.</div></div>

Optimizing Water Use according to the 3Rs Principle

Reduce

Reduce water consumption and water loss from processes, optimize water-use efficiency

Recycle

Recycle water using various treatment technologies to achieve high quality water for both internal and external use



Reuse

Reuse water that has passed through minimal or no treatment processes, reuse water for non-production process activities such as plant watering plants, and cleaning road surfaces etc.

Managing Water Resources together with Communities

CPF recognizes the importance of water which is a key factor in living and therefore implements projects with stakeholders to conserve upstream forests, maintain water sources, and improve access to community water resources, with details as follows:

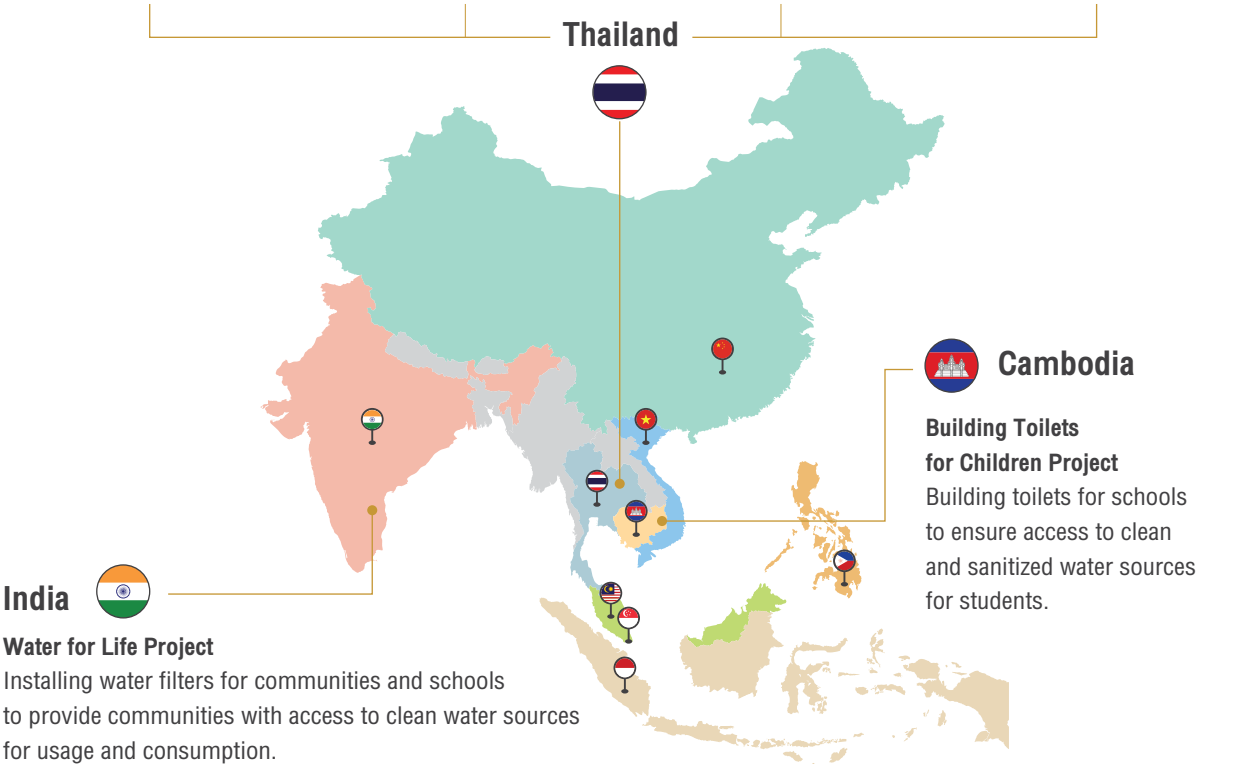
Recycled Water Sharing Project

Distributing recycled water (treated water from biogas production system) to communities for use in agriculture such as growing field crops and garden plants around layer farms nationwide.

**Mun River Conservation Project**  
Conserving and protecting the ecosystem of the Mun River Basin at Chokchai District, Nakhon Ratchasima Province, which is a water source for common use of communities and CPF.

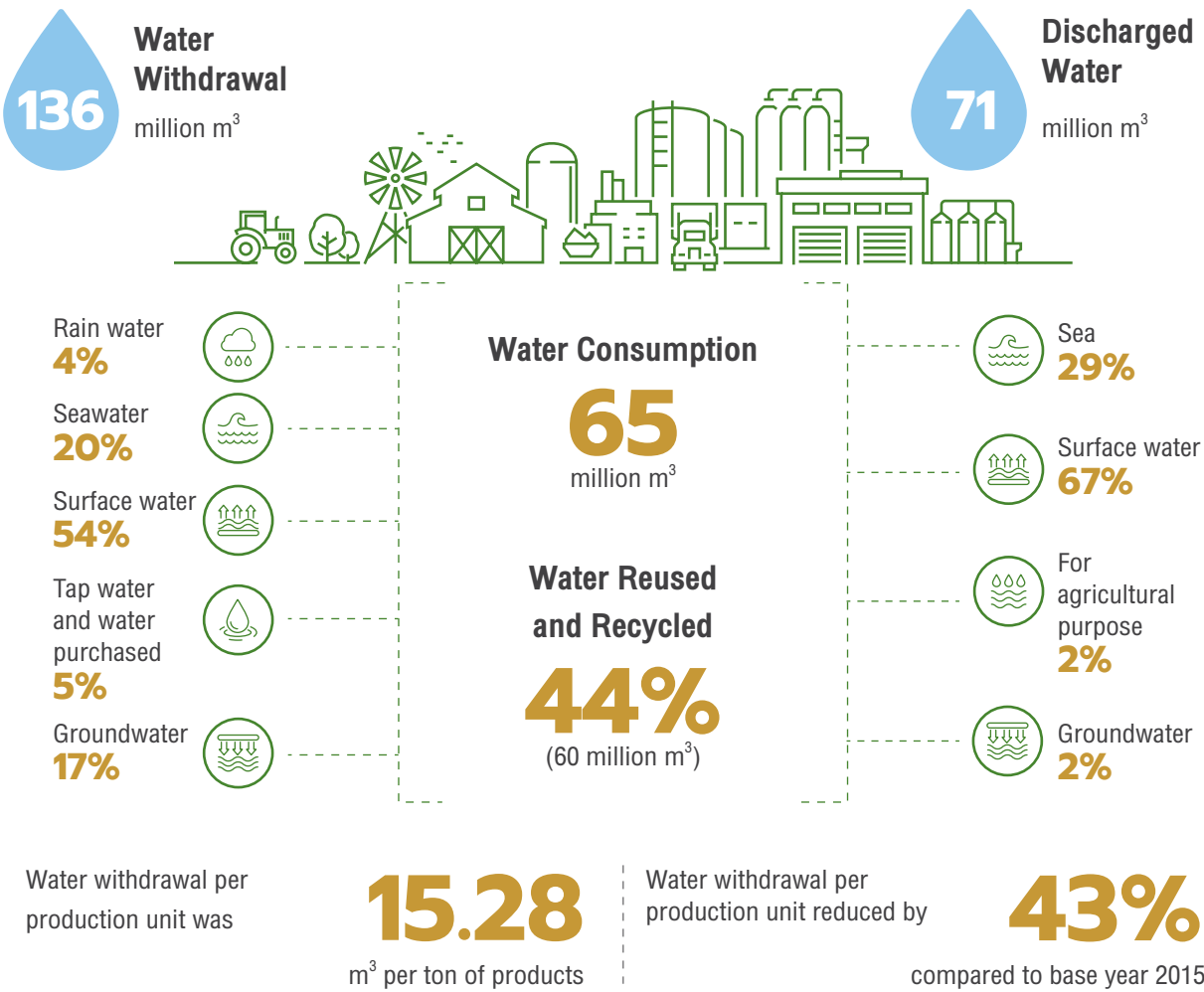
**Groundwater Bank Project**  
Installing underground water storage system for pig farming and crop cultivation at Farming Village of Nong Wa, Sa Kaeo Province, to alleviate water scarcity problems during the dry season.

**Community Drinking Water Project**  
Educating and supporting productions of drinking water for distributions within communities through community enterprises, in order to improve water efficiency in communities and ensure access to clean, hygienic and standardized drinking water for communities.

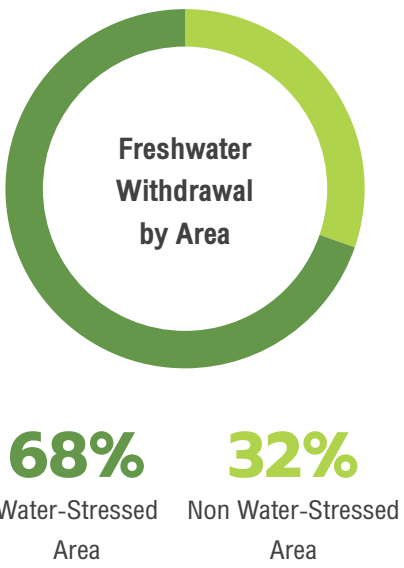
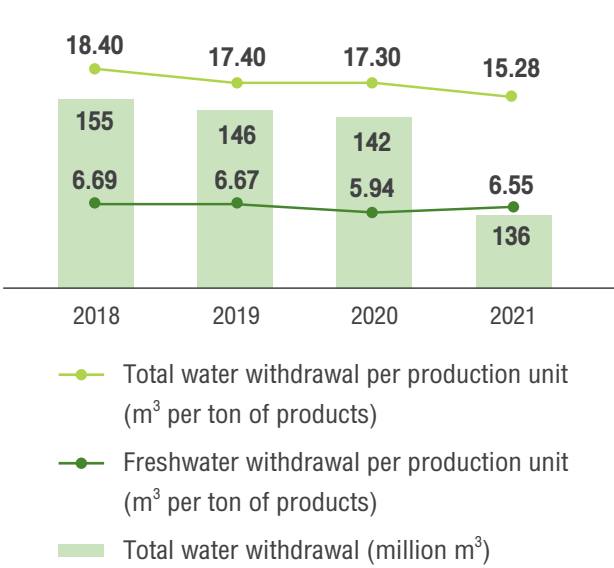




Key Performance in 2021 (Thailand Operations)

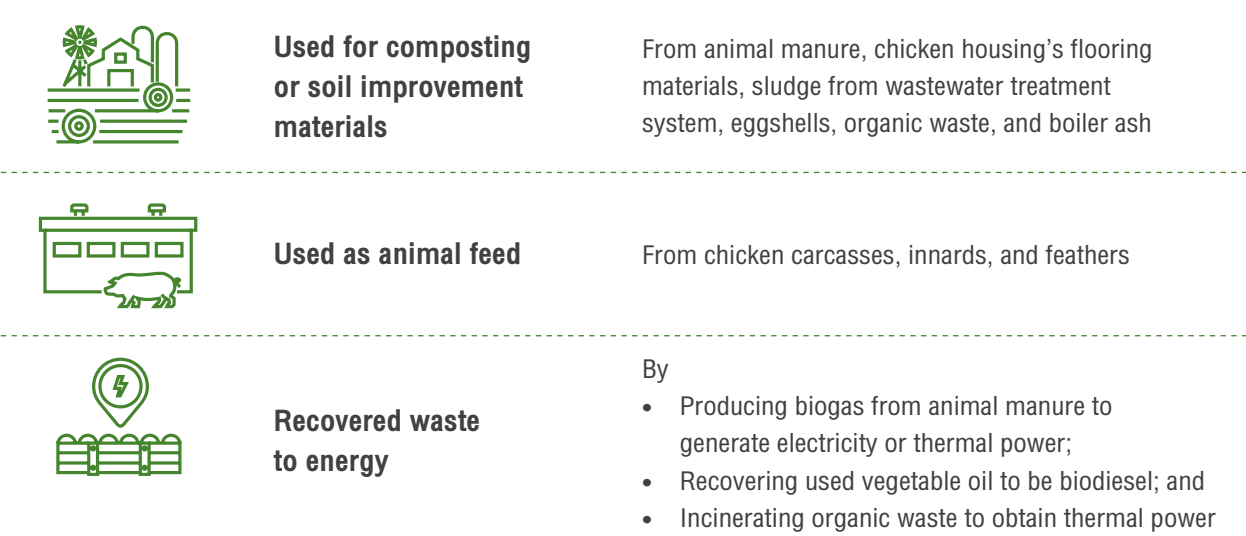


Water Withdrawal



Waste Management

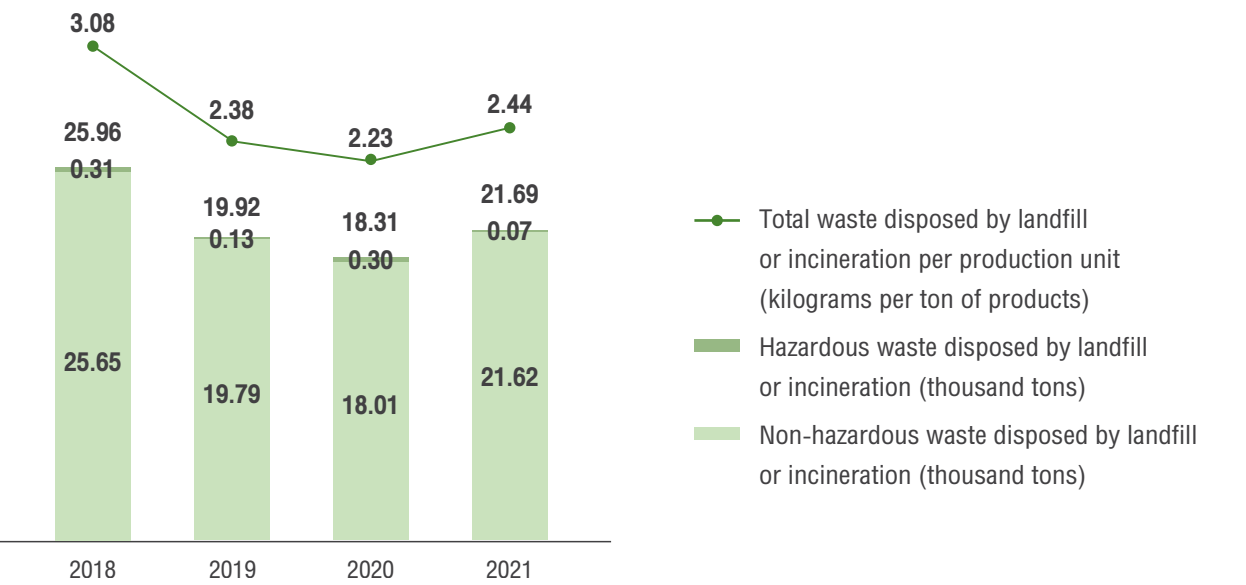
CPF adopts the circular economy as guidelines for managing waste in the production processes and optimizing use of resources. CPF is committed to reducing amount of waste and recovering waste as follows:



Key Performance in 2021 (Thailand Operations)



Waste Disposed by Landfill or Incineration






Becoming the Circular and Net-Zero Emissions Value Chain

CPF is committed to alleviating environmental impacts throughout the value chain, by using modern technology and innovation to manage resources efficiently and for maximum benefits.

1



Raw Material Sourcing




Promote agricultural knowledge to increase yield by maintaining soil properly and efficiently, reducing production costs without forest invasion or burning stubble, which affect the environment and climate.

2



Animal Feed Production



**CPF Coal Free 2022**

- Using energy from biomass fuel instead of coal
- Reducing GHG emissions for over than **70,000** tons of CO<sub>2</sub>e per year

**Using Solar Energy**

- Production capacity of **8** MW
- Reducing GHG emissions for over than **4,700** tons of CO<sub>2</sub>e per year
- Saving cost by THB **8** million per year

**Smart Feedmill Project**

- Applying automation systems and artificial intelligence (AI) to improve efficiency in the feed production process
- Reducing energy consumption for over than **27,000** GJ per year
- Reducing GHG emissions for over than **360** tons of CO<sub>2</sub>e per year
- Saving cost by THB **5** million per year

3




Animal Farming

 Swine farm

 Broiler farm

 Layer farm

 Aquaculture farm




**Using Solar Energy**

- Production capacity of **6** MW
- Reducing GHG emissions for over than **4,000** tons of CO<sub>2</sub>e per year
- Saving cost for more than THB **7** million per year

**Using Biogas Energy**

- Replacing grid electricity by **69** million kWh
- Reducing GHG emissions for over than **489,700** tons of CO<sub>2</sub>e per year
- Saving cost by THB **290** million per year



**Recirculating Aquaculture System (RAS) in Shrimp Farms**


- Applying Biofloc and Ultrafiltration to treat and recycling used water for reusing in shrimp farms
- Reducing external water withdrawal by **75%**

**CARE System in Fish Farms**

- Treating and recycling used water for reusing in fish farms
- Reducing external water withdrawal by **80%**

**Recycled Water and Sludge Sharing Project**

- Providing treated water and sludge to over **103** rais (16 hectares) of farmland to help alleviate drought impacts and build water security for communities
- More than **10** farmers benefiting from the project
- Delivered treated water over **143,500** m<sup>3</sup>




**Eggshell Composting Project**

- Using eggshells for making compost or soil amendment for farmers within the province and nearby areas.
- Reducing waste by more than **1,100** tons per year.
- Reducing GHG emissions for over than **2,800** tons of CO<sub>2</sub>e per year

4



Food Production




**Using Solar Energy**

- Production capacity of **6** MW
- Reducing GHG emissions for over than **4,000** tons of CO<sub>2</sub>e per year
- Saving cost by THB **7** million per year

**Using Biogas Energy**

- Replacing fuel oil more than **520,000** liters at the Minburi and Korat chicken processing plants
- Reducing GHG emissions for over than **2,600** tons of CO<sub>2</sub>e per year
- Saving cost by THB **10** million per year



**Raw Water Bank Project**

- Storing rainwater during the rainy season in preparation for the dry season
- Storing rainwater more than **335,000** m<sup>3</sup> per year


**Water Ultrafiltration System**

- Filtering treated wastewater and reusing it for cleaning tools and equipment in the Korat chicken processing plant
- Reducing external water withdrawal by **1** million m<sup>3</sup> per year
- Saving cost by over than THB **23** million per year

5



Customer and Consumer



**Low-Carbon Products**

- The products certified with the Carbon Footprint Reduction Label by TGO, consisted broiler feeds, live broiler chickens, live ducks, fattening pigs, fresh chicken meat, fresh duck meat and fresh pork meat products



**CP Fresh Chicken Meat Products**

emit GHG **50%** lower than Thailand's average emissions of chicken meat products\*



**CP Fresh Pork Meat Products**

emit GHG **13%** lower than the Thailand's average emissions of pork meat products\*

**Total GHG emissions reduction by Low-Carbon Products more than 1,483,000 tons of CO<sub>2</sub>e**


calculated by the weight of products certified with the Carbon Footprint Reduction Label and sold in 2021 multiplied by the amount of GHG emissions reduction of CPF products, compared to the Thailand's average carbon footprint for CPF export products or the base year carbon footprint of CPF products for CPF products sold in Thailand.

\*Based on the emission factor by TGO

6



Community and Society



**CO<sub>2</sub> Sequestration by Forest Conservation, Protection and Restoration Projects include:**

- Mangrove forests under CPF Grow-Share-Protect Project;
- Watershed forest at Phraya Doen Thong Mountain under CPF Rak Ni-Ves Project; and
- Green areas in the operations

**Total area of over than 10,900** rais (**1,744** hectares)

**CO<sub>2</sub> Sequestered over than 11,400** tons per year



**Forest in the City Project**

- More than **28,000** saplings of perennials, ornamental and medicinal plants were distributed to employees to plant at their homes, offices, farms and factories.
- Over than **4,000** employees have participated in the project.
- The project is estimated to sequester CO<sub>2</sub> for **258** tons per year.





## Responsible Sourcing for the Planet

### 2030 Target

# 100%

of key raw materials from deforestation-free areas

# 100%

of key raw materials are traceable



## Increase 20,000 rais

(3,200 hectares)

of conservation, protection, and restoration of mangrove forests and watershed forests in strategic areas (Thailand Operations)



Over 80 percent of impacts on the food industry often occur in the supply chain. CPF is, therefore, committed to alleviating social and environmental impacts which may occur in the supply chain by promoting responsible sourcing to ensure its procurements of quality and safety raw materials and products, all of which must meet relevant international standards, must be traceable and slavery-free, and must not come from deforestation areas.

**Mr. Siripong Aroonratana**

Chief Operations Officer in Livestock,  
Head of Ambition – Responsible Sourcing for the Planet



Responsible Sourcing for the Planet Ambition

During 1970 and 2016, the Living Planet Index (LPI) had continued to decline. By 2016, the average global animal population decreased by 68 percent<sup>1</sup>. Forest resources which are food sources, genetic sources for production of medicines, and habitats of pollinating animals, pollinators and insects, have been constantly destroyed. This is mainly due to forest encroachment for agricultural activities such as growing food crops and raising animals, along with the use of chemicals, pesticides, chemical fertilizers, and agricultural burning. As a result, the world's biodiversity that is essential to human food production is lost. Food producers and retailers, therefore, have focused on sourcing raw materials that are not derived from areas of deforestation and that are free of forced labours.

<sup>1</sup> THE LIVING PLANET REPORT 2020, the Zoological Society of London (ZSL) et. WWF, 2020: <http://stats.livingplanetindex.org/>

## Management Approach

- **Determining Sustainable Policies and Business operations:** sharing sustainable business practices with suppliers through the **Sustainable Sourcing Policy and Supplier Guiding Principle**, in line with the **Biodiversity and Zero Deforestation Commitment**, in order to create a solid business foundation on the basis of systematic environmental and social stewardship throughout the supply chain.
- **Sustainability Risk Assessment and Audit:** assessing supply chain risks on a yearly basis and supporting new suppliers to conduct sustainable business, as well as assessing suppliers according to **CPF Supply Chain ESG Management Approach**.
- **Traceability of Direct Raw Materials:** ensuring tracing of raw materials back to their sources to ensure that they are not derived from deforestation sites, that they are free from slavery, forced labour, and that they contribute to the protection of biodiversity on land and in the sea.
- **Developing Sustainable Competitive Potential together with Suppliers:** promoting sharing of knowledge and experiences, including encouraging exchanges of technologies, innovations, tools, machines and equipment used in production processes and agriculture in order to enhance suppliers' competitive potential and to grow together in a sustainable way.
- **Creating a Network of Cooperation in Conservation and Restoration of Biodiversity:** jointly creating the network to promote agriculture and fisheries that do not cause damage to natural resource balance, providing technology to improve efficiency, supporting sustainable sourcing from local to international levels, and collaborating with internal and external agencies to conserve and restore terrestrial and marine ecosystems and biodiversity.

## Implementation

### Supply Chain Risk Management for Sustainable Sourcing

Suppliers are a group of stakeholders that are important to CPF's business continuity and sustainability. To prevent and reduce social and environmental risks within the complex and diversified supply chains of CPF's suppliers, CPF is therefore determined to promote sustainability throughout the value chain together with its suppliers under the “**Sustainable Sourcing Policy and Supplier Guiding Principle**” which takes into account business operations based on good corporate governance under the law, rules and regulations in business operation, social and environmental aspects, which are reviewed annually. In this regard, “**CPF Supply Chain ESG Management Approach**” is applied as a guideline for systematically managing risks within the supply chain. In addition, CPF has communicated the implementation of the Sustainable Sourcing Policy to suppliers for their acknowledgement, understanding and being ready to work together regularly according to the Company's policy, which helps build sustainable trade competitiveness throughout CPF's value chain.



Sustainable Sourcing Policy and Supplier Guiding Principle



CPF Supply Chain ESG Management Approach



In 2021, CPF improved its Sustainable Sourcing Policy and Supplier Guiding Principle by appending climate change, biodiversity and water in order to enhance suppliers' abilities to cope with the changing global context. CPF also announced **the Biodiversity and Zero Deforestation Commitment** to demonstrate its business intent on protecting and preserving biodiversity in its business operations from sourcing agricultural raw materials, including the Company's implementations on forest conservation and restoration projects.



Risk Management Plan and Performance in 2021

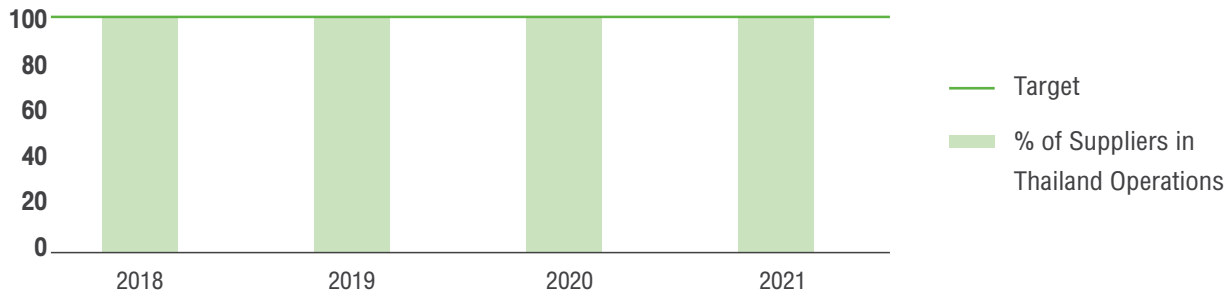
1. **Regularly assessing and reviewing suppliers' sustainability risks** by focusing on suppliers providing high volumes of purchased raw materials that are critical component to production processes and non-substitutable suppliers, as well as supplier group's social and environmental issues and food quality and safety. **100 percent of suppliers of every raw material group in Thailand, China, and Vietnam operations have been assessed and reviewed.** CPF plans to expand the suppliers' risk assessments to more suppliers in overseas operations in 2022.
2. **Delivering and communicating the Sustainable Sourcing Policy** to all suppliers in Thailand, Vietnam and China operations. The critical tier-1 suppliers of the groups of raw materials for producing animal feed and other raw material supplier groups accounting for 100 percent of Thailand operations, 100 percent of Vietnam operations and 21 percent of China operations already signed to acknowledge of the policy.
3. **Screening new suppliers through Online Sustainability Self-Assessment** covering environmental, social and good corporate governance (ESG) issues or through Thai Labour Standards (TLS) which is in

alignment with the Sustainable Sourcing Policy. For corn suppliers, new suppliers were screened under the Corn Traceability system. These are concluded to **25 percent of new suppliers were screened with social and environmental criteria (Thailand operations)**. The Company is developing the screening process which will be used to screen all new suppliers for Thailand operations in 2022.

4. **Conducting key suppliers' social and environmental audit<sup>2</sup>** and having finished 17 percent of the 2021 operational plan in Thailand, China, and Vietnam operations. With regard to the goal set to completely assess all key suppliers in Thailand and Vietnam operations within 2021, it was found that labour practices, overtime control, and occupational safety and health were the issues that suppliers should continue to develop. The Company had already coordinated with such supplier groups to ensure their further development and monitor their operations.

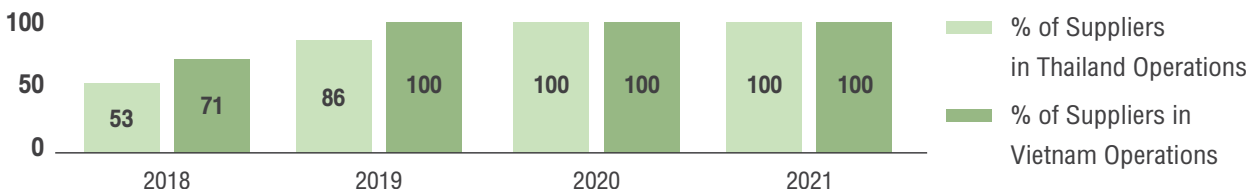
5. **Organizing online meetings to develop trade competitiveness** for over 460 key suppliers and strategic partners in Thailand and Vietnam operations this year (Additional details are available at **"Developing Competitive Potential and Sustainable Operations"**).

Progress of Signing of Acknowledgement of the Sustainable Sourcing Policy



<sup>2</sup> Thailand Operations: In 2018-2020, key suppliers covered suppliers providing direct raw materials which are raw materials used for animal feed production, and suppliers providing indirect raw materials included food ingredient and packaging. In 2021, indirect raw materials were additionally extended to spare parts and machinery, fuel/gasoline, and chemical/lab supplier groups.  
Vietnam Operations: In 2018, key suppliers covered suppliers providing direct raw materials which are raw materials used for animal feed production, and suppliers providing indirect raw materials included food ingredient and packaging. In 2019-2020, indirect raw materials were additionally extended to fuel/gasoline, chemical /lab, and spare parts of machinery supplier groups. In 2021, indirect raw materials were additionally extended to services and maintenance supplier groups.

Conducting Critical Suppliers' Sustainability Assessments\*



\* Critical Suppliers are suppliers providing direct raw materials which are raw materials used for animal feed production, and suppliers providing indirect raw materials which are food ingredient and packaging.

Sourcing Zero Deforestation Raw Materials and Protecting Natural Diversity

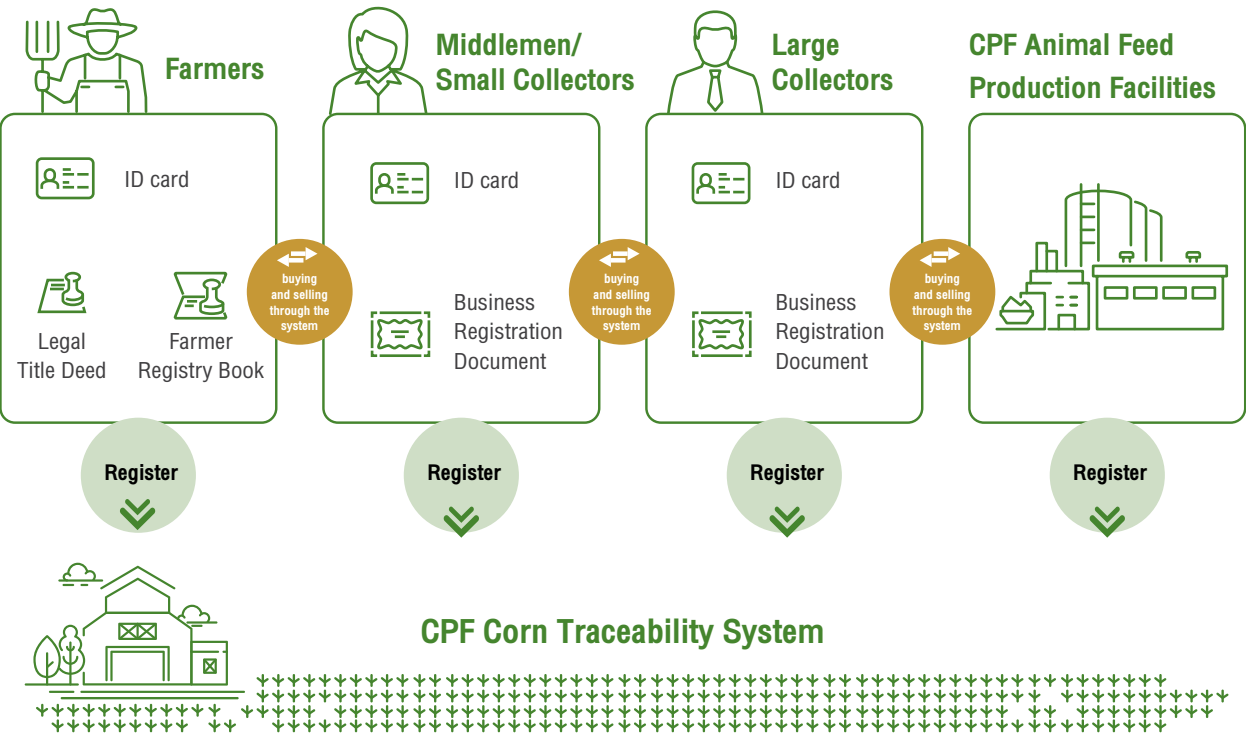
Recognizing its significant role in protecting biodiversity and solving climate change, one of the causes of which is the decrease in forest areas across the world, which are animal habitats, in order to use lands for agricultural activities and animal raising, CPF therefore has proclaimed its **Biodiversity and Zero Deforestation Commitment** and set targets for purchasing agricultural direct raw materials, namely corn, fishmeal, palm oil, soybean and cassava. 100 percent of CPF's global supply must be traceable

and come from deforestation-free areas within 2030, which is an extension of the targets in 2020.

In addition, CPF has identified the critical raw materials which are at risk of forest encroachment, namely corn, soybean, palm oil and cassava. CPF set up guidelines for deforestation-free agricultural areas verification to ensure that each direct raw material does not come from encroachment areas or areas of deforestation.

Procurement of Corn

Corn for Animal Feed Traceability System





CPF has used the Corn Traceability System to verify that corn imported to distribute to its animal feed mills are sourced from farmland without burning stubble after harvesting, and can be traced back to plantation areas.

In 2021, 100 percent of corn in Thailand operations were traceable to plantation areas through the Corn **Traceability System**. CPF is also enhancing data management in the corn traceability system by linking it to CPF feed mills’ production processes. In this regard, a blockchain technology is used to improve the speed of agricultural raw material traceability to

Procurement of Soybean Meal

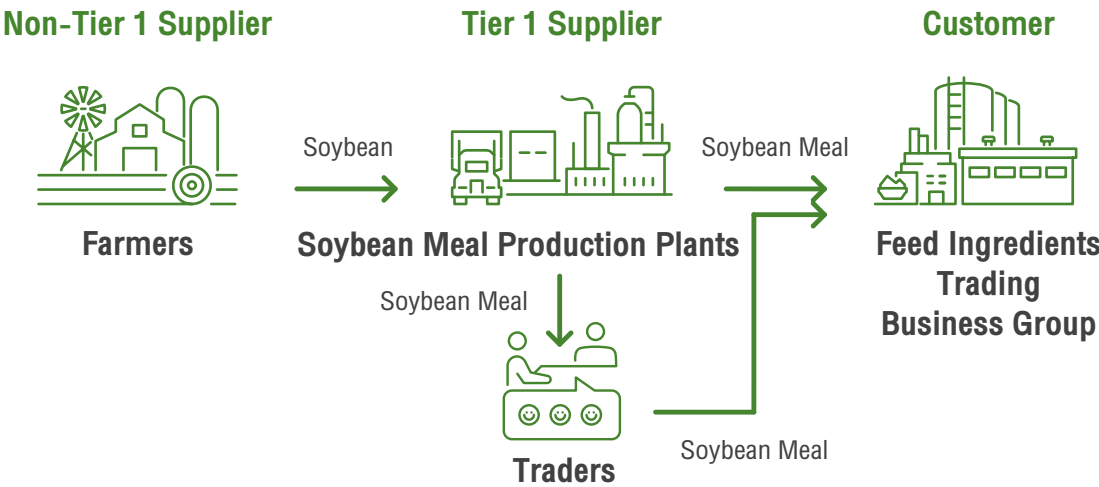
CPF collected information on the origins of soybean, a feedstock of soybean meal, to identify any risk from procuring products which may come from forest encroachment areas, and researched guidelines for responsible sourcing of soybean meal. The information obtained was applied and adapted to match the business strategies and goals setting on purchasing agricultural raw materials that are from zero deforestation areas.

plantation areas, and to ensure customers that raw materials are from responsible sources / sustainable sources / zero deforestation and reflect “Innovative Organization with Technology” in all CPF’s business processes.

Furthermore, within 2030, CPF sets a target to source 100 percent of corn used in CPF’s global operations must be traceable to plantation with the Corn Traceability System. At present, the Company has expanded the work scope to key overseas operations, such as China, Vietnam and India operations. 27 percent of the total quantity of corn in CPF’s global operations were traceable to plantation.

CPF sets a target to source 100 percent of soybean meal that are traceable to production location, countries and states of origin, and also targets to source soybean meal that is from deforestation-free areas by 2030.

In 2021, the Company found that around 23 percent of soybean meal that had been procured for its worldwide operations was traceable to the countries and states of origin. CPF is working with the group of soybean meal suppliers to implement the verification data and documents for procurement of soybean meal.



Procurement of Palm Oil

CPF has procured good quality palm oil as raw material for animal feed and food businesses, which must be systematically traceable or meets international standards such as the Roundtable on Sustainable Palm Oil (RSPO).

Within 2030, CPF targets to expand its practices to source 100 percent of palm oil that is traceable or sources from certified palm oil mill with an international sustainable standard, such as, the Roundtable on Sustainable Palm Oil (RSPO) to the overseas operations.

Procurement of Fishmeal

CPF has procured fishmeal as one of the raw materials used in animal feed production, and it is the only raw material that links the Company’s business to the fisheries which is found to be at risk of labour practices and marine biodiversity loss. As a leading integrated agro-industrial and food business, the Company is committed to supporting sustainable sourcing of fishmeal in accordance with the **“CPF Fishmeal Sourcing Restrictions”** which stipulates sourcing guidelines from two sources, namely:

1. **By-products derived from aquatic processing plants** such as the surimi factory, the canned tuna factory, and the fish ball factory that have been **certified by MarinTrust Standard or MarinTrust Improver Programme** which is a standard that complies with Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO), or **must not be by-products from species at risk of extinction as listed in the International Union for Conservation of Nature (IUCN)’s Red List of Threatened Species** which is internationally recognized, or **by-products that can be traced back by third party**.
2. **By-catch** with internationally recognized sustainability and traceability standard; **MarinTrust Standard** which is certified by the International Fishmeal and Fish Oil Organization or **by-catch that can be inspected by inspection mechanism supported by law**, which consists of various sectors such as officials or representatives from the Department of Fisheries, entrepreneurs, concerned communities, consumers and technocrats.

In 2021, the Company has been procuring according to the target to source palm oil that are systematically traceable as planned for the feed business and food business as follows: -






- For feed business in Thailand operations, 100 percent of palm oil was traceable to the production plants.
- For food business in Thailand operations, around 80 percent of palm oil was certified by RSPO.

In 2021, the Company has been procuring fishmeal for aqua animal feed production in accordance with the “CPF Fishmeal Sourcing Restrictions”, and was able to report its performance for Thailand and Overseas operations as follows: -

- **For feed business in Thailand operations:** 100 percent of fishmeal is made from by-products of processing plants that comply with the “CPF Fishmeal Sourcing Restrictions”.
- **For feed business in Vietnam operations:**
  - 100 percent of fishmeal is made from by-products of processing plants that comply with the “CPF Fishmeal Sourcing Restrictions”.
  - 36 percent of fishmeal is made from by-catch that comply with the “CPF Fishmeal Sourcing Restrictions”.
- **For feed business in other countries of operations:** 36 percent of fishmeal is made from by-products and by-catch that comply with the “CPF Fishmeal Sourcing Restrictions”.



Agricultural Raw Materials Traceability in 2021, of 8 Countries of Operations, namely Thailand, Vietnam, China, India, Philippines, Laos, Cambodia, and Malaysia

Key Raw Material		Traceability Progress (% of Volume)	
Corn		27%	Plantation
Soybean Meal		23%	Country and State of Origin
Fishmeal		66%	Production Plant
		6%	Vessel / Fishing Zone or FAO Zone / Farm of Origin
Palm Oil		51%	Production Plant
		36%	Plantation
Cassava		37%	Production Plant

\* China operation covered the raw materials sourced by Feed Ingredients Trading Business Group only.

Developing Competitive Potential and Sustainable Operations

CPF has focused on improving competitive potential and sustainable operations for suppliers according to the concept of "Thinking Together to Mutually Create and Move toward Sustainable Growth", by organizing meetings or seminars to share knowledge and ideas for sustainable operations from the government agencies, non-governmental organizations (NGOs), and CPF's experts and among suppliers. Due to the situation of COVID-19 outbreak since 2020, CPF recognizes an opportunity for transforming event format to be online format entirely, which helps reduce environmental impact and facilitate suppliers.

- CPF Capacity Building for Partnership Conference 2021 focused on significant issues consistent with the Sustainable Sourcing Policy, human rights, and safety, health and environment. The conference was held in two languages; Thai and English, and targeted over 330 key suppliers from Thailand and Vietnam operations, who had potential to grow together with the organization.



- CEO ROUNDTABLE FOR SMEs Conference 2021 was organized to provide opportunities to executives of SME suppliers to discuss and exchange sustainable business practices with the Company's CEO, particularly management issues and business strategies to overcome the COVID-19 crisis. The conference was further developed from the Faster Payment project, by determining 30 days credit term. The project has continuously supported more than 6,500 SMEs and individual suppliers since 2020 by providing revolving money quicker, increase financial liquidity, and reduce liabilities and costs.



- CAC Training for CPF's SMEs Suppliers 2021 was organized to transfer and share CPF's knowledge and experiences on preventing fraud and corruption risks to suppliers who were SMEs entrepreneurs of more than 120 companies. The aim was also to encourage entrepreneurs to declare their intentions and enhance their operations by becoming certified Anti-Corruption Coalition. The activity aimed to encourage CPF's suppliers to join the Thai Private Sector Collective Action against Corruption (CAC). As a result, CPF received the CAC Change Agent Award 2021.



Opinions from the Executives of CPF's Suppliers:

Our company would like to thank CPF for the opportunity given to us for being the uniform manufacturer in CPF's production line. Working with CPF has contributed to driving small businesses to enhance their quality systems in order to comply with CPF standards, as well as sustainability which is a global trend. Our company is studying and developing fabrics made from fish scales and recycled plastic bottles, as well as adapting our approach to online marketing. Importantly, the Faster Payment Project has promoted good governance, enabled us to pay for goods on time and supported us to be able to thoroughly take care of and help our employees, including temporary employees.

Ms. Naruemon Sangmanee, Managing Director, DMP Uniform Company Limited





As a fresh garlic supplier of CPF that focuses on standardized raw materials, we have been able to join the farmer group and elevated our garlic cultivation according to Good Agriculture Practices (GAP), which is cultivation without chemicals, resulting in positive effects on the environment. It also improves farmers' quality of life. Now, fifty farmer households have already joined the Phurin group to continually deliver organic garlic to CPF.

Mr. Niwat Deengam, Managing Director, Phurin Green Foods Products Company

Developing Competitive Potential and Sustainable Practices to Farmers

In addition, CPF has also created and has been working with a group of suppliers providing main agricultural raw materials for animal feed production in Thailand operations, namely corn smallholder farmers, under the “Self-Sufficient Farmers, Sustainable Corn Projects”. CPF has promoted knowledge and skills of correct cultivation to farmers in the project, in accordance with Thai Agricultural Standard; TAS 4402-2010, Good Agricultural Practices for maize, which includes soil analysis, cultivation methods, proper use of fertilizers, weeding and properly cultivation according to the good agricultural practices to the farmers in the project.

CPF has also developed mobile applications that have systems to help farmers manage their plantation at the first step before planting, such as, plantation areas preparation, satellite images analysis to help farmers prepare the farmland to plant effectively, cost saving, reduce the climate risk, and during the cultivation by

Artificial Intelligence (AI). The system and AI will verify the quality of the corn and be able to estimate the quantity of the produce. Furthermore, CPF has continually developed the CPF Logistics system that helps manage transportation of raw materials to animal feed factories or points of purchase.

With the vision to improve farmers capacity by modern tools and innovations, the Company has continuously enabled smallholder farmers in Thailand to access cultivating knowledge and technology, reducing risks from climate change and problems caused by pests, as well as information for buying and selling produce. Since 2015, the implementation of the project has helped to reduce costs, improve productivity, and increase income. In 2021, the project implementation already covered more than 11,150 smallholder farmers and 250,000 rais or 40,000 hectares of farmland.



Continuity management within the supply chain is one of the key strategies that enable the Company to continue delivering products to consumers. However, the COVID-19 situation has caused changes to the entire supply chain management system, and CPF recognizes the opportunity to promote and develop abilities of suppliers in the countries in which CPF has conducted businesses, as well as supporting domestic

economic circulation resulting in business continuity, all of which enable CPF to accomplish its crucial mission of delivering quality and safe foods, accessible to consumers worldwide. In 2021, CPF purchased goods and services from local suppliers in Thailand, which accounted for 96 percent of the local procurement spending of Thailand operations. The operations are representing 37 percent of the Company's revenue.

Conservation and Restoration of Ecosystems and Biodiversity

Food production is an activity that uses natural resources as raw materials, which may affect ecosystems and biodiversity. CPF, therefore, places great importance on responsible sourcing such as traceability, supporting networks for sustainable fishmeal supply, and adopting nature-based solutions as part of the conservation and restoration of ecosystems and biodiversity.

Sustainable Sourcing Network

CPF is committed to promoting and supporting sustainability in the seafood industry to address concerns caused by issues including degradation of marine resources, unfair employment, human rights violation and impacts on communities due to illegal fishing and labour, especially improvement and development of fisheries management on a variety of marine species which are native to the Gulf of Thailand and which play an important role in marine biodiversity in the regions of Asia.

- As a member of the Thai Feed Mill Association (TFMA), CPF has worked with the **Thai Sustainable Fisheries Roundtable (TSFR)** to improve and develop sustainable trawl fisheries in the Gulf of Thailand; the source of raw materials for the production of fishmeal. CPF has procured fishmeal and promoted sustainable fishmeal acquisition through the Fishery Improver Project (FIP) by setting up the Fishery Action Plan (FAP) of the project that has been implemented since 2016 in the Gulf of Thailand. It has been accepted into the MarinTrust Improver Programme for improving and developing fisheries since 2020 according to the requirements of the MarinTrust standard; the Multi-species Assessment Methodology. The project is the world's first project which serves as the standard that prevents, combats and eliminates illegal, unreported and unregulated fishing (IUU Fishing). The FIP project is a significant achievement in the protection and conservation of Thailand's marine biodiversity. It also helps alleviate the problems caused by forced and illegal labours in the Thai fishing industry.
- CPF has collaborated with the **Seafood Task Force** to be a part of driving social and environmental changes in the Thai seafood industry, including creating a sustainable and transparent supply chain and solving issues related to human rights and human trafficking in the Thai fishing industry. CPF has also jointly promoted and developed shrimp

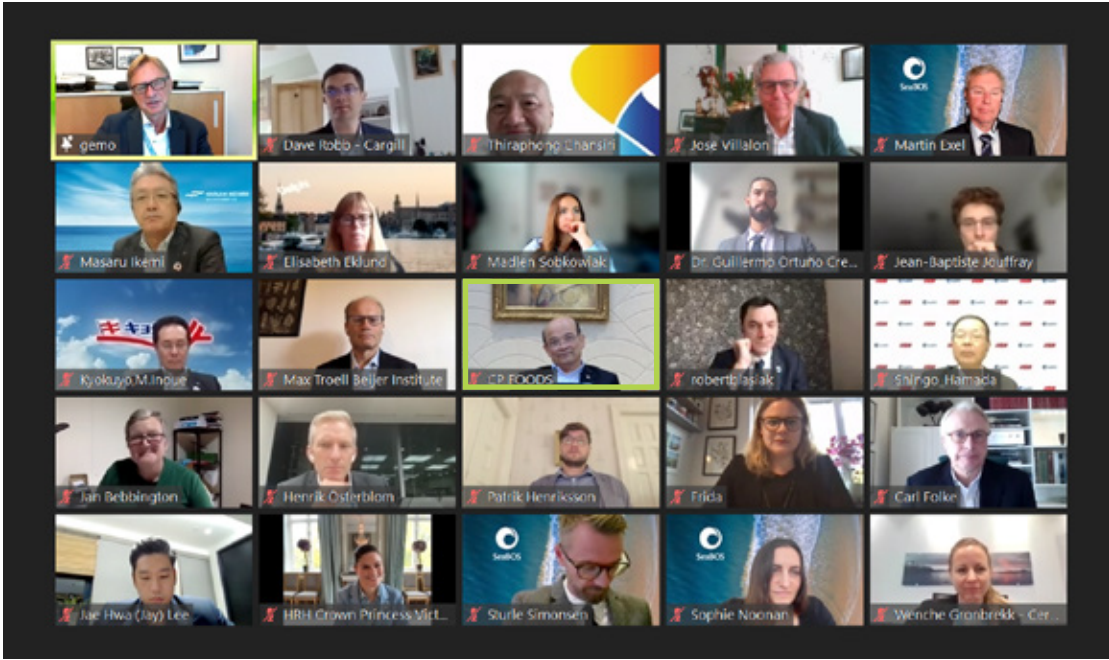
farms to meet international standards in terms of traceability, transparency and accountability. With regard to environmental aspect, aquaculture must not affect the ecosystem. Further, it is expected that, in terms labour, human rights and human trafficking issues in the industry must be eliminated. CPF has supported fisheries that use legal tools which can reduce impact on the ecology caused by overfishing, and has collaborated with government agencies to enhance efficiency of vessel monitoring system (VMS) to prevent Illegal, Unreported, and Unregulated fishing (IUU Fishing).

- CPF jointly founded the **Fishermen Life Enhancement Center (FLEC)** in Songkhla Province in Thailand in 2015 to eliminate issues of illegal workers on fishing boats; improve quality of life of fishermen and their families by providing assistance to victims of human trafficking and illegal labours; build thought leaders and provide knowledge on rights and laws related to fishermen in order to prevent them from being lured into slavery; provide knowledge on safe work environment on ships, first aid, life skills and extra jobs, family planning and reproductive health; and promote access to basic education for children of fishermen. The implementation of the FLEC Phase 2 (2021-2025) will be expanded to cover the cooperation on eliminating marine debris as a model of environmental management in accordance with the principles of circular economy. It requires cooperation and potential of many parties/ organizations to serve as a good role model for the country, for example, Closing the Loop which promotes waste collection at ports and sea cleanup projects by collecting data and managing marine debris comprehensively as well as raising awareness of biodiversity and marine resources conservation and protection together with local networks.
- Serving as a member of the **Seafood Business for Ocean Stewardship (SeaBOS)** for international cooperation in protecting the oceans, natural resources and marine environment in order to move towards the goals of conservation of ecosystems and responsible production of quality seafood for humans in a sustainable manner. There is a mutual agreement on applying global regulations throughout the supply chain, promoting legal fishing, eliminating illegal labour, developing traceability systems, refraining from using antibiotics, and reducing



greenhouse gas emissions and the use of plastic through cooperation in technology, research and development coupled with implementation and practicality. In 2021, CPF expressed its commitment to continually operating in accordance with SeaBOS' goals of ensuring socially and environmentally responsible seafood and fisheries supply chains. CPF also demonstrated its vision as a supporter of the anti-microbial resistance (AMR) working group focusing on responsible use of antimicrobials in aquaculture to the SeaBOS's Annual CEO Meeting

2021. These are in line with the principles of animal welfare to which CPF has strictly adhered and applied in its business operations (Additional details are available in "Food Security", under the ambition: "Animal Welfare"). The working group will work together to finalize the "SeaBOS Antibiotics Code of Conduct" by October 2022, and the SeaBOS member companies will implement the Code of Conduct in their own businesses as well as transferring it to suppliers in their supply chains of both animal feed production and aquaculture farms.



Forest Conservation and Restoration Projects in the Strategic Areas



Since 2014, the Company has continuously implemented the **CPF Grow-Share-Protect Mangrove Forestation Project** in 5 provinces of Thailand. The project has resulted in the abundance of mangrove ecosystems that serve as the nurseries for marine lives, has brought back marine animals to the areas and thus has allowed the surrounding communities to utilize the restored natural resources.

Based on the information from the survey which assesses impact valuation through interviews with local fishermen in Bang Ya Phraek community, Samut Sakhon Province in Thailand about changes after restoring mangrove forests, it was found

that the number of many aquatic animals increased, for example, the oriental angel's wing, the cockle, the mullet, and the mangrove crab. These aquatic animals are resources that generate jobs and incomes for people in the community and nearby areas. (Additional details are available in "Self-Sufficient Society", under the ambition: "Social Impact".)

The Company implements the CPF Grow-Share-Protect Mangrove Forestation Project in areas in which great importance has been placed on the study of aquatic biodiversity.

In addition, under the mangrove forest strategy, the Company initiated the marine waste trap project by launching a pilot at Bang Ya Phraek Subdistrict, Samut Sakhon Province in Thailand, to create the participation of civil society in management of marine debris, develop an appropriate and efficient marine debris management model, provide added value for marine debris, protect and restore ecosystems, and enrich marine and coastal biodiversity.



Since 2016, **CPF Rak Ni-Ves at Phraya Doen Thong Mountain Project**, Lopburi Province, Thailand, has transformed approximately 7,000 rais or 1,120 hectares of degraded forest into fertile forest and has brought nature back to life. In addition, CPF has collaborated with researchers to explore biodiversity of mammals, reptiles and birds. In 2019, foxes, a protected wildlife species, were spotted at the restoration area of Phraya Doen Thong Mountain, and pine buntings were discovered for the first time in Thailand and Southeast Asia in Phraya Doen Thong Mountain project area. In 2020, predator abundance continued to increase, with reports of sightings of foxes, common palm civets, small Asian mongooses and star cats. These groups of predators help control populations of other animals in the areas, such as rats which are pests destroying seedlings, fruits and wood grains in the forest restoration areas. They also help control exotic animal found in the areas such as iguanas. Greater diversity of wildlife populations in the area is a result of constructions and maintenance of check dams and fire protection lines. The forest thus becomes a safe habitat and food source for plants and animals to propagate and increase their populations.

Number of Species of Wildlife according to the IUCN Red List Found in Project Area at Khao Phraya Doen Tong From the Baseline Survey in 2018

CR	EN	VU	NT	LC
Critically Endangered	Endangered	Vulnerable	Near Threatened	Least Concern
0	0	0	0	148

The information derived from the surveys on species and numbers of wildlife in the Phraya Doen Thong Mountain project area, according to the International Union for Conservation of Nature (IUCN) Red List, has been compiled as basic data used to monitor biodiversity development performance in the strategic project for

nature-based solutions. CPF has planned to further expand the project in the following year and monitor diversity by focusing on studies of mammals, reptiles and birds, along with the development of food sources and ecosystems that are suitable as wildlife habitats.







## Waste to Value

### 2030 Target

# Zero

food waste  
from operations

# 100%

of plastic packaging for food products  
to be recyclable or reusable or compostable



“Using technology and innovation such as automation, robotics, and digital technology will help minimize food loss throughout the production process and utilize food loss as much as possible to mitigate environmental impacts to ensure a better world.”

**Mr. Pairoj Apiruknosit**

Executive Vice President in  
Aqua Integrated Business Thailand Area  
Sponsor for Food Loss Sub-Working Group



Food Loss

“One-third of the food produced is discarded as food waste while more than 690 million people around the world, accounting for approximately 10% of the world's population, are starving and malnourished. Thus, CPF's commitment to food waste reduction is to aim to reduce both losses in the economic value and resources, and to end hunger, all of which contribute to global food security.”

**Mr. Sathit Sangkanarubdee**

Chief Operating Officer in Five Stars & Restaurant Business  
Sponsor for Food Waste Sub-Working Group

As of 31<sup>st</sup> December 2021



Food Waste



“Packaging plays an important role in delivering safe foods to consumers. However, without good management, packaging may cause problems and affect the environment. Therefore, CPF is dedicated to developing innovative packaging to create alternatives via research, to reducing unnecessary use of packaging, and to collaborating with its networks to manage post-consumer plastic packaging through recycling processes and creating value to the packaging after being used.”

**Mr. Narerk Mangkeo**

Executive Vice President in  
Ready-to-Eat Food Business  
Sponsor for Sustainable Packaging Sub-Working Group



Sustainable  
Packaging

By 2050, the world's population will increase to more than 9 billion<sup>1</sup> which may cause the world to face a problem of scarcity of resources used food production. Meanwhile, around 30 percent of food is wasted around the world today, accounting for 1,300 million tons per year<sup>2</sup>. These food wastes cause about 8 percent of total GHG emissions. It is not only food waste that affects the environment. Food packaging is also a major contributor to marine pollution problems. About 10 percent of plastic waste found in the ocean is food packaging causing plastic contamination in the human food chain. Moreover, the COVID-19 situation has led to an increase in plastic packaging waste from home delivery for food and other products. To jointly solve such problems, as well as creating food security and environmental balance, CPF has integrated the circular economy concept throughout the Company's value chain.

### Management Approach

- **Establishing Policies and Guidelines:** creating and driving the Food Loss and Food Waste Policy and the Sustainable Packaging Policy and Principle to achieve goals, as well as monitoring and reviewing performances and continually improving operations.
- **Raising Awareness:** communicating and raising awareness about food waste and post-consumer packaging management, which will lead to behavioral changes of personnel within the organization and consumers.
- **Applying Principles of Circular Economy throughout the Value Chain:** focusing on improving food waste, food loss and packaging management to enable the upcycling process to ensure the most effective way of and cost-effective solutions to use of resources.
- **Building Networks of Cooperation:** jointly working with government agencies, the business sector, independent entities and other stakeholders in order to enhance the management of food waste and post-consumer packaging.







<sup>1</sup> United Nation, World Population Prospect 2019: June 2019.

<sup>2</sup> Food and Agriculture Organization of the United Nation, Global Food Losses and Food Waste – Extent, causes and prevention: 2011.

<sup>3</sup> Morales-Caselles et al, An inshore-offshore sorting system revealed from global classification of ocean litter, Nature Sustainability, 2021.



## Implementation

Input*		Output*	Measures
Animal Feed Sack 5,797 tons	 Feed	Animal Feed Sack 5,797 tons	Bulk Feed Tank page 116
	 Farm	Food Loss Used for alternative purposes 124,114 tons Discarded 1,955 tons	Smart Egg Conveyor System Project page 113
Food Packaging Metal 71 tons Glass 860 tons Paper 25,261 tons Plastic 18,687 tons	 Food		Value Added Co-Products page 113 Reducing Food Loss to Create Value page 113 Reduction of Plastic and Paper Use in Food Packaging page 117, 119 Promoting Circulation of Packaging for Maximum Utilization page 118
	 Distribution Center and Channels and Restaurants		Circular Meal Project page 114 Send Plastic Home Project page 118

\* The data of Thailand operations

### Food Loss and Food Waste

CPF recognizes the importance and strives to develop production processes throughout the value chain to reduce food loss and food waste. CPF also promotes utilization of waste according to the principles of circular economy, covering animal farming, food processing, distribution center and channels and restaurants. Further to this, CPF supports the United Nations' Sustainable Development Goals (UN SDGs) on sustainable production and consumption. Therefore, CPF has formulated the Food Loss and Food Waste Policy with the following guidelines:

### Reducing Food Loss, Surplus Food and Food Waste from the Production Process

The management framework is as follows:

	<b>Production Planning</b> Ensuring production planning procedure for all stages from purchasing raw materials, manufacturing, transporting, and distributing goods in order to determine quantities of raw materials, production volumes, and quantities of goods that meet consumer requirements.
	<b>Quality Control</b> Controlling qualities of raw materials and products according to set standards or established criteria to reduce disposals of raw materials and poor quality products.
	<b>Maintenance and Inspection</b> Maintaining and inspecting qualities of raw materials and goods in optimal conditions to minimize potential damage during storage and transportation.
	<b>Management of Food Loss and Food Waste</b> Maximizing value of co-products to minimize food loss and food waste.

#### Projects to Reducing Food Loss in the Production Process

CPF has implemented a wide range of projects to reduce food loss in the production process, which include:

- Smart Egg Conveyor System Project:** an automated system has been used to reduce damage during the conveying of eggs from farms to egg sorting plant and during the egg sorting process. Data show that the system has reduced the number of damaged eggs by approximately 1 percent and increased income derived from good quality eggs by more than THB 14 million per year.



#### Promoting Utilization of Food Loss, Surplus Food, and Food Waste

CPF adheres to food safety standards, resulting in benefits to societies, reducing environmental impact and mitigating effects of climate change.

#### Value Added Co-Products

- Animal parts and components are sold as fresh food or processed foods e.g. innards, pig head and shred meat in order to add value to products and ensure safe consumption, for instance, CP pasteurized pork blood cubes and lard, Chip Chip crispy fish skin.
- Providing crushed eggshells from egg processing plants as composting or soil improvement material for farmers around Nakhon Nayok province, which reduces the amount of waste disposed of in landfills by more than 1,000 tons per year, reduces GHG emissions by more than 2,500 tons of CO<sub>2</sub>e per year, and reduces production costs and the use of chemical fertilizers by farmers as well.

#### Reducing Food Loss to Create Value

- Processing innards, feathers and eggs that are damaged during production into feed raw materials, which can reduce the amount of waste from the production process by an average of 121,000 tons per year and help reducing GHG emissions from waste disposal by 306,000 tons of CO<sub>2</sub>e per year
- Treating wastewater that contains organic matters from chicken processing plants, farms and eggs sorting plants such as blood, fat and damaged eggs, by using a biogas system in order to produce biogas energy for the production processes. The total GHG emissions of 14,000 tons of CO<sub>2</sub>e per year can be reduced accordingly.



Cooperation Network Project

✔ "Circular Meal" Project

CPF had joined hands with the Scholars of Sustenance Foundation (SOS) and GEPP Sa-Ard Company Limited (GEPP) to transform surplus food into more than 15,000 ready-to-eat, delicious, clean, and safe meals, creating access to food for people including children, paupers and vulnerable groups affected by the COVID-19 crisis, and to collect and recycle more than 5,000 pieces of post-consumer plastic packaging, all of which reduced food waste by more than 3 tons and GHG emissions by more than 8 tons of CO<sub>2</sub>e.

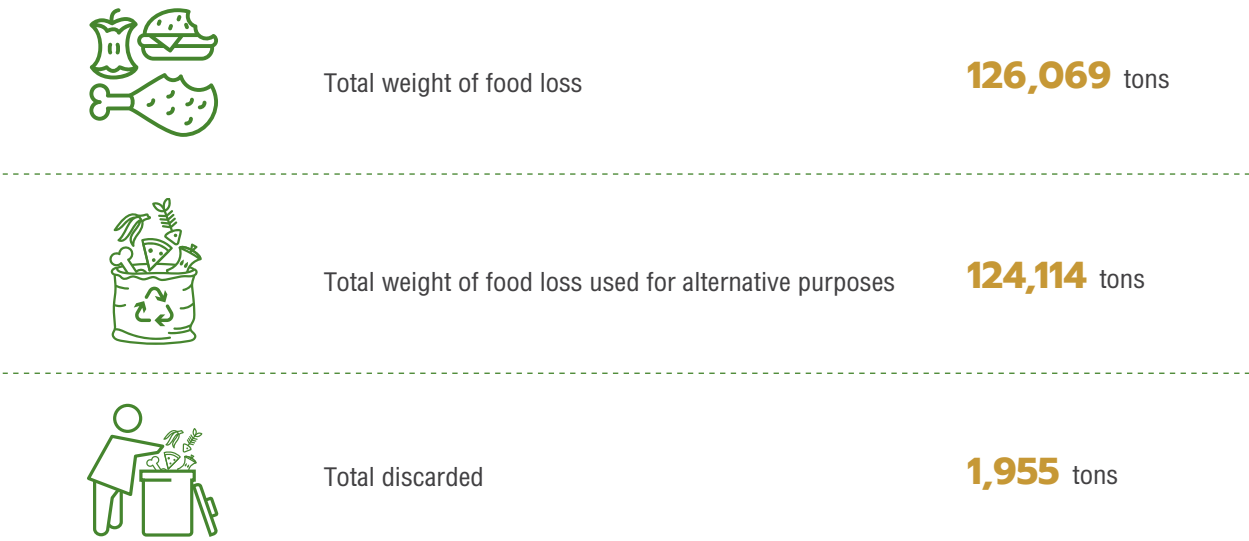


✔ Empty Plate, Save the Planet Project

CPF organized an activity to create value-conscious consumption behaviors without leftover food, which supports UN SDG 12.3 at an individual level. The project aimed to instill conscious consumption behavior at the individual level first and foremost which can then lead to each individual spreading the idea and inviting others to take up the practice, which will then result in a wider scope of impact towards the societal and national levels. 17,312 photos of empty plates without leftover food were posted on social media by employees as part of this project activity. This potentially reduced total food waste by more than 1 ton and GHG emissions by more than 3 tons of CO<sub>2</sub>e.



Performance in 2021 (Thailand Operations)  
Quantity of Food Loss\*



\* The total weight of food loss covered fresh chicken meat and egg products, collected from enterprise resource planning (ERP) system.

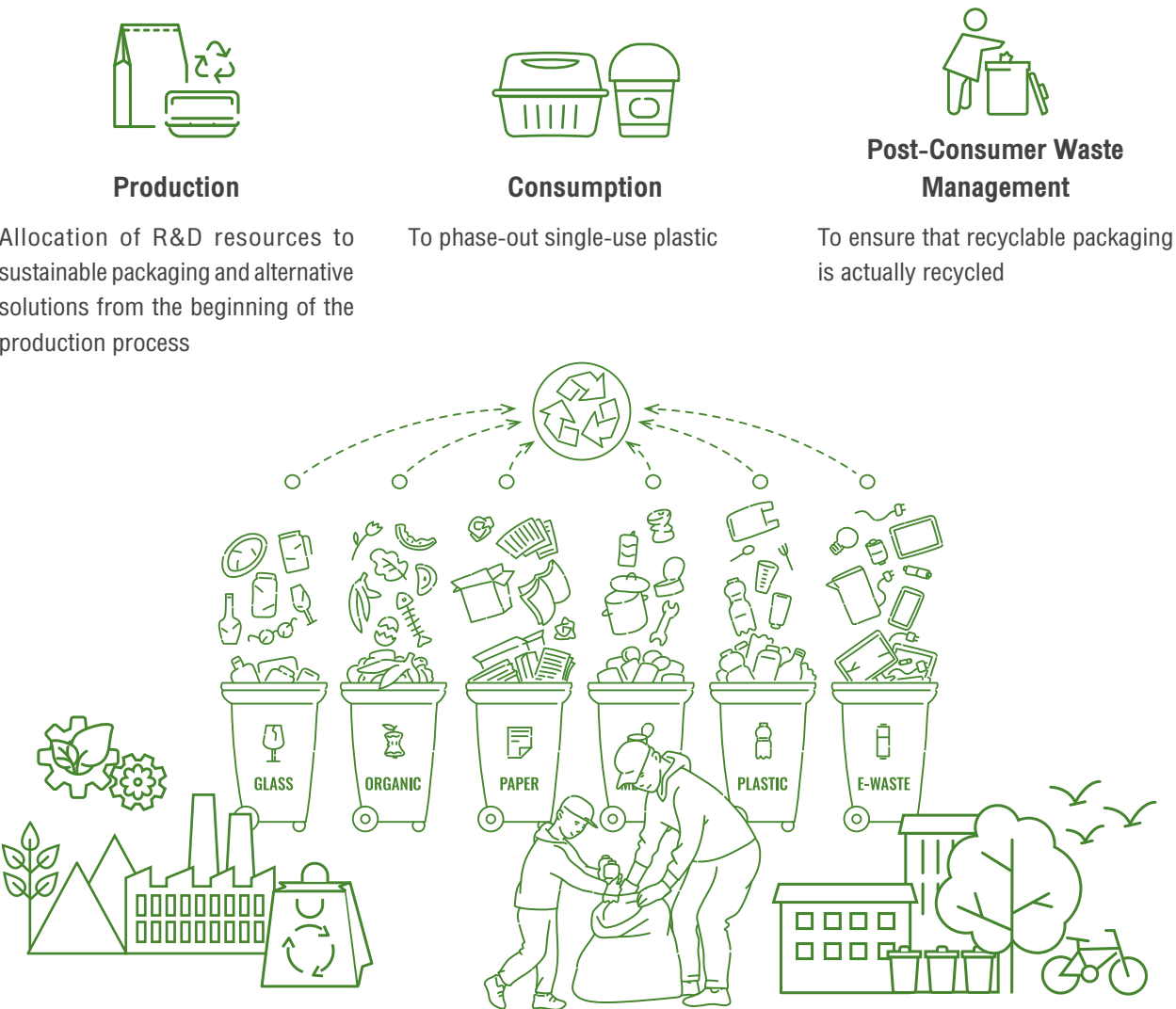
The Amount of Discarded Food Loss Categorized by Production Processes of Fresh Chicken Meat and Egg Products

Product	Unit: Tons				
	Harvest	Transport	Production	Storage	Total
Fresh Chicken Meat	165	0	1,319	0	1,484
Egg	24	12	256	179	471

Sustainable Packaging

CPF recognizes the importance of packaging that protects and maintains quality and safety of products. In the meantime, CPF also takes into account the environmental impact caused by use of resources in the production of packaging that eventually becomes waste. CPF is therefore committed to researching and developing sustainable packaging design and management based on the circular economy concept throughout the value chain, in order to use resources in the production of packaging to gain maximum benefit, to reduce packaging waste problems, and to promote the use of materials that reduce environmental impact according to its Sustainable Packaging Policy and Principle.

CPF's Packaging Management Framework





Developing Innovations for Minimization of the Packaging Use

Feed Business

The livestock feed business has developed bulk feed tanks to be used for containing animal feed for transportation instead of using plastic sacks, which reduce the use of plastic sacks by 50 percent in Thailand, Laos, Cambodia, Vietnam, Malaysia, Philippines, India, Turkey, Russia and Republic of China (Taiwan) operations.

Reducing the total use of plastic by more than  
**16,000**  
tons

Reducing GHG emissions by more than  
**51,000**  
tons of CO<sub>2</sub>e



Farm Business

In 2006, the aquaculture business developed Q-pass tanks to be used for containing shrimp post-larvae for transporting to customers. The Q-pass tank could be washed, sterilized and reused. Later, the Q-pass tank was further developed to meet customer requirements and can be transported properly according to specific requirements in each area.

Reducing the total use of plastic by more than  
**540**  
tons

Reducing GHG emissions by more than  
**2,100**  
tons of CO<sub>2</sub>e



Q-pass Tank



Q-pass Tank for transporting large post-larvae



V-plus Tank

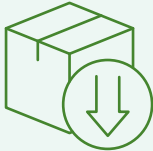


Mini Q-Tank

Meat Processing and Food Production Businesses

CPF's packaging research and development unit has worked with packaging manufactures to develop alternative packaging designs in order to use new materials, reduce thickness, and resize, or change format of food packaging while maintaining properties and efficacy of product protection to ensure safety and preserve complete nutritional value. CPF has set a goal to reduce use of paper and plastic in food packaging by 1,000 tons by the year 2025. In 2021, the total GHG emissions of 3,300 tons of CO<sub>2</sub>e can be reduced from several of food packaging development projects.

Re-Design



Reducing the use of paper by  
**31** tons per year

Reducing the amount of papers used for the CP Flamin' Chicken Tenders packaging, from 2-piece paper boxes to one-piece paper boxes, however with the same strength to prevent product damage from transportation. This design won the 4<sup>th</sup> Asian Export Awards and is currently patent pending.



Before  
Box with 2 pieces of paper



After  
Box with 1 piece of paper

Re-Design



Reducing the use of plastic by  
**25** tons per year

Changing the printing method of Ezy Choice chilled food product labels from printing the labels on stickers to printing them directly on sealing films.



Before  
Product labels printed on sticker



After  
Product labels printed on sealing film

Food Distribution Channels and Restaurants

To Phase Out Single-Use Plastic



A fast food restaurant "Chester's" uses melamine plates, stainless steel spoons, forks and knives, as well as glasses for beverages without single-use plastic in more than 200 branches all over Thailand.



Five Star shops in Thailand, Cambodia, Vietnam and Laos operations use paper bags, instead of plastic bags, purchased fried chickens.





### Promoting Circulation of Packaging for Maximum Utilization

#### To Increase the Use of Reusable Packaging

- CPF promotes the use of reusable packaging in the production processes, including:
- Stainless steel trays used for transporting chicken parts in the production in chicken processing plants can be washed and reused.
  - Plastic baskets used for transporting food products between production plants and distribution centers, as well as delivering food products to customers.
  - Egg trays used for transporting eggs between farms and egg processing plants.

#### To Increase the Use of Recyclable Packaging





Tray and Lid

Film Wrap

Product Label

CPF has jointly worked with packaging manufacturers to develop new packaging innovation, 2-layer mono-material plastic film technology, resulting in 100 percent recyclable packaging. It is used for production of packaging for all frozen Meat Zero products.

Chef Cares ready-to-eat food packaging is designed to have the tray, the lid, the film wrap and the product label easily separated from each other, allowing for easy waste segregation and post-consumer recycle.

#### To Increase the Use of Recycled Material as Packaging Solutions

- CPF promotes the use of recycled materials in various packaging without affecting the quality of food products such as:
- Paper boxes and corrugated boxes made from recycled paper for packing products for transportation.
  - Glass bottles and metal lids.
  - Egg trays made from 100 percent recycled paper and PET plastic with 80 percent recycled plastic in the layer that is not in direct contact with eggs, which can reduce the use of virgin plastic by 700 tons per year.



#### To Raise Awareness and Participation in Plastic Waste Management

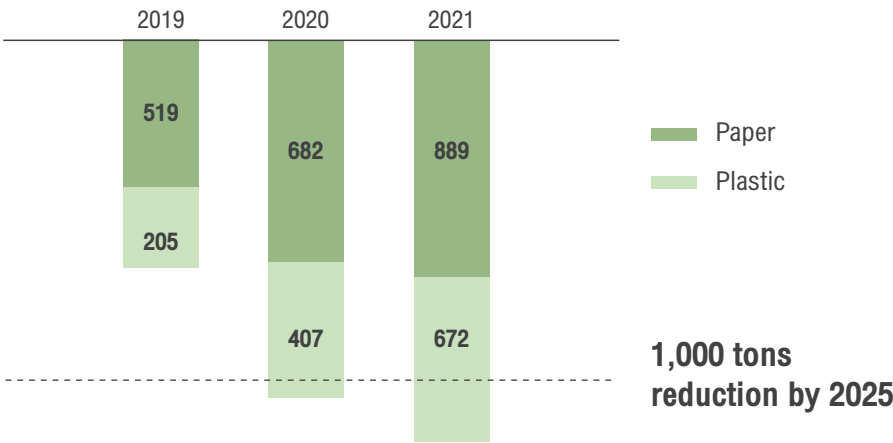
**Send Plastic Home Project**  
CPF collaborated with the private sector, the public sector and the people sector to implement the “Send Plastic Home” Project and promoted among consumers, through joint campaigns, used plastic packaging waste segregation for recycling or upcycling to produce new products. This is to ensure that recyclable packaging is actually recycled. CPF’s plastic packaging waste pickup point is located in front of CP Freshmart, Petchaburi 38/1 branch, (Soi Sukhumvit 39), which can receive the total of 700 kg of post-consumer plastic packaging.

**Catch the Trash Project**  
CPF collaborated with the Department of Fisheries, the private sector and fishing boats to implement a campaign to encourage fishermen to refrain from dumping garbage into the sea, as well as to collect garbage from boats and garbage attached to fishing gear back to the shore. It is further developed as a pilot project, in which CPF cooperated with the JDP; a fishmeal factory in Trang province and fishermen to use plastic bottles collected from the sea to produce 500 upcycling uniforms to be distributed to employees.

### Performance in 2021 (Thailand Operations)

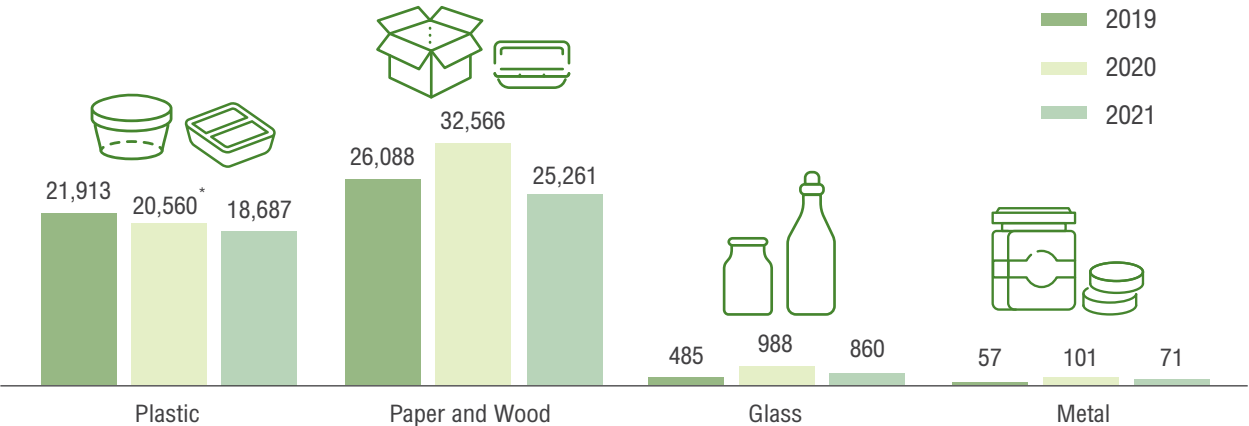
#### Reduction of Plastic and Paper Use in Food Packaging

Unit: Tons



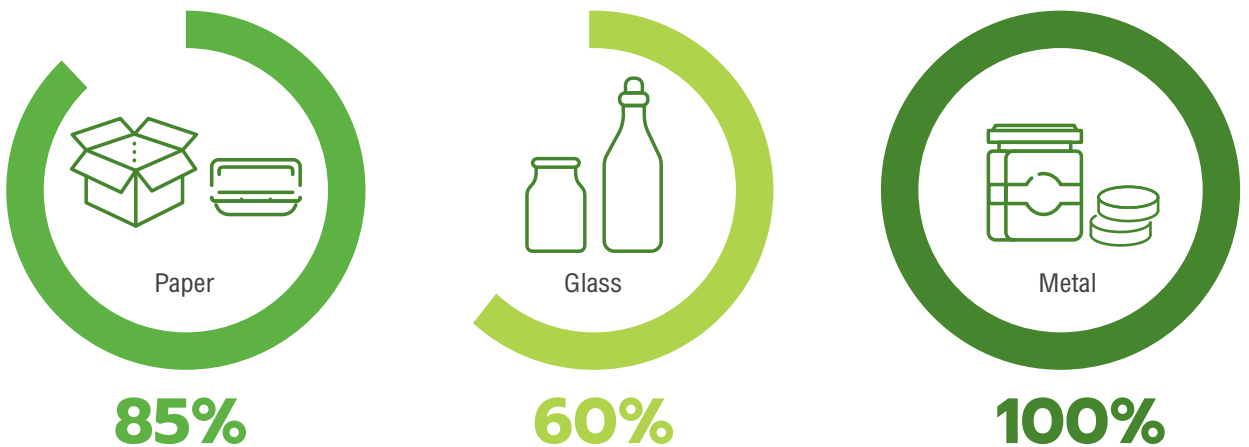
#### Consumption of Food Packaging

Unit: Tons



\* Quantity of plastic packaging in 2020 has been adjusted from the data disclosed in Sustainability Report 2020 due to re-calculation.

#### Proportion of Recycled Materials Used in Different Packaging Types





Proportion of Food Plastic Packaging Classified by Type of Plastic



About this Report

Choroen Pokphand Foods Public Company Limited, also known as CPF, has continuously prepared our sustainability report since 2011, to communicate of CPF's activities to stakeholders our commitment to conducting business towards sustainability, as well as economic, social and environmental impacts.

Reporting Period:

Accounting Period of 2021,  
from 1 January to 31 December 2021

Reporting Frequency:

Annually

Reporting Framework:

This report has been disclosed the Company's performance regarding to the material issues and prepared in accordance with international guidelines as follows:

- GRI

This report has been prepared inaccordance with the GRI Standards: Core option and additional disclosure guideline for Food Processing Sector Supplement (FPSS)
- UNGC

Reporting on the Communication on Progress (COP) at the Advanced level in compliance with United Nations Global Compact (UN Global Compact)
- SDGs

Reporting on the performance of the Company supporting on the Sustainable Development Goals (SDGs)
- TCFD

Reporting on the climate-related performance of the Company in compliance with the Recommendation of the Task Force on Climate-Related Financial Disclosures (TCFD)

Third Party Assurance:

This report has been prepared in accordance with the GRI Standards: Core option, which is also subject to independent third-party assurance by LRQA (Thailand) Limited according to our policy. The assurance also covers environmental, and occupational health and safety performance. The financial performance is reviewed by KPMG Poomchai Audit Ltd., and details are shown in the Auditor's Report in the Annual Report 2021.

The report and additional documents as follows:

- Performances Data
  - People
  - Occupational Health and Safety
  - Environment
- Report Boundary
- GRI Content Index
- Communication on Progress Index – UN Global Compact
- Sustainable Development Goals (SDGs) Index
- Task Force on Climate-related Financial Disclosures (TCFD) Index
- Assurance Statement

The documents are available at:  
[www.cpfworldwide.com](http://www.cpfworldwide.com)  
under “Sustainability”  
Topic: “Sustainability Report”



Contact Point:

For additional information or inquiries on this report, please contact us at:

Office of Corporate Sustainable Development  
Charoen Pokphand Foods Public Company Limited  
(Headquarter) 313 C.P. Tower, Silom Road, Bangrak, Bangkok, 10500, Thailand  
Telephone: (+66) 2766 8571-4 E-mail: [sd@cpf.co.th](mailto:sd@cpf.co.th)  
Website: [www.cpfworldwide.com](http://www.cpfworldwide.com)





**Charoen Pokphand Foods Public Company Limited**  
**313 C.P. Tower Building, Silom Road, Bangrak, Bangkok, 10500, Thailand**  
**Tel : 02 766 8000 Fax : 02 638 2139**



[www.cpfworldwide.com](http://www.cpfworldwide.com)