

3 | Commitment to Environmental Sustainability



3.1 Environmental Management Responsibility

3.2 Climate Change and Energy Management

3.3 Water Resources Management

3.4 Pollution Prevention and Management

3.5 Packaging Materials Management



3.1 Environmental Management Responsibility

(GRI 3-3、GRI 301-2、GRI 302-3、GRI 305-4)

Material Topic	Operational Environment Management	
GRI Topic	- GRI 305-4 GHG emissions intensity - GRI 302-3 Energy intensity	
Policy and Commitment	Develop environmental management policies covering six aspects of "Legal Compliance, Pollution Prevention, Green Procurement, Performance Management, Communication Mechanism, and Continuous Improvement" as the highest guidelines of environmental management.	 Environmental Policy Uni-President Enterprises Corporation
Goal	Develop annual management targets based on the management projects concerning energy conservation, carbon reduction, waste reduction, and wastewater discharge to minimize their impact on the operating environment. ※ See the " Sustainable Value Chain " chapter for the annual management goals and the goal-fulfilling status.	
Action Plan	- Introduce ISO 14001 and make all documents and operating processes subject to verification by a third-party certification unit on a regular basis. - Conduct greenhouse gas inventory and verification on a regular basis every year in accordance with the ISO 14064-1 inventory process. - Regularly track the revision of government environmental laws and regulations and update the same, and formulate response plans. - Establish a sustainable procurement system and clearly state in the procurement policy that green products should be given priority and gradually introduce sustainable raw materials. - Each plant to take the initiative to introduce energy conservation, carbon reduction, water saving programs and waste recycling programs to reduce the environmental impact arisen from the production process.	
Evaluation Mechanism	- Continue to maintain the effectiveness of the ISO 14001 management system. - Comply with environmental laws and regulations. - Review the annual achievement rate for energy conservation, carbon reduction, waste reduction, and wastewater management targets.	
Grievance Mechanism	Establish environmental communication and management processes, and make the Administrative Service Division and the Environmental Protection Team responsible for internal and external communication affairs. Stakeholders may report environment related matters via the contact number of each production plant. As the plant receives the relevant information, the communication management process will be initiated to handle the issue according to the type of the issue.	

Environmental Management Performance for the Past 3 Years

Environmental Management Performance	Unit	2022	2023	2024
Water Consumption (Water Withdrawal) Intensity	Million liters / \$10 million	0.90	0.89	0.90
Waste intensity	Metric tons / \$10 million	7.80	8.43	8.51
Air pollution emission intensity	Metric tons / \$10 million	0.011	0.012	0.012
Self-Operating GHG emission intensity ^{Note2}	Metric tons of CO ₂ e/\$10 million	35.52	34.76	33.20
Energy intensity	GJ / \$10,000	0.34	0.34	0.33

Note:

- The denominator of each type of environmental management performance is the sales revenue of Uni-President for the current year.
- The numerators for the self-operating GHG emission intensity of Uni-President are GHG emissions of Scope 1 and Scope 2 for past years.

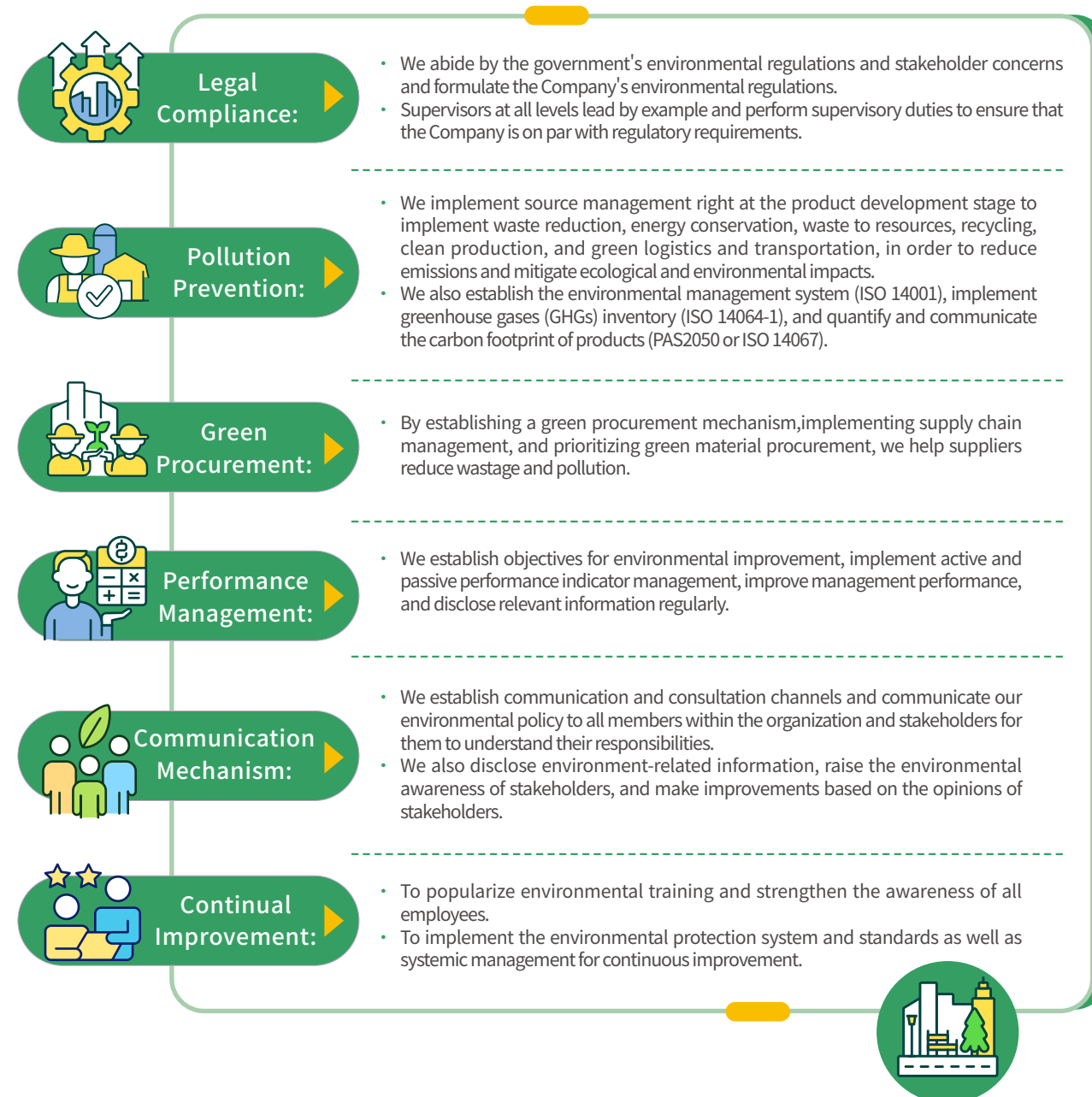
3.1.1 Environmental Management Mechanism

(GRI 3-3)

At Uni-President, we adopt a group management approach, taking into account the development trends of global environmental issues and the direction of Taiwan's environmental policies, while combining key issues faced by Uni-President and each of our affiliated company. Our environmental management is based on the ISO 14001 environmental management system, and we entrust a third-party verification company to conduct an inspection on documents and operating procedures to ensure correct implementation of the plant's internal environmental management system. For environmental risks that need to be actively managed, such as greenhouse gas emissions, energy use, and water resources management, we have established corresponding management teams to implement project-based management. Among them, the ESG Committee reports to the Board of Directors on the progress of the Group's greenhouse gas inventory on a quarterly basis.

Uni-President has formulated six major aspects of the environmental management policies as the highest principle guiding environmental management. Currently, all general plants in Taiwan have passed the new environmental management system ISO 14001:2015 certification. Moreover, each general plant has set further annual targets and management plans as the Company's priorities in order to continuously improve environmental management performance.

Uni-President Environmental Management Policies



Main objectives, focus areas, and implementation programs for ISO 14001 in 2024

Management Target	Introduction Program	Annual Management Achievement
Enhancement of environmental protection awareness	Conduct general environmental education and training	80 employees – hours/year
	Publish a monthly environmental newsletter	12 sessions/year
Meet regulatory requirements	Conduct the Level 3 Environmental Parameter Inspection Program	There were 23 internal audit deficiencies and 1 external environmental violation (1 internal audit deficiency remains unresolved, which relates to the need for Xinchih General Plant to amend its water pollution control permit; completion is expected by December 31, 2025)
	Conduct the annual environmental emergency response drill	Yungkang General Plant Conducted environmental emergency response drills
	Conduct greenhouse gas inventories at all production sites.	Yungkang General Plant / Yangmei General Plant Obtained ISO 14064 certification
Air pollution, wastewater, and waste reduction efforts	Plastic bag recycling and resource recovery project	Chungli General Plant The amount of recycled resources increased by 84 metric tons / year
	The oil skimmer volume from wastewater pools at food plants was increased	Hukou Park Oil recovery increased by 6 metric tons / year
	Overflow from chilled water discharge of ice maker was reduced	Hukou Park Saved 353,537 kWh / year
Reduction of energy consumption	Back-end rinse water reuse project	Xinchih General Plant saved a total of 1,416 tons of water this year.
	Local processing vendors were developed to reduce the transport distance of plant-based residues	Hukou Park Reduced transportation by 90,000 kilometers
	Xinchih General Plant: - Energy consumption of sterile water sterilizers was improved - A 300 HP chilled water unit was replaced - Optimization of the chilled water unit control system was completed - Air compressors were upgraded - No. 5 ammonia compressor was replaced as part of an energy-saving initiative - Office fluorescent lighting was replaced with LED fixtures - Raw water tank motor energy-saving project was implemented	A total of 8,220,215 kWh of electricity was saved across all general plants this year
	Chungli General Plant: Cooling tower fin upgrades were carried out to improve energy efficiency	
	Hukou Park: Energy use in the materials storage area was reduced	



2024 Uni-President Environmental Footprint

Increased utilization of raw materials

Fresh milk output rate reached **96.53%**



Soybean output rate reached **96.07%**



Tea output rate reached **95.23%**



Major Raw Material Procurement Volume (tons)

Milk, powdered milk	145,767
Soybeans (nongenetically modified beans + for feed)	11,338
Tea leaves	2,303
Coffee beans	10,529
Sugar	30,789
Flour	45,408
Beef	1,121
Palm oil	6,678
Pork	3,917
Wheat	111,128
Corn	77,208

Energy saving

Reduced electricity by **8,220** thousand kWh



Reduced **1,839.45** natural gas by thousand cubic meters



Energy consumption (GJ)

Purchased electricity	
Fuel oil	
Diesel	
Biodiesel	1,705,759
Petroleum	
Natural gas (NG)	
Liquefied petroleum gas (LPG)	
Self-generated green electricity	31.19

Water saving

Reduced by **1.42** million liters



Water resources consumption (million liters)

Total water withdrawal	4,592
Surface water	371
Municipal water	4,093
Underground water	128



Waste generation (tons)

General industrial waste	1,864
Recyclable waste (sludge)	7,349
Recyclable waste (tea residue)	7,739
Recyclable waste (wastepaper)	2,387
Recyclable waste (waste plastic)	214
Recyclable waste (soybean residue)	13,253
Recyclable waste (other)	10,548
Hazardous industrial waste	2



Waste Recycling rate 95.70%

GHG emission (ton of CO₂e)

Direct Emission (Scope 1)	62,459
Greenhouse gas emissions from self-operations (Scope 1 and Scope 2)	169,248



GHG emission intensity

- Self-operations (Scope 1 and Scope 2): **33.20** metric tons CO₂e/\$10 million
- Value chain (Scope 3): **290.62** metric tons CO₂e/\$10 million

Air pollution (metric tons)

VOCs	3.24
Nitrogen oxides (NO _x)	40.76
Sulfur oxide (SO _x)	0.01
Particulate matters (PM)	17.75



Average COD equivalent reduction of 98.09%

Wastewater discharge (million liters)

Wastewater	3,275
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3.1.2 Green Procurement and Sustainable Materials

In Uni-President's environmental management policy, green procurement and sustainable materials are important responsibilities and commitments to sustainable development. We give priority to green products upon procurement and emphasize environmental protection, energy conservation and carbon reduction of the supply chain. By putting our green procurement mechanism into good use, we hope to gradually reduce the environmental impact caused by our operations. Since 2013, Uni-President has been awarded the Private Enterprise Green Procurement Excellence Award by the Ministry of Environment of the Executive Yuan. Our total green procurement amount totaled NT\$1.571 billion in 2024, an increase of 15.17% compared to the previous year.

Year	2022	2023	2024
Green Procurement Amount (Unit: NT\$ million)	1,318	1,364	1,571

With respect to raw materials, we continue to keep a close eye on domestic and international material trends, while gradually introducing the procurement of relevant certified raw materials for our key ingredients. Summarized as follows:

Category	Certification content	Certification mark
Paper packaging materials	FSC™ certification	
Soybean	Non-GMO Project Verified	
Palm oil	Roundtable on Sustainable Palm Oil (RSPO) certification	

Sustainable Packaging Material Procurement

Uni-President has been purchasing paper-based packaging materials bearing the FSC™ since 2019. The ratio of FSC™ procurement amount accounted for 46.39% of the total procurement amount of paper packaging materials in 2024. In 2024, 53 new items were added, bringing the total number of product applications to 76.

FSC™ (Forest Stewardship Council™), founded in 1993, is an independent non-governmental organization (NGO) established by global environmental groups, timber trade organizations, foresters, local residents and certification institutions. FSC™ forest certification is one of the most recognized forest certification standards in the world.

Sustainable Soybean Procurement

The U.S. Soybean Sustainability Assurance Protocol (SSAP) is a system for sustainable soybean production widely used in the U.S and is audited and certified by a third party. The certification involves measures such as reducing deforestation, protecting biodiversity, and promoting community participation. It can reduce the use of natural resources in the process of soy production, further reduce the impact on the ecosystem, and reduce greenhouse gas emissions. Given that soy is an important raw material for our products, in the past three years, the proportion of SSAP soybean purchase amount accounted for more than 30% of all soybeans purchased. The procurement volume in 2024 was 4,574 metric tons.



Sustainable Palm Oil Procurement

As a means to improve the use of sustainable palm oil, Uni-President makes inventories on the products that use palm oil, while also ensuring the source of main suppliers. At present, the inventory results show that the main product that uses palm oil is instant noodles. As palm oil is mainly supplied by our affiliated company President Nisshin, and as a member of the RSPO, President Nisshin has attained a certification by a third party certification company. Uni-President has been purchasing RSPO palm oil since 2022, and will continue to pay attention to this issue to improve product sustainability.



Sustainable Tea Management and Local Procurement

The tea products of Uni-President are well received by consumers. In order to ensure food safety and fulfill our commitment to sustainability, Uni-President actively promotes local procurement to reduce the carbon footprint of tea raw materials in life cycle. In 2024, the local tea procurement volume of Uni-President reached about 1,340 tons, accounting for 36.22% of the total tea procurement.

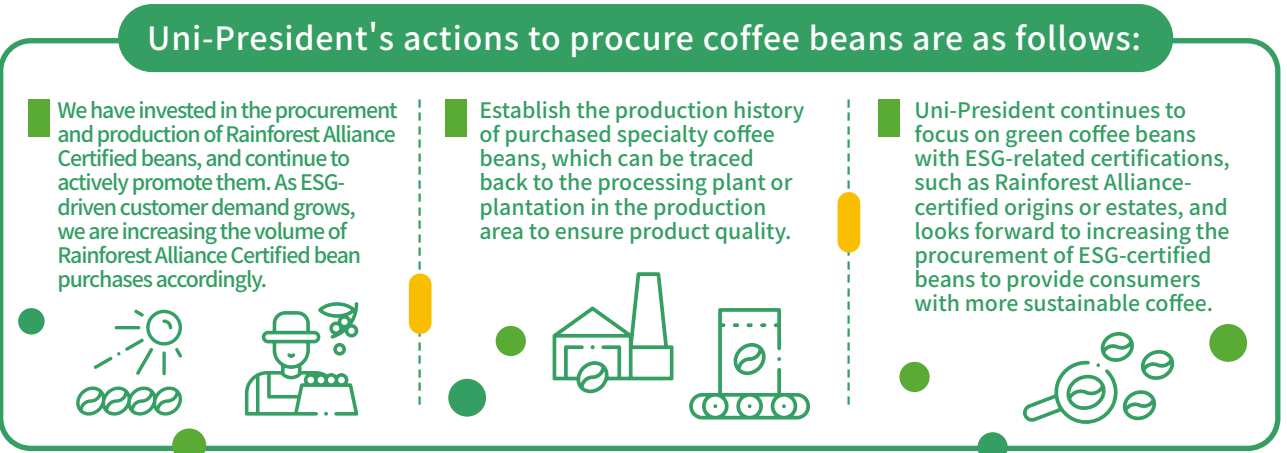
In terms of tea leaves management, Uni-President adopts multiple measures that ensure the safety, quality, and stable supply of tea leaves and the health of consumers. In terms of safety management, beyond complying with pesticide regulations, we also monitor herbicide usage between the tea plantation ridges to ensure consumer safety and promote responsible use of agricultural chemicals in tea farming. At the same time, we implement a comprehensive traceability system, allowing 100% of tea raw materials to be traced back to their source plantations. Uni-President is also promoting Ethical Procurement, and will continue to expand the scope of application in the future to further enhance the sustainability of our tea products.

Note: Local sourcing includes both direct and indirect procurement (via contract manufacturers).



Sustainable coffee beans management and procurement

Over the last few years, the worldwide craving for coffee drinks has been on the rise. To guarantee the quality of its coffee beans and remain committed to sustainability, Uni-President has established principles for the purchase of green coffee beans. The main point of the principles is to ensure food safety and consistency in quality, so as to give consumers safe and dependable products. When it comes to specific measures, each batch of green beans must be inspected for pesticide residue to meet food regulations.



The Rainforest Alliance (RFA) is a non-profit organization dedicated to protecting ecosystems and enhancing the sustainability of agriculture, forestry, and tourism around the world. The organization provides rainforest certification for sustainable agriculture, forestry, and tourism in recognition of corporate sustainable practices.

3.1.3 Environmental Protection Expenditure

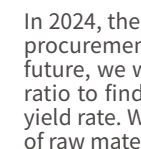
We strive to alleviate the burden on the environment during the process of producing and providing services. The average expenditure on environmental protection in the past three years was NT\$ 479.71 million. The amount of expenditure in 2024 increased by NT\$ 59.06 million compared to 2023. In addition to continuing to invest in upgrading environmental protection equipment in each factory, Uni-President increased the number of containers used for various products (including PET and paper containers for tea, dairy and water products) in 2024, resulting in an increase of 6.37% in container recycling and disposal fee compared with 2023. For the data of environmental protection expenditure in the past three years, please refer to Appendix I ESG Information.

3.1.4 Raw Material Utilization Rate Improvement

Uni-President Enterprises is dedicated to promoting a green economy by continually improving raw material utilization to reduce resource consumption and enhance production efficiency. In 2024, we continued to integrate multiple technologies into our production processes to reduce raw milk losses on the production line and improve our extraction techniques for soybeans and tea leaves. In the future, we will further strengthen process management to ensure production yield targets are met, continuously optimize raw material use, and improve both production efficiency and sustainability performance.



In 2024, the actual output rate for fresh milk was 96.53%, indicating a 5.53% decrease in output due to fixed loss in the production process. The target for 2025 is set at 96.70%, with plans to reduce the impact of fixed loss through process optimization.



In 2024, the consistency of maturity of bean seeds used was affected by the difference in procurement location, which reduced the extraction rate of bean juice to 96.07%. In the future, we will continue to adjust the parameters of the bean grinder and water-to-bean ratio to find the optimal process parameters for different bean varieties to improve the yield rate. We also aim to achieve an output rate of 96.50% by 2025 to reduce the wastage of raw materials.



To improve the tea juice extraction rate, the production line and researchers worked together to test different tea juice extraction conditions. Through the adjustment of the tea extraction rate and extraction parameters, adjust the ratio of the amount of water to the amount of tea leaves (tea to water ratio), increase the mixing time, and test different combinations to obtain the best extraction conditions. The 2024 output rate for tea extract reached 95.23%. However, since tea is an agricultural product affected by factors such as climate and sunlight, fluctuations have led to a drop in output, which fell short of the 96.00% target. For 2025, the output rate target is set at 95.50%, and efforts will continue to identify ways to improve tea yield and reduce the influence of raw material variability.

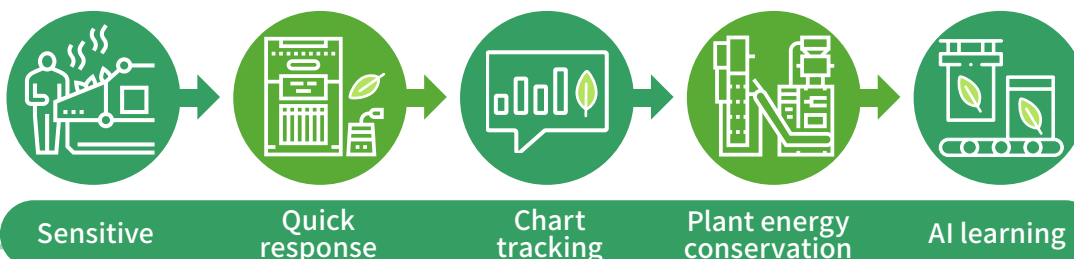
Established smart production lines

At Uni-President, we keep a close eye on smart production to improve the efficiency of product manufacturing. We have applied for the pilot program to the Ministry of Economic Affairs for testing the smart production of the tea drink production line. The main items for the smart production system cover: electronic in-plant forms and energy-saving control mechanism, which are expected to constantly innovate and improve the production technology of products and achieve the effect of proper utilization of energy resources. We expect to gradually promote this experience onto other production lines once the program is proven to be successful. By doing this, we will fully facilitate transformation of production lines with Industry 4.0 smart production systems. Our primary establishment scheme has two primary concentrations.

- ✓ Connect data at the raw material end, the process end, and the quality control end to the monitoring system
- ✓ Guarantee that the actual operational parameters at the end of the process can be implemented accurately in line with the standards



Uni-President smart production lines



3.2 Climate Change and Energy Management

(GRI 302-1、GRI 302-4、GRI 305-1、GRI 305-2、GRI 305-3、GRI 305-4、GRI 305-5)

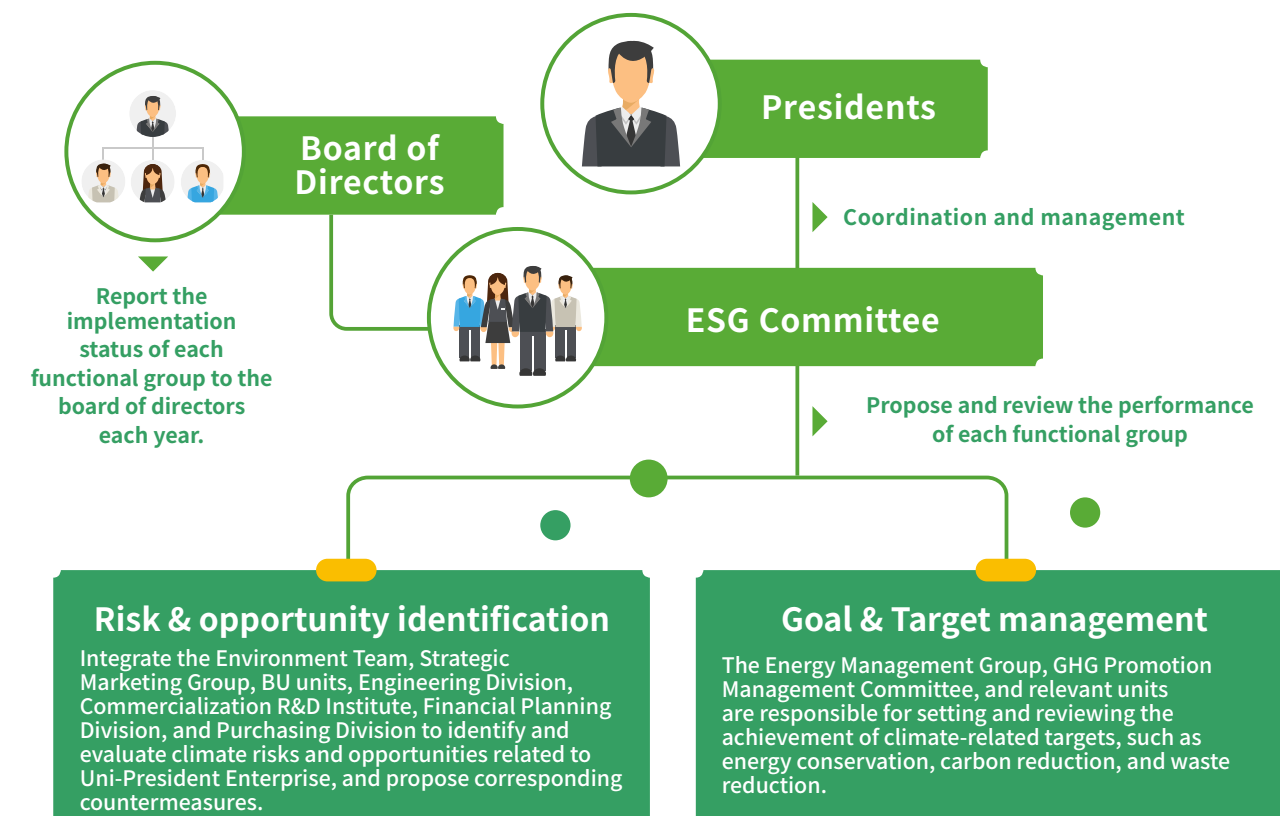
According to the Sixth Assessment Synthesis Report (AR6) from the Intergovernmental Panel on Climate Change (IPCC), climate change has already had widespread negative impacts on both the natural environment and human society, becoming an urgent global issue that can no longer be ignored. Through proactive measures such as reducing carbon emissions and implementing concrete actions, we aim to mitigate global temperature rise while also enhancing our resilience to climate impacts, eventually contributing to long-term sustainability goals. In recent years, climate-related disasters have become increasingly frequent around the world. The Global Risks Report 2025 identifies the top four long-term risks as all being nature-related—extreme weather events, biodiversity loss and ecosystem collapse, major changes in Earth systems, and depletion of natural resources. Among these, extreme weather events has become the most critical long-term risk and is ranked as the second most critical short-term risk. Nowadays, it is impossible to ignore the impact of climate change on us. We must take immediate action to maintain the sustainable development of human society and the natural environment.

Businesses play a key role in addressing the challenge of climate change. By reducing carbon emissions and investing in green technologies, enterprises can fulfill their corporate social responsibilities while reducing the impact of climate change, to promote sustainable management practices. In addition to proactively implementing energy conservation and carbon reduction measures in each factory, we have also adopted the methods recommended in the Task Force on Climate-related Financial Disclosures (TCFD) since 2020 to strengthen our control mechanism for climate risks, comprehensively assess and review the impact of climate change on the Company, and then formulate short, medium and long-term governance strategies on climate change issues to cope with the impact of climate change.

3.2.1 Climate Risk Governance

The Presidents of Uni-President oversees the ESG Committee in supervising and managing sustainability-related matters. The committee is responsible for formulating the Company's sustainability policies, key performance indicators, targets, and plans for each functional group, as well as reviewing execution performance. Regular meetings are held to promote and strengthen the implementation of sustainability initiatives (including climate-related issues), and the execution status of each functional group is reported to the Board of Directors annually. The environmental group of the committee is responsible for environmental management systems, compliance with environmental laws and regulations, and evaluating and improving resource utilization and climate change response mechanisms. It also holds cross-departmental meetings from time to time to discuss and achieve the goal of environmental sustainability.

Uni-President Climate Change Risk Governance Framework



Note: BU units include Dairy and Beverage Group, Baking Business Group, Provisions Group, General Foods Group, and Food-for-Life Group.

3.2.2 Assessment, response, and management of climate risks and opportunities

To assess the impact of climate change on our business, strategy, and financial planning, we have adopted a three-stage climate risk and opportunity identification process. Through this process, we narrowed down five major risks and one major opportunity facing Uni-President. For detailed methodology, please refer to the 2020 Uni-President CSR Report. We further quantified the financial impact of environmental regulations on Uni-President's businesses and reviewed and adjusted the current status of our response and management of key climate risks and opportunities. In 2024, we continued to track and optimize climate risk and opportunity management measures based on the latest environmental changes and policy trends to ensure that relevant strategies can effectively respond to possible challenges and opportunities in the future.



Response and Management of Climate Risk and Opportunity Issues

Climate risks and opportunities	Potential impact to Uni-President	Time interval
 Physical risks Increase of severity of extreme weather events such as typhoons, floods and droughts	Faced with increasing probability of extreme weather events, our supply chain for raw materials may lead to disruption, or we may need to increase the number of days for storage of raw materials and products due to droughts or water scarcity. In addition, extreme weathers may cause damage to our plant equipment, raw materials or products, and road disruptions may result in difficulties in transporting raw materials or power or water outages, which may affect the production.	Short-term (less than three years)
 Transformation risk Requirements and monitoring of existing products and services	As there is growing emphasis on sustainable products, we may begin to impose related regulations on products, or require reducing plastic used for packaging and product carbon footprint investigation. If our products are not labeled in accordance with related regulations, fines may be imposed due to violation, while the plastic reduction plan for product packaging and carbon management tool introduction will increase our R&D and product carbon management costs.	Mid-term (three to five years)
 Transformation risk Climate-related policy	The government is gradually amending its regulations for greenhouse gas emissions and renewable energy sources in response to the worldwide net-zero transformation. In 2023, Taiwan promulgated the Climate Change Response Act, setting the precedent for the imposition of carbon fees in 2025. It is anticipated that Uni-President will be influenced by the effect of carbon fees, leading to a rise in production costs. In addition, big energy users are subject to renewable energy regulations, plus the self-government ordinances promulgated by Tainan City, Taichung City, and Taoyuan City as they pursue a low-carbon city; the ordinances stipulate that big energy users install a certain proportion of renewable energy capacity locally. Having production factories in all three cities, Uni-President expects itself to face increased equipment installation cost and production cost.	Mid-term (three to five years)

Financial impact	Adaptive management strategy	Management Target
- Increasing the number of days for storage of raw materials/products requires additional rented warehouses results in an increase in costs. - Disruptions in the transportation of raw materials or products results in an increase in warehousing costs - Equipment damage results in asset value damage. - Damages in raw materials or products results in an increase in operational costs and decrease in revenue.	- Production process adjustment, change the order of production according to material shortage and water shortage time. - For intermittent production of products, the priority is to produce products with a short shelf life of raw materials. - Establish a Water Resources Response Team to monitor the water consumption efficiency in the plant. - Sign a water supply agreement with water suppliers to give priority to supplying water to the plant in the event of water shortage. - In the event of a Level 1 water shortage, initiate response measures such as switching plants for production or production reduction. - Rent generators for power outages. - Avoid flooding areas when selecting plant locations. - Take out disaster insurance policy for plants to reduce financial impact. - Plan emergency response mechanisms and regularly conduct risk assessments. - Purchase raw materials from different production areas to diversify risks.	- Monitor water conditions and continue to optimize response measures and management mechanisms. - Continue to optimize the efficiency of water consumption in each plant and introduce water saving projects - Diverse tea raw material supply establishment. - Stable high quality and quantity of domestic and overseas dairy sources - Refine source safety management and reduce procurement risks of raw materials. - Maintain a good relationship with large international suppliers by obtaining quotations and procuring from them. - Enhance the ability to procure outsourced services.
- Fines imposed due to violation of regulations results in an increase in operating expenses. - Product carbon footprint verification expenditures results in an increase in operating expenses. - Alternative materials and packaging R&D increase operating costs; at the same time, due to the light weight of products, waste treatment expenses are decreased.	- The Commercialization R&D Institute, Food Safety Center and Production Units immediately grasp new product packaging label policies, while making new labeling requirement in advance. - The "Packaging Label Review Process" has been set up. Each business unit, R&D unit, the Strategic Marketing Group, the Production Plant and the QC Unit of the FSC work together to prevent improper labeling and marketing. - There is also a "Packaging Materials Technology Team" in place for the research and development of lightweight packaging materials and material substitution.	- Product labelling is in compliance with regulatory standards. - Introduction of most suitable, environmental and functional packaging materials.
- Paying a carbon fee causes production costs to rise. - Payment of violation fees results in an increase in operating expenses. - Due to renewable energy regulations : - Depreciation of equipment is increased. - Operating costs increased (procurement of renewable energy power certificates). - Operating expenses increased (payment of allowance).	- Inventory and performance evaluation of annual energy consumption and greenhouse gas emission of the organization. - Product carbon footprint introduction. - Introduce energy-saving projects: In 2024, the total electricity reduction was 8,220 thousand kWh, the natural gas consumption was reduced by 1,839.45 thousand cubic meters, the water saved was 1.42 million liters, and there was a reduction of 7,525.4 metric tons of CO₂e - Installation of biogas power generation equipment: The power generation in 2024 was 558,337 kWh, which was sold back to Taipower to generate a total income of NT\$ 3.75 million. - Installation of photovoltaic equipment: In 2024, the power generation was 8,578 kWh.	- The annual average power saving rate of each general plant is >1% for 2020–2024 (Average power saving rate was 2.17% in 2024). - Lower the GHG emission intensity of Scope 1 and 2 by 1.5% per year (Emission intensity: Metric tons of CO₂e / \$10 million Sales Revenue).

Climate risks and opportunities► Potential impact to Uni-President► Time interval

 Transformation risk Stakeholder concerns	- To increase consumers' awareness of sustainability, NPO and NGO organizations proactively promote carbon reduction, plastic reduction products and related actions to change consumption behaviors of consumers. If we do not make a timely response or launch related products, it may affect our product sales. - Faced with the pressure of many sustainability ratings, a poor sustainability rating may affect the willingness as to whether an investor will make an investment, as well as the consumers' sense of brand identity.	Mid-term (three to five years)
 Transformation risk Raw materials management resilience	Climate change and rising geopolitical risks may affect the timeliness and stability of raw material supply, leading to increased raw material costs or disruption of raw material supply chains. Therefore, we must increase the diversity of raw material sources and increase the stability of supply chain sources to respond to different risk situations.	Mid-term (three to five years)
 Opportunity Improve resource utilization efficiency	We continue to enhance product yields and reduce food waste through process improvement. At the same time, we promote waste recycling and reduction to improve waste treatment efficiency. By doing this, we increase the opportunities to create new markets while reducing waste treatment costs.	Short-term (less than three years)

Financial impact► Adaptive management strategy► Management Target

- If sustainability performance is poor, it may lower an investor's willingness for investment, further increasing borrowing costs. - A consumer's purchasing willingness is affected due to sustainability brand image or lack of sustainable products, resulting in a decrease in revenue.	- Continue to invest in the R&D of new types of bakery, fresh food, and high nutrition products and processes. - Proactively develop and expand lightweight and optimal packaging materials. - Carry out surveys on a regular basis to get hold of issues concerned by stakeholders. - Continue to invest in the research of the possibility of plastic reduction while maintaining the quality of products.	- Continue to refine quality products. - Introduction of most suitable, environmental and functional packaging materials.
- Unstable supply prices of raw materials result in an increase in operating costs. - Alternative material selection and R&D results in an increase in operating costs.	- Stable management of raw material sources. - Come up with different formulas to handle short-term shortages of raw materials. - Frequently assess the availability of goods to bolster the stability of the supply chain.	- Seek an alternative supplier of raw materials and a mechanism for substitute materials. - Stable high quality and quantity of domestic and overseas dairy sources. - Refine source safety management and reduce procurement risks of raw materials.
- Waste treatment expenses are reduced as a result of the promotion of waste recycling and reduction of the weight of waste. - Due to the improvement of production efficiency, raw material consumption is reduced, decreasing operating costs.	- Installing sludge dryers and expanding the possibility of resource utilization of tea residue in the future. - Evaluate utilization of soybean residue and set up biogas power generation. - Resale of anaerobic sludge. - Carry out product process improvement through the technologies to reduce raw material consumption.	Waste recycling rate over 95%.



Major strategies and impacts of Uni-President in response to the evolution of environmental regulations

In order to grasp the possible risks and impacts of environmental laws and regulations on operations within Uni-President and provide a basis for future carbon reduction strategies, we have inventoried several major costs and expenditures arising from related laws and regulations. In response to renewable energy regulations, we have invested in the development of renewable energy power generation. In addition to continuing to expand biogas power generation, we installed 2.05MW of solar power in Xinshih Logistics Park, 0.35MW in Xinshih General Plant, and 0.16MW in Yangmei General Plant in 2024. Related infrastructure construction and other capital expenditures amounted to approximately NT\$ 103.9 million.

In addition, the announcement of "Carbon Fee Regulations" indicates an increase in related costs in the future. Therefore, we pre-assess the possible carbon fee costs in advance to adjust the allocation of related funds. We pre-assess the related costs with a carbon price of NT\$ 300 / ton. According to the current regulations, the plants required to pay the carbon fee in 2025 are Xinshih and Yangmei. After deducting 25,000 tons of emissions from each factory, the total emission for which carbon fees are payable is 27,600 tons. It is expected that the initial carbon fee will be about NT\$ 8.28 million in 2025.

To strengthen internal awareness of carbon pricing, Uni-President Enterprises implemented an internal carbon pricing mechanism starting in January 2024. In line with the Ministry of Environment's carbon fee standards, a benchmark of NT\$300 per ton of CO₂e is used. The head office collects carbon fees from each business unit and allocates the funds into a dedicated carbon fee fund. The purpose of implementing carbon fees is to incorporate carbon costs into investment and operational decision-making and cost-benefit analysis, in order to evaluate relevant investments, such as energy-saving technologies, green building certifications, and renovation projects. Uni-President Enterprises has set a carbon reduction target of 38% by 2030, using 2005 (236,000 tons) as the base year. In 2024, total electricity savings reached 8,220 thousand kWh, and natural gas consumption was reduced by 1,839.45 thousand cubic meters. The average power saving rate across all major factories in 2024 reached 2.17%. Compared to the base year of 2005, emissions in 2024 were reduced by 28% (a decrease of 66,600 tons). At NT\$300 per ton, this translates to a total savings of NT\$19.98 million.

3.2.3 Energy Consumption and GHG Emissions Management Performance

(GRI 302-1、GRI 305-1、GRI 305-2、GRI 305-3、GRI 305-4)

Due to the rising global demand for carbon management while facing the global and domestic net-zero trend, we formally introduced the new ISO 14064-1:2018 inventory in 2021. By taking this approach, not only have we expanded the inventory scope, the internal GHG promotional team was also adjusted. Furthermore, through comprehensive inventory process and stringent external verification mechanisms, the management for direct and indirect GHG emissions is strengthened and the carbon management of Uni-President moves towards a new milestone.

In addition, we have an Energy Management Team in place to set management targets for each plant and to evaluate energy management incentives in groups. Evaluation is carried out based on the daily management achievements and annual energy-saving efficiency of each plant. The first place in each group will be granted an incentive to encourage their energy saving performance. Our Hukou Park passed ISO 50001:2018 energy management certification in 2024 and received the SGS certificate on January 15, 2025.



Uni-President's incentives for energy conservation and carbon reduction and the internal carbon pricing mechanism

At Uni-President, we have established an incentive system for improvement of energy conservation proposals. If an energy conservation proposal submitted by an employee meets the review criteria of the Review Committee, a grant will be given according to the improvement contents and energy conservation benefits. If the carbon reduction benefits have been verified, each ton of CO₂e reduced can be converted into an energy-saving benefit equivalent to NT\$300.

Through an incentive system for energy-saving and carbon reduction proposals, Uni-President Enterprises saved a total of 1,899,391 kWh of electricity, 6,164 tons of water, and 1,234 tons of steam, while reducing carbon emissions by 1,038 tons.



Energy consumption status

In 2024, Uni-President consumed 1,705,790 gigajoules (GJ) of energy, of which 43.53% came from purchased electricity, and 0.0018% from renewable energy. Moreover, electricity and natural gas take up the majority of the direct energy consumption. For detailed energy consumption for the past years, please refer to energy consumption, non-renewable energy consumption and renewable energy generation in Appendix I – ESG Information.

Reducing energy consumption is the Company's top priority in its carbon reduction efforts. Uni-President Enterprises manages energy use by setting power-saving rate for each plant. In 2024, the average power-saving rate across all main plants reached 2.17%. In the future, Uni-President Enterprises will continue to strengthen the management of power-saving rates at each plant, and aim for an annual power-saving rate of no less than 1.0%, with the goal of reducing Scope 1 and 2 GHG emissions by 38% compared to 2005 levels by 2030.

Meanwhile, to comply with renewable energy regulations, e.g., "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity" and the self-government ordinances for low-carbon cities promulgated by Tainan City, Taichung City, and Taoyuan City, At the same time, in response to the current green energy regulations, such as the renewable energy regulations for Taiwan's major energy giants and the low-carbon city development regulations in Tainan, Taichung, and Taoyuan, we are also gradually improving the Group's green energy transformation plan. In 2024, Uni-President generated a total of 684,423.95 kWh of electricity through biogas, solar, and wind power generation methods. In 2024, some of the solar and biogas power generation was converted from self-use to sales, and the total sales of renewable energy reached 675,761 kWh. In the past three years, Uni-President has invested NT\$ 119.38 million in various energy-saving improvement measures. In the future, we will continue to invest resources to increase the amount of green power generation. In 2024, solar power generation facilities with capacities of 2.05 MW were installed at the Xinshih Logistics Park, 0.35MW at the Xinshih General Plant, and 0.16MW at the Yangmei General Plant.

GHG emissions

In the past, Uni-President performed GHG inventory management according to the government's policies. To be on par with the progress of GHG inventory standard conversion and global carbon management trends, inventories have been conducted according to ISO 14064-1:2018 GHG inventory criteria in all plants and have passed the external verification since 2021.

In 2024, we determined key indirect emission sources by following six significant principles for indirect emission source identification, namely: regulations and stakeholder expectations, ease of data acquisition, peer disclosure status, availability of emission coefficients, quantification of materiality and the possibility of reduction plans. In 2024, the total GHG emissions were 1,650,849 metric tons of CO₂e, and among this, the GHG emissions for Scope 1 and Scope 2 (self-operations) were 169,248 metric tons of CO₂e (accounting for 10% of the total emissions), while the GHG emissions for Scope 3 (value chain) were 1,481,601 metric tons of CO₂e (accounting for 90% of total emissions).

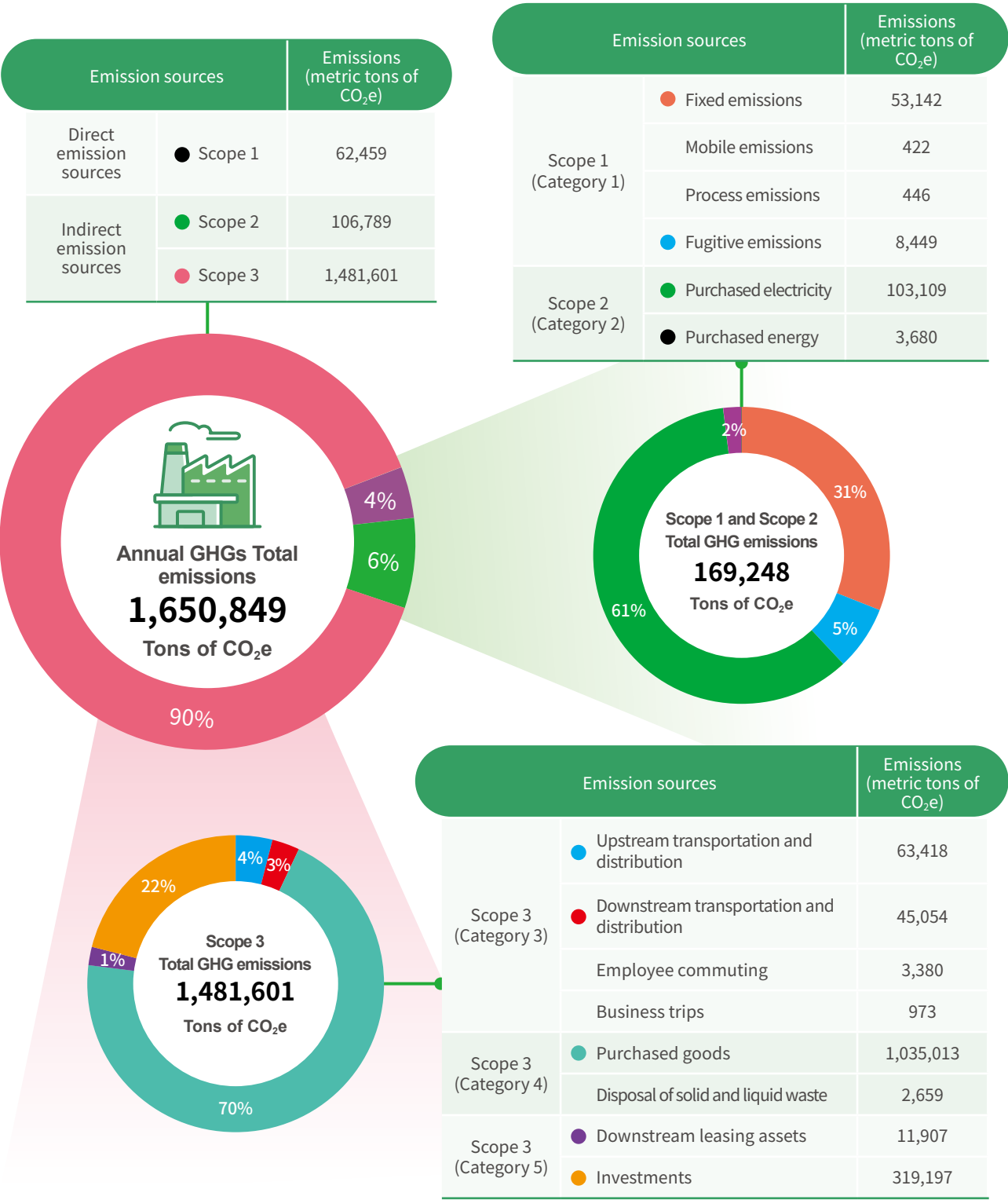
Of all the GHG emissions from self-operations (Scope 1 and Scope 2), 103,109 metric tons of CO₂e were the main emission source generated by purchased electricity, accounting for 61% of the GHG emissions from self-operations; followed by fixed emissions, including emissions generated from the use of fuel for power generation engines, boilers, and heaters, with emissions of 53,142 metric tons of CO₂e, accounting for 31% of the GHG emissions from self-operations.

The GHG emissions in the value chain this year covered upstream and downstream transportation and distribution, employee commuting, business travel, purchased goods, disposal of solid and liquid waste, downstream leasing assets and investments. Among these items, purchased goods were the main source of emissions with 1,035,013 metric tons of CO₂e, accounting for 70% of GHG emissions in the value chain; followed by emissions generated due to investments, with a total of emissions of 319,197 metric tons of CO₂e, accounting for 22% of GHG emissions in the value chain.

In 2024, the self-operating (Scope 1 and Scope 2) GHG emission intensity was 33.20 metric tons of CO₂e/per NT\$10 million of sales revenue. The greenhouse gas emission intensity of the value chain (scope 3) for this year is 290.62 metric tons of CO₂e per NT\$10 million of sales revenue. Going forward, we will keep an eye on and control the emission intensity, aspiring to eventually accomplish the aim of decoupling business growth from carbon emissions. For GHG emission data for the past 3 years, please refer to GHG Emission Data for the Past 3 Years in Appendix I – ESG Information.



2024 GHG emissions of Uni-President



Note:

- The scope of inventory in 2024 included Yungkuang General Plant, Xinshih General Plant, Taichung General Plant, Chungli General Plant, Hukou Park, and Yangmei General Plant. Moreover, we also completed inventories using the operational control approach as required by ISO 14064-1:2018, with the data verified by SGS.
- Types of GHG covered: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃.
- In response to the ISO 14064-1: 2018 criteria, we conducted identification and inventory for Scope 3 (category 3–6) emission sources for the first time in 2021. Given this, we have set 2021 as the base year.
- At present, the electricity emission factor announced by the Bureau of Energy of the Ministry of Economic Affairs is applied to purchased electricity. The electricity emission factor in 2024, which was 0.494 kg CO₂e/kWh, was used as the calculation parameter. Other emission parameters are mostly adopted from the "Greenhouse Gas Emission Factor Management Table 6.0.4" announced by the Environmental Protection Administration in June 2019, and the applicable factors announced by the IPCC. Since the global warming potential (GWP) of various greenhouse gases have different impacts on the climate, the calculated emissions of various greenhouse gases from all emission sources are multiplied by the GWP value to convert into carbon dioxide equivalent (CO₂e). The GWP value is currently based on the 2021 IPCC Sixth Assessment Report, and might be changed in accordance with the regulations of government agencies in the future.
- We have been conducting inventories of Scope 3 GHG emissions since 2021 and the emission coefficients were based on EPA's Product Carbon Footprint Information website, business database coefficients, academic papers, and similar goods or services of the public carbon footprint data. At present, our inventory items cover items that generate GHG emissions from upstream and downstream transportation and distribution, employee commuting, business trips, purchased goods, disposal of solid and liquid waste, downstream leasing assets and investments.

3.2.4 Reduction Plans

(GRI 302-4、GRI 305-5)

In order to achieve the medium and long-term reduction targets, Uni-President Enterprises evaluates and plans the implementation of various emission reduction measures based on the results of greenhouse gas inventories. In terms of direct operational emissions, the Company has replaced fuel oil with cleaner natural gas and implements annual energy-saving projects. These include equipment upgrades, parameter optimization, and production process adjustments. In 2024, key energy-saving projects focused on replacing chilled water units and improving boiler systems. These initiatives resulted in a total reduction of 1,026.34 metric tons of CO₂e and saved NT\$4.73 million. To manage product carbon footprints, the Company continues to maintain carbon footprint labeling certification. The Extra Large Tung-I Noodles - Minced Pork Flavor (85g) has also received the carbon reduction label. The estimated cost of carbon footprint certification for 2025 is approximately NT\$1.44 million with the certification valid for two years.

Collaboration with suppliers to organize education and training on carbon reduction

In terms of value chain emissions, the main source of emissions is purchased goods. Therefore, Uni-President has continued to actively cooperate with suppliers to carry out carbon reduction actions. In 2024, we conducted education training on greenhouse gas inventory, energy savings and carbon reduction for the top 20 suppliers by transaction value. The training topics included greenhouse gas management trends, greenhouse gas and carbon footprint inventory

descriptions, and life cycle assessment tools. We hope to work with suppliers to find more carbon reduction opportunities. In the future, we will pay more attention to the governance, environmental, and social aspects of our suppliers, so that they can become important partners in promoting sustainable development in the value chain.



2024 Product Carbon Footprint Label



Carbon footprint :
190.00g CO₂e / pack

Carbon Reduction Label



Carbon footprint for 300mL
packages :

160.00g CO₂e / box

Carbon footprint for 375mL
packages :

200.00g CO₂e / box



Carbon footprint for 300mL
packages :

130.00g CO₂e / box

Carbon footprint for 375mL
packages :

160.00g CO₂e / box



Carbon footprint for 300mL
packages :

120.00g CO₂e / box

Carbon footprint for 375mL
packages :

140.00g CO₂e / box

2024 Representative Energy Saving and Carbon Reduction Projects

Yungkang Administration Building chilled water unit replacement project

Annual savings of 142,370 kWh of electricity; reduction of 0.5125 TJ of energy consumption;
reduction of 70.33 tons of CO₂e emissions; annual cost savings of NT\$ 0.29 million

- The high-energy-consuming 100RT chilled water unit (with energy consumption of 1.15 kW/RT) was replaced with variable frequency, permanent magnet 120RT chilled water unit (with energy consumption of 0.63 kW/RT). After improvements, the average unit energy consumption of Yungkang Administration Building decreased by approximately 45% compared to before the upgrade.

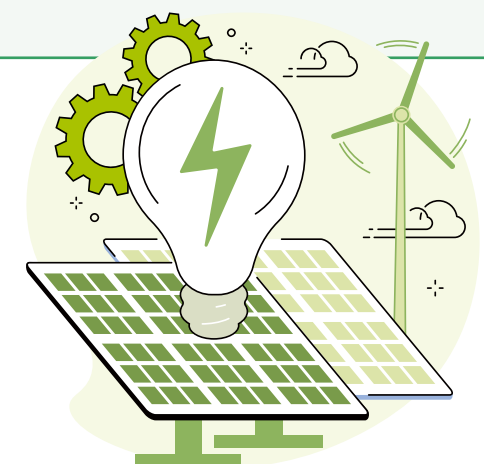


Yungkang Dormitory Building chilled water unit energy-saving project

Annual savings of 246,205 kWh of electricity; reduction of 0.8863 TJ of energy consumption;
reduction of 121.63 tons of CO₂e emissions; annual cost savings of NT\$ 0.76 million



- The high-energy-consuming 120RT chilled water unit (with an energy consumption of 1.15 kW/RT) was replaced with a permanent magnet 120RT chilled water unit (with energy consumption of 0.63 kW/RT). After renovation, the average unit energy consumption of Yungkang dormitory building decreased by approximately 45% compared to the level before the installation.



3.3 Water Resources Management

(GRI 303-1、GRI 303-2、GRI 303-3、GRI 303-4、GRI303-5)

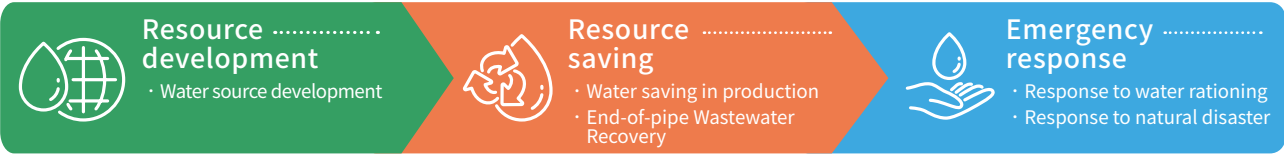
Uni-President regards water resources as an important environmental and operational issue. Among our diversified products, beverage products such as juice, tea and dairy products are highly dependent on water in the manufacturing process. Although rainfall is abundant in Taiwan, with uneven distribution of water resources, coupled with frequent rainstorms and water shortages caused by climate change in recent years, the complexity of water resource management has further increased. Therefore, we are committed to enhancing resilience and adaptability in water resource management.

3.3.1 Water resource management strategies

(GRI 303-1)

To avoid the numerous risks to water resources, Uni-President has three standpoints, including resource development, resource saving and emergency response, which manage water resources based on the energy management team's hierarchical management system. We also hold regular meetings to discuss issues related to water resources, set up policies, and review the performance of water conservation, as well as integrate water conservation concepts into detailed planning, design, production and working environments via various means such as posters, slogans and training courses.

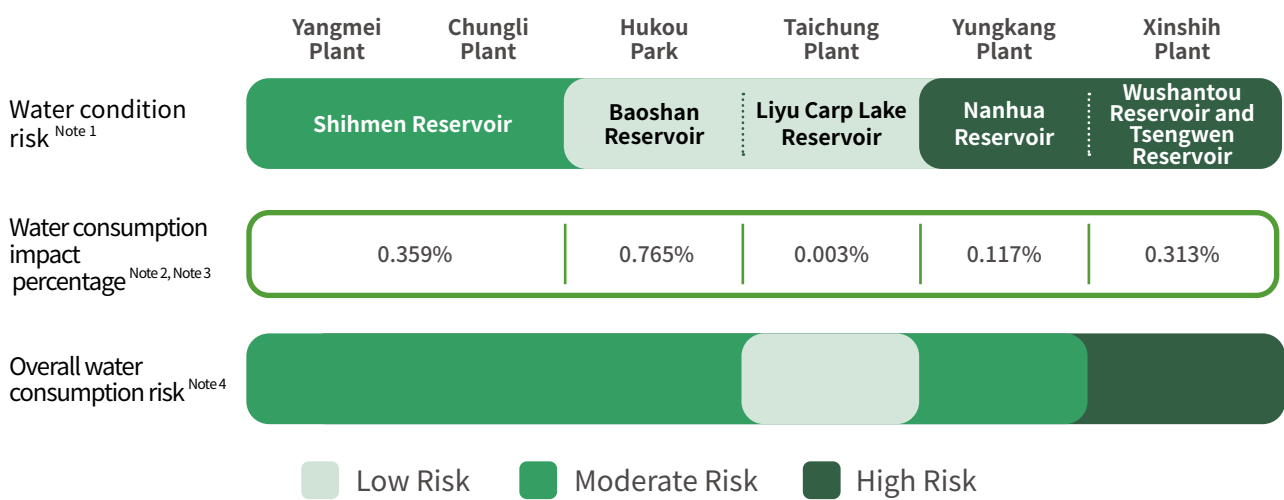
Water resource management strategies



Water resource risk identification and response

In the overall value chain, the "raw materials" and "manufacturing stage" of our products are highly related to water resources. Among them, raw materials come from crops, and as water, as an integral part of our products, is crucial for their production. To understand more about water withdrawal risk and its impact on the environment, we refer to the research data released by the National Science and Technology Center for Disaster Reduction to get an understanding of the probability of drought risk with each source of water withdrawal. Moreover, we also identify the overall water consumption risk of each plant with reference to the 2024 water consumption data. The results indicate the control of water conditions and production scheduling are management priorities.

Water consumption risk analysis of each plant



Note 1: Water condition risk data: With reference to the Disaster Risk Adaptation Platform. <https://dra.ncdr.nat.gov.tw/Frontend/Disaster/RiskDetail/BAL0000022>

Note 2: Water consumption impact ratio: 2024 plant water intake/2024 water consumption announced by each reservoir.

Note 3: The announced water consumption of each reservoir in 2024: Refer to 2024 Reservoir Operation Overview from the Water Resources Agency, Ministry of Economic Affairs.

Note 4: Overall water consumption risk: The risk level identified after the combining of information on water condition risk data, water consumption impact percentage, and historical plant operation experience.

3.3.2 Risk Management for Water Resources

(GRI303-3、GRI303-4、GRI303-5)

Extreme weather makes it more difficult to manage water resource risks. Moreover, typhoons and rainstorms that hit Taiwan each year often lead to an increase in raw water turbidity or water risks such as water shortages caused by climate anomalies. These are risks that affect productivity. We have set up a water resources response team to prevent production losses caused by unstable water conditions. The supervisor of the Technical Group is appointed as the convener, and is responsible for cooperating with all relevant units and assigning work duties in order for different units to jointly develop response plans while strengthening the coordination among the emergency response team. We have also entered into a sales and purchase agreement with the water suppliers, agreed on reasonable transportation costs with water transportation operators, while effectively controlling the transportation schedule, ensuring that water is supplied during water shortages. In the event of a water shortage, we initiate related countermeasures according to the levels of water restrictions announced by the government. In doing so, we minimize operational losses caused by water shortages.

Water Resources Risk and Adaptation

Risk Source	Risk Issue	Adaptation Action
Regulations	- Response to laws and regulations - Water consumption fee collection method - Water Pollution Control Act	- Establishment of the Water Response Team. Closely monitor the water consumption of each plant and water conditions in each area - Acquire green building certification for new plant buildings - Establish and monitor targets for discharged water quality
Disasters	- Insufficient water resources - Increased chance of heavy rainfall and floods	- Establish natural disaster response standards and conduct regular emergency response drills - Promote water conservation projects to enhance water use efficiency - Rainwater recovery equipment installed in the new plant - Establish water restriction and response plans

Management mechanism and division of labor of the Water Resources Response Team

 Coordination and management	- Decide on, announce, and implement countermeasures - Coordinate the work and capture status	Technical Group
 Monitoring water consumption	- Understand water demands and cultivate water sources - Monitor water conditions in production areas and announce related information - Establish the water shortage response plan of the general plant and coordinate production based on water consumption sequences	Engineering Division Production Plant
 Water scheduling	- Dispatch water trucks - Conclude transportation service agreement	Logistics Division
 Water price management	Conclude agreements on the unit price with water suppliers	Purchasing Division
 Monitoring water quality	Control water quality and water truck safety	Food Safety Center
 Water conservation measures	- Publicize and implement drinking water conservation measures in office buildings and dormitories. - Promote and implement technologies for water conservation and recycling in the process. - Implement technologies relating to water recycling	Engineering Division Administrative Service Division Production Plant

Water shortage countermeasures of Uni-President

To address the risks of water restrictions or supply interruptions, Uni-President has established a comprehensive risk assessment mechanism and corresponding response measures to ensure both production operations and domestic water needs are met. The company holds meetings in response to changes in the water supply warning signals. Business units review and adjust stock keeping units (SKUs) to reduce the impact of water restrictions or outages on the supply chain. At the same time, the Water Resources Response Team conducts preparatory checks and drills for water transportation operations to ensure a prompt response in the event of water shortages. As for response measures, business units assess production output adjustments, plant and dormitory facilities reduce domestic water flow, and the Engineering Division is responsible for reallocating water for production use. In addition, the company collaborates with transportation providers to ensure that water can be transported from Hukou Park, the Xinshih General Plant, or other water sources, thereby minimizing the operational impact of water restrictions or supply disruptions.

 Water rationing measures	 Emergency response of Uni-President
Phase I - Reduce water supply pressure - Stop water supply to non-urgent or unnecessary facilities	- Increase the frequency of Water Supply Information Reports and online reporting of water consumption and storage to facilitate situation control - Check the quality of well water and purchased water after phase II water rationing is announced - Verify the status of other water sources, including capacity, water quality, and water rights
Phase II - Stop high consumption water supply users - Reduce water supply	
Phase III Stop water in turns by area or in all areas	- Initiate the "Water Supply Emergency Response Mechanism." Manage purchased water, water transportation, and dedicated intakes, and test water quality and treat incoming water - Activate water storage equipment and increase storage - Perform inter-plant dispatch, with the Hukou park in northern Taiwan and the Xinshi General plant in southern Taiwan as the dispatch centers to supply water to other complexes in a timely manner - Adjust production processes and product prioritization, and increase normal temperature inventory
Phase IV Fixed time and fixed quantity supply	

Water shortage response drill plan



In 2024, water transportation drills were conducted at the Yangmei and Chungli General Plants.

To address extreme weather events arising from climate change, Uni-President implements an annual water shortage response drill program. These drills ensure that each plant is prepared to respond appropriately during drought periods in the event of a water shortage, and areas for improvement are documented throughout the drill process. In 2024, a total of two plants completed water transportation drills.

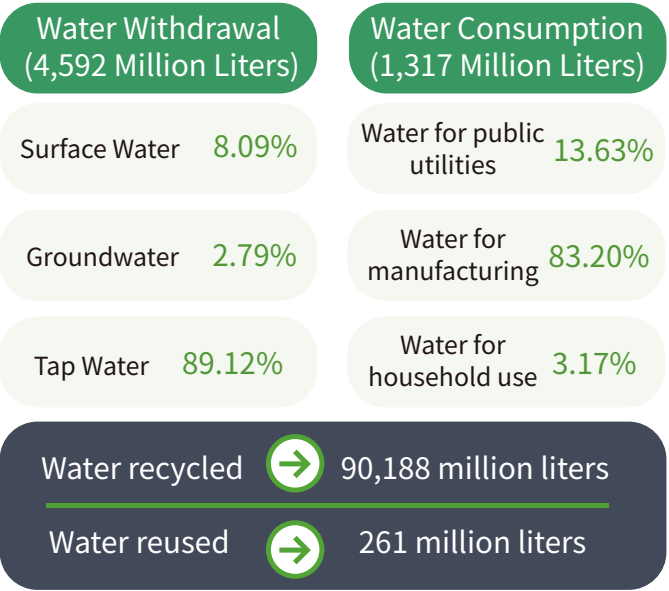




Water Consumption Status in Production Sites

In 2024, Uni-President's total water withdrawal amounted to 4,592 million liters^{Note}, and the total water consumption 1,317 million liters^{Note}. Water was withdrawn from various sources, with 8.09% from surface water, 2.79% from groundwater, and 89.12% from tap water. The total water discharge in 2024 amounted to 3,275 million liters, of which 4.02% was handed over to a third party for treatment, and the remaining 95.98% was discharged from the drains of each plant (surface water). The water withdrawal of Yungkang and Xinshih General Plants, which are located in the higher water source risk area, account for 49.11% of the total water withdrawal and 47.62% of the total water discharge. The water withdrawal intensity in 2024 was 0.90 million liters per NT\$10 million, meeting the target set for the year. However, due to increased production capacity, the total water withdrawal increased, resulting in a 1.12% rise in water withdrawal intensity compared to 2023. In the future, we plan to continue to optimize water consumption efficiency with a water withdrawal intensity of less than 1.00 million liters/NT\$ 10 million (sales revenue). For relevant data, see Appendix I Use of Water Resources for the Past Three Years.

Note: 1 million liters of water=1 thousand cubic meters of water.



Note:

1. Water for manufacturing includes water for soft water systems, boilers, and products.
2. Water for public utilities includes water for cooling towers, washing towers, cleaning and pouring, and fire fighting.
3. Water for household use includes water for drinking, washing and flushing toilets.

3.3.3 Water Conservation Action

Apart from water that is required in production processes, we make an effort to promote efficient water usage in the plant through four water conservation strategies and introduction of water saving projects. These include water source development, process water source improvement, process water recycling, and end-of-pipe wastewater recycling.

Water Saving Strategy

 Water source development	Rainwater: Rainwater recovery equipment installed in the new plant for cooling towers and flushing toilets. Air-conditioning condensate: Recovered into the clean water system or used as refill water for cooling water towers.
 Process Water Source Improvement	Select low-water-consumption machines and establish "Water Balance Management" to control the reasonable consumption of machines in each plant used as the reference of calculating the plant's water recovery rate and water saving rate.
 Process Water Recycling	Extend the scope of water recovery and reuse, while reducing wastewater generation. For instance: steam condensate recovery, RO wastewater, discharge water recovery, and finished barrel jacketed ice water recovery.
 End-of-pipe Wastewater Recovery	According to the classification of the machine's wastewater nature, discharged water quality is checked from time to time, and is effectively treated and recovered by the wastewater treatment plant. For instance, acid and alkaline discharge from the manufacturing process is recovered into the clean water system or into the cooling water tower as secondary water after being treated and monitored.

2024 Water Saving Projects

Xinshih Dairy Product Plant No. 2 - Back-end rinse water reuse project ^(Note)

► A total of NT\$0.04 million was invested, saving 1.42 million liters of water per year, generating an annual benefit of NT\$0.07 million.

1. Current status: At Dairy Plant No. 2, empty containers used for chilled products must be cleaned using a box washer that sprays hot water via a pump. When there is insufficient recovered hot water, the washer's storage tank must be filled with fresh water, which is then heated with steam to the required temperature for cleaning.
2. Improvement measures: There are two idle 10-ton tanks on the 2nd floor of Health Food Plant. Clean rinse water discharged from the sterilization units during processing is now stored in these two tanks. Piping has been installed to deliver this rinse water to the UPN and TR18C box washers at Dairy Plant No. 2, replacing the need to supplement the process with fresh water when recovered hot water is insufficient. This reduces the use of fresh water.
3. Annual benefit: NT\$0.07 million.



Note: "Rinse Water Reuse" refers to collecting clean rinse water discharged during production. It is treated appropriately and reused in production processes to conserve water resources.

3.3.4 Wastewater Management

(GRI 303-2)

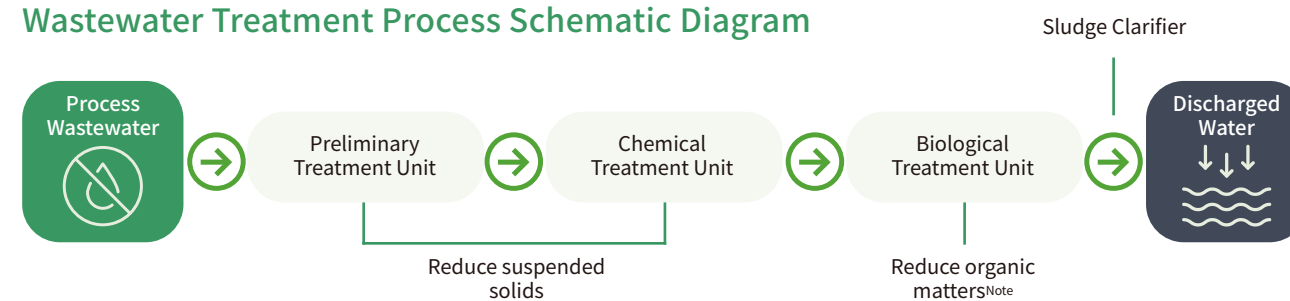
As Uni-President's wastewater is mainly organic, oil and grease, and suspended solids, we have set up wastewater treatment equipment in the plants. Wastewater is discharged after front-end pretreatment and biological treatment, or discharged to a legal outlet or into exclusive wastewater treatment plants in the industrial park. In order to comply with effluent standards, we have established strict standards in accordance with the government's laws and regulations. By doing this, we inspect the functions of wastewater treatment plants and the concentration of effluent in each plant. We have also set up targets for management on annual wastewater quality as the basis for assessing effectiveness.

In 2024, the total wastewater volume of all plant combined amounted to 3,275 million liters, and the average chemical oxygen demand (COD) concentration for the year was 45.07 mg/L, achieving the target of an average concentration of less than 48 mg/L. We will continue to strictly control the wastewater quality targets of the plants in order to reduce the average concentration to less than 40 mg/L in 2030. In contrast, the performance of other testing items such as TSS and BOD this year remained unchanged from the past, indicating the stability of the factory's wastewater treatment performance.

Resource utilization of the fermentation liquid from Liuying TMR ^{Note}

A wastewater treatment system improvement project was implemented in 2024. At Liuying TMR Center, wastewater (fermentation liquid) was previously treated internally and discharged to Liuying Science Park wastewater treatment plant. It has since been repurposed by outsourcing to a contractor who converts the plant-based residue (R-0120) for reuse as a medium for cultivating photosynthetic bacteria that help purify water. Starting from January 2024, wastewater has been regularly transported for treatment, totaling 910 tons by December, and yielding an annual benefit of NT\$422,000.

Wastewater Treatment Process Schematic Diagram



Note: After treatment, the wastewater undergoes a biological treatment process to reduce organic content, followed by sedimentation to become dischargeable effluent.

Uni-President Wastewater Discharge Control Standards

Uni-President Wastewater Discharge Control Standards

- BOD $\leq$ 22.5 mg/L
- COD $\leq$ 48 mg/L
- SS $\leq$ 22.5 mg/L

Effluent Quality Standard

- BOD $\leq$ 30 mg/L
- COD $\leq$ 100 mg/L
- SS $\leq$ 30 mg/L

Standards of Setting Uni-President Effluent Quality Target

- Our self-imposed strict regulations (75% of the regulatory limits)

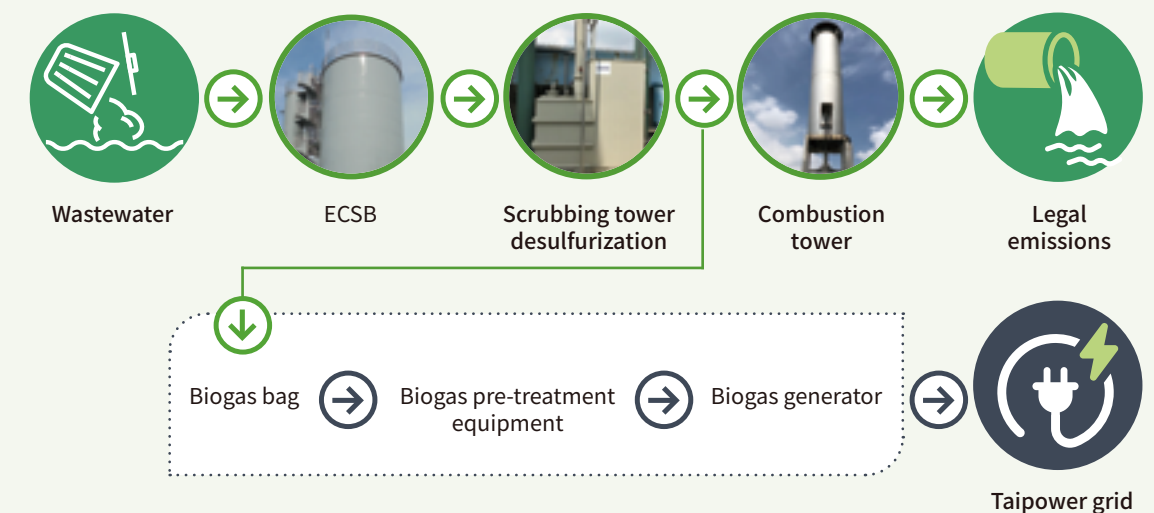
Xinshih Plant – Project of wastewater and biogas power generation

► In 2024, Carbon emission reduced by 276 tons of CO₂e, increasing revenue by NT\$3.75 million

With circular economy and carbon reduction issues being the most pressing issues in the world at the moment, as a responsible company, we are dedicated to pollution reduction at source and waste recycling. We are aware that the high concentration of organic sugar-containing wastewater in the food manufacturing industry produces a large amount of biogas after treatment. Our old approach was to send biogas directly to the combustion tower for burning; however, according to domestic and international research, biogas collected for power generation can maximize the benefits of biogas and reduce methane emissions, posing a beneficial effect to GHG emission reduction.

In view of the environmental benefits of biogas power generation, we installed a biogas power generation system for the first time in Xinshih General Plant, which was fully completed in September 2022. The system collects methane generated by the wastewater treatment system for power generation. In 2023, the power generation reached 541,088 kWh, generating NT\$3.19 million in revenue from selling electricity back to Taipower. In 2024, the power generation increased to 558,337 kWh, resulting in a revenue of NT\$3.75 million.

Biogas power generation schematic diagram



3.4 Pollution Prevention and Management

(GRI 305-7、GRI 306)

3.4.1 Air Pollution Management

(GRI 305-7)

In the production processes of our products, air pollutant emissions are mainly PM, SO_x, NO_x and volatile organic compounds (VOCs). The pollutants may come from material processing, boiler combustion and wastewater treatment. To effectively collect air pollutants, we have installed cyclone dust collectors in the plants while strengthening equipment maintenance to improve equipment availability rate. At the same time, we plan to replace oil-fired boilers with natural gas boilers in all plants in an effort to largely reduce the generation of NO_x and SO_x.

This year, emissions of volatile organic compounds (VOCs), nitrogen oxides (NO_x), and particulate pollutants (suspended particulates/PM) slightly increased, while sulfur oxides (SO_x) remained unchanged. The increase in VOC emissions was mainly due to increased production at Xinshih Plant to meet market demand and an increase in laboratory testing at Yungkang Plant. The increase in NO_x emissions was primarily due to higher natural gas consumption at Yangmei Plant. The increase in particulate pollutants (PM) was mainly due to increased feed production capacity at Yungkang Plant. For air pollution emissions in the past three years, please refer to Appendix I ESG Information. In the future, we will continue to monitor the emission concentrations of VOCs, NO_x, and PM.

3.4.2 Waste Management and Circular Economy

(GRI 306)

Uni-President Enterprises manages waste from a full value chain perspective. Upstream, we ensure proper disposal through our supplier management system and oversight of contract manufacturers' waste flows. Within our operations, we have established the "Waste Management Measure" to ensure that waste is not only properly classified and managed but also removed and treated in accordance with procedures and legal requirements. All operational waste is handled by third-party contractors and includes general waste, food ingredient residues, sludge, recyclable packaging materials, and hazardous waste. In 2024, the total waste generated was 43,356 metric tons, an increase of 5.85% compared to 2023. The increase was mainly due to significant increases in food processing sludge, tea residues, waste paper, and kitchen waste compared to the previous year. For the waste generation and disposal status in the past three years, please refer to Appendix I ESG Information.

Although the amount of waste can be reduced by relying on the improvement of manufacturing processes or other technologies, with the increase of the Company's business, the key to controlling the amount of waste is to effectively increase the waste recycling rate. We actively adopt the circular economy mindset and set KPIs for waste reuse management. Since 2016, we have achieved our waste management targets for eight consecutive years, with a waste recycling rate of 95.70% this year. Specific circular economy cases are explained below:

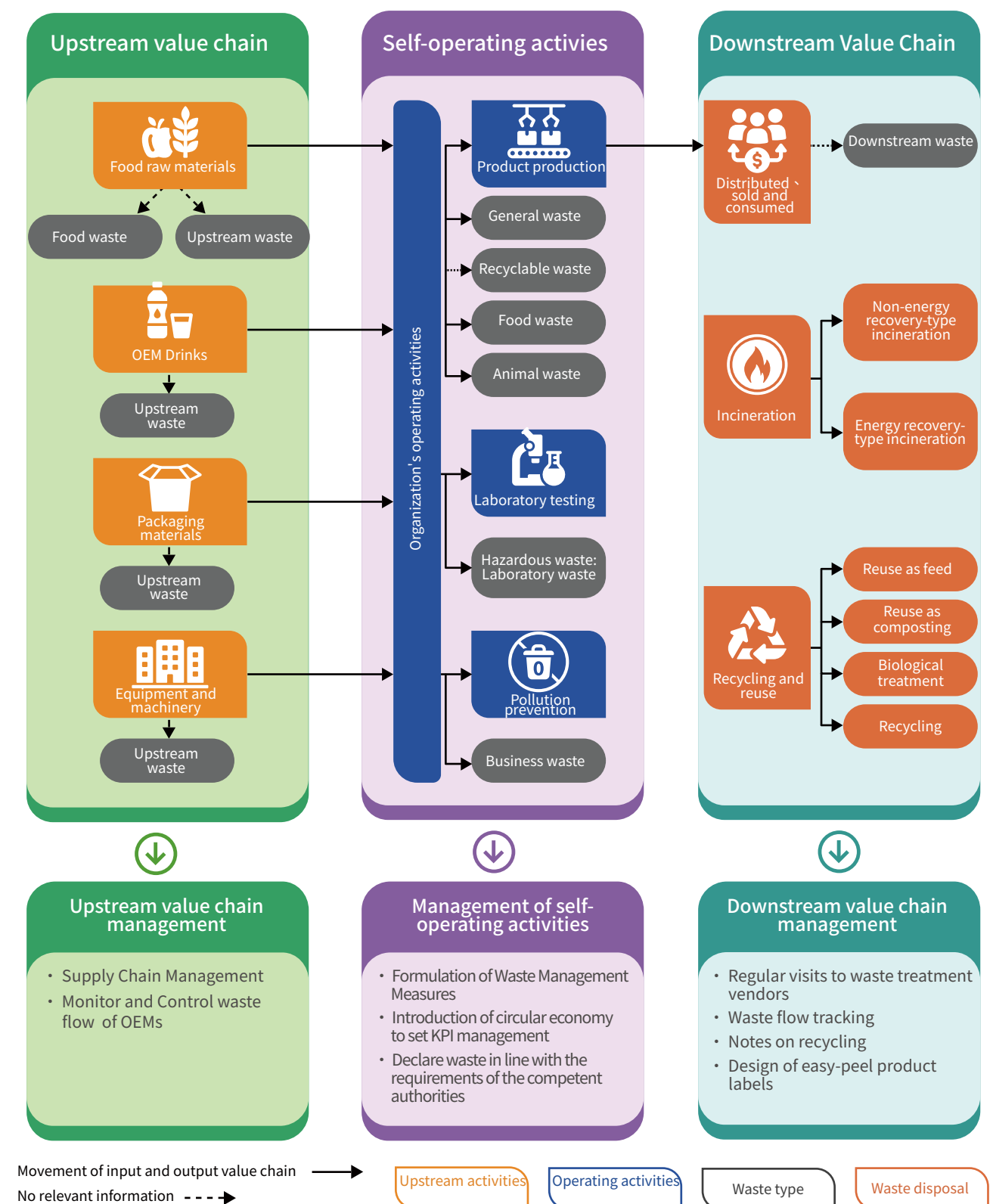
Soybean residue reuse

Uni-President is the first company in Taiwan to have obtained the certification of soybean as a byproduct in the manufacturing process by the Council of Agriculture. Not only this, but we were the first company in Taiwan to use soybean residue as a resource. Soybean residue generated in Xinshih General Plant is converted into feed for dairy cattle, saving waste removal costs while also bringing us new economic benefits. In 2024, we reused as many as 48.47 metric tons of bean dregs.

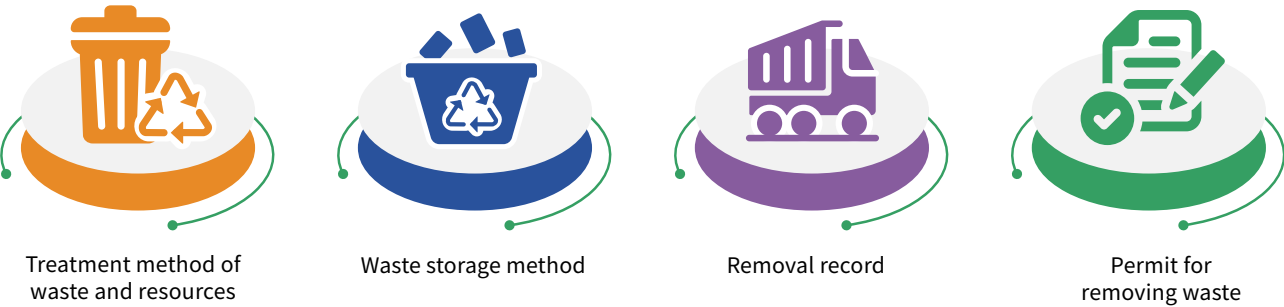
Tracking the flow of factory waste and recyclable materials

In terms of the downstream value chain, as we emphasize the proper waste removal by the vendor, waste generated by Uni-President is removed and recycled by a legal vendor. For waste that may be reused for food, we have clear regulations in place that prohibits its use in food reprocessing or to be used as food to ensure food safety. In addition, in order to strengthen the flow tracking of waste, we use a GPS system to clearly track and inspect the flow of waste, resources, and hazardous waste generated by each plant. The inspection includes treatment of waste and resources, waste storage approaches, disposal records, flow, and transportation licenses. In 2024, a total of 24 waste, resources, and hazardous waste treatment companies were inspected, with a total of 120 tracked. There were no violations discovered in the inspection and tracking results. In addition, we also clearly mark the waste sorting category on the products. Cha Li Won tea drink series, for instance, bear a easy peel removable label, thus minimizing the complexity of the recycling process.

Uni-President Value Chain Waste Flow Chart



Key Items for Waste Treatment Plant Inspection

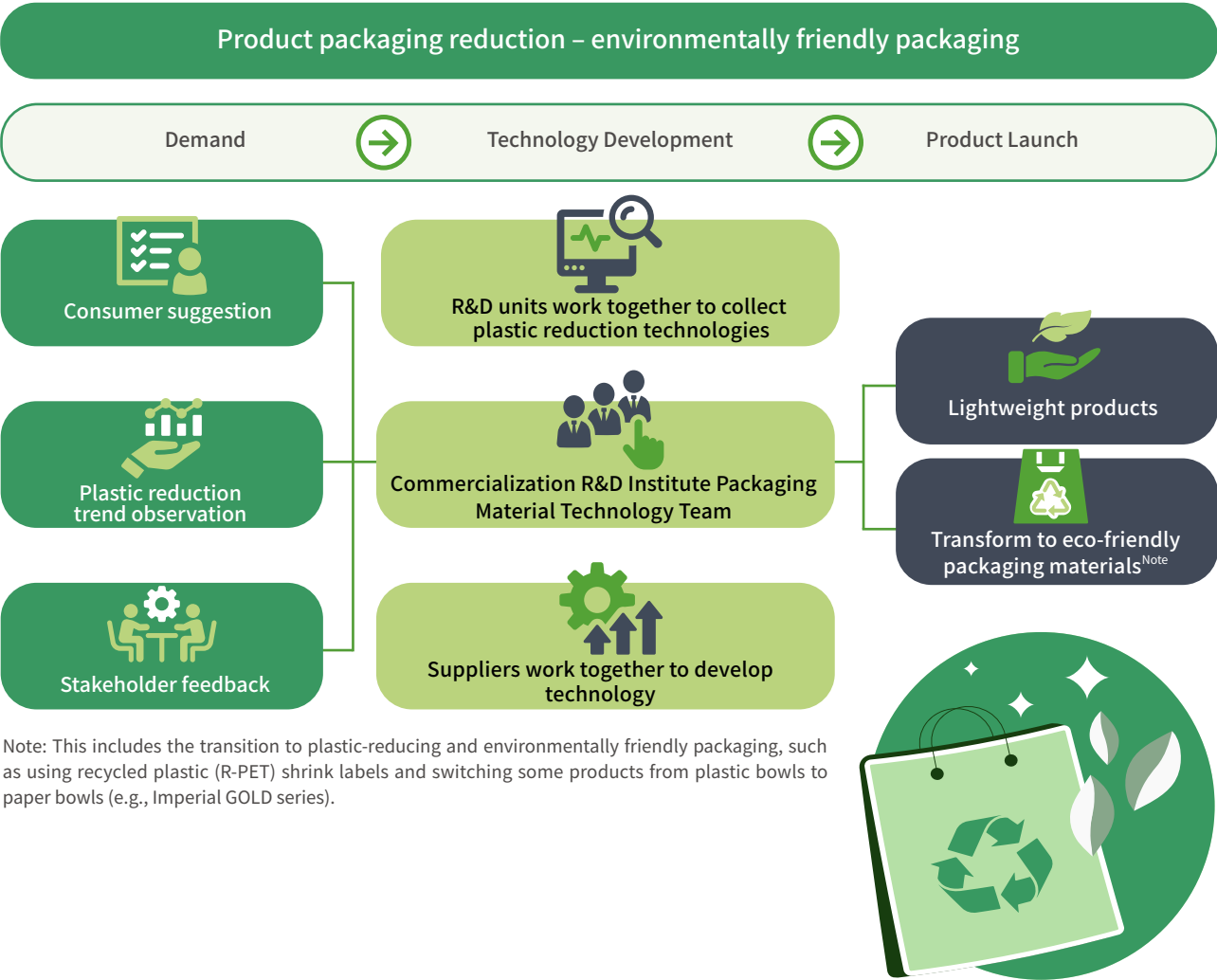


3.5 Packaging Materials Management

(GRI 301-1)

We have long been committed to improving the sustainability of product packaging materials. In recent years, following the global trend of plastic reduction, waste reduction and recycling, we have established a packaging material technology team to actively promote the use of environmentally friendly packaging materials. Uni-President purchases internationally recognized sustainable and environmentally friendly packaging materials every year. The FSC-certified paper packaging materials have been used for Mine Shine, Pure Tea, Café Plaza, and Reisui Extreme fresh milk. In 2024, 53 new items were added, bringing the total number of product applications of FSC-certified paper packaging materials to 76 items. We also regularly check the feasibility of optimizing existing product packaging materials, and actively look for possible plastic reduction measures to gradually reduce the use of plastic while ensuring food hygiene and safety.

Packaging Materials Management and Product Development Process



In 2024, Uni-President Enterprises used a total of 22,593.9 metric tons of plastic in its products, with PET accounting for 64.80% of all plastic packaging materials. (Note) We work toward plastic reduction goals by modifying packaging formats, reducing packaging weight, and applying recycled plastic (R-PET) shrink label materials.

In the future, Uni-President Enterprises will continue to promote plastic reduction in packaging by optimizing, developing, and introducing eco-friendly and functional packaging materials. We are committed to reducing plastic usage, minimizing packaging, and expanding the application of recycled plastics to lower the carbon footprint of our products and packaging.

Note: PET items, including PET bottles and packaging for oil products, accounted for approximately 14,641 metric tons, representing 64.80% of all plastic packaging used.

Aspects	2024 Achievements	Picture
Packaging format modification	Imperial GOLD series and Herbal Stewed Pork Ribs Instant Noodles switched from plastic to paper containers, and reduced plastic by 38.6g per bowl. Implemented in May 2024, 430,194 bowls were used, resulting in a total plastic reduction of 16.61 metric tons. It is estimated that the implementation will reduce plastic by 24.36 tons per year.	
Product packaging weight reduction	- Guoyang Apple-Flavored Soda: The contract manufacturer reduced bottle weight by 1.745g per bottle. Implemented in August 2024, a total of 2,811,408 bottles were produced, saving 4.91 metric tons of plastic. It is estimated that the implementation will reduce plastic by 8.73 tons per year. - Dairy beverage cartons: The inner PE layer was made thinner, which reduced weight by 0.46-0.67g per pack. Implemented in October 2024, a total of 8,406,000 packs were produced, reducing plastic by 4.66 metric tons. It is estimated that the implementation will reduce plastic by 28.26 tons per year.	
Recycled Plastic (R-PET) in Shrink Label Materials Application	PET bottled beverage series: including selected products from Chai Li Won, Mine Shine, iseLect, and Coffee Plaza. Introduced 99,103,549 R-PET shrink labels in July 2024, and reduced the use of virgin plastic by 20.34 metric tons. It is estimated that this upgrade will reduce the use of virgin plastic by 59 tons per year.	