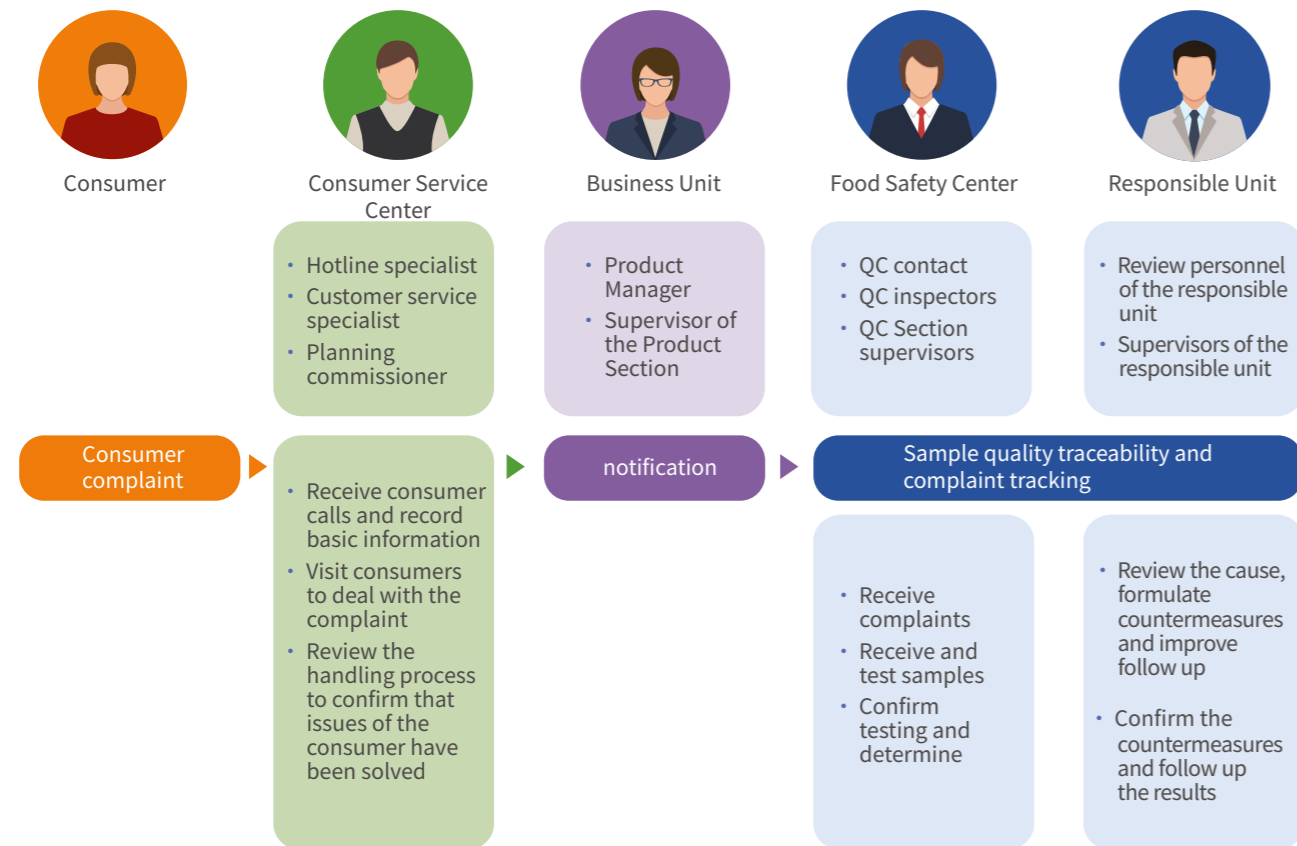


3

Commitment to Environmental Sustainability

Consumer Service Center Complaint Handling Process



Take in the Feedback of Consumers

Issues Received	Understand the Reason	Optimize Measures
The top seal of carton products occasionally has a tighter seal, which makes it difficult to tear open the seal completely.	The opening of top seal is tested by personnel manually opening the boxes, and the seal tightness is not managed with quantitative data.	Introduce tension tester to measure and monitor the top seal of carton-packed products.

Tensile Tester



Schematic diagram of tension test



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 302-3、GRI 305-4)

Material Topic	Operational Environment Management
 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.   
 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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.



Material Topic	Packaging Material Management
 Policy	Introduction and development of optimized, eco-friendly, and functional packaging materials, committed to plastic reduction and weight reduction of packaging materials, recycled plastic applications, and actively promoting the Company's sustainable development.
 Goal	Use eco-friendly materials and implement plastic packaging reduction. ※ See the " Sustainable Value Chain " chapter for the annual management goals and the goal-fulfilling status.
 Responsibility and Resource	Create a Packaging Material Technology Team within the Commercialization R&D Institute to improve and advance product packaging materials.
 Action Plan	<ul style="list-style-type: none"> R&D cooperates with external units (packaging material suppliers, legal entities, etc.) to develop plastic reduction, communicates with consumers through the customer service center, collects relevant suggestions, and continues to implement plastic reduction plans, environmental protection and functional packaging materials. Use FSC-certified paper materials as paper-based packaging materials, and continue to evaluate the feasibility of putting them in use in the production line. Collaborate further with external organizations on researching and developing technologies for the decomposition or recycling of plastic to explore more application opportunities.
 Evaluation Mechanism	Continue to implement plastic packaging reduction projects, reduce the intensity of plastic use, and apply environmentally friendly packaging materials (such as lightweight packaging materials, green packaging materials, recycled plastics, etc.).
 Grievance Mechanism	The Consumer Service Center receives comments from our consumers via multiple channels (0800 hotline, official website, service mailbox, retail feedback). Gain insight into customers' thoughts regarding product packaging materials, and then provide feedback to the Packaging Material Technology Team; convert feasible suggestions into actions of packaging material reduction and plastic reduction through systematic management.

Environmental Management Performance for the Past 3 Years

Environmental Management Performance	Unit	2021	2022	2023
Water Consumption (Water Withdrawal) Intensity	Million liters / \$10 million	0.99	0.90	0.89
Waste intensity	Metric tons / \$10 million	8.39	7.80	8.43
Air pollution emission intensity	Metric tons / \$10 million	0.014	0.011	0.012
Self-Operating GHG emission intensity ^{Note2}	Metric tons of CO ₂ e/ \$10 million	36.25	35.52	34.76
Energy intensity	GJ / \$10,000	0.35	0.34	0.34

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

Legal Compliance:

- We abide by the government's environmental regulations and stakeholder concerns and formulate the Company's environmental regulations.
- Supervisors at all levels lead by example and perform supervisory duties to ensure that the Company is on par with regulatory requirements.

Pollution Prevention:

- We implement source management right at the product development stage to implement waste reduction, energy conservation, waste to resources, recycling, clean production, and green logistics and transportation, in order to reduce emissions and mitigate ecological and environmental impacts.
- We also establish the environmental management system (ISO 14001), implement greenhouse gases (GHGs) inventory (ISO 14064-1), and quantify and communicate the carbon footprint of products (PAS2050 or ISO 14067).

Green Procurement:

- By establishing a green procurement mechanism, implementing supply chain management, and prioritizing green material procurement, we help suppliers reduce wastage and pollution.

Performance Management:

- We establish objectives for environmental improvement, implement active and passive performance indicator management, improve management performance, and disclose relevant information regularly.

Communication Mechanism:

- We establish communication and consultation channels and communicate our environmental policy to all members within the organization and stakeholders for them to understand their responsibilities.
- We also disclose environment-related information, raise the environmental awareness of stakeholders, and make improvements based on the opinions of stakeholders.

Continual Improvement:

- To popularize environmental training and strengthen the awareness of all employees.
- To implement the environmental protection system and standards as well as systemic management for continuous improvement.

Main targets, subjects and introduction programs for ISO 14001 in 2023

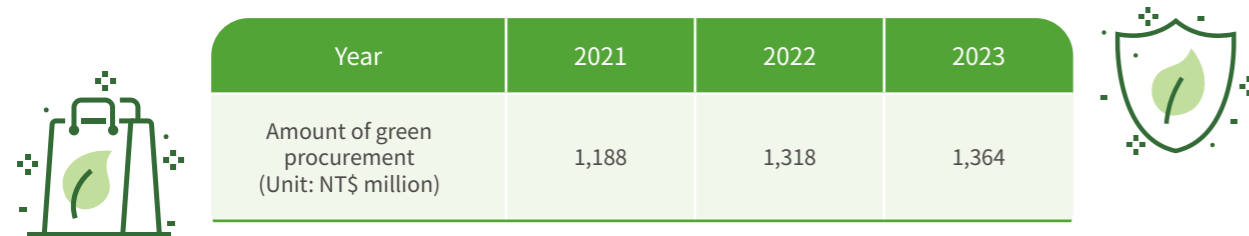
Management Target	Introduction Program	Annual Management Achievement
Enhancement of environmental protection awareness	To provide environmental and general training and education	180 employees – hours/year
	Monthly environmental texts	12 sessions/year
Meet regulatory requirements	To implement level 3 auditing on environmental protection parameters	21 deficiencies identified in internal audit and 0 violation on environmental protection.
	Conduct annual environmental emergency response drills	Yungkang General Plant Conduct environmental emergency response drills
	Installation and improvement of scrubbers in the wastewater treatment plant	Yangmei General Plant The odor in the surrounding environment of wastewater plant is less than 50
Air Pollution Reduction	Prevent dust from flying during flour transportation	Hukou Park Cumulative reduction of dust emission by 3%
	Recycling and reuse of softened water from tower washing' s activated carbon filter Modify the softened water manufacturing process to improve water conservation Improvement by changing RO water for cleaning into softened water Optimization of natural gas energy consumption for ovens	A total of 5,045 tons of softened water of all general plants was saved this year Hukou Park Save 36,130 cubic meters of natural gas
Reduction of energy consumption	Energy efficiency improvement project for air compressor systems and chilled water mainframes in the plants	A total of 1,194,459 kWh/year electricity of all general plants was saved
	Project to improve the energy efficiency of in-plant cooling towers	
	Project to improve the efficiency of in-plant freezers and motors	
	Sterilization system energy efficiency improvement project	
	Machinery replacement project	
Energy consumption improvement for raw water pumping		
Energy-saving project for renewal of evaporators in finished product warehouses		

2023 Uni-President Environmental Footprint



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 on 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\$1.364 billion in 2023, an increase of 3.54% compared to the previous year.



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 38.72% of the total procurement amount of paper packaging materials in 2023. The FSC-certified paper packaging materials have been used for 23 products.

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 in our products, in the past three years, the proportion of SSAP soybeans purchase amount accounted for more than 30% of all soybeans purchased. The procurement volume in 2023 was 3,374 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

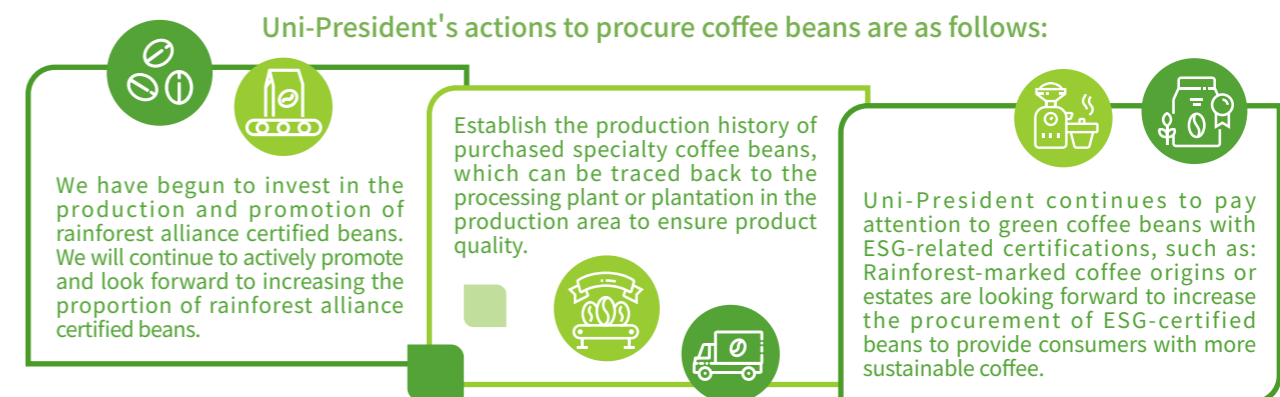
The tea products of Uni-President are well received by consumers. In order to ensure food safety and fulfill our commitment to sustainability, Uni-President has formulated the management principles for tea procurement through the Commercialization R&D Institute and actively promotes local procurement to reduce the carbon footprint of tea raw materials in life cycle. In 2023, the local tea procurement volume of Uni-President reached about 1,210 tons, accounting for 34.57% 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, in addition to complying with the requirements of pesticide regulations, we also monitor the herbicides in tea leaves to ensure the safety of consumers and strengthen the rationality of herbicides in tea plantations. At the same time, we have implemented a complete history system to enable 100% traceability of tea raw materials, which can be traced back to the tea plantations. Uni-President is also actively promoting the Ethical Procurement Policy, and will continue to expand the scope of application in the future to further enhance the sustainability of our tea products.

Note: Local procurement is defined as first-tier suppliers in Taiwan, without taking in account the location of second-tier suppliers.

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\$ 449.66 million. The amount of expenditure in 2023 increased by NT\$ 4.02 million compared to 2022. In addition to continuing to invest in the update of 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 2023, resulting in an increase of 8.64% in container recycling and disposal fee compared with 2022. 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

(GRI 301-1)

To promote a green economy, we continue to optimize raw material utilization rate. We introduced a number of technologies in the product process in 2023. These technologies included wear and tear reduction in the production line of raw materials for fresh milk and improvements in soybean and tea extraction technology. In doing so, production capability has improved compared to past years, to further reduce resource consumption.

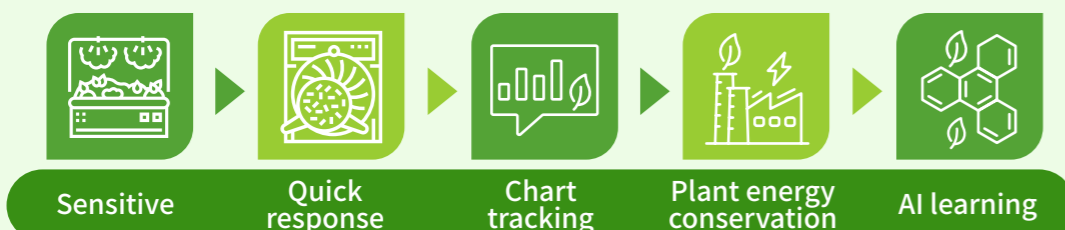
<p>Fresh Milk</p> <p>The actual output rate of fresh milk in 2023 was 96.81%, an increase of 0.01% compared to the same period last year. In 2024, we will aim to achieve a raw material yield rate of 96.82%, and continue to subdivide the production process for project improvement.</p>	<p>Soy Milk</p> <p>In 2023, 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 96.99%. 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 extraction rate of 97.50% by 2024 to reduce the wastage of raw materials.</p>	<p>Tea leaves</p> <p>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. In 2023, the tea juice extraction rate exceeded the original target of 95.45%. In 2024, our goal is to achieve a tea juice extraction rate of 96.00%.</p>
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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)

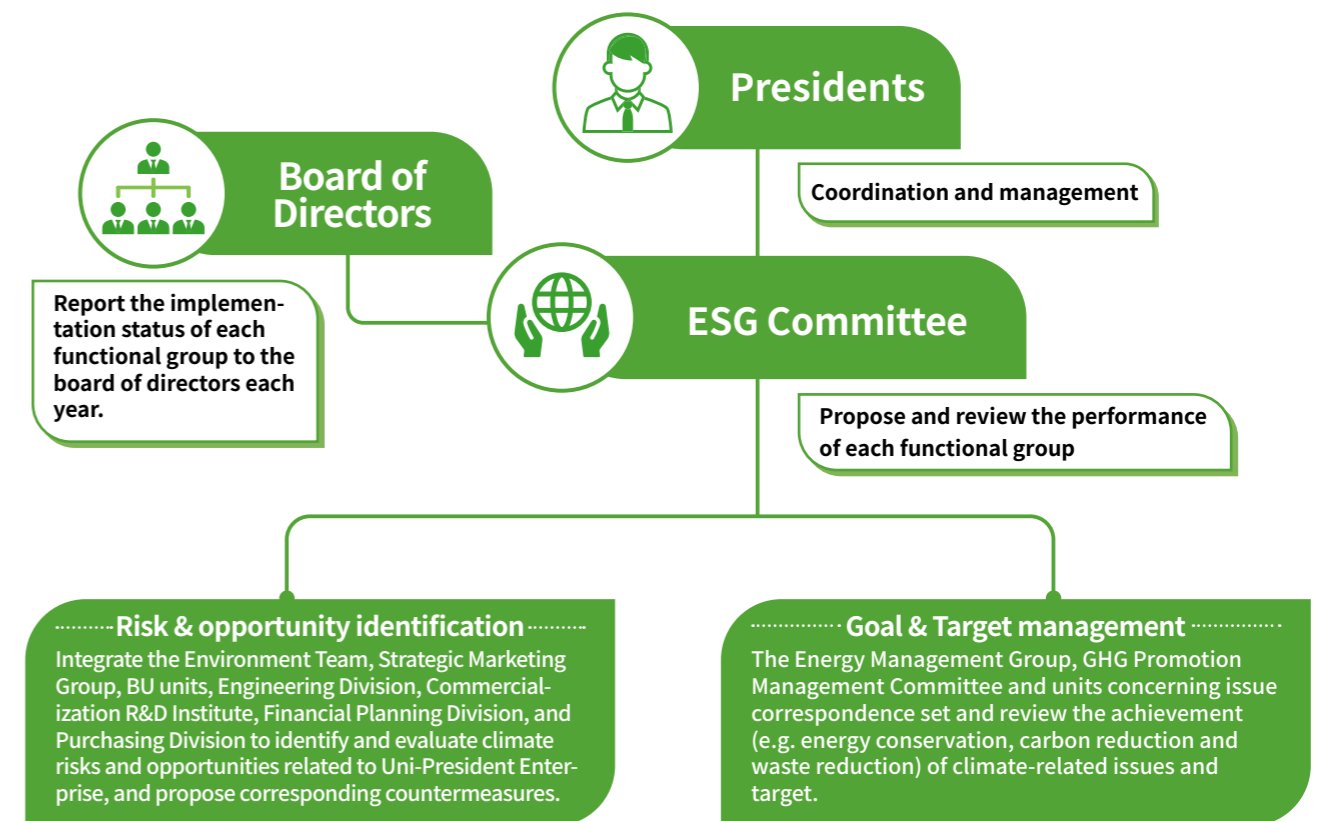
According to the AR6 Synthesis Report of the United Nations Intergovernmental Panel on Climate Change (IPCC), climate change has caused extensive negative impacts on the natural environment and human society, and it is not only necessary for human beings to slow the continuous rise of global temperature through practical actions such as carbon reduction but also to improve the ability to adapt to the impacts of climate change. In recent years, climate-related disasters have become more frequent around the world. The 2024 WEF Global Risks Report pointed out that the top four long-term risks are all nature-related risks, among which extreme climate events have become the top risk topic. 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

In terms of climate change governance, the Presidents of Uni-President assumes the overall supervision responsibility and supervises the control status of climate change issues by the ESG Committee. Based on the business scope and operational development status of the Company, the ESG Committee conducts an overall assessment of climate change risks and opportunities, formulates appropriate countermeasures, and reports the implementation status of each functional group to the Board of Directors every year. Through a comprehensive governance structure and mechanism, we reduce the impact of climate issues on our operations and enhance our operational resilience against climate-related issues.

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. In 2023, we further quantified the financial impact of certain issues on Uni-President, and further reviewed and adjusted the response to and management of key climate risks and opportunities for the corresponding issues.






Response and Management of Climate Risk and Opportunity Issues

Climate risks and opportunities	Potential impact to Uni-President	Time interval
<p>Physical risks</p> <p>Increase of severity of extreme weather events such as typhoons, floods and droughts</p>	<p>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.</p>	<p>Short-term (less than three years)</p>
<p>Transformation risk</p> <p>Requirements and monitoring of existing products and services</p>	<p>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.</p>	<p>Mid-term (three to five years)</p>
<p>Transformation risk</p> <p>Climate-related policy</p>	<p>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.</p>	<p>Mid-term (three to five years)</p>



Financial impact	Adaptive management strategy	Management Target
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The Commercialization R&D Institute, FSC 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. 	<ul style="list-style-type: none"> Product labelling is in compliance with regulatory standards. Introduction of most suitable, environmental and functional packaging materials.
<ul style="list-style-type: none"> 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: <ol style="list-style-type: none"> Depreciation of equipment is increased. Operating costs increased (procurement of renewable energy power certificates). Operating expenses increased (payment of allowance). 	<ul style="list-style-type: none"> Inventory and performance evaluation of annual energy consumption and greenhouse gas emission of the organization. Product carbon footprint introduction. Introduce energy-saving projects: In 2023, the total electricity reduction was 6,912 thousand kWh, the natural gas consumption was reduced by 166 thousand cubic meters, the water saved was 23.39 million liters, and there was a reduction of 4,417 metric tons of CO₂e Installation of biogas power generation equipment: The power generation in 2023 was 541,088 kWh, which was sold back to Taipower to generate a total income of NT\$ 3.19 million. It is expected to generate 546,000 kWh in 2024 and the expected benefit is NT\$ 3.82 million in revenue. Installation of photovoltaic equipment: In 2023, the power generation was 110,866 kWh, and the total emission reduction was 54.88 metric tons of CO₂e. 	<ul style="list-style-type: none"> The annual average power saving rate of each general plant is >1% for 2020-2024. (Average power saving rate was 3.40% in 2023). 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
 <p>Stakeholder concerns</p>	<ul style="list-style-type: none"> 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)
 <p>Raw materials management resilience</p>	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)
 <p>Improve resource utilization efficiency</p>	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
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Continue to refine quality products. Introduction of most suitable, environmental and functional packaging materials.
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 also plan to install 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\$ 107 million.

In addition, the announcement of "Carbon Fee Regulations (Draft)" 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. Since the draft has not yet been officially passed, we pre-assess the related costs with a carbon price of NT\$ 300/ton. According to the current draft 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.




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.

\$



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. By taking this approach, we encourage all employees to work together towards energy conservation and carbon reduction. In 2023, incentives granted amounted to NT\$0.39 million.

To strengthen internal employees' understanding of carbon pricing, Uni-President started to officially introduce an internal carbon pricing mechanism in January 2024. As per the draft amendments made by the Ministry of Environment, the internal carbon fee is set at NT\$ 300/ton CO₂e. The head office collects carbon fees from various business units to use as a source of funding for future carbon reduction actions. (The actual collection benchmark of the internal carbon fee will be implemented in accordance with the laws and regulations of the Ministry of Environment)

Energy consumption status

In 2023, Uni-President consumed 1,665,094 gigajoules (GJ) of energy, of which 43.96% came from purchased electricity, and 0.0014% from renewable energy. Moreover, natural gas takes up the majority of the direct energy consumption, making up 54.42% of the total energy consumption, indicating that electricity and natural gas are the principal sources of energy for Uni-President. 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.

Enterprises aiming to cut down on carbon are primarily tasked with reducing energy usage. Uni-President controls energy usage by establishing the power-saving rate for each plant. The average power-saving rate of the general plants in 2023 was 3.40%. In the future, Uni-President will intensify the management of each general plant's power-saving rates, hoping to reduce scope 1 and scope 2 emissions by 2030 by 38% from the 2005 level.

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 2023, Uni-President generated a total of 652,031 kWh of electricity through biogas, solar, and wind power generation methods. In 2023, some of the solar and biogas power generation was converted from self-use to sales, and the total sales of renewable energy reached 645,732 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, the installation of 2.05MW in Xinshih Logistics Park, 0.35MW in Xinshih General Plant, and 0.16MW at Yangmei General Plant in solar power generation is expected.



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 are made according to ISO 14064-1:2018 GHG inventory criteria in all plants and passed the external verification since 2021.

In 2023, 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 2023, the total GHG emissions was 1,567,139 metric tons of CO₂e, and among this, the GHG emissions for Scope 1 and Scope 2 (self-operations) were 168,921 metric tons of CO₂e (account for 11% of the total emissions), while the GHG emissions for Scope 3 (value chain) were 1,398,218 metric tons of CO₂e (accounting for 89% of total emissions).

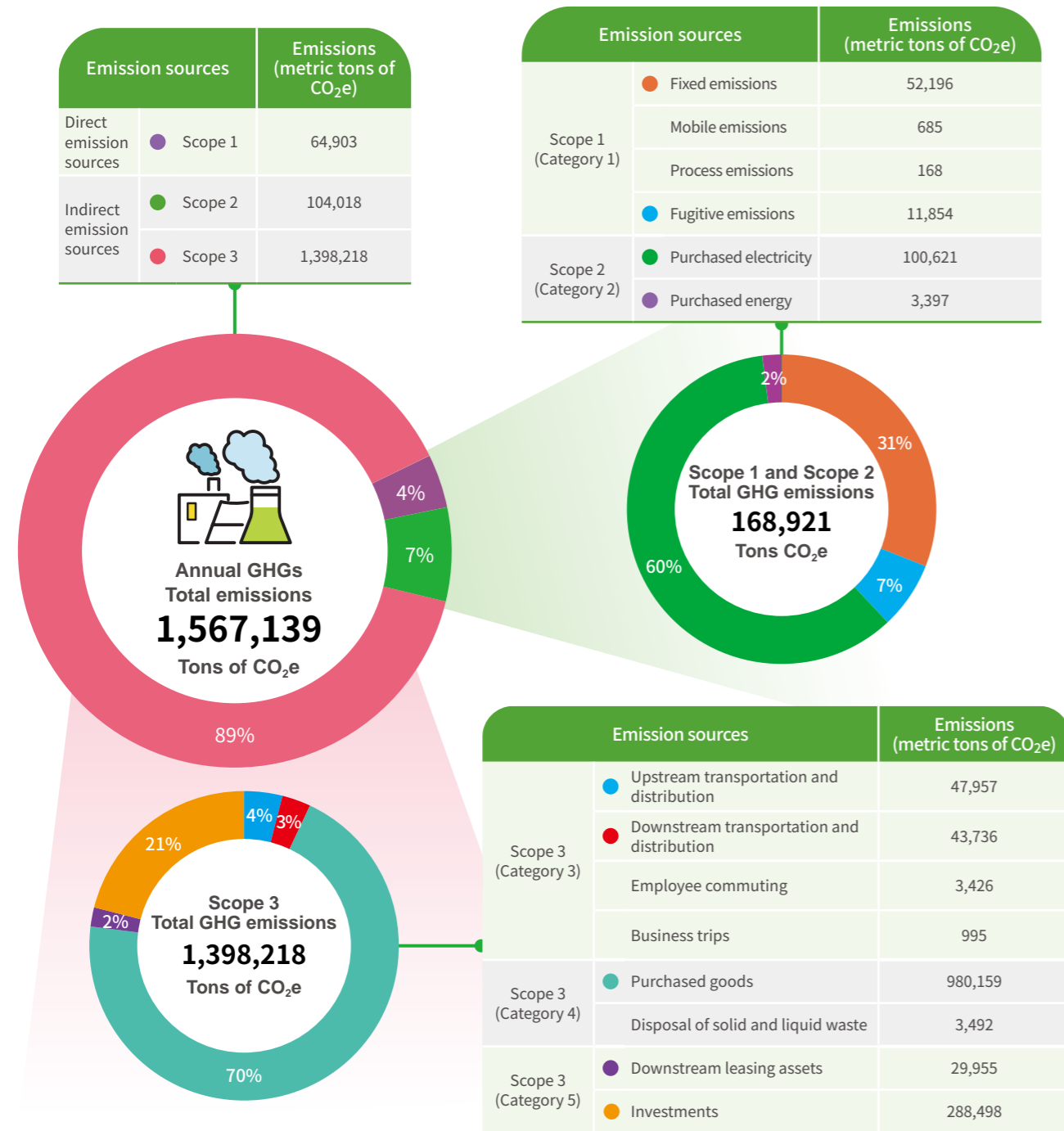
Of all the GHG emissions from self-operations (Scope 1 and Scope 2), 100,621 metric tons of CO₂e were the main emission source generated by purchased electricity, accounting for 60% of the GHG emissions from self-operations; followed by fixed emissions, including emissions generated from the use of fuel for power generation engines, boilers, and heaters, with emissions of 52,196 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 980,159 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 288,498 metric tons of CO₂e, accounting for 21% of GHG emissions in the value chain.

In 2023, the self-operating (Scope 1 and Scope 2) GHG emission intensity was 34.76 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 287.76 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.



2023 GHG emissions of Uni-President



Note:

- The scope of inventory in 2023 included Yungkang General Plant, Xinshih General Plant (including ice general plant and cold food plant), Taichung General Plant, Yangmei General Plant (including Rueifang Mineral Water Plant) and Chungli General Plant (including Madou Bread Plant), TMR, logistics warehouses, Taipei branch, Kaohsiung Office, Neihu Office, Wugu Office, and Hukou Park (including the ice cube 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, SF₆.
- 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 2023, which was 0.495 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 began to make inventories on Scope 3 GHG emissions since 2021 and the emission coefficients took reference from 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 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 medium and long-term reduction targets, Uni-President evaluates, plans and implements various emission reduction measures based on the results of the greenhouse gas inventory. In terms of self-operation emissions, we have replaced fuel oil with low-polluting natural gas, supplemented by the annual implementation of energy-saving projects. The content of the projects includes measures such as equipment replacement and modification, equipment parameter optimization, and production process control, etc. The energy-saving projects of each factory in 2023 focus on the replacement of water chiller main units and the improvement of system operations. In total, the energy-saving projects this year reduced 913.55 metric tons of CO₂e and saved NT\$ 5.29 million. In addition, to manage the carbon footprint of products, we continue to carry out carbon footprint label certification of our products. Among them, Extra Large Tung-I Noodles - Minced Pork Flavor (85g) has also obtained the carbon reduction label certification. The estimated carbon footprint certification fee in 2025 is approximately NT\$ 0.8 million (certification period is five 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 2023, 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.

2023 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

2023 Representative Energy Saving and Carbon Reduction Projects

Yangmei Dairy Product Plant No. 1 and Xinshih Beverage Plant No. 2 - Energy conservation improvement project for water chiller system

Annual savings of 783,862 kWh of electricity; reduction of 2,822 GJ of energy consumption; reduction of 394 tons of CO₂e emissions; annual cost savings of NT\$ 3.28 million

- Add water chiller dispenser joint control system to specific host to activate or shut down the water chiller dispenser according to actual needs. In addition, through signal series device and cooling tower motor, the cooling tower can be started and stopped according to the operation of water chiller main engine. The average unit energy consumption of Xinshih Beverage Plant No. 2 and Yangmei Dairy Product Plant No. 1 after the improvement decreased by about 19.1% and 35.1%, respectively, compared with that before the installation.

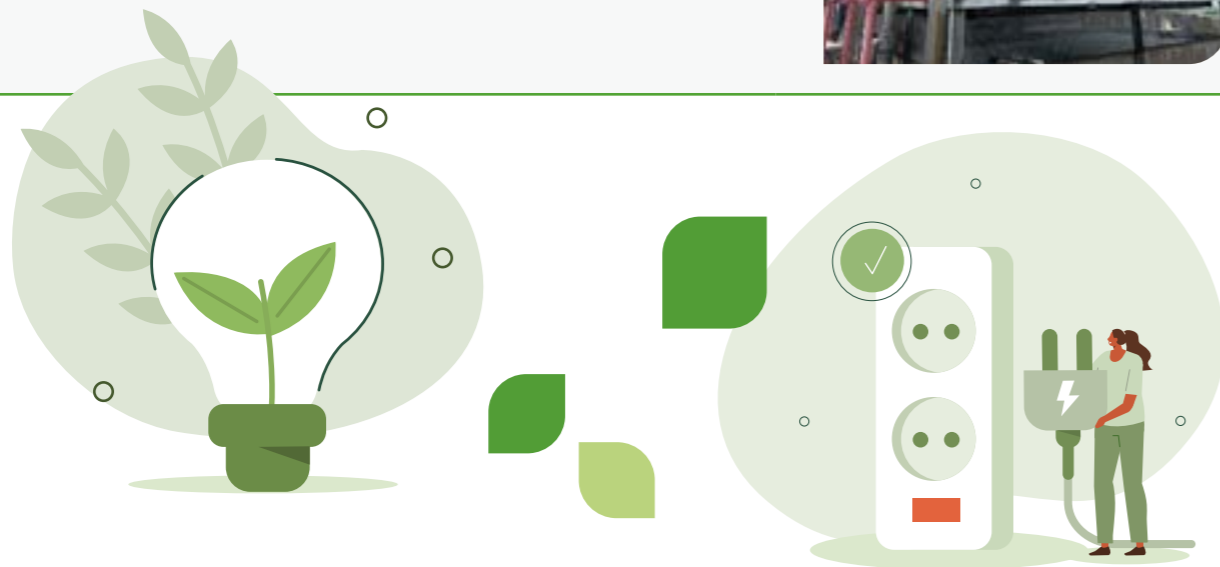


Xinshih Dairy Product Plant No. 1 - Water chiller building energy saving project



Annual savings of 686,768 kWh of electricity; reduction of 2,470 GJ of energy consumption; reduction of 349.56 tons of CO₂e emissions; annual cost savings of NT\$ 0.61 million

- Renovate the evaporative condenser in ice water building, and improve the water chiller output and flow rate to increase energy efficiency. After the improvement, the difference between unit energy consumption before and after cleaning was measured, and the average energy load of water chiller building increased by 4%.



3.3 Water Resources Management

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

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 2023 water consumption data. The results indicate the control of water conditions and production scheduling are management priorities.

Water consumption risk analysis of each plant

	Yangmei Plant	Chungli Plant	Hukou Park	Taichung Plant	Yungkuang Plant	Xinshih Plant
Water condition risk ^{Note 1}	Shihmen Reservoir	Baoshan Reservoir	Liyu Carp Lake Reservoir	Nanhua Reservoir	Wushantou Reservoir and Tsengwen Reservoir	
Water consumption impact percentage ^{Note 2, Note 3}	0.299%	0.752%	0.003%	0.148%	0.601%	
Overall water consumption risk ^{Note 4}	<div style="display: flex; justify-content: space-between; width: 100%;"> <div style="width: 33%; background-color: #90EE90; height: 10px;"></div> <div style="width: 33%; background-color: #3CB371; height: 10px;"></div> <div style="width: 33%; background-color: #191970; height: 10px;"></div> </div> <p style="text-align: center;"> Low Risk Moderate Risk High Risk </p>					

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: 2023 plant water intake/2023 water consumption announced by each reservoir.

Note 3: The announced water consumption of each reservoir in 2023: Refer to 2023 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	<ul style="list-style-type: none"> Response to laws and regulations Water consumption fee collection method Water Pollution Control Act 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Insufficient water resources Increased chance of heavy rainfall and floods 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Decide on, announce, and implement countermeasures Coordinate the work and capture status 	Technical Group
 Monitoring water consumption	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Dispatch water trucks Conclude transportation service agreement 	Logistics Division
 Water price management	<ul style="list-style-type: none"> Conclude agreements on the unit price with water suppliers 	Purchasing Division

 Monitoring water quality	<ul style="list-style-type: none"> Control water quality and water truck safety 	Food Safety Center
 Water conservation measures	<ul style="list-style-type: none"> 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


 Water rationing measures		 Emergency response of Uni-President
Phase I	<ul style="list-style-type: none"> Reduce water supply pressure Stop water supply to non-urgent or unnecessary facilities 	<ul style="list-style-type: none"> 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 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 II	<ul style="list-style-type: none"> Stop high consumption water supply users Reduce water supply 	
Phase III	<ul style="list-style-type: none"> Stop water in turns by area or in all areas 	
Phase IV	<ul style="list-style-type: none"> Fixed time and fixed quantity supply 	

Water shortage response drill plan



In 2023, a total of 7 plant areas were subjected to water exercise drills

To cope with extreme climate events caused by climate change, Uni-President implements a water shortage response drill every year. Ensure how each plant responds to water shortages during the dry season, and document the items that need to be optimized during the drill. In 2023, we completed water exercise drills at 7 plant areas, put forward 9 suggestions for optimizing water-handling processes, and formulated related improvement strategies and guidelines.

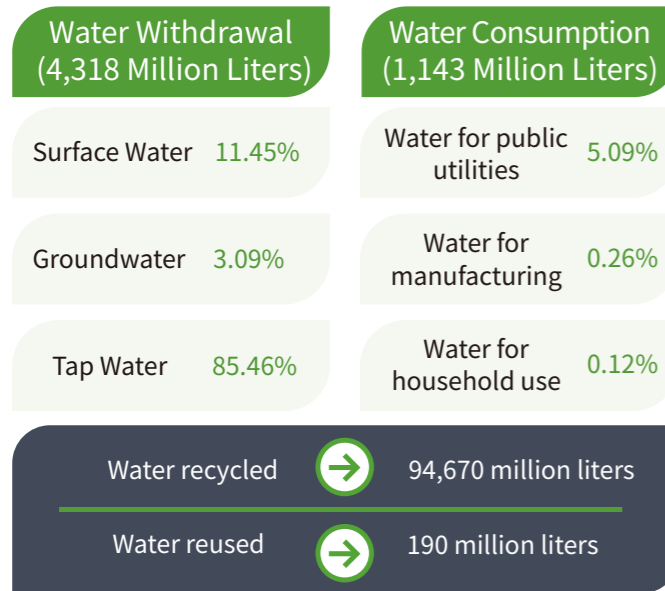


Note: The areas where the drills took place include Yungkang General Plant, Xinshih General Plant, Yungkang Ice Products Plant, Madou Bakery Plant, Xinying Refrigeration Plant, Yangmei General Plant, and Chungli General Plant.

Water Consumption Status in Production Sites

In 2023, Uni-President's total water withdrawal amounted to 4,318 million liters^{Note}, and the total water consumption 1,143 million liters^{Note}. Water was withdrawn from various sources, with 11.45% from surface water, 3.09% from groundwater, and 85.46% from tap water. The total water discharge in 2023 amounted to 3,175 million liters, of which 3.86% was handed over to a third party for treatment, and the remaining 96.14% was discharged from the drains of each plant (surface water). The water withdrawal of Yung Kang and Xinshih General Plants, which are located in the higher water source risk area, account for 49.97% of the total water withdrawal and 50.49% of the total water discharge. The water withdrawal intensity in 2023 decreased by 1.11% compared to 2022, reaching the 2023 target. 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

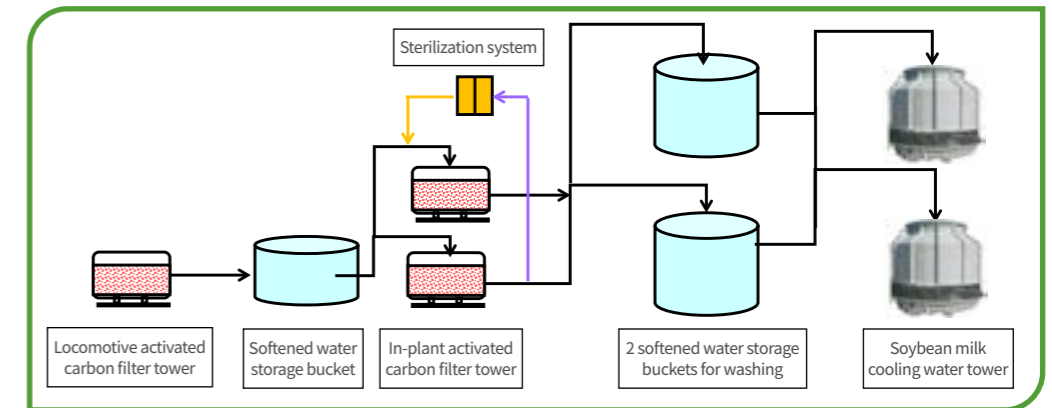
Water source development	Rainwater: Rainwater recovery equipment installed in the new plant for cooling towers and flushing toilets. Air-conditioning condensate: Recovered into the clean water system or used as refill water for cooling water towers.
Process Water Source Improvement	Select low-water-consumption 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.

2023 Water Saving Projects

Xinshih Beverage Plant No.1- Softened water recycling and reuse

▶ A total of NT\$0.11 million was invested, saving 3.9 million liters of water per year

- Modify the washing and drainage pipelines of the activated carbon filter tower in the factory so that softened water previously discharged from the washing process can be recycled and reused for water make-up and cleaning of the cooling water tower.



3.3.4 Wastewater Management

(GRI 303-2)

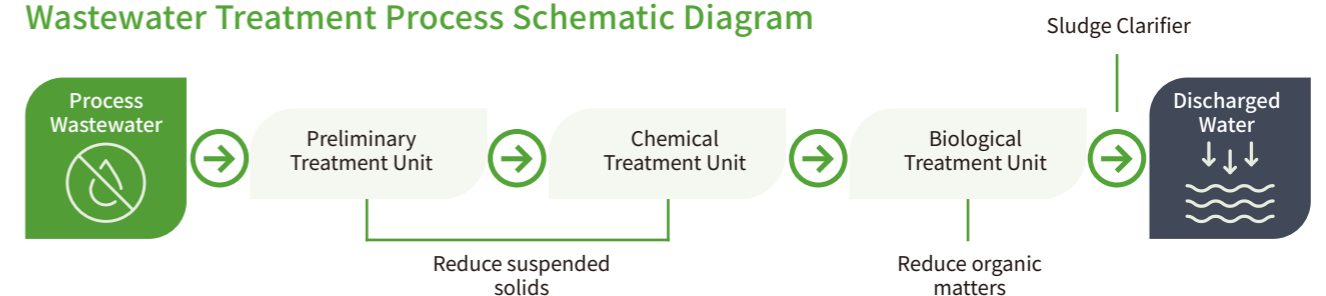
As Uni-President's wastewater is mainly organic, oil and grease, and suspended solids, we have set up wastewater treatment equipment in the plants. Wastewater is discharged after front-end pretreatment and biological treatment, or discharged to a legal outlet or into exclusive wastewater treatment plants 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 2023, the total wastewater volume of all plant combined amounted to 3,175 million liters, and the average chemical oxygen demand (COD) concentration for the year was 42.11 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 2026. 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

In 2023, a wastewater treatment system improvement project was implemented at a cost of NT\$ 0.23 million to reuse the fermentation liquid from Liuying TMR Center as a resource for photosynthetic bacteria to purify water. Cleanup and transportation began in January 2024, and the annual wastewater treatment volume is expected to be reduced by 1.2 million liters, with an estimated annual benefit of NT\$ 1.38 million.

Wastewater Treatment Process Schematic Diagram



Uni-President Wastewater Discharge Control Standards

<p>Uni-President Wastewater Discharge Control Standards</p> <ul style="list-style-type: none"> • BOD ≤ 22.5 mg/L • COD ≤ 48 mg/L • SS ≤ 22.5 mg/L 	<p>Effluent Quality Standard</p> <ul style="list-style-type: none"> • BOD ≤ 30 mg/L • COD ≤ 100 mg/L • SS ≤ 30 mg/L 	<p>Standards of Setting Uni-President Effluent Quality Target</p> <ul style="list-style-type: none"> • Our self-imposed strict regulations (75% of the regulatory limits)
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Xinshih Plant – Project of wastewater and biogas power generation

▶ Carbon emission reduced by 368 tons of CO₂e per year, increasing revenue by NT\$3.19 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, and generated 541,088 kWh of power in 2023. A total of NT\$ 3.19 million in revenue was generated for selling electricity back to Taipower. The estimated power generation in 2024 is 546,000 kWh, and the expected benefit is NT\$ 3.82 million in revenue.

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.

Emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO_x) increased slightly this year. The increase in volatile organic compound (VOCs) emissions was mainly due to the increase in production volume of Xinshih General Plant and Yangmei General Plant in response to market demand. The increase in nitrogen oxide (NO_x) emissions was mainly due to the increase in natural gas consumption at Xinshih General Plant and Hukou Park, and the change in the emission coefficient of Yungkuang General Plant and Yangmei General Plant. The difference in emissions of sulfur oxides (SO_x) and particulate pollutants (particulate matter (PM)) comes from changes in the emission coefficient. For air pollution emissions in the past three years, please refer to Appendix I ESG Information. In the future, we will continue to pay attention to the emission concentrations of volatile organic compounds (VOCs) and nitrogen oxides (NO_x).

3.4.2 Waste Management and Circular Economy

(GRI 306)

At Uni-President, we manage waste from the perspective of the value chain as a whole. In terms of upstream value chain, we ensure proper treatment of waste by upstream suppliers through a supplier management system, while monitoring the waste flow of our OEMs. For our operating activities, we have established the "Waste Management Measures" to ensure that not only is all waste properly classified and managed, but waste must also be removed and treated in accordance with procedures and regulations. All waste generated in the process of our operation is disposed of by an outsourced vendor. Waste includes: general waste, food material waste, sludge, recycled packaging materials, and hazardous waste. The total amount of waste generated in 2023 was 40,959 metric tons, an increase of 12.5% compared to 2022. The increase in waste generation was mainly due to the increase in the production of soy milk and tea products by Xinshih General Plant and Yangmei General Plant according to market demand. The amount of bean dregs and tea residues increased by 2,602 metric tons and 616 metric tons compared to 2022, respectively. 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 seven consecutive years, with a waste recycling rate of 95.64% this year. Specific circular economy cases are explained below:

Soybean residue reuse

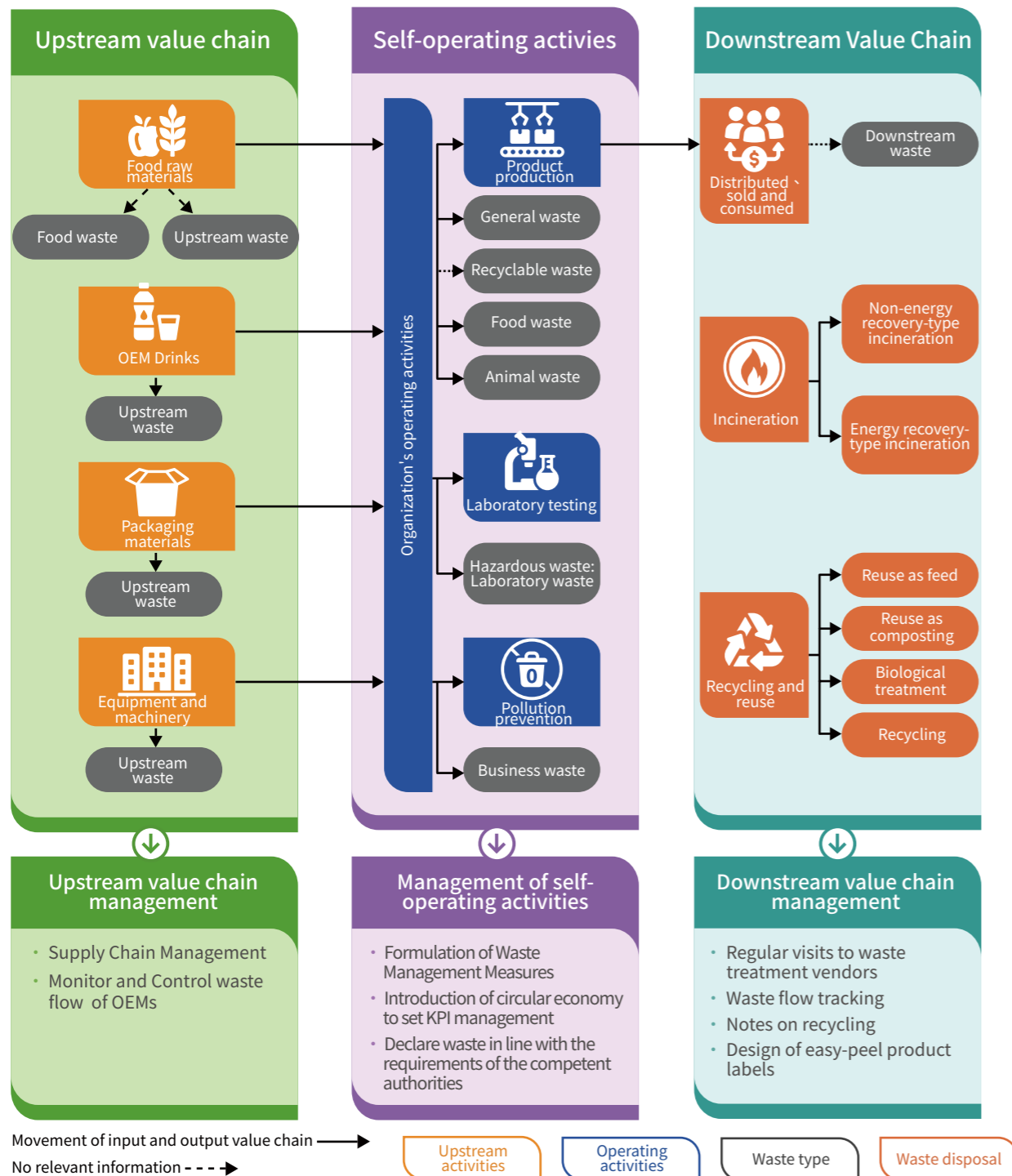
Uni-President is the first company in Taiwan to have obtained the certification of soybean as a byproduct in the manufacturing process by the Council of Agriculture. Not only this, but we were the first company in Taiwan to use soybean residue as a resource. Soybean residue generated in Xinshih General Plant is converted into feed for dairy cattle, saving waste removal costs while also bringing us new economic benefits. In 2023, we reused as many as 6,882 metric tons of bean dregs, an increase of approximately 4 times compared to 2022.

Decrease in moisture content of sludge and recycling of sludge

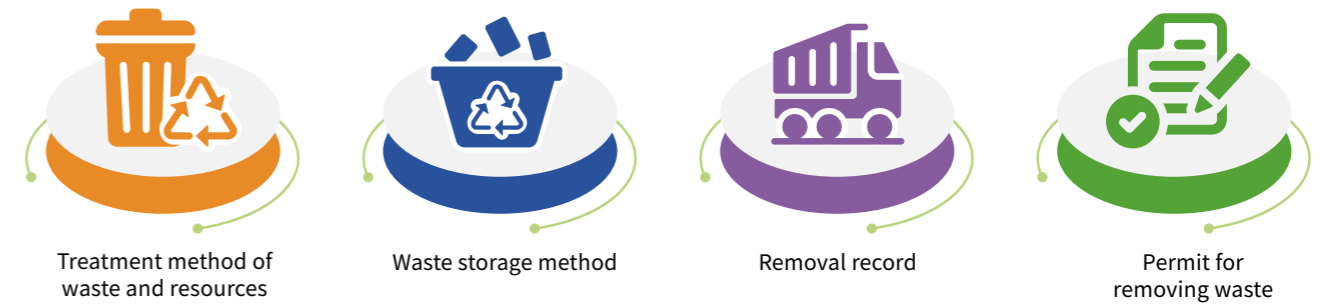
We composted the sludge at Yangmei General Plant, Chungli General Plant and Hukou Park, but in 2023, they were transferred to Yuen Foong Yu for biomass energy treatment. It is estimated that the total sludge reuse volume will reach 2,278 metric tons; the recycling rate has increased by 66% compared to 2022.

Finally, 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 2023, a total of 23 waste, resources, and hazardous waste treatment companies were inspected, with a total of 81 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 23 products such as Mine Shine, Pure Tea, Café Plaza, and Reisui Extreme fresh milk. 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



Note: The change to environmentally friendly packaging materials includes the use of reduced plastic products and environmentally friendly packaging materials. For example, polystyrene bowls of Imperial Bowl Instant Noodles have been changed to paper bowls.







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Building a Healthy and Happy Workplace

Uni-President used 21,069 metric tons of plastic in its products in 2023, of which PET accounted for 63.42% of sole plastic packaging materials. To reduce plastic usage in packaging materials, we are actively employing four strategies: developing and testing R-PET bottles, optimizing packaging size, making containers lighter, and altering sales models. As a result, the projects implemented yielded an outcome of a total reduction of 5.99 tons of plastic.

Moreover, Uni-President cooperates with the Group's subsidiaries to promote PET recycling project, where Uni-President cooperates with its affiliated company President Packaging to connect upstream and downstream manufacturers. President Packaging developed recycling machines and installed them in the shops of President Chain Store to recycle used PET bottles. At the same time, we have also completed the R-PET plastic introduction test. In 2023, we evaluated the practical application of R-PET bottle products, and this will be applied to products manufactured by Uni-President in the future. Currently, among the imported products, Healthy Resetta Diet Oil uses plastic bottles containing R-PET ingredients.

Going forward, Uni-President will persist in its efforts to reduce the use of plastic in packaging materials. Our aim is to create product packaging that uses a single type of material and is easy to recycle. We also evaluate the feasibility of introducing plant-sourced plastic materials or packaging new products using paper instead, so as to reduce product carbon footprint while decreasing the use of plastics in packaging materials.

Aspects	2023 Achievements	Picture
Plastic reduction 	<ul style="list-style-type: none"> UNI FIT Sparkling SUNports Drink : The heat-resistant bottle (HPR) was replaced with a regular bottle (CSD), and the weight of each bottle was reduced by 7.3g. It was introduced in July 2023, a total of 541,560 bottles have been used to reduce plastic by 3.95 tons. It is estimated that the annual reduction of plastic consumption is 7.62 tons. 	
Decrease the thickness of carton coating 	<ul style="list-style-type: none"> Decrease the thickness of carton coating to achieve the effect of plastic reduction. Reisui Fresh Milk Starbucks carton: Reduced plastic consumption by 1.1-1.5 g/carton. It was introduced in December 2023, a total of 1,041,980 cartons have been used to reduce plastic by 1.15 tons. It is estimated that the plastic consumption will be reduced by 5.01 tons per year after introduction. Reisui Fresh Milk "Ru Mu (Like Wood)" carton: Reduced plastic consumption by 1.6g/carton. It was introduced for short-term use in June 2023. A total of 556,240 cartons have been used to reduce plastic by 0.89 tons. 	



- 4.1 Talent Development Management
- 4.2 Occupational Health and Safety

