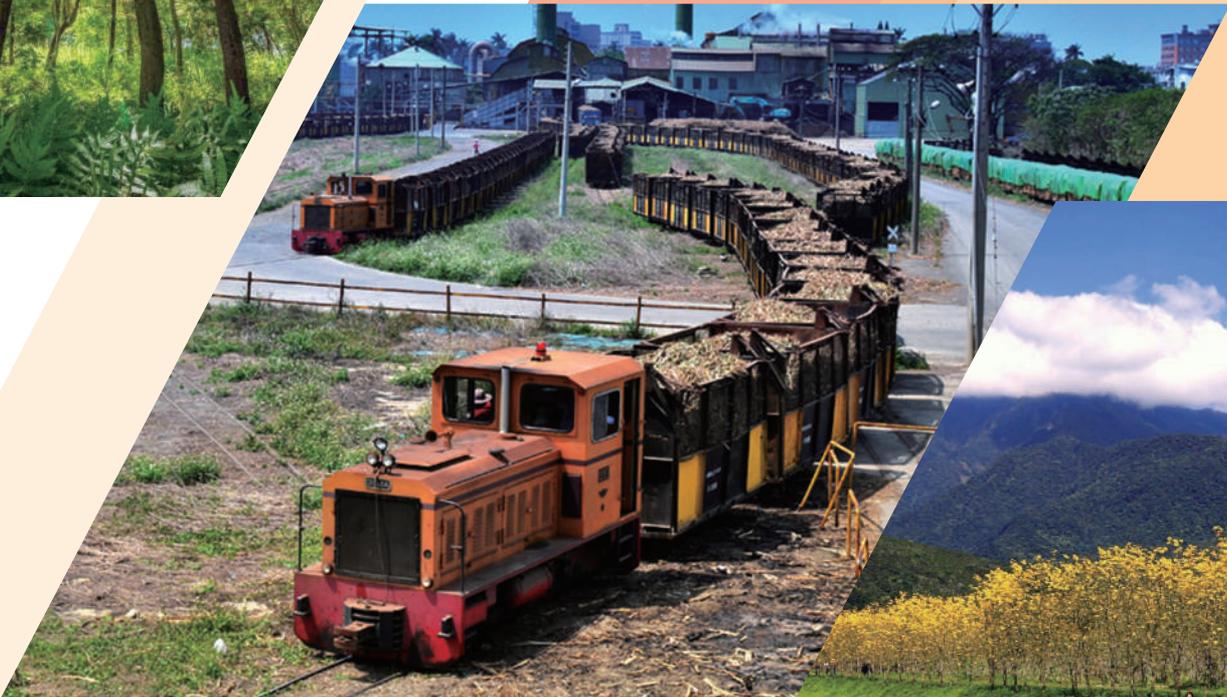


# 2022 Sustainability Report



# CONTENTS

EDITING PRINCIPLES	1
MESSAGE FROM THE TOP MANAGEMENT	3
2021 SUSTAINABILITY ACHIEVEMENTS AND PERFORMANCE	5
IMPLEMENTATION OF SDGS AND OBJECTIVES	9
<b>SPECIAL FEATURE ON TSC' S ESG ACTIONS</b>	
CLIMATE ACTIONS- GREAT ADVANCE OF GREEN ENERGY! ENERGY TRANSFORMATION TO STEP TOWARD NET ZERO BY 2050	17
CIRCULAR ECONOMY ACTION- CIRCULAR USE OF OYSTER SHELLS	20
CIRCULAR ECONOMY ACTION- SHALUN SMART GREEN ENERGY RECYCLING RESIDENTIAL PARK	21
POST-EPIDEMIC ACTION- EXPANDING ANTI-EPIDEMIC CAPACITY IN THE SOCIETY	23
SUPPORT ACTIONS FOR FARMERS- SUPPORTING TAIWAN' S AGRICULTURAL PRODUCTS TOGETHER	24

## **1. PRACTITIONER OF SUSTAINABLE GOVERNANCE** 25

1.1 TSC' S MISSION AS A BENCHMARK GREEN ENTERPRISE	26
1.2 IDENTIFICATION OF AND COMMUNICATION WITH STAKEHOLDERS	34
1.3 MATERIAL TOPICS OF SUSTAINABLE DEVELOPMENT	39

## **2. THE MANAGER OF OPERATIONAL RISKS** 41

2.1 CORPORATE GOVERNANCE	43
2.2 IMPLEMENTATION OF INTEGRITY MANAGEMENT	50
2.3 IMPLEMENTATION OF SUSTAINABLE GOVERNANCE	54

## **3. THE COLLABORATOR OF POLICIES THAT RESONATE WITH THE PUBLIC** 61

3.1 SUSTAINABLE FOOD	63
3.2 FOOD SAFETY	66
3.3 SUSTAINABLE MANAGEMENT OF THE VALUE CHAIN	70
3.4 LAND ACTIVATION AND UTILIZATION	76

## **4. THE PRODUCER WITH REVERSAL PROCESS** 79

4.1 NEW AGRICULTURAL ECONOMICS	81
4.2 ENERGY RESOURCES MANAGEMENT	86
4.3 POLLUTION CONTROL	92

## **5. THE OPERATOR PROTECTING TALENTS** 99

5.1 TALENTS AND ORGANIZATION OPTIMIZATION	101
5.2 LABOR RELATIONS	108
5.3 REINFORCED OCCUPATIONAL SAFETY	111

## **6. THE CREATOR OF SOCIAL VALUE** 119

6.1 CULTURAL PRESERVATION	121
6.2 MAINTENANCE OF NATURAL RESOURCES	125
6.3 COLLABORATION WITH ALLIES	128
6.4 COMMUNITY CARE AND RELATIONSHIP MAINTENANCE	130

## **7. APPENDIX**

APPENDIX I : BRITISH STANDARDS INSTITUTION (BSI) VERIFICATION STATEMENT	135
APPENDIX II : GLOBAL REPORTING INITIATIVE (GRI) INDEX	137
APPENDIX III : REFERENCE TABLE OF TAIWAN STOCK EXCHANGE CORPORATION RULES GOVERNING THE PREPARATION AND FILING OF CORPORATE SOCIAL RESPONSIBILITY REPORTS BY TWSE LISTED COMPANIES (ARTICLE 4, ITEM 1)	147
APPENDIX IV : SUSTAINABLE DEVELOPMENT GOALS (SDGS) INDEX	148
APPENDIX V : SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB) INDEX	149



## Editing Principles

Taiwan Sugar Corporation (hereinafter referred to as “Taiwan Sugar”, “TSC”, “the Company”, and “We”) started to publish its Corporate Sustainability Report annually from 2010, and this is the thirteenth publication of our Sustainability Report. This 2022 TSC Sustainability Report focuses on core of “Promoting New Agriculture” and “Circular Economy”, with the five major strategies of “Deep Rooting Health and Green Related Industries”, “Promoting New Agriculture and Circular Economy”, “Accelerating Asset Activation”, “Enhancing the Company Physique and Improving Operational Performance”, and “Exploring Overseas Investment and Cooperation with Diplomatic Allies” as the core of future business, with 15 major sustainability topics and reinforced disclosure of our Management Approaches to respond to the importance of all the major topics to Taiwan Sugar Corporation. In addition, we also make efforts to implement the UN’s Sustainable Development Goals (SDGs) to enable the general public to understand the results and our endeavor in terms of sustainability development.

The editorial principle of this Report is based on the combination of the corporate culture of Taiwan Sugar Corporation and the visions of future sustainable management. The Report is divided into six chapters, including “Practitioner of Sustainable Governance”, “Manager of Operational Risks”, “Collaborator of Policies that Resonate with the Public”, “Producer with Reversal Process”, “Operator Protecting Talents”, and “Creator of Social Value”. TSC takes actions to support sustainable development and discloses its endeavors and achievements in terms of sustainable development indicators, including economy, product liabilities, environmental and social participation, labor care, and human rights related matters. Relevant data are organized and detailed in this Report. It is hoped that with the release of this Report, the general public can have a better understanding of and trust in Taiwan Sugar’s performance and efforts in every aspect of the corporate sustainability in 2021.

Taiwan Sugar has established a Corporate Sustainability Area on our official website to constantly update the results of the promotion of sustainable development. In addition, CSR issues of the public’s concern and major events related to Taiwan Sugar will be immediately reported and responded to on the official website to demonstrate our determination to fulfill the corporate social responsibility.

### Scope of the Report and Statistics Basis

This Report covers Taiwan Sugar’s corporate sustainability efforts and results from Jan. 1 to Dec. 31, 2021 (for complete disclosure, data disclosed included those in 2020 and some in 2019 in terms of some material topics). Except that corporate governance and financial performance include data of reinvested companies and overseas branches, other performance disclosure focuses on the Company’s operation and activities in Taiwan. The statistical data disclosed in the Report come from the results of Taiwan Sugar’s internal data collection, research and inquiry. The financial data are public information disclosed after being audited and verified by KPMG Taiwan. Some of the statistical data are cited from public information on government websites and all the numbers are presented in the most common way of description. The financial statements have been based on the International Financial Reporting Standards (IFRSs), and the financial data were calculated in NTD. For the Environmental performance figures, the data of environmental costs came from TSC AS400 Financial Accounting Management System. Each unit operator enters the “accounting code” when the expenses are reimbursed, and the monthly statistical data cover data from all units. Data of environmental benefits come from the material flow analysis system, and the data are limited to the environmental accounting units, which include input of raw materials, output of products and other items not set up by Environmental Protection Administration (EPA). Taiwan Sugar established management indicators based on the needs of operational management, and the data are all presented in International Generic Indicators. Compared with the 2021 Sustainability Report, there is some merge or withdrawal in this 2022 Sustainability Report, and the reorganized data are detailed in this Report. The chapters are slightly different for the complete presentation of the sustainable development framework, but it does not prevent readers from comparing the contents with those in the 2021 Sustainability Report.

### Referred Guidelines and Principles

2022 Sustainability Report was compiled in accordance with the GRI (Global Reporting Initiative) Standards and Article 4 of the Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies stipulating that listed companies within the food industry shall reinforce disclosure items, and the stakeholders’ issues of concern were identified through the model of materiality analysis for the determination of the priorities of these topics. The major sustainability issues, relevant strategies, goals and management policies to be disclosed in this Report were analyzed and compiled in accordance with the reporting principles and requirements while referring to the principles of Sustainability Accounting Standards Board (SASB), Task Force on Climate-Related Financial Disclosures (TCFD), ISO 26000 Guidance on Social Responsibility, the Earth Charter, the OECD Guidelines for Multinational Enterprises, United Nations Global Compact, Sustainable

Development Goals (SDGs), and as the focus and direction for long-term development in the future.

## The Editing, Review and Authorizing Procedure and Verification of this Report

### Sustainability Report Editing Group

The Sustainability Report Editing Group for this 2022 Sustainability Report is under the Corporate Sustainable Development Committee, in charge of the overall planning, communication and integration, data consolidation and editing and revision, with the Vice President supervising the Department of Planning serving as the convener of the editorial team, the Director of the Planning Department as the executive secretary. The members include representatives from all Staff Room of the Headquarters, all business divisions, all Operation Branch, the research institute and Taiwan Sugar Labor Union.

### Internal Audit of the Sustainability Report

The Editorial Team of this Sustainability Report is composed of members assigned from all units. After collecting data for the Department of Planning to compile the first draft, the members of the Editorial Team were then in charge of the review and revision of relevant content and data before submitting the report to the executives of all units (members of the Corporate Sustainability Committee), the president (the Committee Chair), and the Chairman (the Steering Committee) for further review and finalization of this report. The finalized content was verified by an impartial third party before submitted to the 2th Board Meeting (June, 2022) of the 35th Session of Board of Directors for approval in accordance with the administrative procedure, and will be disclosed on TSC's Sustainability Website.

### External Verification of this Report

All the information in this Report was verified by the world renowned British Standards Institution (BSI), and both the editing framework and procedure fitted the core items of GRI Standards and AA1000 Accountability Principles Standard v3 Type I. In addition, to reinforce the reliability of relevant information disclosed, the part stipulated in Article 4 of the Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies that listed companies within the food industry shall reinforce disclosure items was under the verification of AA1000 AS v3 Type II, high level of assurance. BSI verification report can be found in Appendix I.



### Publishing Schedule of the Report

Taiwan Sugar Corporation annually publishes its Sustainability Report, and this Report is also disclosed to the public in the Corporate Sustainable Development Area on our official website.

Previous edition: June, 2021

Current edition: June, 2022

Next edition: June, 2023

### Contact Information

You can download the complete Sustainability Report in the Corporate Sustainability Area on TSC's official website. Please contact us for any question or suggestion for this 2022 Corporate Sustainability Report (CSR). Your opinions are the driving force for our progress. We look forward to your valuable suggestions to enable our next Sustainability Report one that is in line with the needs of our stakeholders, providing the information all the stakeholders want to know. Here is our contact information:

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TSC official website



TSC official channel



TSC Fanpage



TSC CSR Fanpage



TSC LINE@



## Message from the Top Management

The COVID-19 epidemic continued in 2021. However, for Taiwan, where the epidemic was relatively mild and stable, carbon issues were the more shocking focus for the industry. In July, 2021, the EU announced a Carbon Border Adjustment Mechanism (CBAM), and in November of the same year, it was announced that the fossil fuel era came to an end at the COP26 (the 26th UN Climate Change Conference). President Tsai has also announced the goal of Net Zero by 2050 several times. All of a sudden, “carbon sink”, “carbon credits”, “carbon neutrality”, and “carbon pricing” all become must-know keywords for enterprises. The transformation of business model in response to climate change will dominate the survival and development of the future for enterprises.

In such an environment with drastic changes, Taiwan Sugar Corporation, with its clear vision of “Becoming a benchmark enterprise in health and green industries in Asia-Pacific Region” that is in line with the trend, is able to grasp the direction and find opportunities while working on its diversification under the dual impact of post-epidemic era and carbon reduction. Agriculture, green energy, and circular economy will remain the core of TSC’s business.

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### **New agriculture and circular economy are business opportunities that take into account both the environment and resource sustainability**

Agriculture is the foundation of Taiwan Sugar Corporation, and it is also the base of the national economy and people’s livelihood. It is our goal to improve traditional agricultural technologies and establish a high-value supply chain. We have assisted the government to promote eco-friendly agriculture, solved production-and-sales problems, and encouraged more young people to engage in agriculture by releasing some self-operated farms, planning organic farming zones, leasing organic farmland, providing contract farming projects, and producing and selling organic fertilizers. In addition, TSC has continued to renovate traditional pig farms into modern and intelligent pig houses combined with solar PV energy generation and biogas power generation for waste reduction and water conservation since 2020. Coupled with the recycling of waste, TSC has promoted the upgrading of domestic livestock industry, constructing a high-quality industrial chain.

The benefit of waste reduction from circular economy is one of the important ways to implement carbon reduction. Therefore, for the energy consuming construction business that requires large amounts of materials, we have firstly introduced the concept of circular economy and built intelligence circular housing for rent only and not for sale with green materials and green infrastructure to boost industrial reforms. TSC’s biological material plant also provides a solution for the high-value reuse of waste oyster shells in Taiwan, which not only solves the environmental pollution problems but also can be widely applied in additive in agriculture and animal husbandry, and what is more, it can further be developed into industrial raw materials.

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### **Developing green energy and carbon sink are the trends for the future**

Participating in the installation of solar PV energy is part of TSC’s resource activation. In addition to installing charging piles at gas stations, parking lots, and hotels to provide green energy services, TSC also uses its land assets to assist with the government’s energy transformation by providing unfavorable farming land and detention ponds for free to set up large-scale solar PV energy generation fields. In addition, the development of biomass energy is also an opportunity for business transformation. Carbon reduction can be reached by using the fermentation of pig manure and urine for biogas energy production. Furthermore, the afforestation in the vast plain area is also the source for carbon sink storage.

## Land is the advantageous resource TSC can make good use of

Land resources are important for the implementation of government policies and assistance with industrial development. Taiwan Sugar Corporation works in line with various major government policies to provide land for industrial parks and cooperate with county and city governments for the development of industrial parks. In addition, TSC also provides local governments with land for the construction of social housing and residential houses for senior citizens. Furthermore, the closed factory areas are restored and reused for cultural assets preservation or leased to or co-developed with the public sector under preferable conditions. TSC builds houses to satisfy the demands for house buying in the urban area or leasing needs for students, and the company also constructs the elderly residence close to hospitals and medical schools to provide the senior citizens with a safe living space and diverse services. For the afforestation in the vast plain areas, after the government subsidies expire, we will make diverse use of the afforestation land in accordance with its ecological value and soil conditions.

## Implementation of corporate social responsibility is part of sustainable management

Faced with various changes in the economic environment, TSC also cares for local groups and helps organize educational, cultural, and sports activities, relief for the elderly and disabled, emergency relief, and other public welfare activities. Long-term actions have also been taken to support local agriculture. To support the farmers impacted by the epidemic and suffered from hindered export, we successively purchased a total of 43,572 kilograms of agricultural products, including pineapples, Aiwon mangoes, pomelos, and Atemoya during March, 2021 and February, 2022, with the total value of NTD 3.674 million. We set additional sales areas of these agricultural products at our self-operated bases and also shared them at our gas stations as gifts once the customers spend over a certain amount of money. Moreover, TSC continues to pass on warmth to our diplomaticalliance, Honduras, by purchasing coffee from small-scale farmers in the highlands and constructing three middle schools, which were successively completed, to improve the incomes of local farmers there and education in remote areas in Honduras.

The epidemic of COVID-19 changed the lifestyles and patterns of work and consumption. It has become imperative for carbon reduction to control the global temperature increase within 1.5 °C , making corporate sustainable management more challenging and difficult, and requiring faster responses. TSC faces the mainstream issue of sustainability in a prudent manner. We give full play to our own advantages and incorporate the SDGs into our business strategies to contribute to the sustainability of Taiwan.



董事長

陳明生



總經理

王國德

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# 2021 Sustainability Achievements and Performance



Awarded TOP50 Taiwan Corporate Sustainability Award and Corporate Sustainability Report Award-Platinum Award in the Traditional Manufacturing Industry Category



Awarded BSI (British Standards Institution) Sustainable and Resilient Award



Jianshanpi Jiangnan Resort won the bronze award at the Taiwan Sustainability Action Award (TSAA)- "Dream Building in Low-lying Mountains-Ecological Restoration in Jianshanpi Jiangnan Resort"



"Green Mine- The Recycling Model of Oyster Shells" earned the One-star Outstanding Enterprise Award for Resource Reuse from EPA, Executive Yuan.

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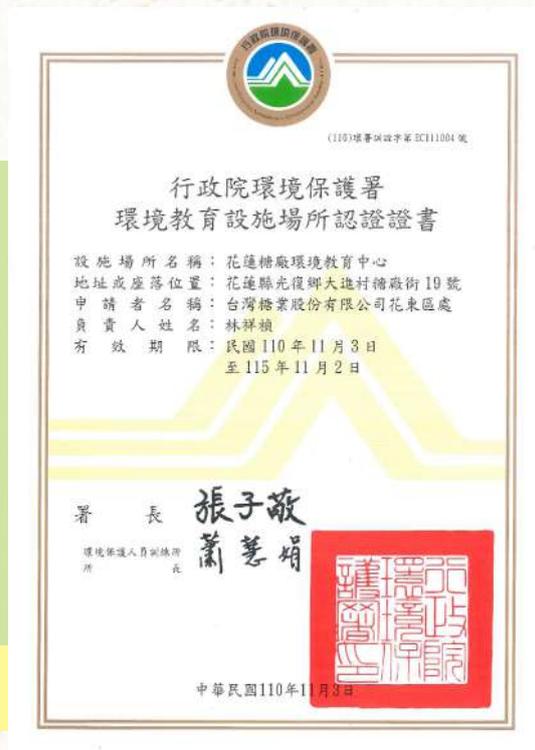
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TSC's action to respond to the purchase of products from Shelter Workshop was recognized by Tainan City Government and was granted a trophy



Hualien Tourism Sugar Factory obtained the Environmental Education Field Certification.



## 2021 Sustainable Management Performance of ESG

### TSC' s Featured Performance



Stabilized the commodity prices, the retail price of sugar remained at NTD **36**/kg, and the price of small packaged soybean oil remained the same.



Stabilized the hog prices and allocated **20,715** pigs in total for supply and demands.



As the international bulk grain prices surged and the domestic feed soybean was in short supply, TSC released **8,000 tonnes** of soybeans to the industry for turnover.



To cope with the needs during the epidemic period, the prices of anti-epidemic products remained the same, and we further expanded production and produced more than **4.86 million** bottles of alcohol products.



In response to the COVID-19 epidemic, Rent Relief Measures to Tenants were implemented, and the rent reduction amounted to **NTD 497 million** in 2021.



Assisted farmers to sell abundantly produced agricultural products and to ease their difficulty caused by hindered export , we purchased a total of **21,054** kilograms of pineapples, mangoes, pomelos and so on, with the total value of NTD **1.75 million**.



Promoted organic agriculture and farming, and provided the government with land for lease to set up organic agricultural zones of an area of **266.09 hectares**; other agricultural land was leased for organic crops, with an area of **873.38 hectares**.



The area for afforestation and tending has amounted to 11,711.06 hectares in total, absorbing approximately **174,000 tonnes** of carbon dioxide.

### E-Environmental Aspect



Made use of residual bagasse for power generation for self-use, and the total power generated in 2021 totaled **12.9069 million kWh**.



Made use of pig manure and urine for biogas energy production, and the total power generated amounted to **1.2631 million kWh**, a **367%** increase compared with 2020.



Produced **197** certificates of biomass renewable energy, that is 197,000 kWh of green electricity.



The power generation from the solar PV system was **231.53 million kWh**, a **1,885.67%** increase compared with 2020.



Implemented power and energy conservation, and the total energy saved at TSC in 2021 was approximated **23,294.78 GJ**, reducing approximately **2,094.36 tonnes of CO<sub>2</sub>e**.

## E-Environmental Aspect



A total of **712 sessions** of green meetings were held, reducing **56.82 tonnes of CO<sub>2</sub>e**.



The total green procurement rate in 2021 was **99.83%**.

## S-Social Aspect



A total of **100** cases of various activities related to good-neighborliness and public welfare were handled, and the donation amount was about **NTD 4.79 million**.



**100%** of TSC's food products are included in our own Food Safety Traceability Management System (FT).



The score of customer satisfaction survey in 2021 was **95.49** points, a 2.44% increase compared with 2020.



The average training hours were **33.59 hours**, and the staff training expenses totaled **NTD 37.13 million**.



TSC's total reading certified hours was **14,883 hours**.



During 2017 through 2021, a total of **2,918** people participated in **58** beach cleaning activities, clearing **12.61** tonnes of waste.

## G-Corporate Governance



The average attendance rate of directors in the board meetings was **99.54%**; the 3 functional committees under the board convened **44** meetings, and the results of the performance evaluation all reached **"Excellent"**.



The Board of Directors reviewed a total of **231** cases that included policies, economic, environmental and social issues.



A total of **16** sessions of anti-corruption briefings, **44** sessions of anticorruption training and advocacy exercises were organized in 2021, with **2,114** employees participating.



In the handling of various types of procurement tenders, **100%** of the business partners have been notified of anti-corruption policies.



A total of **65** labor-management meetings were held in 2021.



# SUSTAINABLE DEVELOPMENT GOALS

## Implementation of SDGs and Objectives

### Medium and Long-term Objectives

- ◆ To contribute to economic development and improve the quality of life of the local communities and society.

- ◆ To have "zero" hazard incident of our own-manufactured food.
- ◆ To expand our cooperation with farmers to increase the yields of organic crop production.

### Goals for 2022

- ◆ To budget NTD 11 million to subsidize local groups for various activities.
- ◆ To organize a total of 120 public welfare activities and other community-related activities.

- ◆ To have "zero" hazard incident of our own-manufactured food.
- ◆ To increase the area of organic farmland.

### Performance in 2021

- ◆ Due to the severe epidemic, the number of public welfare activities reduced, and a total of 100 activities were held, and the amount of subsidy was approximately NTD 4.79 million.
- ◆ Purchased 21,054 kg of abundantly produced agricultural products and those whose export were hindered, with the total value of NTD 1.75 million.

- ◆ No occurrence of food safety incidents.
- ◆ Increased the area of organic farmland by 3.2% in 2021.
- ◆ Completed the construction project of the 197.3 hectares of cultivation area for Maguang Grower Group in 2021.

### 2021 Goals and Achievements

To budget NTD 12 million to subsidize local groups for various activities **X Not achieved**

To have "zero" hazard incident of our own-manufactured food. **✓ Achieved**

To organize a total of 120 public welfare activities and other community-related activities. **X Not achieved**

To increase the area of organic farmland. **✓ Achieved**

### Social Participation (SDGs 1.4)

### Sustainable Food(SDGs 2.4)

### Material Topics



To keep the operations of TSC in line with international trends, we refer to the Sustainable Development Goals (SDGs) as corresponding to the company's major theme goals and policies to have a comprehensive and sustainable business advantages in a rapidly changing environment.

- ◆ To continue the organization of health food promotion activities.
- ◆ To develop health care products and continue to increase number of items.
- ◆ To cooperate with the government's policy of stabilizing commodity prices and adjust retail prices.

---

- ◆ To continue the organization of health food promotion activities.
- ◆ To continue the R&D of health food.
- ◆ To cooperate with the government's policy of stabilizing commodity prices and adjust retail prices.

---

- ◆ Organized 4 sessions of health food promotion activities.
- ◆ As of 2021, we have obtained cumulative 10 (12 health claims) health food certifications.
- ◆ We launched new health care products of Veggie Glucosamine Myrobalan Drink and Lutein Compound Soft Capsules in 2021.
- ◆ The revenue of health care products amounted to approximately NTD 179 million in 2021.
- ◆ The retail price of sugar remained at NTD 36/kg; to stabilize pig prices, 20,715 pigs were allocated for supply and demands.

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To organize health food promotion activities. **✓ Achieved**

---

To research and develop health food. **✓ Achieved**

---

To cooperate with the government's policy of stabilizing commodity prices and adjust retail prices. **✓ Achieved**

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**Healthy and Reasonably priced food (SDGs 2.c.)**

**2 ZERO HUNGER**



- ◆ To carry out the commitment of "Food safety guaranteed at TSC".
- ◆ To combine new agriculture and the use of biotechnology for the R&D of non-toxic, non-polluting, high value-added, and healthy product.

---

- ◆ To continue the investment in food safety testing equipment in the laboratory.
- ◆ To implement the feeding of green feed.
- ◆ To implement the policy of no sulfonamides, no clenbuterol, no hormones and no growth hormones.
- ◆ To organize 2 sessions of quality management education and training, with an estimated participants of 80.

---

- ◆ The related expenditure of all business units totaled NTD 90,508 thousand.
- ◆ 100% of feeding of green feed.
- ◆ 100% compliant of no sulfonamides, no clenbuterol, no hormones and no growth hormones.

---

To invest in food safety testing equipment in the laboratory. **✓ Achieved**

---

To implement the feeding of green feed. **✓ Achieved**

---

To implement the policy of no sulfonamides, no clenbuterol, no hormones and no growth hormones **✓ Achieved**

---

**Food Safety and Labeling (SDGs 3.9)**

**3 GOOD HEALTH AND WELL-BEING**



- ◆ To expand the organizational boundary of GHG inventories.
- ◆ To replace the more polluting heavy oil with natural gas (NG) to reduce GHG emissions, and it is expected to reduce GHG emissions by 20% annually per year in Xiaogang Sugar Refinery.
- ◆ To continue the upgrading of equipment for efficiency improvement to save energy and reduce carbon emissions.

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- ◆ The test run of the boiler in Xiaogang Sugar Refinery was completed and it was officially changed to natural gas.
- ◆ Organized a total of 400 sessions of green meetings.

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- ◆ Completed the GHG verification.
- ◆ Organized a total of 712 sessions of green meetings

---

Xiaogang Sugar Refinery conducts GHG inventory and verification annually. **✓ Achieved**

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To organize a total of 350 sessions of green meetings. **✓ Achieved**

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**Emissions (SDGs 3.9)**



# Implementation of SDGs and Objectives

## Medium and Long-term Objectives

- ◆ To exceed 10% of the livestock manure and urine recover rate stipulated by laws.

- ◆ To complete the rooftop solar PV energy generation and biogas power generation in TSC's livestock farms in 2023.
- ◆ Approximately 74 MW (of the current year) of solar PV equipment for rooftops, groundtops, detention ponds and unfavorable farming land is expected to be reached by 2023, with the cumulative capacity of 611.79 MW.

## Goals for 2022

- ◆ To officially start the use of the flood detention facilities of Dalin Biotechnology Factory and to add the pumping facilities to recycle rainwater for irrigation of the plants in the Biotechnology Research Park.
- ◆ To have the livestock manure and urine recovery rate at 5%.

- ◆ Approximately 215 MW of solar PV equipment for rooftops, groundtops, detention ponds and unfavorable farming land is expected to be reached.
- ◆ To continue the promotion of energy conservation movement and the development of renewable energy.

## Performance in 2021

- ◆ Big and small packages of frozen meat, small frozen packages of TSC safety pig series, meat crisps and meatballs obtained the water footprint verification statements.
- ◆ In 2021, Dalin Biotechnology Factory built rainwater storage and flood detention facilities, and the configuration of water and electricity pipelines was completed.
- ◆ Wastewater recovery rate (R2) to reach 88.24%.

- ◆ The overall capacity of solar energy equipment increased by 310.49 MW.
- ◆ A total of 197 certificates of biomass renewable energy have been produced.
- ◆ The total power generation of renewable energy and agricultural residues was 14.17 million kWh, reducing approximately 7,113.34 tonnes of CO<sub>2</sub>.

## 2021 Goals and Achievements

To strengthen water resource management. ✓ Achieved

To install additional solar PV equipment. ✓ Achieved

Wastewater recovery rate (R2) to reach 80%. ✓ Achieved

To develop renewable energy. ✓ Achieved

### Water and Effluents (SDGs 6.3)

### Energy (SDGs 7.2)

## Material Topics

6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



- ◆ To combine new agriculture and the use of biotechnology for the R&D of non-toxic, non-polluting, high value-added, and healthy product.



- ◆ To invest NTD 40,000 thousand for R&D.
- ◆ Management of patent (patent application and maintenance).



- ◆ The amount of R&D expenses invested reached NTD 39,170 thousand, which was due to the suspension of some research plans to stay in line with market trends.



To invest NTD40,000 thousand for R&D. **X Not achieved**



**Innovative Research (SDGs 8.2)**

- ◆ To facilitate effective communication between labor and management and establish a good mechanism for interaction.



- ◆ To carry out welfare measures to take care of employees.
- ◆ To facilitate effective communication between labor and management and establish a good mechanism for interaction.



- ◆ A total of 65 labor-management meetings were held in 2021, and all proposals were immediately responded for smooth and good labor-management communication.
- ◆ Employee welfare measures are all compliant to regulatory requirements.
- ◆ TSC has signed the collective agreement with TSC Federation of Labor Unions.



To hold labor-management meetings as scheduled. **✓ Achieved**

To carry out welfare measures to take care of employees. **✓ Achieved**

To sign the collective agreement and establish work rules. **✓ Achieved**



**Employee Relations Management (SDGs 8.8)**

- ◆ To have all the business units at TSC be verified by ISO 45001 and TOSHMS.
- ◆ To achieve the highest occupational safety and health goals of "zero disaster", "zero accident" and "zero injury".



- ◆ No occupational diseases and no major occupational fatalities.
- ◆ To promote industrial safety and environmental protection month, disaster prevention education & training and emergency response drills with full participation.
- ◆ To introduce health examination service plants.



- ◆ No occurrence of major occupational incidents.
- ◆ Organized a total of 121 sessions of disaster prevention education and emergency response drills, with a total of 3,750 participants.
- ◆ Organized 10 sessions of occupational safety and health related education and training in 25 classes, and the total participants amounted to 1,924.
- ◆ Each unit conducts health examinations every 1-2 years, better than the legal regulation.



No occupational diseases and major work-related deaths. **✓ Achieved**

To promote industrial safety and environmental protection month, disaster prevention education & training and emergency response drills with full participation. **✓ Achieved**

To introduce health examination service plants. **✓ Achieved**



**Occupational Safety and Welfare (SDGs 8.8)**

**8 DECENT WORK AND ECONOMIC GROWTH**





# Implementation of SDGs and Objectives

## Medium and Long-term Objectives

- ◆ To respect the rights and interests of the stakeholders and ensure corporate sustainable development with integrity management.

- ◆ To reach 93% of waste recycling by 2027.

## Goals for 2022

- ◆ To have zero incidents concerning privacy violation and data leakage.

- ◆ Continue to study the recycling of agricultural waste and develop recycling businesses in different fields.

## Performance in 2021

- ◆ There was no cases of data leakage.

- ◆ As of the end of 2021, 3,012 tonnes of discarded oyster shells were made into oyster shell powder.
- ◆ The percentage of waste recycling reached 92.71%, a 3.57% increase compared with 2020.

## 2021 Goals and Achievements

To have zero incidents concerning privacy violation and data leakage. **✓ Achieved**

To promote industrial circular economy. **✓ Achieved**

To actively promote circular economy and reduce waste. **✓ Achieved**

Customer Privacy (SDGs 10.3)

Circular Economy (SDGs 11.6)

## Material Topics



- ◆ To carry out the commitment of "Food safety guaranteed at TSC"
- ◆ To pass the ISO 14067 carbon footprint.
- ◆ To continue the organization of health food promotion activities.
- ◆ To develop health care products and continue to increase number of items.



- ◆ The products continue to pass relevant international certifications.
- ◆ To continue the implementation of customer satisfaction policy.
- ◆ To continue the organization of health food promotion activities.
- ◆ To continue the R&D of health food.



- ◆ To continue the Quality Management System verification.
- ◆ To have a dedicated person in charge of customer service for timely response. The 2021 customer satisfaction survey scored 95.49 points, a 2.44% increase compared with 2020.
- ◆ The spending on marketing and advertising was NTD 42.97 million.
- ◆ As of the end of 2021, a total of 112 sessions of Mobile Coffee Cart marketing activities were held, and 240.8 tonnes of Honduran raw coffee beans were imported.



The products continue to pass relevant international certifications. **✓Achieved**

To continue the implementation of customer satisfaction policy. **✓Achieved**

To strengthen product marketing, including advertising and promotions. **✓Achieved**

To promote coffee from small-scale Honduran farmers to help our ally market agricultural products. **✓Achieved**

**Food Safety and Labeling (SDGs 12.6) (SDGs 12.A)**



- ◆ TCFD supporter it is expected to complete the TCFD Report and become the TCFD support by 2023.
- ◆ It expected to participate in the CDP program.
- ◆ Evaluate the use of technology of GHG fixation (absorption, storage) for carbon reduction.



- ◆ To complete the Task Force on Climate-related Financial Disclosures (TCFD) and identification of opportunities.
- ◆ To continue the promotion of energy conservation and carbon reduction measures.
- ◆ To continue the tending of the afforestation land because its location is with ecological and habitat value.



- ◆ Completed the planning of writing schedules of the TCFD report.
- ◆ CO<sub>2</sub>e Promoted energy conservation and carbon reduction, saving 23,294.78 GJ of energy and reducing 2,094.36 tonnes of CO<sub>2</sub>e.
- ◆ As of 2021, the cumulative afforestation tending area reached 11,711.06 hectares, absorbing approximately 174,000 tonnes of carbon dioxide<sup>(Note)</sup>.



To introduce TCFD **✓Achieved**

To promote energy conservation and carbon reduction measures. **✓Achieved**

**Climate Action (SDGs 13.2)**



Note: The calculation basis for CO<sub>2</sub> absorption was based on 14.9 tonnes/hectare/year (referred to the website of Low Carbon Sustainable Information System: The CO<sub>2</sub> fixation was 7.45~14.9 tonnes/hectare/year per unit area of forest land of the Forestry Bureau, <https://reurl.cc/Dvknk6>).



# Implementation of SDGs and Objectives

## Medium and Long-term Objectives

- ◆ To protect shareholders' rights, strengthen the functions of the board of directors, bring out the functions of a functional committee, respect the interests of stakeholders, and govern the company with integrity management to ensure sustainable development of the company.

- ◆ To comply with relevant environmental laws and regulations.
- ◆ Zero fines.

## Goals for 2022

- ◆ To implement the self-assessment system and performance evaluation of the board of directors.
- ◆ Directors continue to participate in advanced courses concerning corporate governance.
- ◆ Continue to participate the corporate governance evaluation organized by State-owned Enterprise Commission, Ministry of Economic Affairs (MOEA).

- ◆ No major violations of laws and regulations.

## Performance in 2021

- ◆ One independent director has legal background.
- ◆ The results of the performance evaluation all reached "Excellent".
- ◆ Directors participated in advanced courses concerning corporate governance, with an average of 14.6 training hours per person.
- ◆ The score of the corporate governance evaluation organized by State-owned Enterprise Commission was better than last year, and TSC was affirmed long-term "twAA-" and short-term "twA-1+" rankings by Taiwan Ratings.

- ◆ There were no major violations of laws and regulations.

## 2021 Goals and Achievements

Board members have legal background to ensure the regulatory compliance of the company. **✓ Achieved**

To implement the self-assessment system and performance evaluation of the board of directors. **✓ Achieved**

Directors continue to participate in advanced courses concerning corporate governance, with more than 8 hours of training per person averagely. **✓ Achieved**

To participate in the corporate governance evaluation organized by State-owned Enterprise Commission, Ministry of Economic Affairs (MOEA). **✓ Achieved**

No major violations of laws and regulations. **✓ Achieved**

## Material Topics

**Corporate Governance**  
(SDGs 16.5)(SDGs 16.6) (SDGs 16.7)

**Compliance**  
(SDGs 16.b)



# Special Feature on TSC' s ESG Actions

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4

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6

7





# Special Feature on TSC's ESG Actions

Climate Actions- Great Advance of Green Energy! Energy Transformation to Step toward Net Zero by 2050

## Great Advance of Green Energy- Solar Power Generation Project

Work in line with the government's energy transformation policy of Net Zero by 2050

☀️ It is estimated that by the end of 2028, the solar power generation efficiency will be **682.61** GWh/year

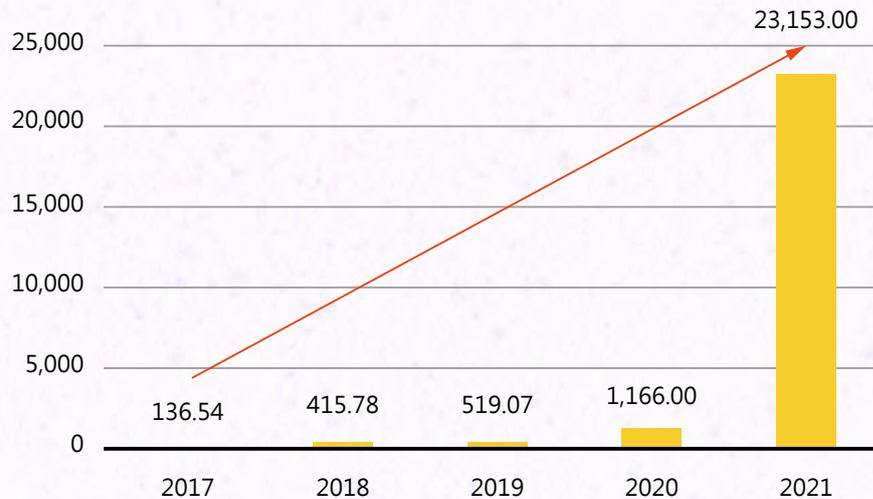
🔋 The estimated capacity of the solar power generation equipment is **512.85** MW

TSC makes use of the roofs and land of its business bases for cooperative installation of solar power generation equipment. In addition to making good use of the value of space, we also reduce fossil fuel consumption and environmental pollution. As of 2021, rooftop solar power generation equipment has been installed in 39 locations in central, southern and eastern Taiwan, with the total capacity of 14.02 MW. Installation projects of solar power generation equipment at unfavorable farming land and detention ponds have met the targets of 92.77 MW and 216 MW respectively set by MOEA. The power generation efficiencies in recent 3 years are as follows.

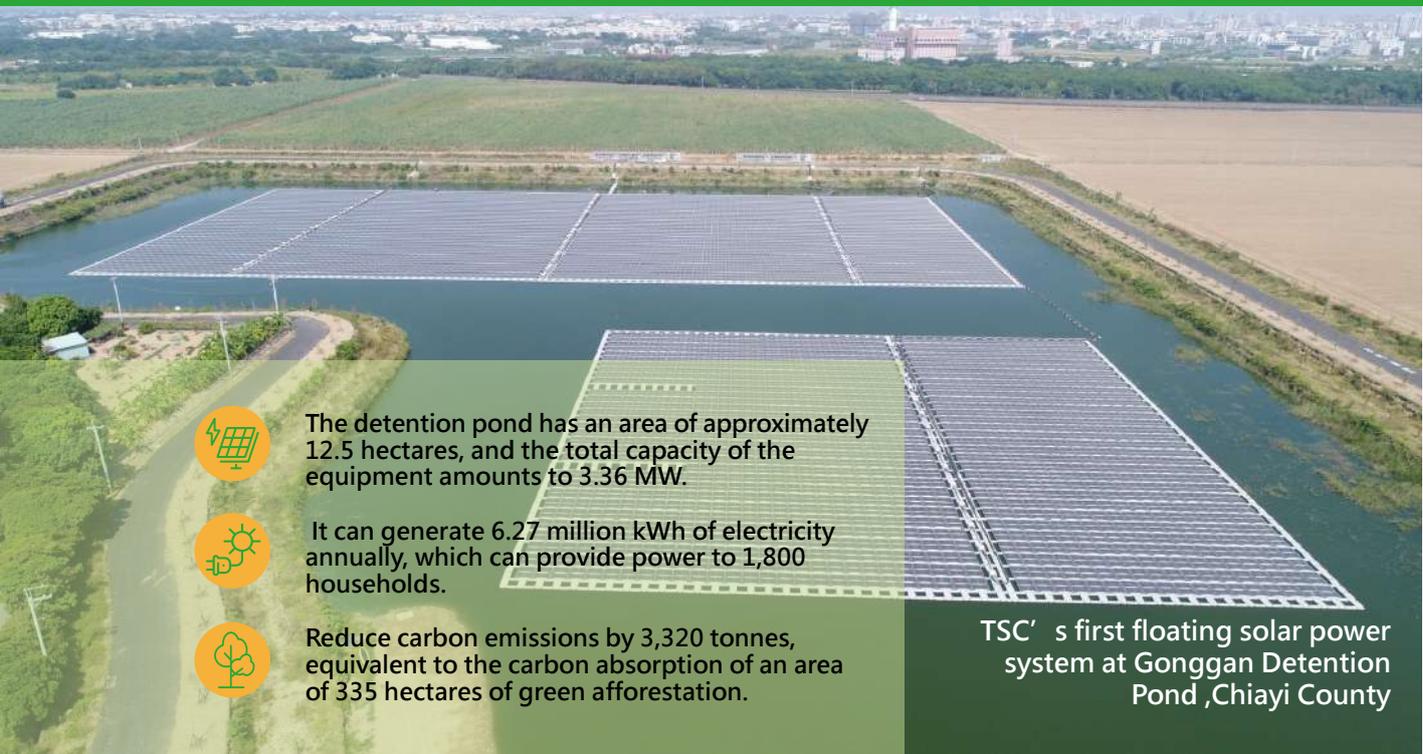
### Solar power generation efficiency

	Total equipment capacity (MW)	Total power generation (10,000 kWh)	Increase/decrease ratio
2019	4.86	519.07	24.84%
2020	12.30	1,166.00	124.63%
2021	322.79	23,153.00	1,885.67%

### Total Power Generation (10,000KWh)



## Maximized Utilization of Land and Energy- Floating Solar Power System at the Detention Pond



The detention pond has an area of approximately 12.5 hectares, and the total capacity of the equipment amounts to 3.36 MW.



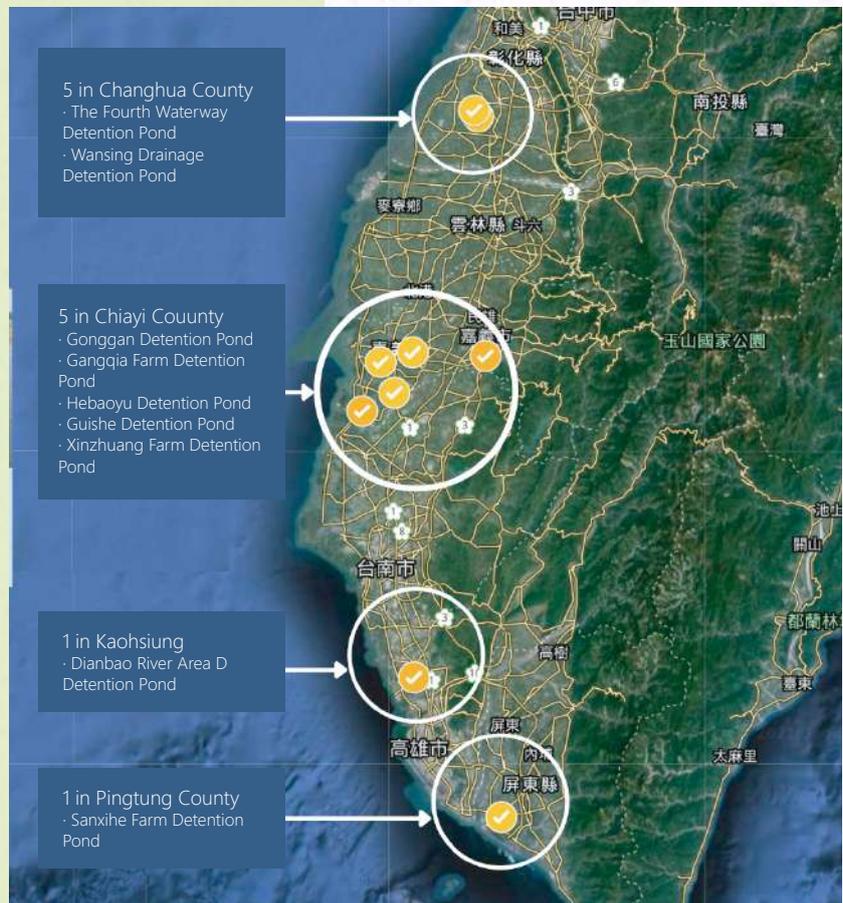
It can generate 6.27 million kWh of electricity annually, which can provide power to 1,800 households.



Reduce carbon emissions by 3,320 tonnes, equivalent to the carbon absorption of an area of 335 hectares of green afforestation.

TSC's first floating solar power system at Gonggan Detention Pond, Chiayi County

TSC has worked in line with the government's goal to reach 20% of power generation from renewable energy in 2025 and cooperated with Water Resources Agency, MOEA, in 2018. We provided 215.71 hectares of land for free in Changhua, Chiayi, Kaohsiung, and Pingtung and planned 9 detention ponds for the business attraction for the solar PV facilities. As of 2021, except for the Hebaoyu Detention Pond in Chiayi County, the other 8 have been officially launched. The facilities take into account flood detention and power generation in terms of the functions, maximizing land utilization efficiency while reaching the goal of green electricity development and disaster prevention and water control.



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- 2
- 3
- 4
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# Special Feature on TSC's ESG Actions

Great Advance of Green Energy- Power Generation from Renewable Energy and Agricultural Waste Resources to Reach Independent Green Power Supply

## Power Generation from Renewable Energy and Agricultural Waste Resources to Reach Independent Green Power Supply

Compared to 2020, biogas power generation increased by **367%**

Rooftop solar PV and biogas power generation facilities in the livestock farms are expected to be completed in **2023**.

TSC uses bagasse and animal waste from animal husbandry and agricultural waste materials with biomass potential for biogas power generation and adds solar power generation equipment to support the green energy policy of the government. To develop renewable energy and implement circular economy, TSC applies agricultural waste resources in power generation. In 2021, a total capacity of the green electricity from agricultural waste resources amounted to 14.17 million kWh, which reduced 7,113.34 tonnes CO<sub>2</sub>e equally.

Utilization of remaining sugarcane bagasse for cogeneration

Huwei and Shanhua Sugar Factories of the Sugar Business Division make use of the remaining bagasse for power generation for their own use, generating 12.9069 million kWh of electricity in 2021.

Use of pig manure and urine for biogas power generation

Livestock Business Division used pig manure and urine for biogas power generation through the anaerobic digestion process. In 2021, 1.2631 million kWh of electricity was produced, a 367% increase compared with 2020, and among all, 29.3 thousand kWh was for self-use, while the remaining 1.2338 million kWh was sold to Taiwan Power Company.

## Supply Chain of the REC Market of Green Electricity, Biogas Power Generation from Pig Farming

In 2018, our First Livestock Farm in Da Xiang Yin in Pingtung became the first domestic REC certificate provider in the biomass power generation category. As of 2021, our Da Xiang Yin and Silin Livestock Farms have produced 197 certificates of biomass renewable energy, generating 19.7 thousand kWh of green electricity, and completed transaction of 191 certificates. Currently, TSC remains the one and only domestic supplier of renewable energy certificates in the category of biomass energy.

**197**  
certificates of biomass renewable energy

Generating **19.7**  
thousand kWh of green electricity

transaction of **191**  
certificates



## Circular Economy Action- Circular Use of Oyster Shells

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SPECIAL FEATURE ON TSC'S  
ESG ACTIONS

### Dedicated to Circular Economy, Becoming a Benchmark Enterprise of Green Sustainability in Asia

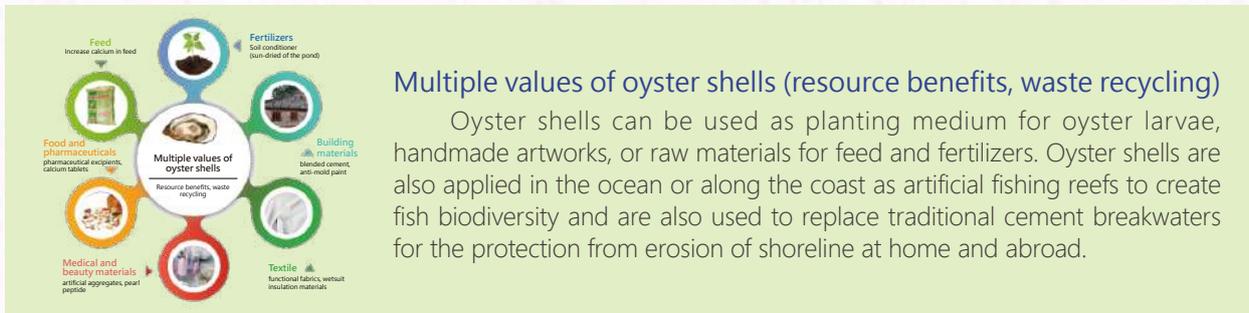
As of the end of 2021, the total waste oyster shells recycled and treated amounted to **3,012** tonnes.

We have passed the verification of **BS:8001 Level Optimizing** in February, 2022

TSC invested NTD 170 million in the “circular use of oyster shells” as an “innovation pioneer” and built an oyster shell biological material plant. Through the collaboration with the Industrial Technology Research Institute (ITRI), the discarded oyster shells are recovered and calcined into raw materials of calcium carbonate or ground powder, turning the shells into valuable biomass materials, enabling us to not only supply materials for self-demands in the feed factories and farms but also provide calcium carbonate sources for domestic manufacturing of feed and fertilizers to replace imported materials.

TSC's oyster shell biomaterial plant is located in Yongkang Industrial Park, and the processing capacity of discarded oyster shells is estimated to be 50,000 tonnes annually, producing 40,000 tonnes of calcium carbonate, turning oyster shells into resources, increasing the utilization rate of oyster shells throughout Taiwan, and reducing the occurrence of environmental pollution. The core value of TSC's circular use of oyster shells includes the followings.

1. To increase the recycling and reuse of oyster shells to indirectly alleviate the environmental pollution caused by discarded oyster shells.
2. To turn waste into useful resources for multiple uses.
3. After high temperature calcination and after being finely crushed, the discarded oyster shells are turned into calcium carbonate, which can replace the traditional digging the mountains for calcined stones or the imported white sintered stone, solving the problem of the shortage and waste of natural resources and reducing the carbon footprint.



#### Multiple values of oyster shells (resource benefits, waste recycling)

Oyster shells can be used as planting medium for oyster larvae, handmade artworks, or raw materials for feed and fertilizers. Oyster shells are also applied in the ocean or along the coast as artificial fishing reefs to create fish biodiversity and are also used to replace traditional cement breakwaters for the protection from erosion of shoreline at home and abroad.

Products successfully developed by other companies with the oyster shells TSC provides are as follows.



Antibacterial Shell Powder



3D Printing Substrates

TSC supplies oyster shells to other companies. After calcined at high temperature, oyster shell powder produces strong alkali and active oxygen, which can destroy the bacterial structure and become antibacterial shell powder. This antibacterial shell powder can be added into plastic daily necessities (such as flip-flops, EVA shoes, and chopping boards) to create a safe home environment for people.

Through the technology developed with the cooperation between NTNU's C-Hub and other manufacturers, oyster shell powder is added into the cement slurry for the development of a new 3D printing substrate. The developed cement-like structure can be used in artworks for public display or public facilities. Its pressure resistance is as good as pure cement products, but it is lighter and has low specific heat, and it will soon be applied in environmentally friendly building materials.

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## Circular Economy Action- Shalun Smart Green Energy Recycling Residential Park

### Sustainable Residential Park, supporting Shalun Smart Green Energy Science City

Completion of construction in June, 2021, with **351** residential units/ **17** stores

To cooperate with the Shalun Smart Green Energy Science City Policy of the Executive Yuan to meet the living needs for the stationed staff in the Shalun Green Energy Science City, the Company has planned the "Shalun Circular Residence Development Project" in a designated area at Tainan High Speed Rail Station, the first residential project incorporated with the concept of circular economy, to create an eco-friendly environment with its energy saving, carbon reduction, and water saving properties, aiming at zero emission and sustainable operation.

TSC successively built a number of circular residential buildings for rent in northern, central and southern Taiwan, inspiring innovation in construction-related industries and building consensus to serve as a strong support for the development of circular residences and cities that will further enhance the competitiveness of the overall construction industry in Taiwan.

### Highlight of circular economy- Shalun Smart Green Energy Recycling Residential Park

<b>Circular building materials</b>	To enable the building to move toward the direction of reuse, restoration, maintenance, waste reduction and energy saving in its life cycle from design stage to demolition stage.
<b>Resource reuse, energy management</b>	The circulation mechanism includes "rain and reclaimed water circulation" , "application of solar energy" , "food waste recycling" , "heat pump system" and so on.
<b>Circular economy- Rent-to Own</b>	Various devices such as elevators, furniture, home appliances (including air conditioners), bathrooms, kitchen waste treatment equipment, and lighting systems are rented from the manufacturers instead of one-time purchase.





Shalun Smart Green Energy Circular Residence introduction of flexible compartments, open pipping configuration, building materials bank, dismantling and reuse of building materials. At the same time, it is also equipped with the environmental management system for safety control, smart water grid and meter, self-cultivated food ingredients, connecting with the overall smart facilities and green energy technology in the whole science city, making this community a livable one with green energy cycling network, low-carbon transportation network and high-performance information network.

### Recognitions of Shalun Smart Green Energy Recycling Residential Park

- ◆ Green Building (EEWH) Diamond Grade Candidate Certificate
- ◆ Diamond-level Low Carbon Building Label
- ◆ Gold Grade Smart Building Candidate Certificate
- ◆ High Distinction Award, the 6th (2019) and 7th (2020) Competition of Green and Beautiful Hoarding for Construction Site of Tainan City
- ◆ 2022 Taiwan Residential Architecture Award (TRAA)- First Place for Best Residential Complex
- ◆ Awarded as Eco-friendly Excellent Construction Site of Tainan City, 2020
- ◆ Winner, Best Planning & Design Category, FIABCI-Taiwan Real Estate Excellence Awards, 2019
- ◆ Nominee, World Architecture Festival Award (WAF), 2018



## Post-epidemic Action- Expanding Anti-Epidemic Capacity in the Society

### Paid leave for vaccination

To encourage our employees to receive COVID-19 vaccination, we started to provide a one-day official leave for those receiving the vaccination on weekdays and one day off for those receiving the vaccination on holidays from July 16, 2021. This measure effectively increased the employees’ willingness for vaccination. As of April 1, 2022, approximately 92.56% of our employees had received the 2nd dose of vaccine while 68.73% had received the 3rd dose. In addition, considering that the epidemic at home and abroad has not been eased and the new variants of viruses like OMICRON keep emerging, TSC will continue the incentive measure of paid leave for vaccination in 2022 to increase the vaccination rate.

### Relief Measures for Rent Deferral and Rent Reduction

In response to the severe impact on the lessees during the COVID-19 epidemic period, TSC provides relief schemes to lessen the financial burden of the lessees in accordance with the “Rent Relief Measures to Tenants of State-owned Enterprises under MOEA Affected by Severe Pneumonia with Novel Pathogens” and actively informs the tenants of the 20% rent reduction and rent deferral in 2021. As of the end of 2021, the operating income reduced by NTD 497 million because of TSC’s relief measures.

### TSC’s Epidemic Prevention Actions

Since epidemic prevention has become part of our daily life, TSC develops health food and cleaning and epidemic prevention products to help the public maintain their health. In response to the announcement of COVID-19 Level 3 Alert, TSC initiated the following actions:

1. Increased production of alcohol: to cope with the demands for epidemic prevention
2. Strengthened channel distribution: We developed the TSC’s Control and Distribution Mechanism of the Epidemic Prevention Alcohol Products to ensure sufficient production and supply of alcohol products that are distributed to the channels of all stores (convenience stores, PxMarts, wholesale stores, drug & cosmetic stores). The sales volume of TSC’s 75% alcohol was 3.36 million bottles in 2020 and it amounted to as many as 3.89 million bottles in 2021.
3. Stabilized retail prices: We fully work in cooperation with the government policies to stabilize retail prices. The information that the prices of epidemic prevention commodities will not go up and that the supply of such products will continue is released through media reports to appease consumers' panic buying so that the public can purchase at ease.

### Expanding Anti-Epidemic Capacity in the Society

<b>May, 2021</b>	Donated 7 barrels of 18L undenatured alcohol to Minxiong Precinct and Dalin Police Station of Chiayi County Police Department for epidemic prevention and cleaning purposes.
<b>June, 2021</b>	Donated a batch of TSC’s epidemic prevention alcohol to the residents service center in Datang Village, Dalin Township, to give back to local villages and for good-neighborliness.
<b>July, 2021</b>	Cooperated in the “Passionate Darlin Cittaslow- A Gift that Saves Lives” Event organized by Dalin Cittaslow Development Association, China Youth Corps for Dalin, and Dalin Township Office and provided gifts from TSC (Alcohol Wipes Single Piece Packing and Black Sesame Mixed Instant Cereal) to increase people’s willingness for blood donation to fulfill our corporate social responsibility.
<b>November, 2021</b>	Visited National Chiayi University and donated 2 barrels of 5L alcohol for epidemic prevention and cleaning purposes.

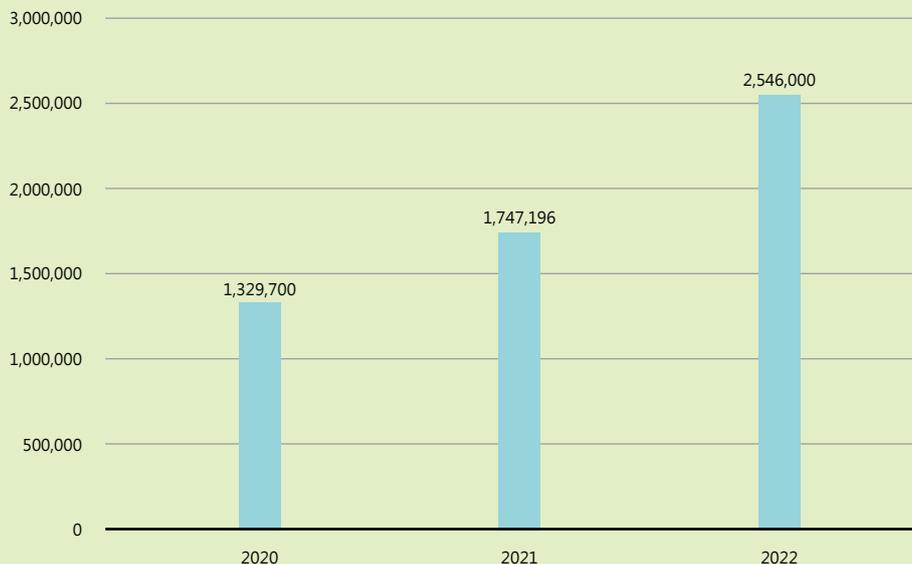
## Support Actions for Farmers- Supporting Taiwan' s Agricultural Products Together

State-run enterprises play a crucial role in the economic system in Taiwan. As one of the state-run enterprises, TSC serves as a force for economic development and social stability, and has been actively cooperating with national policies for long to solve various problems.

In recent years, Taiwan' s agricultural products have encountered difficulties such as abundant production with sluggish sales, impacts of COVID-19 pandemic, and hindered export. To help farmers go through the difficulties, TSC combined resources of the trade union, the Welfare Committee, and various business departments and purchased guavas, red beans, mangoes, pineapples, oranges, lichis, bananas, pomelos, honey tangerines, atemoya, and candied dates during 2019 thru February 2022, with a total of 192,971 kgs, which amounted to NTD 9.99 million. In addition to giving these agricultural products as gifts to our members, we also donated them to our neighbors and police and fire units for neighborly purposes. In addition, we also set additional sales areas of these agricultural products at our self-operated bases and shared them at our gas stations as gifts once the customers spend over a certain amount of money. This not only solved the problem of sluggish sales of local agricultural products, the operation of TSC business could also be combined to create a win-win result.



Supporting Taiwan' s Agricultural Products Concretely(Unit:NTD)





# Practitioner of Sustainable Governance



## Related-Stakeholders



shareholders



consumers/  
clients



employees



Government  
agencies/ elected  
representatives



media



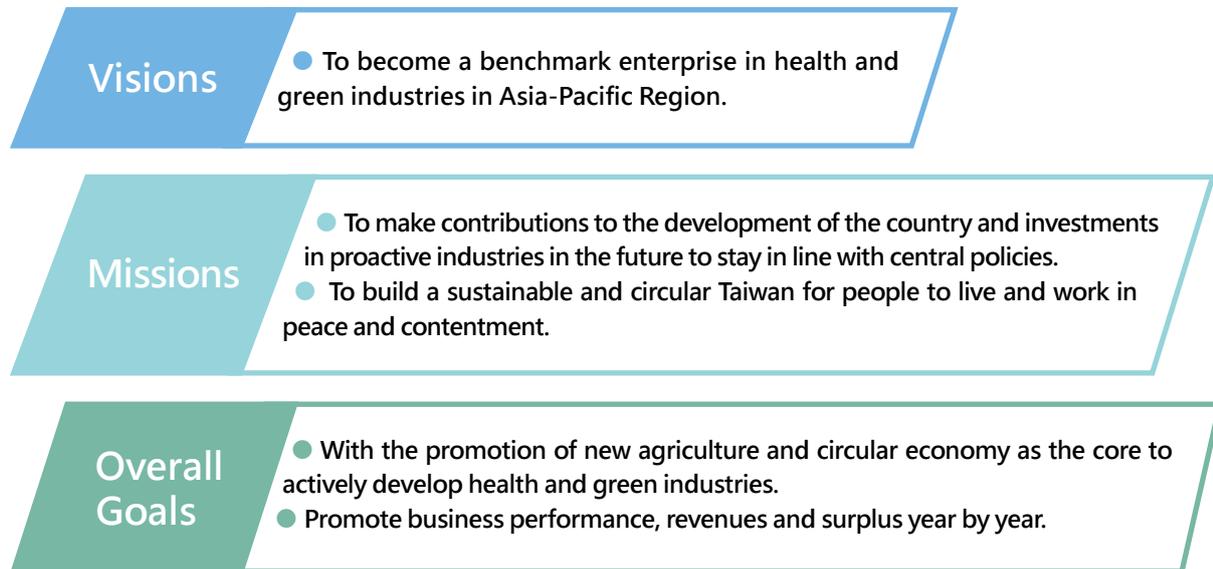
Raw material  
suppliers/  
contractors/  
agents



communities

## 1.1 TSC' s Mission as a Benchmark Green Enterprise

### 1.1.1 Company Overview



TSC has land resources and abundant experience in agricultural farming and processing. We have core technologies and niches in sugar industry, pig farming and Phalaenopsis, and have expanded our business territory to the United States, Canada and Southeast Asia. In recent years, we have also expanded our businesses from the existing sugar and pork production and processing industries to more livelihood industries like quality agriculture, commodity sales, leisure and accommodation, and others. We have gradually transformed from the traditional agriculture of pure sugar production and marketing into a diversified integrated business including agriculture, industry, commerce, and service industries. There are seven business divisions, including Sugar Business Division, Biotechnology Business Division, Agriculture Business Division, Petroleum Business Division, Livestock Business Division, Leisure Business Division and Marketing Business Division. Product sales and services are mainly in Taiwan, and only part of our pig farming and flower businesses are in the areas outside Taiwan.

By making use of TSC' s advantages of existing land and the core technology of pig farming, TSC actively converts pig manure and urine into biogas power generation for reuse, installs solar power generation devices on the roofs of its operation bases and idle land, and plans the Shalun Smart Green Energy Recycling Residential Park. In addition, TSC has also obtained the first Renewable Energy Certificate (REC) for biomass energy, making transformation in accordance with the global trend of circular economy and renewable energy, taking a step forward toward sustainable management.

#### ▣ Profile of TSC

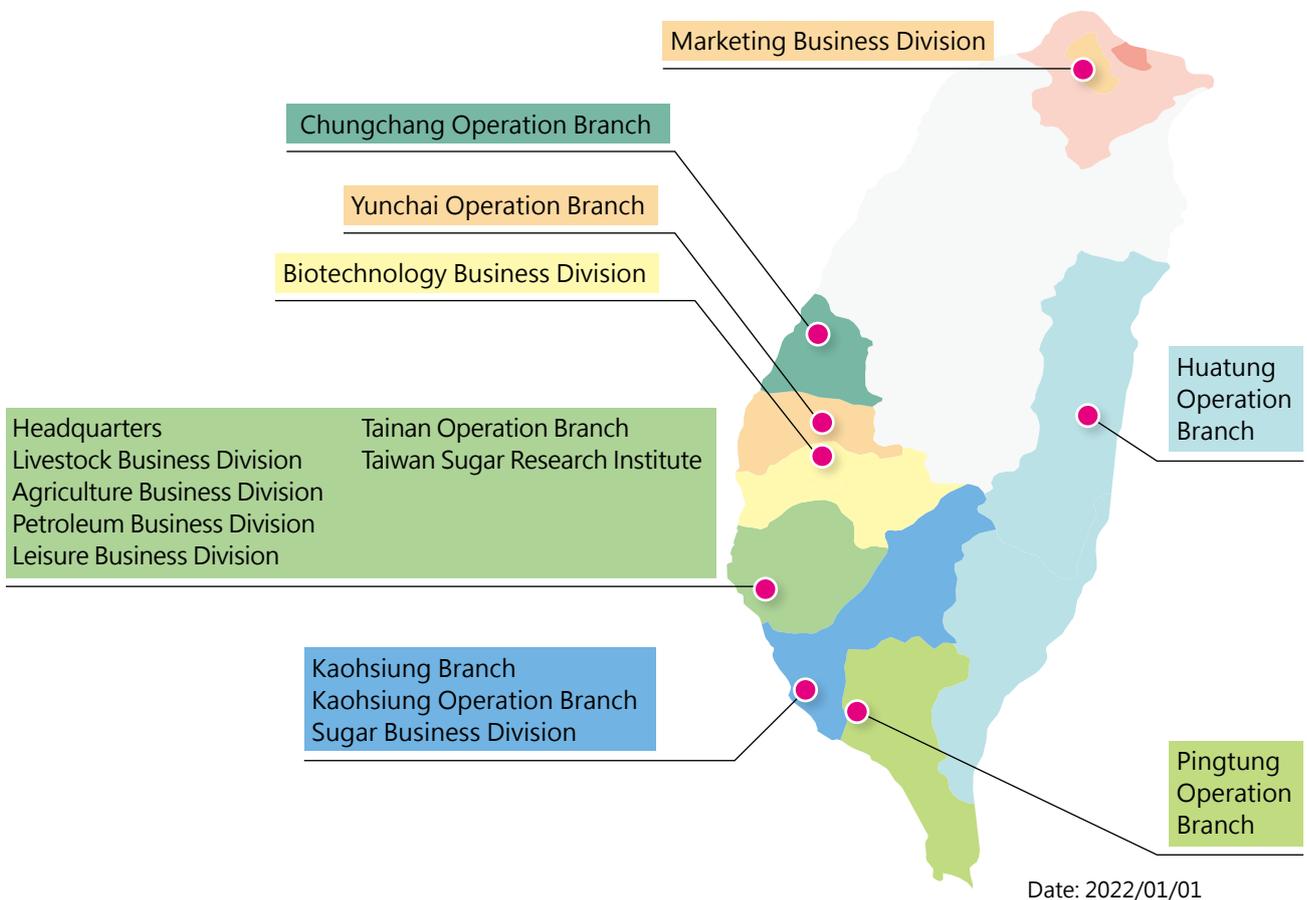
<b>Company name</b>	Taiwan Sugar Corporation
<b>Equity status / market type</b>	State-owned enterprise under the Ministry of Economic Affairs (The government holds 96.51% of shares, private 3.49%; for related shareholding structure.)
<b>Establishment date</b>	May 1, 1946
<b>Capital</b>	NTD 56,367 million
<b>Total assets</b>	NTD 659,780 million (as of December 31, 2021)
<b>Chairman</b>	Chao-Yih Chen
<b>President</b>	Kuo-Hsi Wang
<b>Number of employees</b>	3,241 (as of December 31, 2021)
<b>TSC Headquarters</b>	No. 68, Shengchan Road, East District, Tainan City



## Major business scope

Business	Main business (products, services) items
Sugar Business	Refined white sugar, golden brown sugar, fine granulated sugar, refined liquid sugar, secondary processed sugar, and edible oil
Livestock Business	Hogs, feed, pork and pork products
Biotechnology	Alcohol, health care products, clam essence, beauty and skin care products and OEM products
Agriculture Business	Phalaenopsis
Leisure Business	Hotels, resorts, tourism sugar factory, leisure plaza, golf course, commercial real estate and so on
Product Marketing	Sale of TSC products, import/OEM products, bulk grains and channel operation
Petroleum Business	Gas stations and related services
Land Development	Construction, student dormitories, development of plant areas, and project development
Property Management	Land lease, establishment of superficies
Agricultural Management	Organic crops, landscape seedlings, forage crops and miscellaneous crops, farmland lease, afforestation and tending
Environmental Protection Business	Operation of waste incineration plants (The service is terminated on November, 2021), environmental testing and landfill lease
Storage and Transport Business	Logistics Center, terminal business, parking lots, transport
Green Energy	Solar PV power, biogas power generation

## Domestic Operation Bases



## Organizational Adjustment

The major organization adjustments of the company in 2021 are as follows. In the future, TSC will continue to review the rationality of units, departmental organization and manpower allocation in accordance with the company's business strategies and the growth and decline of business.



### Organizational Downsizing

The Human Resources Team, Ethics Team, and Information Team under the Agriculture Business Division are merged into the CEO Office; Wushulin Orchid Nursery, Taitung Orchid Nursery, Nanjing Orchid Nursery, Puli Orchid Nursery, and Seed Breeding Farm are merged into the Production Team; Deflasking Orchids Seedlings Farm and the Branch in the Netherlands are deactivated.

The Crops and Fertilizers Team of the Department of Agribusiness Management is deactivated, and the personnel and the business are transferred to Comprehensive Planning Team.

The Organic Crops Section of Tainan Operation Branch is deactivated.



### Business Adjustment

Yuemei Tourism Sugar Factory of the Leisure Business Division is merged into the Chungchang Operation Branch as the Comprehensive Management Section II, and the original Comprehensive Management Section is renamed Comprehensive Management Section I; the Taisugar Wushulin Park of Leisure Business Division is merged into Tainan Operation Branch as the Comprehensive Management Section II, and the original Comprehensive Management Section is renamed Comprehensive Management Section I.

Jianguo Building is added to the Operation and Management Team of the Leisure Business Division.

Chengkung Automatic Warehouse and Zhong An Logistic Park are added to the Logistic Management Section of Kaohsiung Branch, and Dinghong Parking Lot and Wudong Parking Lot are added to the Parking Lot Management Section.

## Investment

According to the transformation strategy planning, under the analysis of the investment evaluation team, we seek partners to establish cooperative relationships with the Company's advantages of land, funds, technologies and other resources and accumulate the experience of professional evaluation and investment management to foster more solid and professional capabilities.

The major fields of business TSC has invested include livestock feed, high-speed rail, power generation. As of the end of 2021, the total investment in 16 domestic and foreign private-owned enterprises amounted to approximately NTD 5.74 billion. In the domestic market, we have invested 14 companies, including Pfizer Biotech and others, with an investment of approximately NTD 5.214 billion, accounting for 90.84%. Investment is made in 2 foreign companies, such as Vietnam-Taiwan Sugar Co., Ltd., with an investment of approximately NTD 526 million, accounting for 9.16%.

## Key participation in organizations and associations

Name of association or professional organization	Title	The purpose of participating in the organization
Taiwan-New Zealand Business Council, Chinese International Economic Cooperation Association	Committee chairman	To grasp international business conditions and to expand overseas investment opportunities
Chinese Society for Management of Technology	Director	To obtain new knowledge of technology management and learn from practical experience.
Taiwan Bio Industry Organization	Supervisor	Related to the company's business, and can enhance the overall benefits.
Taiwan Sugar Industry Resources and Circular Economy Technology Society	Managing director, executive director, executive supervisor, director, supervisor, convener of the finance committee	



Name of association or professional organization	Title	The purpose of participating in the organization
Taiwan Sugar Association	Director, supervisor	To promote the upgrading and development of sugar industry and other related industries
Center for Corporate Sustainability	Director	To grasp the trend of sustainable management and strengthen external exchanges
Taiwan Biomass Energy Industry Associatio	Director, executive director, supervisor	To develop renewable energy
Tainan City Food Safety Self-Management Alliance	Deputy Managing Director, Director	To establish a channel for communication with the local food industry
The Chinese Society for Training and Development	Director	Latest education and training trends, methods, technologies and experience
Chinese National Federation of Industries-Employers' Committee	Member	To promote exchanges among employers' organizations, establish cooperative relationships, and increase operating efficiency.
TOSHMS Southern District Promotion Society	Planning and External Relations Committee Member	To promote exchanges between excellent occupational safety units and improve international occupational safety skills
Taiwan Feed Industry Association	Director	For the needs of business promotion.
Kaohsiung Chamber of Industry	Director	To promote exchanges among employers' organizations, establish cooperative relationships, and increase operating efficiency.
Taiwan Vegetable Oil Manufacturers Association	Director, Alternate Director	To obtain information of the production and sales of soybeans and vegetable oil and improve vegetable oil refining technology
Taiwan Amusement Park Association	Director	To promote cooperation of the regional tourism and leisure industry and improve services
Tainan City Tourism Association	Executive Director	
Tainan Municipality Hotel Association	Director	To participate in trade associations and have exchanges with the same trade in accordance with the law
Taichung City Gasoline Stations Operators Association	Consultant	To participate in the business meeting of association of gasoline stations to master the trend of the industry
Tainan City Gasoline Stations Operators Association	Executive Supervisor	
The Global Logistics Council of Taiwan	Director	To enhance the Company's global logistics and logistics management knowledge and promote industrial cooperation.
The Dr. Lee Chong-Dao Foundation	Director	Related to the company's business, and can enhance the overall benefits
TSC Federation of Labor Unions	Executive Director	To facilitate exchanges in labor relations
Taiwan Federation of Trade Unions in Energy Industry	Supervisor	To promote harmonious labor relations and enhance employee rights and interests
Kaohsiung City Federation of Trade Unions	Supervisor	To facilitate exchanges in labor relations
Kaohsiung City Government	Adviser on Municipal Administration	To facilitate the relations with the local government for the promotion of business
Taiwan Federation of Trade Unions in Energy Industry	Director	To promote harmonious labor relations and enhance employee rights and interests

## 1.1.2 Financial Performance

TSC has actively invested in the R&D and application of sugar as its core technology and developed the concept of diversification operations. We use existing resources and advantages to develop new businesses, research and develop new products and provide new services. In addition, internal performance evaluation indicators are set in accordance with Regulations for Performance Evaluation of State-Run Enterprises and Guidelines for Performance Evaluation of State-Run Enterprises for corporate management and performance. In 2021, with the joint efforts of all units and all employees, the total revenue reached NTD 31.788 billion, the total expenditure was NTD 27.88 billion, the net profit was NTD 3.908 billion; the net profit margin accounted for 14.41%, TSC's business bases are located in Taiwan, Vietnam, the United States, and Canada. We strictly abide by the local laws and regulations of the countries, adhere to integrity management, and pay taxes honestly. There is no such thing as setting a base in a tax haven for Taiwan Sugar Corporation.

For information about TSC's final report, annual report for shareholders' regular meetings and information on corporate governance, please refer to the public information section on TSC home page.



### TSC's Condensed Income Statement in Recent Three Years

Unit: NTD:thousand

Item/year	2019	2020	2021	The percentage of increase or decrease compared with the previous year (%)
<b>Income</b>				
Operating income	26,409,607	25,435,173	27,122,957	6.64%
Other income	-	-	2,502	-
Non-operating income	4,068,084	4,478,293	4,662,446	4.11%
Total revenue	30,477,691	29,913,466	31,787,905	6.27%
<b>Expenses</b>				
Operating cost	20,954,606	19,825,005	21,643,010	9.17%
Operating expenses	4,181,489	4,130,895	4,127,206	-0.09%
Other expenses	28,478	109,758	-	-100.00%
Non-operating expenses	2,038,404	2,224,913	2,226,713	0.08%
Income tax expense (benefits)	-141,495	-944,254	-116,661	-87.65%
Loss (income) from discontinued operation	673,680	-	-	-
Total expenses	27,735,162	25,346,317	27,880,268	10.00%
Net income	2,742,529	4,567,149	3,907,637	-14.44%
Dividend	3,382,050	6,200,425	3,945,725	-36.36%
Net profit margin (%)	10.38%	17.96%	14.41%	-3.55%
Earnings per share(NTD)	0.49	0.81	0.69	-14.81%

Note :

- The numbers in this table was certified by CPAs.
- The 2021 annual income tax benefit was NTD 116,661 thousand mainly because the profit-seeking enterprise income tax was NTD 3,905 thousand and the benefit of land value increment tax was NTD 120,566 thousand.
- The final consolidated statement of profit and loss of the current period for 2021 is NTD 139,829 thousand, mainly because the re-measurements of the defined benefit plans was NTD 267,988 thousand. The re-measurements of associates for using equity method. The unrealized valuation gains and loss from equity investment instruments measured at fair value through other comprehensive income was NTD -153,781 thousand. The conversion difference of the financial statements of the foreign operating organizations of the associated and joint ventures accounted for using equity method was NTD 25,622 thousand.
- The total salary and benefits for employees in 2021 was NTD 4,312,647 thousand.
- The Hypermarket Business Division discontinued operations on June 17, 2019. In accordance with the International Financial Reporting Standards 5 (IFRS 5) Non-current Assets Held for Sale and Discontinued Operations, the revenue of NTD 1,125,823 thousand and the expenditure of NTD 1,799,503 thousand would be reclassified to NTD 673,680 thousand in "Loss (income) from discontinued operation"



TSC adheres to the principle of paying taxes honestly according to law, which contributes to the country's construction and development. In 2021, TSC paid a total of NTD 4,368,891 thousand in taxes and fees to local and central governments in Taiwan, a 4.98% increase compared with the NTD 4,161,490 thousand in 2020. We will continue to focus on the steady development of the Company and create the maximum value for our shareholders

### Details of taxes and fees

Unit: NTD:thousand

Year	Central government	Local governments	Contribution to domestic governments		Foreign governments
			Tax payment	% of Operating Income	
2019	1,468,874	2,766,223	4,235,097	16.04%	6,451
2020	1,357,418	2,804,072	4,161,490	16.36%	4,307
2021	1,511,167	2,857,724	4,368,891	16.11%	7,441

### Government financial subsidies accepted in 2021

Unit: NTD:thousand

Government agency	Amount	Description
Council of Agriculture, Executive Yuan	1,100	Subsidy for the project of "Co-fermentation operation efficiency of vertical fermentation tank in circulation area and reuse of biogas residues"
	10	Subsidy for cooperation with the Statistical Survey of the Animal Husbandry Industry
Kaohsiung City Government	49,941	Compensation provided by Kaohsiung City Government for the section expropriation in the development zone of the Kaohsiung New Town Phase II (in cooperation with the science park)
Tourism Bureau, Ministry of Traffic and Communication	19,494	The revenues of the leisure and recreation industry were significantly impacted due to COVID-19 epidemic, and the government provided the following subsidies. 1. Salary subsidy of NTD 16,500 thousand for employees in the tourism, entertainment and hotel industries 2. Relief subsidy of NTD1,292 thousand for the cancellation of tour groups 3. Subsidy of NTD 1,702 thousand for the project of high-quality tourism and entertainment industry
Water Resources Agency, MOEA	593	Subsidy for the maintenance of the sand side discharge gate of Jianshanpi Reservoir
Tax Collection Agency	354	1. For the unused floors of tourist hotels or inns, the house tax is levied at a non-residential and non-business tax rate of 2% to lower the burden on house tax, and the subsidy is NTD 318 thousand. 2. Businesses in entertainment industry that are subject to taxation and impacted by the epidemic that led to no business or reduced business income can submit application to tax collection agencies and obtain the subsidy of NTD 36 thousand.
Tainan City Government	238	Subsidies for epidemic preparation and prevention as well as for railway culture

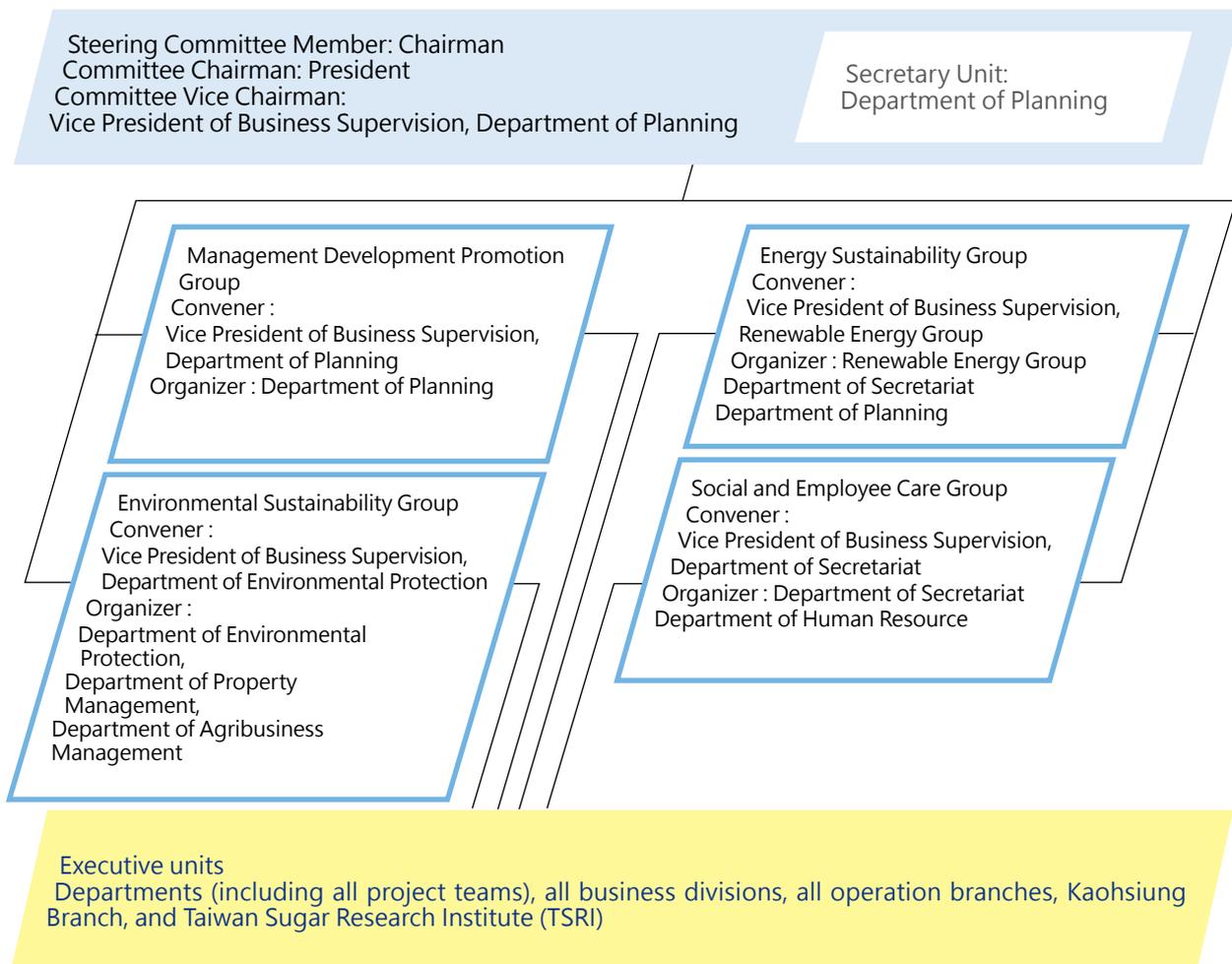
Note: Government subsidies received include tax exemption and reduction, subsidies, investment grants, R&D grants, and other relevant types of grants, incentives, royalty waiver period, financial grants from Export Credit Agencies (ECAs), financial incentives, and financial assistance received or available from any agency for any operation.

### 1.1.3 Sustainable Operation and Practices

#### ■ TSC' s Corporate Sustainable Development Committee

The "TSC Corporate Sustainable Development Committee" has been set up to establish relevant procedural documents, with the general manager serving as the chairperson and the chairman as the steering member attending committee meetings on behalf of the board of directors. In addition, it is also in charge of incorporating the corporate sustainable development into the corporate operations and development directions, setting sustainable development policies, systems or related management guidelines, and preparing annual work plans and reports of implementation results every year. In addition, future business strategies related to sustainable development are submitted to the board of directors for deliberation in November each year. Economic, environmental and social issues arising from the operation activities are handled by four working groups. The organizers of each working group will set the group' s work plan for the following year based on the execution status of the annual business and track the implementation of the plans of the current year. Department of Planning will then organize the submitted results and report them to the committee.

#### Organizational Structure and Task Assignments of TSC' s Corporate Sustainable Development Committee



Please visit the Corporate Sustainable Development Page to download TSC Corporate Governance Regulations.



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## TSC's Sustainable Development Strategies

Right after COP26, various countries started to develop carbon reduction policies and have successively announced net-zero emissions by 2030 and 2050. Taiwan also gears to international standards and has announced Net Zero by 2050. Net Zero has become the trend for the future. For enterprises, the problems that will be directly or indirectly brought by extreme weather would impact corporate operations, responses to situations such as changes in consumer behavior, carbon reduction trends, disaster prevention, and energy shortage should also be made. We will continue to align international trends and advocate for TCFD and SASB-aligned reporting. Please refer to 2.3.2 Response to Climate Change Risks for TCFD-related disclosure and Appendix V for Comparison Table with Sustainability Accounting Standards Board (SASB) Index.

TSC has set an overall business strategy for the following 6 years and PDCA (Plan-Do-Check-Act) is used for the annual review of the goal achievement and adjustment of related strategies. In terms of business development, in addition to continuing the active talent cultivation to strengthen the corporate physique and improve operational performance, we also refer to government policies and the trends of industrial environment changes, focusing on the core of "Promoting New Agriculture" and "Circular Economy", and having the five major strategies of "Deep Rooting Health and Green Related Industries", "Promoting New Agriculture and Circular Economy", "Accelerating Asset Activation", "Enhancing the Company Physique and Improving Operational Performance", and "Exploring Overseas Investment and Cooperation with Diplomatic Allies" as the blueprint for future business strategy, putting forward the direction of business transformation, upgrading, and land resources utilization as the main axes of the strategies for the implementation of related projects.

### TSC's future business strategies

#### 1. Deep Rooting Health and Green Related Industries

- Continue to develop health food
- Promote health and leisure travel business
- Develop green energy
- Implement waste reduction and water conservation
- Carbon reduction and carbon sequestration
- Green procurement and supply



#### 3. Accelerating Asset Activation

- Active cooperation with the government and industry for land development
- Build houses for sale or rent
- Cooperate with the policy to provide land for social welfare purposes
- Diversified use of woodland
- Preservation and activation of cultural assets



#### 5. Exploring Overseas Investment and Cooperation with Diplomatic Allies

- Continue the operation of existing bases overseas
- Work in line with the policy and promote cooperation with allies



- Promote renovation of pig farms and smart pig raising
- Recycling and reuse of biological materials
- Construction of intelligence circular housing
- Promote eco-friendly farming
- Develop high-value agricultural technologies and products

#### 2. Promoting New Agriculture and Circular Economy



- Talent cultivation and organization optimization
- Implement goal management and performance review
- Improve product competitiveness
- Strengthen cooperation with external parties
- Fulfill corporate social responsibility
- Improve land asset management efficiency

#### 4. Enhancing the Company Physique and Improving Operational Performance

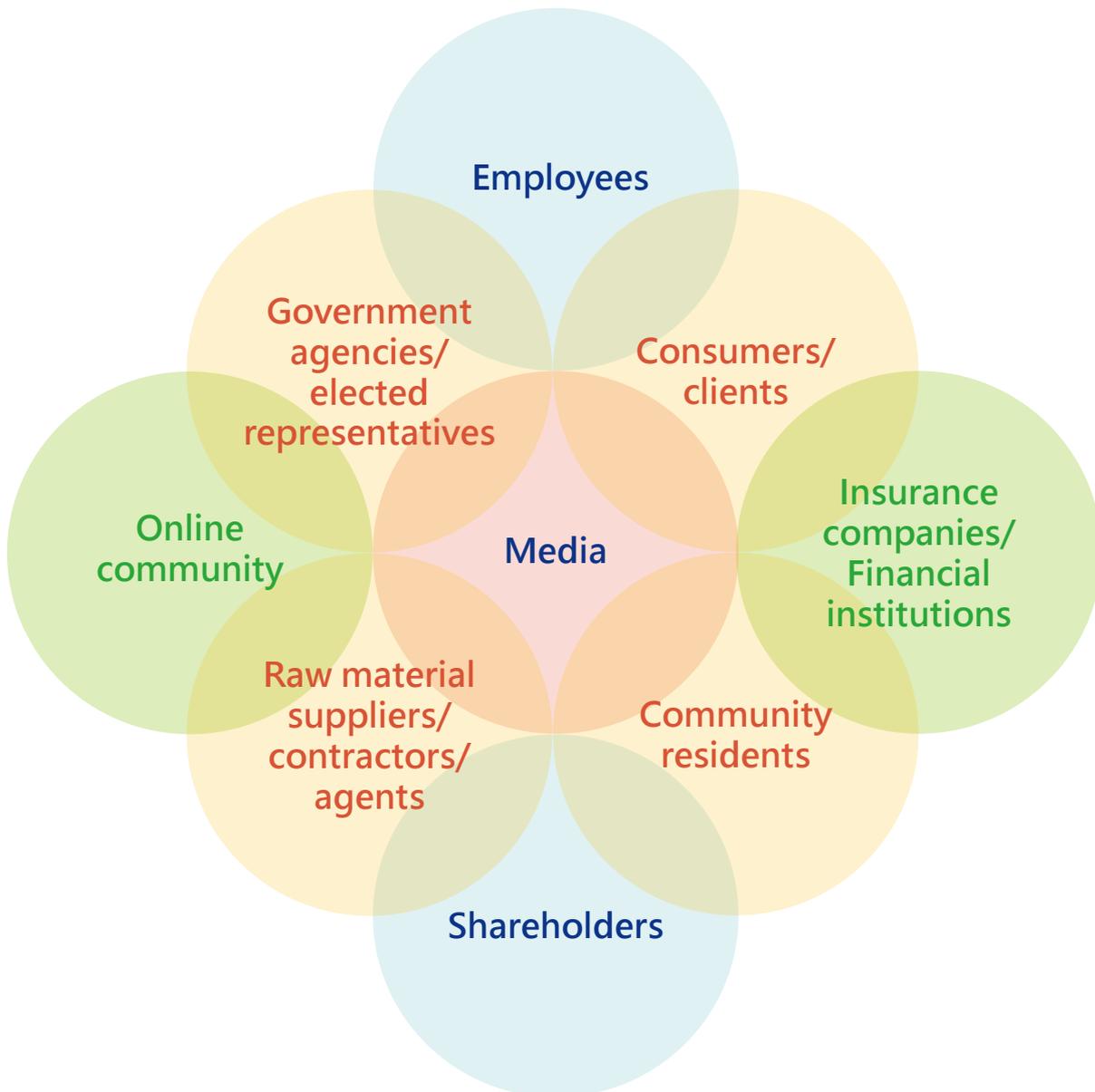


## 1.2 Identification of and Communication with Stakeholders

The identification of and communication with the stakeholders are the foundation for the implementation of corporate sustainable development. TSC maintains multiple communication channels with our stakeholders and carefully listens to the stakeholders' voice. The stakeholders' needs and expectations of TSC are taken as the reference for decision making. TSC hopes to create and share the maximum possible benefits with its stakeholders in the diversification of business activities.

### ■ Identification of Stakeholders

Corporate Sustainable Development Committee and executives in all departments held internal discussions and with the reference to stakeholder groups identified by the same trade. Based on the criteria of AA1000 Stakeholder Engagement Standards (AA1000SES) for the scoring and prioritization of the stakeholders, employees, consumers/clients, raw material suppliers/contractors/agents, government agencies/elected representatives, media, and community residents.



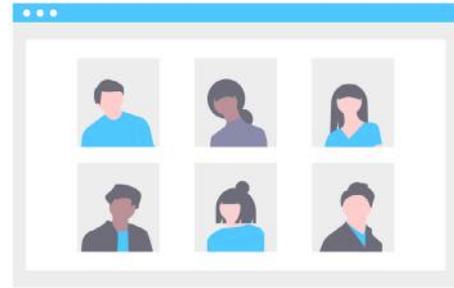


**■ Communications with Stakeholders**

TSC takes the initiatives to communicate with our stakeholders through our official website, trade union, related meetings, Annual Report, TSC Communication, internal publications, CSR questionnaire, customer services and other channels to understand the stakeholders' issues of concern. In addition, through the coordination and communication among internal departments and units and based on our previous experience cooperating with our stakeholders, we set a SOP of PDCA (Plan-Do-Check-Act) to make prompt responses based on the sensitivity and level of impact of the nature of issues.

**TSC's Communication Channels with its Stakeholders**

Stakeholders	Significance of Stakeholders	Issues of Concern	
 <b>Shareholders</b>	<p>In the stakeholder structure, government agencies hold 96.51% of shares. They focus on TSC's operating performance, corporate governance and sustainable development.</p>	<p>Integrity Management            Marketing and Labeling            Providing land for urban planning            Indirect Economic Impacts            Anti-corruption            Effluents and Waste</p>	
 <b>Employees</b>	<p>We regard our employees as the Company's most important assets and the cornerstone of our growth. Therefore, we value our employees' opinions and hope to create a workplace for them to enjoy work and life.</p>	<p>Labor/ Management Relations            Socioeconomic Compliance            Education and Training            Occupational Health and Safety            Customer Health and Safety</p>	
 <b>Consumers/clients</b>	<p>As a state-owned enterprise, the products and services TSC provides should be the model and example for the domestic food industry, and we also play a leading role in food safety in particular. Therefore, the recognition and advice given by our consumers/clients are the driving force for our continuous efforts and growth.</p>	<p>Customer Privacy            Customer Health and Safety            Marketing and Labeling            Socioeconomic Compliance            Effluents and Waste</p>	
 <b>Raw material suppliers/ contractors/agents</b>	<p>We attach great importance to the quality of raw materials and labor services our distribution partners provide. We cooperate with our partners in an impartial, open and fair manner to achieve the goals of benefits sharing and sustainable development.</p>	<p>Marketing and Labeling            Customer Health and Safety            Socioeconomic Compliance            Supplier Environmental Assessment            Environmental Compliance</p>	



	Communication Channels	Frequency	Communication Effectiveness in 2021
	ESG questionnaire survey	Annually	<p>One shareholders' meeting was held. The shareholders expressed their opinions fully in the meeting and these opinions were included in the meeting minutes.</p> <p>The remarks made by the shareholders regarding the provisional motion at the general shareholders' meeting were replied to the individual shareholders in letters.</p>
	Shareholders' meeting	Annually	
	Annual report/financial report	Regularly	
	Official document exchanges	Occasionally	
	TSC official website	Instantly	
	External communication mailbox	Instantly	
	ESG questionnaire survey	Annually	<p>In order for smooth labor-management communication, all the units held a total of 65 labor-management meetings during 2021 and the labor-management relationship is harmonious.</p> <p>The meeting of the Federation of Trade Union Confederation is held annually.</p> <p>The Employee Welfare Association provides various welfare measures for the employees and their family dependents. The satisfaction survey score was 72 points in 2021 employee satisfaction survey.</p>
	Taiwan Sugar Communication	Monthly	
	Official document exchanges	Occasionally	
	TSC official website	Instantly	
	Opinion exchange platform	Instantly	
	Trade Union Confederation Congress	Annually	
	Labor-Management Meeting	Quarterly	
	Employee Welfare Association	Occasionally	
	Employee satisfaction survey	Annually	
	ESG questionnaire survey	Annually	<p>Our 2021 customer satisfaction survey was conducted, and it averagely scored 95.49 points, an increase of 2.28 points compared with the 93.21 points in 2020.</p> <p>The Customer Complaint Mailbox is set up to handle customers' inquiries, suggestions and complaints. In 2021, a total 7,915 inquiries of 768 e-mails and 7,147 phone calls were received. All the consumers' opinions were responded appropriately to solve the consumers' problems.</p>
	Customer complaint mailbox	Instantly	
	Customer Service Hotline	Instantly	
	TSC official website	Instantly	
	FB TSC Fanpage	Instantly	
	Customer satisfaction survey	Instantly	
	Service desk at operation branches	Instantly	
	External communication mailbox	Instantly	
	ESG questionnaire survey	Annually	<p>All the purchases were made in accordance with the Government Procurement Act, and there were no incidents of corruption. We conducted 23 irregular supplier audits.</p>
	Symposium/education and training	Occasionally	
	Supplier Evaluation Questionnaire	Annually	
	TSC official website	Instantly	
	External communication mailbox	Instantly	
	Agents meeting	Quarterly	
	Face to face communication	Occasionally	
	Purchase/ Distribution contract	Contract period	



Stakeholders	Significance of Stakeholders	Issues of Concern	
 <p><b>Government agencies/elected representatives</b></p>	<p>As a state-run business, opinions or inquiries expressed by the government agencies/elected representatives are the driving force for our continuous growth, and they are also the keys to our operating performance and sustainable development.</p>	<p>Socioeconomic Compliance            Environmental Compliance            Effluents and Waste            Customer Privacy            Circular Economy</p>	
 <p><b>Media</b></p>	<p>As a state-run business, we attach great importance to the interaction with the media. If there are important events related to the Company, we respond promptly to the media to maintain and enhance the Company' s image.</p>	<p>Labor/Management Relations            Emissions            Local Communities            Employee Diversity and Equal Opportunity            Economic Performance</p>	
 <p><b>Community residents</b></p>	<p>We are committed to maintaining community relations. Through communication and interaction with community residents, we can understand the residents' issues of concern and establish a harmonious relationship.</p>	<p>Effluents and Waste            Customer Privacy            Sustainable Food            Socioeconomic Compliance            Environmental Compliance</p>	
 <p><b>Online community</b></p>	<p>Due to the advancement of IT and the popularization of the Internet, TSC has to have more intensive contacts with the online community to expand the depth and breadth of information dissemination and make rapid response to various issues. We constantly improve the positive impression of TSC' s business operation through listening to the online community and responding in a positive manner.</p>	<p>Social Participation            Farmers' Revenue            Food Safety and Labeling            Human Rights Policy            Healthy and Affordable Food            Corporate Governance</p>	
 <p><b>Insurance companies/ Financial institutions</b></p>	<p>In the process that drives enterprises to move toward sustainable transformation and low-carbon economy, the lifeblood of funds plays a crucial role, and financial institutions are also gradually aware of the risks in potential environment, society, and governance. The company may face ESG performance rating from insurance companies and financial institutions in the future. TSC is dedicated to becoming a benchmark corporation for sustainability in Asia, and will keep improving its ESG performance.</p>	<p>Food Safety and Labeling            Compliance            Energy            Social Participation            Climate Action            Biodiversity            Equator Principles            Green Finance            Credit Rating</p>	

	Communication Channels	Frequency	Communication Effectiveness in 2021
	Corporate governance evaluation	Annually	The government agencies or elected representatives care about the major issues of TSC, and in 2021, there were 519 times of official document exchanges, 234 discussion meetings with relevant government agencies, and we responded to the elected representatives' opinions promptly.
	Field inspection of work performance	Annually	
	ESG questionnaire survey	Annually	
	TSC official website	Instantly	
	Official document exchanges	Occasionally	
	Discussion meetings	Occasionally	
	External communication mailbox	Instantly	
	ESG questionnaire survey	Annually	All sectors of the society are concerned about major issues of TSC. We respond immediately to the media and hold press conferences for major issues. In 2021, we held press conferences and released press releases 44 times, with a total of 5,505 SMS notifications.
	TSC official website	Instantly	
	Press conferences	Occasionally	
	External communication mailbox	Instantly	
	SMS notifications	Occasionally	
	New product presentation	Occasionally	
	ESG questionnaire survey	Annually	TSC maintains a harmonious relationship with its neighboring communities and maintains the community environment with its neighbors. In 2021, TSC held a total of 100 neighborly activities.
	TSC official website	Instantly	
	External communication mailbox	Instantly	
	Visiting the neighborhood	Occasionally	
	Reaction through elected representatives	Occasionally	
	On-site communication of person in charge	Occasionally	
	ESG Topics Questionnaire Survey	Annually	TSC listens to the public through the online community. Our FB TSC Fanpage (Health TSC) published 215 posts to communicate with external community.  In 2021, TSC announced epidemic-related information, such as epidemic prevention alcohol, quintuple stimulus voucher revitalization plan, and the number of fans increased by 24% compared with the previous year.
	TSC' s Global Information Network	Instantly	
	FB TSC Fanpage	Instantly	
	Line	Instantly	
	YouTube channel	Instantly	
	Instagram	Instantly	
	ESG Topics Questionnaire	Annually	As ESG issues gradually heat up and to cope with the short-term capital allocation needs, TSC conducted 4 times of bank credit business in 2021. A credit rating management level meeting was held in 2021, in which the company' s operating conditions were fully discussed. TSC was affirmed long-term "twAA-" short-term "twA-1+" ratings by Taiwan Ratings, outlook stable. We will continue to pay attention to the development of ESG.
	TSC' s Global Information Network	Instantly	
	External communication mailbox	Instantly	
	Face-to-face communication	Occasionally	
	The Company' s annual report	Annually	
	Sustainability Report	Annually	
	Bank credit work	Occasionally	
	Credit rating discussion meeting	Annually	



# 1.3 Material Topics of Sustainable Development

## 1.3.1 Identification of Material Topics

To enable the information disclosed in the Sustainability Report to meet the needs of the stakeholders, the major topics of sustainability were decided through "identification of stakeholders", "collection of sustainability topics", "topic analysis", "identification of materiality" and "review and discussion".

- (1) Through internal discussions and with the reference to stakeholder groups identified by the same trade, a total of 9 major categories of stakeholders were identified based on the AA1000 SES (Stakeholder Engagement Standards).
- (2) Collection of topics was conducted with the considerations of the context of sustainability and based on GRI Standards, Food Process Sector Supplement and SDGs, and a total of 43 topics were summarized, were consolidated to 28 topics and were used for the questionnaire design. The content of topics includes data in corporate governance, economic, environmental and social aspects.
- (3) TSC used questionnaire survey for stakeholders' level of concern (which affects stakeholders' evaluation and decision making) and the impact on the company's sustainable management (significant impacts on economy, environment and society) as the reference for topic prioritization. A total of 643 copies of questionnaire were recovered.
- (4) Through questionnaire analysis and discussions, 15 material topics were identified and the DMAs were also disclosed.
- (5) For the material topics, the value chain was used as the element for boundary analysis, and relevant information will be disclosed in this Report.

### Identification of Material Topics

This year through the stakeholder questionnaire analysis and internal identification and discussions, a total of 15 material topics were identified.

Analysis of material topics



## Prioritization of Material Topics

1 Food Safety and Labeling	8 Innovative Research	15 Water and Effluents	22 Biodiversity
2 Sustainable Food	9 Occupational Safety and Welfare	16 Economic Performance	23 Raw Materials
3 Corporate Governance	10 Legal Compliance	17 Cultural Assets	24 Renewable Packaging
4 Healthy and Reasonably Priced Food	11 Energy	18 Net Zero Emissions	25 Farmers' benefits
5 Customer Privacy	12 Employee Relations Management	19 Animal welfare	26 Providing land for urban planning
6 Social engagement	13 Climate Action	20 Supplier Sustainable Assessment	27 Tax
7 Circular Economy	14 Emissions	21 Human Rights Assessment	28 Gender equality

### 1.3.2 The Value Chain Boundary of Material Topics

After analysis of the material topics in the 2022 Sustainability Report and with the value chain being used as the element for the boundary analysis, five roles were summarized, including the “Manager of Operational Risks”, the “Collaborator of Policies that Resonate with the Public”, the “Producer with Reversal Process”, the “Operator Safeguarding Talents”, and the “Practitioner of Sustainable Governance”. Active management is made in the aspects of economy, product liability, environment, social participation, labor care and human rights. TSC will continue to strengthen sustainable management and disclose relevant information in the corporate sustainability report.

The topics of the Report this year were consolidated, and the original material topics and custom topics corresponding to GRI were reorganized and categorized to facilitate the conciseness of the Report and focused communication with stakeholders. The original 43 topics were consolidated into 28 topics, so there were fewer major topics identified compared with the previous Report. The consolidation of topics caused the change in the stakeholders’ level of concern on material topics, and cultural assets and the provision of land for urban planning were not included in the material topics.

Sustainability Aspects (Corresponding Chapter and Section)	TSC's Sustainability Topics of 2021	Included Topics	TSC Value Chain Impact Boundary	Page
The Manager of Operational Risks (Chapter 2)	Corporate Governance	Corporate Governance, Anti-corruption(205), Anti-competitive Behavior(206)	TSC (direct impact), consumers/clients (business behavior impact), raw material suppliers/contractors/ agents (business agents (business behavior impact), insurance companies/financial institutions (indirect impact))	41
	Climate Action	-		
	Legal Compliance	Environmental compliance(307), Social and Economic Compliance(419)		
	Customer Privacy(418)	-		
The Collaborator of Policies that Resonate with the Public (Chapter 3)	Innovative Research	-	TSC (direct impact), raw material suppliers/contractors/ agents(business behavior impact),consumers/clients (business behavior impact),	61
	Healthy and Reasonably Priced Food	-		
	Sustainable Food	-		
	Food Safety and Labeling	Customer Health and Safety(416),Marketing and Labeling(417)		
The Producer with Reversal Process(Chapter 4)	Energy (302)	-	TSC (direct impact), community residents (direct impact), government agency, suppliers/contractors/ agents(business behavior impact), consumers/clients (business behavior impact)	79
	Water and Effluents (303)	-		
	Emissions(305)	-		
	Circular Economy	Circular Economy · Waste(306)		
The Operator Protecting Talents(Chapter 5)	Employee Relations Management	Market Presence (202), Employment and Labor Relations (402), Labor/Management Relations (401), Employee Diversity and Equal Opportunity(405)	TSC (direct impact), Community residents (direct impact)	99
	Occupational Safety and Welfare	Occupational Health and Safety (403), Education and Training (404)		
The Creator of Social Value(Chapter 6)	Social Participation	Indirect Economic Impacts (203), Local Communities(413)	TSC (direct impact), Community residents (direct impact)	119



# 2 The Manager of Operational Risks

## Related-Stakeholders



consumers/  
clients



Raw material  
suppliers/  
contractors/  
agents



Insurance  
companies/  
Financial  
institutions



Corresponding material topics & SDGs	Corporate Governance, Climate Action, Compliance, Customer Privacy  
Policy	<ul style="list-style-type: none"> <li>◆ Continue the management of climate change risks (Climate Action)</li> <li>◆ Strengthen the daily implementation of corporate governance and internal control to reduce violations of environmental and socioeconomic regulations (Corporate Governance, Compliance)</li> <li>◆ Performing comprehensive risk management (Customer Privacy)</li> </ul>
Commitments and goals	<ul style="list-style-type: none"> <li>● Short-term goals (within 3 years):             <ol style="list-style-type: none"> <li>1. To establish the TCFD Working Team for continuous management of climate change risks</li> <li>2. It is expected to complete the TCFD Report in 2023</li> <li>3. To expand the organizational boundaries for GHG inventories</li> <li>4. To be a TCFD supporter</li> <li>5. To develop renewable energy and promote circular economy</li> <li>6. Continue to improve the corporate governance system and improve the transparency of financial performance information</li> <li>7. To organize at least 2 sessions of anti-corruption activities (integrity promotion, social participation, administrative transparency) to establish the concept of honesty and integrity</li> <li>8. Compliance with various economic and social regulations</li> <li>9. No incidents of infringement of customer privacy rights and loss of customer data</li> </ol> </li> <li>● Medium and long-term goals (3 to 7 years):             <ol style="list-style-type: none"> <li>1. To participate in the CDP Program</li> <li>2. Zero fines</li> <li>3. To implement risk assessment, strengthen the supervision and inspection mechanism, and reach the goal of zero corruption</li> <li>4. To become a benchmark enterprise in the health and green industry</li> <li>5. To protect shareholders' rights, strengthen the functions of the board of directors, bring out the functions of a functional committee, respect the interests of stakeholders, and ensure sustainable development of the company with integrity management</li> <li>6. To complete the implementation of TSC' s Future Business Strategies 2023-2028</li> <li>7. To evaluate the use of technology of GHG fixation (absorption, storage) for carbon reduction</li> </ol> </li> </ul>
Responsible units	<ul style="list-style-type: none"> <li>◆ Business Development Promotion Group of the Corporate Sustainable Development Committee</li> <li>◆ TSC Risk Management Promotion Committee</li> <li>◆ Board of Directors</li> <li>◆ Department of Planning</li> <li>◆ Department of Ethic</li> <li>◆ Department of Secretariat</li> <li>◆ Legal Affairs Office</li> <li>◆ Department of Information</li> <li>◆ Department of Environmental Protection</li> </ul>
Input resources	<ul style="list-style-type: none"> <li>◆ Establish the TCFD Working Team</li> <li>◆ Costs for holding training courses related to corporate governance for directors</li> <li>◆ Entrusted external units to conduct corporate governance evaluation</li> <li>◆ Set up charging (piles) stations at gas stations as the transformation plan</li> <li>◆ Continuous evaluation and expansion of solar PV</li> <li>◆ Overall renovation project of modern livestock housing (including solar PV and biogas power)</li> </ul>
Recourse mechanism	Audit Committee Mailbox, the Corruption Report Channel of TSC' s Department of Ethics, Customer Service Hotline, Key Points for the Implementation of the Confidentiality of Reported Cases, Customer Service Email Box, TSC Facebook Fan Page
Management System and Action	<ul style="list-style-type: none"> <li>◆ Implementation Points for Board Performance Evaluation, Continuing Education Implementation Plan for Directors, Audit Committee Charter, Corporate Governance Best Practice Principles, Practice Principles for Corporate Sustainable Development, Code of Ethical Conduct</li> <li>◆ Future business strategies, Principles of Risk Management and Crisis Handling, Guidelines for Risk Assessment, Guidelines for the Process of Preparing Financial Statements, Guidelines for Endorsements and Guarantees, Management Points for Personal Data Protection, Manual for Personal Data Protection, Responsibility Center System, Internal Control System</li> </ul>
Assessment management mechanism	Internal Control System, TSC Performance Assessment System, Corporate Sustainable Development Committee Work Plan and Implementation Review Meeting, Guidelines for the Evaluation of the TSC' s Board of Directors, Evaluation Index of Corporate Governance System of State-owned Enterprises

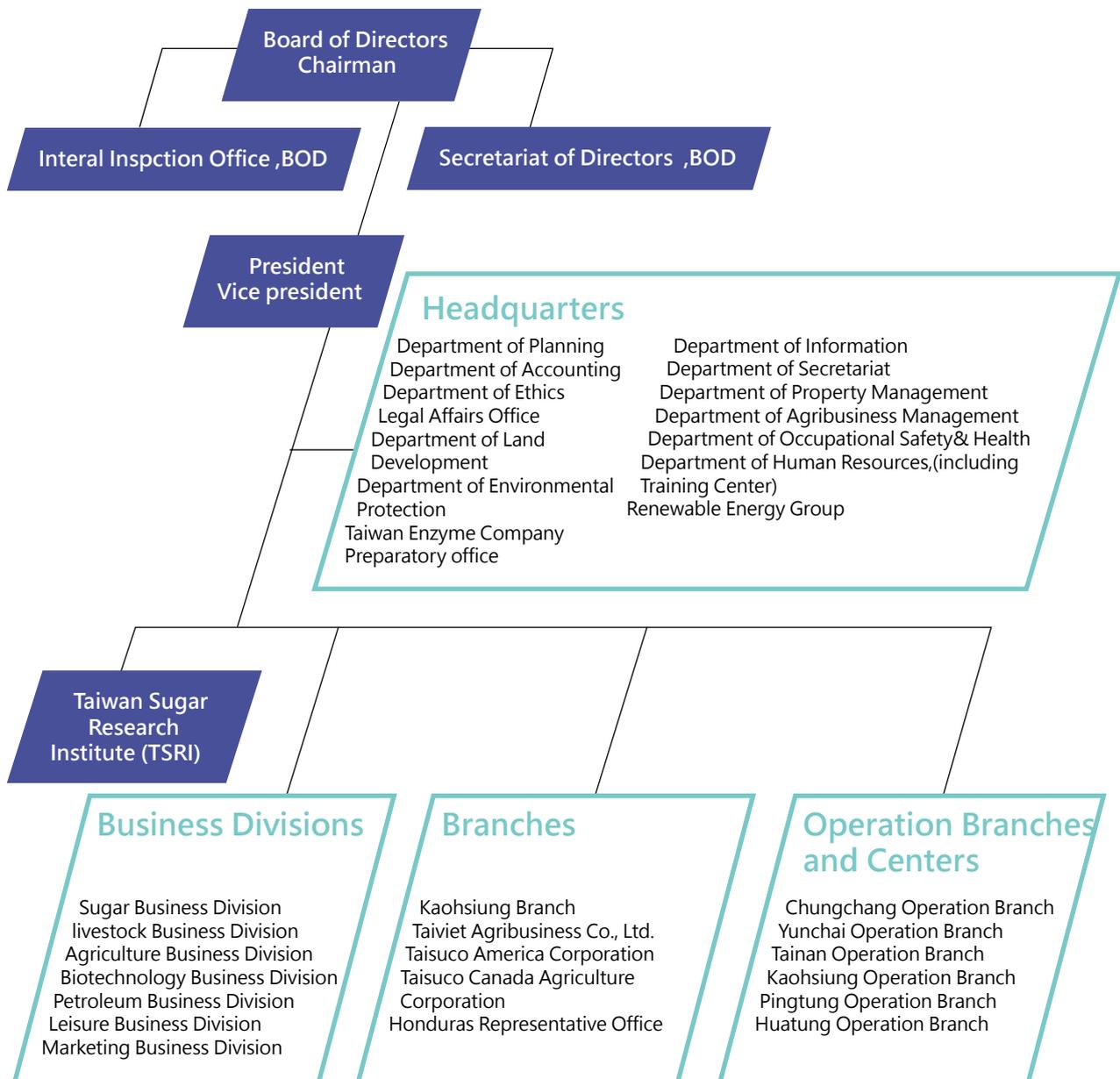


## 2.1 Corporate Governance

### 2.1.1 Board of Director Structure

The Board of Directors is the Company's highest governance body. The chairman is also the chairman of the shareholders' meeting and the board of directors and not a member of the management team. The president and the vice presidents assist the chairman. The chairman upholds the resolutions of the board of directors for the overall management of the company's business. The vice presidents assist the president according to the division of business. The concept of corporate governance at TSC is implemented from top to bottom. All the important business decisions are implemented based on the resolutions of the board of directors.

#### Organizational Structure of TSC



Date of information : January 1,2022

TSC is a state-owned enterprise under MOEA. Mr. Chao-Yih Chen was nominated the chairman by the Ministry of Economic Affairs and elected the chairman in the 14th board meeting of the 33rd session of BOD on June 19, 2019, and re-elected the chairman in the 1st meeting of the 34th session of BOD on June 11, 2020.

TSC's BOD (board of directors) comprises 15 directors (including 3 independent directors, 1 female director included). The directors include representing directors, female directors, and representative directors assigned by the trade unions. The number of female directors is 5, reaching the requirement that each gender shall account for more than one-third of the board seats. Board members have different professional background in the fields of law, accounting, finances, marketing, agriculture, economic development, urban development, and environment engineering, and they are also industry experts with the expertise in risk management. After examining and evaluating the qualifications, it can be found that all board members of TSC are equipped with the aforementioned capabilities and expertise, and the diversity and complementation among the directors enable the company to implement business management and develop future strategies effectively. The term of office of the directors shall be 2 years in accordance with the Articles of Association. TSC held the general shareholders' meeting in June, 2020 to re-elect the 34th session of board of directors, whose term is from June 11, 2020 to June 10, 2022. All newly appointed directors have to sign the "Consent to Appointment of Directors", abide by all the stipulations in Company Act, and shall have the loyalty and exercise the due care of a good administrator in conducting the business operation of the company. Functional Committees established under the board of directors include the Business Investment Committee, the Land Resources Committee, and the Audit Committee. Audit Committee is composed of all independent directors, and the committee members should elect one person as a convenor. Relevant operations of the Audit Committee are handled in accordance with the Audit Committee Charter, which is disclosed on P27-28 of the Annual Report. Matters concerning the number of committee members, term of office, powers, rules of procedures, resources the company should provide when exercising their power are all stipulated in the TSC Audit Committee Charter, Organization and Key Points for Business Investment Committee of the Board of Director, Taiwan Sugar Corporation, and Organization and Key Points for Land Resources Committee of the Board of Director, Taiwan Sugar Corporation.

The responsibilities of each functional committees are as follows.

- ◆ Audit Committee: Responsible for the deliberation of matters stipulated in Paragraph 1 to Article 14-5 of the Securities and Exchange Act.
- ◆ Business Investment Committee: Responsible for the deliberation of matters concerning investment, business plans, future business strategies and annual operating budget.
- ◆ Land Resources Committee: Responsible for the deliberation of proposals for land resource utilization and development or asset transactions.

Committee	Convenor	Powers of Committee
Audit Committee	Independent director, Mr. Chung-Feng, Wu	Handle matters in accordance with Article 14-4 and 14-5 of the Securities and Exchange Act
Business Investment Committee	Independent director, Mr. Suen-Zone Lee	• Proposal for capital expenditure or equity investment
		• Proposal for business plans
		• Proposal for annual operating budget
		• Proposal for business strategies
		• Proposal for write-off of bad debts
		• Other business investment-related proposals (including asset transactions)
Land Resources Committee	Independent director, Mr. Yuan-Shang Lin	• Proposal for land lease and establishment of superficies with the annual rent or full term royalties reaching NTD 5 million and above
		• Proposal for land lease and establishment of superficies with a period of 10 years or more
		• Proposal for land lease and establishment of superficies with a period of over 3 years and an area of 20 hectares or more
		• Proposal for the sale of land with the total value of more than NTD 1 million appraised by the Headquarters.
		• Proposal for land purchase or exchange with an amount of NTD 50 million or more
		• Proposal for co-construction
		• Proposal for other asset transactions or land resource utilization, development and so on.



## ■ Diversity of Directors

As prescribed in Article 20 of Corporate Governance Best Practice Principles for Taiwan Sugar Corporation, to achieve the ideal goal of corporate governance, the board of directors shall possess the following abilities, including ability to make operational judgments, ability to perform accounting and financial analysis, ability to conduct management administration, ability to conduct crisis management, knowledge of the industry, an international market perspective, ability to lead, and ability to make policy decisions.

To implement the diversity of board members, information concerning the gender, educational background, professional qualifications and experience, tenure of service, and the situation of concurrently holding other company positions is all disclosed in TSC's Annual Report. The diversity of board members include gender, age, cultural and educational background, professional experience, skills, knowledge, tenure of service, and situation of concurrently serving as directors or managers in other companies. With the diverse expertise and experience of the board members, corporate governance and operational performance can be continuously strengthened.

### Basic information of the BOD members (34 rd session) in 2021

Date of information: December 31, 2021

Title	Name	Current Position	Education	Experience	Attendance rate in 2021 (12 BOD meetings)
Chairman	Chao-Yih Chen	Chairman of Taiwan Sugar Corporation	Ph.D. in Agricultural Chemistry, National Taiwan University	Chairman of Automotive Research & Testing Center Honorary Chair Professor, China University of Science and Technology Chairman of Taiwan Sugar Corporation CEO of Sinotech Engineering Consultants, Inc. Vice Chairperson of State-owned Enterprise Commission Director of Industrial Development Bureau, MOEA Executive Secretary of Energy Commission Director General of Department of Industrial Technology Deputy Director of Council for Economic Planning and Development, Executive Yuan	100%
Director	Kuo-Hsi Wang	President of Taiwan Sugar Corporation	Ph.D. in Agricultural Chemistry, National Taiwan University	Vice President of Taiwan Sugar Corporation; Director of Taiwan Sugar Research Institute (TSRI); Deputy CEO and Acting CEO of Biotechnology Business Division	100%
Independent Director	Chung-Fern Wu	Professor of Accounting Department, College of Management, National Taiwan University	Ph.D. in UCLA Anderson Graduate School of Management	Full-time Commissioner of Financial Supervisory Commission, Executive Yuan; Associate Professor of Accounting Department, National Taiwan University	100%
Independent Director	Suen-Zone Lee	President of Chia Nan University of Pharmacy and Science	PhD in Environmental Engineering, University of Delaware, USA	President of Chia Nan University of Pharmacy & Science Vice president of CNC (Dean of School of Environment) (Chief, Taiwan Hot Spring Research Center) (Professor) (Associate Professor)	100%
Independent Director	Yuan-Shyang Lin	Partner attorney of Alliance International Law Offices	LL.B, LL.M, and Ph.D. of Fu Jen Catholic University, School of Law	Attorney and Partner Attorney of Alliance International Law Offices; Adjunct Assistant Professor of Dept. of Law & Dept of Financial and Economic Law, Fu Jen Catholic University; Attorney of Taiwan International Patent & Law Office	100%
Director	Junne-Jih Chen	Deputy Minister, Council of Agriculture, Executive Yuan	Ph.D. in Department of Agronomy, National Chung Hsing University	Deputy Director and Director of Taiwan Agricultural Research Institute, Council of Agriculture, Executive Yuan Researcher and Head and Researcher and Deputy Director of Taiwan Seed Improvement and Propagation Station, Council of Agriculture	100%
Director	Mao-Xiang Su	Deputy Director of Agriculture and Food Agency, COA, Executive Yuan	Master's degree of Agricultural Economics Research Institute, National Chung Hsing University	Technical Specialist and Chief of Dept. of Agriculture and Forestry, Taiwan Provincial Government, Section Chief, Deputy Head, Head, Director of the East Branch and Director Secretary of Agriculture and Food Agency, COA, Executive Yuan	100%

Title	Name	Current Position	Education	Experience	Attendance rate in 2021 (12 BOD meetings)
Director	Yuh-Show Cheng	Researcher of Dept. of Economic Research, Central Bank	Graduated from Department of Statistics, National Chengchi University	Dept. of Economic Research, Central Bank; Dept. of Banking, Central Bank	100%
Director	Shu-Tzu Chen	Director of Department of Budget, Accounting and Statistics, Tainan City Government	Graduate from Department of Political Science, Graduate Program of Political Economy	Director with selected appointment rank under office level of 11 of the Department of Budget, Accounting and Statistics, Tainan City Government (before the merger); Division Chief with recommended appointment under office level of 9 of the Directorate-General of Budget, Accounting and Statistics, Executive Yuan; Division Chief with recommended appointment under office level of 9 of National Policy Agency, Ministry of Interior; Supervisor with recommended appointment under office level of 9 of Taiwan Provincial Police Administration; Inspector, Sub-division Chief, and Section Assistant of Bureau of Accounting & Statistics, Provincial Government of Taiwan; Tax Personnel with ordinary appointment under office level of 5 of Revenue Service Office, Taipei County; Accounting and Statistics Officer with ordinary appointment under office level of 5 of Er Chong Elementary School, Taipei County	100%
Director	Yi-The Lee	Director, Department of Urban and Rural Development of Pingtung County Government	PhD in Architecture, Urban Design and Spatial Planning in University of Leuven	Director of Economic Development Bureau, Kaohsiung City Government Director of Urban Development Bureau, Kaohsiung City Government Chief Secretary of Urban Development Bureau, Kaohsiung City Government	100%
Director	Ming-Fang Chang	Senior Executive Officer of Vice Premier Office, Executive Yuan	Graduate School of Urban Planning, National Chung Hsing University	Senior Technical Specialist of MOEA; Section Chief of National Development Council; Technical Specialist of the original Council for Economic Planning and Development; Temporary Transferred Specialist of Dept. of Economics, Energy and Agriculture; Technical Specialist & Assistant Technical Specialist of Industrial Development Bureau, MOEA	91.7%
Labor Director	Pi-Yu Huang	Head of Accounting Team of TSC Employee Welfare Committee	Master's of Financial Management, National University of Science and Technology	Director of TSC Federation of Labor Unions, President of TSC Tainan City Corporate Union	100%
Labor Director	Shui-Ming Huang	Property Manager, Shanhua Assets Division, Tainan Operation Branch of TSC	Manufacturing Group, Mechanical Engineering Department, Far East Junior College of Technology	Managing Director of TSC Federation of Labor Unions, President of TSC Shanhua Corporate Union	100%
Labor Director	Wen-Lin Luo	Product Manager, Storage and Sales Unit, Sugar Workshop of Huwei Sugar Factory, TSC	Dept. Of Administration, National Open University	Labor Director and Executive Director of TSC Federation of Labor Unions, President of Yulin Trade Union of TSC, Convener of Supervisory Committee of Yulin Trade Union of TSC	100%
Director (Civilian Shareholder)	He-Ling Lin	Director of TSC	Dept. of Business Administration, Ritsumeikan University	Person in charge of Hong Yu Development Construction Co. Ltd.	100%

Please refer to 2022 Annual Report to General Meeting (data of the year 2021) for relevant personnel changes of the board of directors.



Please refer to the special sections of Corporate Governance for the Proceedings of Board of Directors and Corporate Sustainability Development for the responsibilities, functions & powers of the functional committees of BOD.



Proceedings of Board of Directors



Corporate Sustainability Development



## ■ Directors' Training

In addition to having solid and abundant experience in related matters, considering the scope outside the professionalism of the directors, board members can choose to participate in continuing education courses in corporate governance related themes such as finance, risk management, business, commerce, accounting, law, or corporate social responsibility. The number of training hours are arranged in accordance with the "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies". The Continuing Education Plan for Directors of TSC was revised in 2021. New directors are advised to receive 12 hours of training in the year when they take office, and the re-appointed directors are advised to receive 6 hours of training, which are compliant with the regulations. In 2021, 15 directors (3 new directors and 12 continuing ones) should receive a total of 108 hours of training. All directors have reached the required hours of training this year, with a total of 219 training hours, averagely 14.6 hours per person, exceeding the required training hours.

To enable the directors to understand and improve their professional knowledge related to TSC's various industrial environments, the management department is arranged to report to the board of directors on changes in the industrial environment every month. In addition, advanced training courses for the knowledge and skills the directors shall be equipped with proposed by independent directors are arranged to strengthen their functions and decision-making capabilities when they carry out their duties.

In response to the international trends and the Corporate Governance 3.0- Sustainable Development Roadmap announced by Financial Supervisory Committee and to enable the directors to understand the trends, disclosure, explanation, and cases for ESG, TCFD, SBT, and SASB, the advanced course of "2021 Keynote Speech on New Trends in TCFD Sustainable Decision Making" was organized, inviting experts in the field to be the lecturers, and TSWE certification was also obtained.

Considering that land development is the core business of TSC, courses entitled "Complex Development Strategies for Large Base", "Financial Evaluation and Analysis of Land Development Investment", "Low-Carbon Aesthetics-New Design Principles" and others were organized to strengthen the board functions and decision-making capabilities.

To obtain real-time information of systematic courses on corporate governance, we have applied for the membership in professional training institutions such as the Taiwan Corporate Governance Association to provide training related information for our directors to refer to. The secretarial unit of the board will assist the directors with the registration of courses. This can help the directors enhance their professional knowledge and improve the operation efficiency of the board.

## ■ Avoidance of Conflict of Interest

The Article 7.4.15 of "Directions for the Operation and Management of Board Meetings" stipulates that "For any proposal in which a Director or the legal person he or she represents is an interested party, the Director shall explain the important aspects of his/her interest at the Board meeting. When his/her interest is likely to compromise the interest of the Company, the Director shall not participate in the discussion and voting on the proposal and the Director shall abstain himself or herself from discussion and voting on the proposal and cannot exercise the voting right for and on behalf of another Director. Where the spouse, a blood relative within the second degree of kinship of a director, or any company which has a controlling or subordinate relation with a director has interests in the matters under discussion in the meeting of the preceding paragraph, such director shall be deemed to have a personal interest in the matter". The notices of Board and committee meetings are all added with matters of avoidance of conflict of interest. For 2021 BOD resolutions, directors who have an interest in the matters of the agenda items shall evade themselves in accordance with the company's regulations governing internal control.

When members of TSC deal with suppliers, investors, creditors, competitors and accountants, a supervision mechanism for the implementation of integrity and ethical values has been established. The Company has an internal control system of "Management of related party transactions" as the supervision mechanism to control the behavior of related parties. Transactions with related parties are all handled in accordance with the main points of the provisions and matters of major transactions are disclosed in the notes in the financial statements.

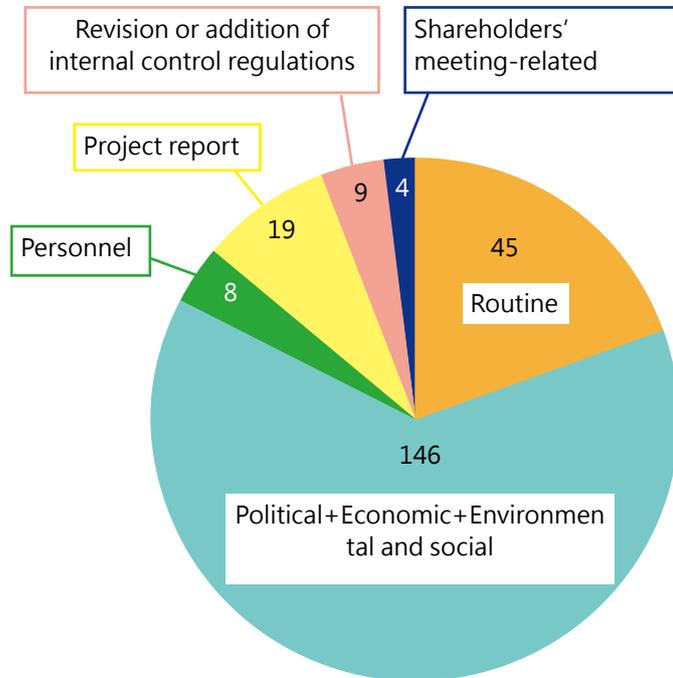


## 2.1.2 Performance Evaluation

### Agenda Review

The Company's board of directors convenes a monthly meeting to review relevant information prepared by the management of the relevant departments. In 2021, a total of 12 board meetings were held (the average attendance of directors was 99.54%). The personnel of the relevant departments attended the board meetings to make explanatory statements depending on the details of the meeting agenda, enabling sufficient time and opportunities for explanation and communication with the board. The Board of Directors reviewed a total of 231 cases, included 146 cases concerning policies, economic, environmental and social issues. All the major proposals are communicated with directors by phone or in person, and the directors will conduct inspections when necessary and the management department will also make detailed explanation for complete communication among directors to ensure in-depth understanding of the proposals.

Types of the 231 proposals reviewed in TSC Board in 2021



Routine	Political	Economic	Environmental and social	Personnel	Project report	Revision or addition of internal control regulations	Shareholders' meeting-related
45 proposals	146 proposals			8 proposals	19 proposals	9 proposals	4 proposals

TSC divides the responsibilities of the board of directors and the management department according to the Detailed Charts of Hierarchical Responsibilities, and in accordance with the Key Points for Management of Operation of Board Meeting, items to be reported or discussed in the board meeting should be signed and then obtain the approval from the chairman of the board before being proposed to the board. When making a proposal, the responsible unit should prepare the TSC Board Meeting Proposal Paper and attach sufficient meeting materials before sending them to the Secretariat of BOD for acceptance. Such proposal shall be approved by the chairman before being included in the agenda of the board meeting. However, for urgent or routine proposals, they are signed and together with the submission of the proposal paper to the chairman. After the approval is obtained from the chairman, if such proposal belongs to the matters within the function or power of the functional committees, they shall be submitted to the committees for deliberation before being submitted to the board of directors for approval.

Materials for the proposal to be deliberated by the committee should be provided 30 days before the meeting for investment proposals; 15 days before the meeting for major proposals; 7 days before the meeting for general proposals. All directors can read these materials uploaded onto our e-meeting system at any time. The minutes of each committee meeting are forwarded to the directors participating in the committee meeting, and it is also necessary to put those who do not participate one copy so that all directors can understand relevant information concerning proposals, and the efficiency of board meetings can also be improved.



## ■ Directors' Remuneration

TSC is a state-owned enterprise. The remuneration of the directors is paid according to Paragraph 2, Article 15 of the Articles of Incorporation, "Standards for Remuneration of Directors and Managers Determined by the Competent Authority." Therefore, the "Remuneration Committee" is not set up.

In addition to the independent director's monthly payment of concurrent serving of NTD 30,000, the remainders are all paid in accordance with the "List of Monthly Payment of the Directors and Supervisors of the Ministry of Economic Affairs". The salary and bonuses of the chairman, president and vice presidents are paid according to the "Guidelines for the Management of Employment Expenses of the Business Units Affiliated with the MOEA", and there are no other additional remuneration or bonuses.

## ■ Board Assessment

As a state-owned enterprise and not a TWSE/TPEX listed company, the evaluation of corporate governance performance of TSC does not apply to the Corporate Governance Evaluation Index announced by Securities & Futures Institute. However, MOEA has selected an external impartial unit for the annual evaluation of the corporate governance effectiveness of business units affiliated with the MOEA in recent years. In 2021, the State-owned Enterprise Commission of MOEA entrusted National Taipei University of Technology to conduct evaluation of the corporate governance system based on the OECD Guidelines on Corporate Governance of State-Owned Enterprises. In addition, corporate governance evaluation items incorporated with 9 major aspects, including the Responsibilities of BOD of State-owned Enterprise were formulated in 2021 by referring to the Executive Yuan's Policy Agenda and Action Plan to Strengthen Corporate Governance. The evaluation includes 60% of written documents review and 40% on-site visit. The suggestions in the report are used as a reference for the company's corporate governance system and operational performance evaluation.

Assessment of board performance should be carried out at least once a year, and the results should be reported to the board meeting convened at the beginning of the following year, and they should also be disclosed on TSC's official website. The results of the 2021 board performance evaluation were reported to the board of directors on February 25, 2022. The results of the performance evaluation all reached "Excellent" for the functional committees. This result will be disclosed on TSC's official website and the Annual Report.



Please refer to the Evaluation Form of the Board (Functional Committees) Performance on TSC's website for the evaluation results (Released in 2022, data year: 2021)

## 2.2 Implementation of Integrity Management

### 2.2.1 Internal Control Management

In order to strengthen corporate governance and promote the Company's sound operations, TSC has developed "The Internal Control System of TSC", the document regarding "the Responsibility of the Board of Directors and Managers" as well as complete documents regarding internal control system, which can be followed by all units. In 2021, 45 internal control documents were revised and 6 internal control documents were abolished. The implementation of the internal control system is also included in the annual performance assessment to promote the self-management and implement self-monitoring mechanism by all units.

In accordance with the "Regulations Governing Establishment of Internal Control Systems by Public Companies" revised and promulgated by the Financial Supervisory Commission of the Executive Yuan, we formulated the "Guidelines for Internal Audit Practices" to specify the professional ethics, responsibilities and operating procedures for the internal audit staff. The Internal Audit, BOD completed the in-field audit on 26 units. In addition to notifying the audited unit in written form for improvement, the report was delivered to independent directors for further audit in accordance with the laws and regulations. At the same time, the Inspector General attended the board meetings and reported auditing affairs.

#### ■ Elimination of Malpractice and Whistleblower Protection Policy

All TSC employees abide by the "Ministry of Economics Employee Integrity and Ethics Rules" to facilitate integrity governance. We have developed "Codes of Ethical Conduct of TSC", which applies to TSC personnel, including directors (including independent directors) and managers (including the president, vice presidents and directors of various units). In addition, "Employees Normal-Time and Project Evaluation Guidelines", "Working Rules for Practitioners", "Service Guidelines for Practitioner" and "Practice Guidelines for Corporate Governance" are stipulated. We allow practitioners to understand the company's code of conduct by the internal network, posting propaganda of laws and announcements and implementing education and training. Reports of corruption cases are handled by the independent ethics personnel of each unit or designated personnel assigned by the unit. In addition, there are designated phoneline, mailbox, fax number, and email address set up to provide channels for reporting.

We ensure the confidentiality of reported cases to encourage our employees or the public to report on illegality or violations so as to prevent malpractice and urge relevant units to make improvement in a timely manner. TSC has established the Key Points for the Implementation of Confidentiality of Whistleblowing Cases in the internal control system in accordance with the Personal Information Protection Act, the Anti-Corruption Informant Rewards and Protection Regulation, Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies, and TSC's Code of Ethical Conduct, which serve as the basis for the establishment of an operation process for each unit to handle whistleblowing cases with the principles of confidentiality, legality, rationality, promptness, certainty, and prudence.

The Company regularly reviews anti-corruption risks to promote what is beneficial and abolish what is harmful. The Headquarters and various units under it held a total of 16 integrity reports. In addition, an ethics unit was established in accordance with the "Act of the Establishment and Management of the Government Employee Ethics Units and Officers" while various reporting channels, such as fax, a dedicated mail box for reporting and reporting hotline were also established for the public to report or make grievance, and the above information will be disclosed in the bidding notice and the official website of Taiwan Sugar Corporation.

**Reporting email: [ethics@taisugar.com.tw](mailto:ethics@taisugar.com.tw)**  
**Reporting mailbox: Mailbox No. 20-210, Datong Rd.**  
**Post Office, Tainan 70263**  
**Reporting hotline: 06-3378682**  
**Reporting fax number: 06-3378519**

External donations or sponsorships are handled in accordance with relevant laws and regulations and internal regulations to prevent the incident of offering or accepting a bribe and illegal political contributions. In 2021, TSC did not engage in any public policy lobbying or political donation and was not involved in any legal actions related to anti-competitive behavior, anti-trust and monopolistic conduct.



### ■ Anti-corruption Risk Assessment and Education

In 2021, Department of Ethics conducted a corruption-related risk assessment for 17 units under it, which accounted for 100% of the Company's total number of business locations. According to the risk report, there were no major corruption-risk cases in 2021.

In order to publicize anti-corruption policies and related procedures, the Department of Ethics and Ethics Offices of all units involved enabled the Company's employees to understand relevant anti-corruption regulations and make anti-corruption efforts by multi-advocacy methods such as organizing the relevant anti-corruption education and training, holding a workshop of manufacturers, inviting experts and scholars to give special lectures, issuing and disseminating documents and using electronic information equipment for the internet advocacy and questionnaire surveys.

In 2021, Department of Ethics organized a total of 44 sessions of anti-corruption training and advocacy exercises. The number of employees participated totaled 2,114 employees. In addition, the anti-corruption policy advocacy and training was carried out for employees of the Company and its subordinate units through text, e-mail, and videos.



Policy Advocacy

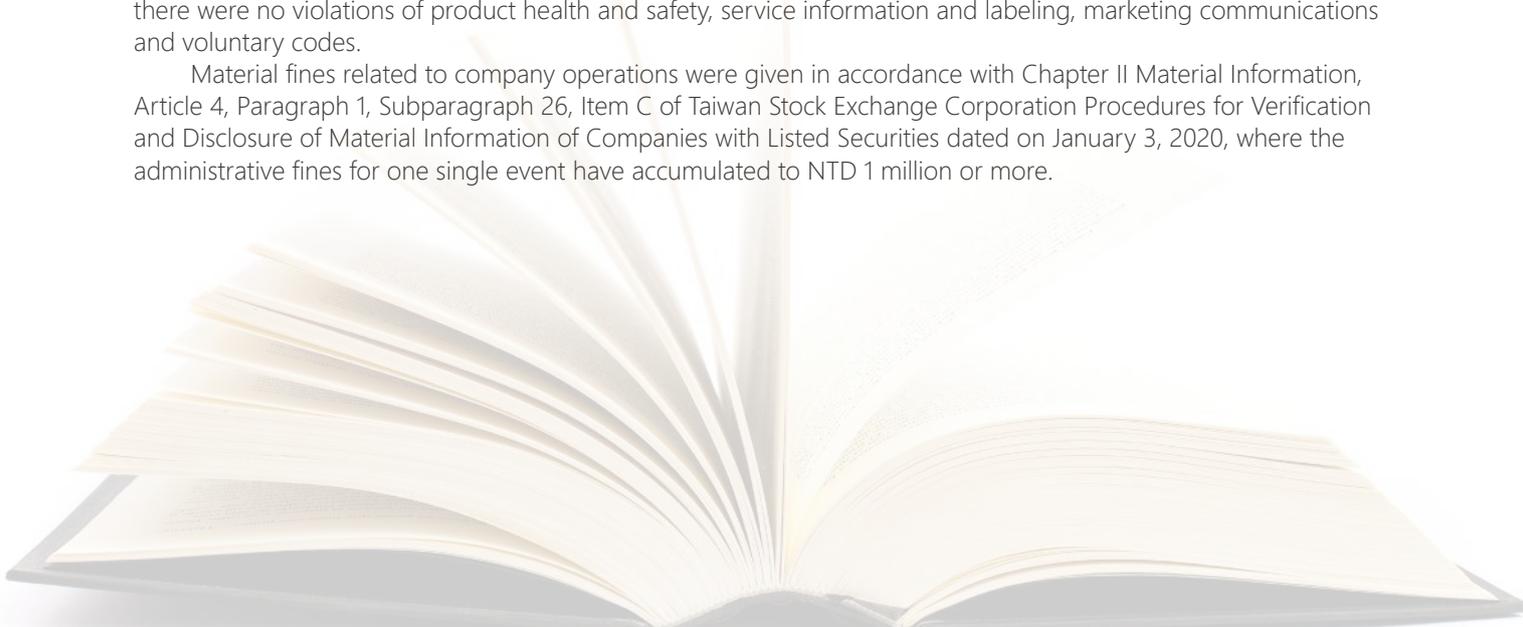
The Department of Ethics and its Ethics Offices established the "TSC Agricultural Circulation Pig Farms Renovation Project- Implementation Plan of Anti-corruption Platform" for our business partners. The training activities held in 2021 included "Public Sector- A Required Course for You Public Career", "Avoidance of Conflict of Interest and Briefing Session of Ethics Guidelines for Civil Servants", and "Integrity Advocacy for Trade Union Cadres". In addition, we also cooperated with Chiayi County Government, CPC Corporation, and the 5th River Management Office, WRA and co-organized the "Kick-off Symposium on Corporate Integrity and Ethics". A total of 44 sessions of related activities were held, and the number of employees participating amounted to approximately 2,114. In addition, when handling various types of procurement tenders, the anti-corruption policies and reporting channels are also described in the contractual bidding instructions for the bidders to know. We have fully notified all our business partners of anti-corruption policies.

## 2.2.2 Compliance and Information Disclosure

### ■ Compliance

TSC products must comply with local regulations and customer requirements, including Act Governing Food Safety and Sanitation, Health Food Control Act, Pharmaceutical Affairs Act, Food Administration Act, Organic Agricultural Product and Organic Agricultural Processed Product Certification Management Regulations. In 2021, there were no violations of product health and safety, service information and labeling, marketing communications and voluntary codes.

Material fines related to company operations were given in accordance with Chapter II Material Information, Article 4, Paragraph 1, Subparagraph 26, Item C of Taiwan Stock Exchange Corporation Procedures for Verification and Disclosure of Material Information of Companies with Listed Securities dated on January 3, 2020, where the administrative fines for one single event have accumulated to NTD 1 million or more.



**Illegal landfill of waste by criminal groups involving in environmental crime on the land in Liu Kuai Liao Section of Anding District, Dazhou Section of Shinshih District, and Hsin-chai Section of Jiali District of TSC Tainan Operation Branch**

On October 20, 2021, our Tainan Operation Branch was notified that waste was abandoned in the reported areas. Our Ethics Office went to the scene and cooperated with the prosecutor for investigation. On the same day, the prosecutor directed the first on-site excavation and found unknown waste in many places (3-5 meters underground). Excavation continued on October 29, November 25 and December 27 respectively, and the Tainan District Prosecutor's Office initiated an indictment against the criminal group on February 7, 2022. According to the indictment, the area of the landfill of waste on the land in Dazhou Section of Shinshih District, Liu Kuai Liao Section of Anding District, and Hsin-chai Section of Jiali District amounted to 27,169.84 m<sup>2</sup>, and the volume was 75,217.04 m<sup>3</sup>.

TSC's handling of the case

- 1 To ensure the rights and interests of the company, we appointed an attorney to file criminal petition with the Tainan District Prosecutor's Office on February 24, 2022, and was issued with an indictment for this case. TSC has appointed the attorney to file a criminal incidental civil lawsuit against all the defendants of the criminal group composed of Mr. Tsai and others, and the application for provisional seizure was also filed in accordance with the indictment. Currently, we are applying to the court for provisional seizure enforcement on the debtors, and will continue to cooperate with local prosecutor's office and environmental protection authority in the investigation.
- 2 The head responsible for the business is currently suspended. The District Prosecutor's Office filed a public prosecution on April 21 for crimes involving criminal misappropriation, breach of trust, and violation of the Waste Disposal Act. We have entrusted an attorney to file a criminal incidental civil lawsuit against him and applied for provisional seizure to protect the rights and interest of TSC.

TSC's follow-up precautions

- 1 Take a comprehensive inventory of the land where waste had been discarded or is easily discarded or land with high frequency of reports of abnormality and increase inspection frequency.
- 2 Install remote monitors (with infrared detection) on land with high risks and strengthen land protection at night.
- 3 Set up jersey barrier roadblocks or iron chain in key access road sections of each flat farm to prevent unscrupulous businessmen from breaking into and discarding waste.
- 4 When recovering the invaded or leased land, various situations such as surface changes, land area scale and so on should be judged, and on-site excavation should be moderately done to confirm there is nothing buried underground before agreeing to hand over.
- 5 Before the completion of the activation of land with large area, it is suggested to plant oats, cosmos, and other crops for the greening and beautification. This can improve the inspectors' judgement on the abnormality of the land and prevent the land from being invaded or discarded waste.
- 6 Strengthen the education and publicity of environmental protection laws and regulations among inspectors, including cases of discarded waste, handling methods, and relevant laws and regulations to strengthen their sensitivity and awareness of the severity of cases.
- 7 Invite prosecutors to conduct a series of anti-corruption propaganda and compile guidelines for corruption prevention concerning land inspection business, strengthen handling skills for abnormal land conditions and awareness of legal risks, enabling the inspectors to identify risks effectively and take corresponding actions actively.





## Information Transparency and Stakeholder Participation

Information disclosure is an important responsibility in a company's operations, and enterprises are obligated to faithfully disclose information. To rapidly pass on major information of TSC to the public and the internal organizations within TSC, the company has established a highly efficient communication system, set the "Directions for Online Filing" on the public information, with designated personnel responsible for the collection and disclosure of TSC Information and exposed information on corporate governance on MOPs and the TSC website. There are also response measures for emergencies, such as the setting of "Disasters Emergency Response Guidelines" and "Guidelines for Reporting Matters in Occupational Safety and Health Management Information System Reports". When news is required to be released for major disasters and emergencies, it will be signed by the unit and approved by the president, and the information will be emailed to all directors. The designated spokesperson shall make uniform external explanations and reply or take the initiative to convene a press conference to ensure timely disclosure of information that may affect the decisions of shareholders and stakeholders.

In addition, the information including finance, business, corporate governance, public welfare activities and publications is disclosed on TSC's official website for shareholders' and stakeholders' reference and is constantly updated.

TSC has been making efforts to improve information transparency and enhance communication with stakeholders. Therefore, TSC was affirmed long-term "twAA-" and short-term "twA-1+" rankings by Taiwan Ratings, with "outlook stable". Furthermore, the rating among global debtors in financial constitution is rated as "extremely robust" and its rating in management and governance is also "satisfactory".

To strengthen the bilateral communication with our stakeholders, TSC has implemented various measures as follows.

### ● Face-to-face meeting :

For proposals they are interested in, shareholders can come to the Headquarters to have a face-to-face opinion exchange with the chairman or relevant supervisors on the first Monday of every month.

### ● Regular shareholders' meeting :

To ensure the right of participation and power of decision of shareholders, a regular shareholders' meeting is held once a year. In addition to reporting on the operating results of the previous year and future strategies, matters for ratification and discussions on major proposals are also reported. Shareholders' questions are also answered in a timely manner.

### ● Proceedings of Shareholders' Meetings :

The proceedings of the shareholders' meetings are recorded as required. Relevant information is uploaded to the MOPs and TSC's official website for shareholders' reference.

### ● Labor Director :

Representatives assigned by trade unions appointed by the Ministry of Economic Affairs act as labor directors and participate in corporate governance.

### ● Employee Participation :

Labor-management meetings (a total of 65 meetings were held in 2021), Welfare Committee meetings, Labor Safety and Health Committee meetings, and meetings of the "Employees' Retirement Funds Management Committee" and "Labor Retirement Reserve Supervisory Committee" are regularly convened.

### ● Symposiums :

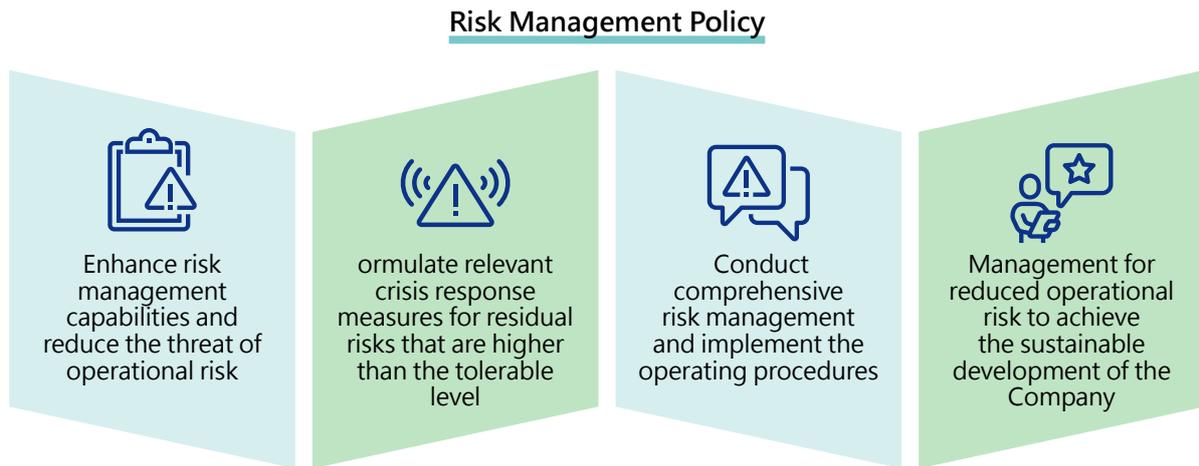
The chairman of the BOD convenes symposiums and invites employees from all units to listen to their opinions on management.

## 2.3 Implementation of Sustainable Governance

### 2.3.1 Risk Management

#### ■ Risk Management Policy

The "Guidelines for Risk Assessment" has been developed, followed by the identification, analysis, assessment and handling of every short-, medium- and long-term risks. First, we identify the risk factors and assess potential losses, followed by the selection of management methods and the implementation of regular and irregular monitoring, auditing, and tracking of risk management.



Operation Flow Chart of Risk Management and Crisis Handling



Note: When all units initiate the crisis event management mechanism, they shall comply with the relevant internal control systems and work practices.

Identification, assessment, control and monitor of possible risks are conducted based on the principles of risk management and crisis management to ensure the effective operation of the risk management system. When a risk event occurs, necessary response measures should be taken to prevent disasters from expanding and recovery work should be performed and the handling of crisis events will be reviewed. Risk control methods and crisis management operations are available under the Corporate Governance Risk Management on TSC's webpage of Corporate Sustainable Development.



Risk Management

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## ■ Risk Management Organization

### 1. TSC set 3 functional committees under the board of directors

Three Functional Committees established under the board of directors include the Audit Committee, the Land Resources Committee, and the Business Investment Committee. Among the three committees, one of the major purposes of the Audit Committee is to “Control the existing or potential risks of the company” as stipulated in Article 3 of the Audit Committee Charter.

For issues concerning major business risks (e.g. business operation, major investment, lease (sale) of land, land development), discussions or reports will be arranged for communication. Inspections of relevant units or on-site inspection are arranged when necessary to strengthen monitoring and management.

### 2. The Internal Audit is subordinate to the BOD, conducting regular and irregular audit of business operation risks in each unit

TSC has set the Internal Audit, BOD, a permanent and dedicated unit independently exercising its power to conduct internal audit operations for the evaluation and review the deficiencies of the internal control system, the compliance with relevant laws and regulations, and the evaluation of the effectiveness and efficiency of operations, and suggestions for improvement are also provided in a timely manner.

At the beginning of each year, the Internal Audit sets annual internal audit plan in accordance with the risk level and schedules regular or irregular on-site inspections to examine the handling situations. Items to be improved are listed for management and tracking, and guidance and counselling will be given. The operating risk of the company is reduced to the minimum by means of tactical and institutionalized practices.

The audit report of each unit audited by the Internal Audit, BOD is provided to all independent directors for review. In addition, the audit report is also submitted to the board of directors every month, and the annual summary of audited items of each unit should also be reported to independent directors and the Audit Committee.

In addition, to ensure continuous and sound operation of the company, we have developed “The Internal Control System of TSC” in accordance with the "Regulations Governing Establishment of Internal Control Systems by Public Companies". To ensure the continuous and effective design and implementation of the internal control system, the Internal Audit, BOD, also makes regular review and gives suggestions for revision of unreasonable regulations that could hinder the business development for the internal control system when conducting the annual audit of each unit through the self-evaluation of the internal control system. Autonomous management and self-supervision mechanism are promoted at each unit to reasonably ensure achieving the goals of the efficiency and effectiveness of operations, the reliability, promptness, and transparency of reporting, and the regulatory compliance.

#### Responsible Business Units of Crisis Management

Scope of risk crisis	Units in charge
Natural disasters, occupational safety and health disasters, environmental impact matters, major epidemic (infectious) diseases	Department of Occupational Safety and Health/ Occupational Safety and Health Committee
Matters with environmental impact	Department of Environmental Protection / Environmental Protection Committee
Product quality	Department of Planning/ Quality Management Committee
Labor disputes	Department of Human Resources
Customer service, media issues, the corporate image effect	Department of Secretariat
Information security	Department of Information / Information Security Committee
Integrity	Department of Ethics/ Integrity Report
Damage (due to disasters) of water conservancy facilities, plant diseases	Department of Agribusiness Management
Personal data protection	Legal Affairs Office
Others	Business units and departments and divisions responsible for the business at TSC Headquarters

## ■ Risk Management Organization

The "TSC Risk Management Promotion Committee" was established to be responsible for the assessment of various risks, the development of preventive measures, the internal control system and the implementation of related businesses. The chairman of the Company serves as the steering committee member, the president as the committee chairman and the vice president of Business Supervision, Department of Planning as the committee vice chairman. The vice presidents and the first-level supervisors of all divisions (excluding the Internal Audit, BOD) and all unit are committee members. An annual risk management meeting is held, and the risk management situation of the previous year, the major risk items of each unit of the year, as well as the precautions are reported and discussed in the meeting.

The scope of the company business is very extensive, so various select committees have been established for various business attributes, such as the Quality Management Committee, Occupational Safety and Health Committee, Environmental Protection Committee, Labor-Management Meeting, Information Security Committee, and Integrity Report. Regular meetings are convened to eliminate or reduce the occurrence and level of impact of risk events. In addition, high-level "decision-making meeting" (about every 2 weeks) and the company-wide monthly "business briefing" are held regularly to solve problems concerning business operations or disputes in a timely manner.

In accordance with the Key Points of Risk Assessment and Management", we conduct rolling wave planning to discuss the implementation status of risk management. Each unit has to evaluate the degree and probability of the occurrence of all potential risk events based on the actual implementation of the management business every year, draw relevant preventive measures, and also review the effectiveness and plan the risk management operations for the following year by the end of the current year.

The Internal Audit, BOD, conducts on-site inspection of the implementation at each unit and lists and tracks items to be improved. The inspection report and the handling situation are provided to independent directors for review and submitted to the board of directors.

Educational training is provided every year and the risk management policies are also promoted. In 2021, to strengthen the risk awareness of overseas talents, the Overseas Talent Training Course held on November 17, had incorporated the course of Overseas Business Operation and Strengthening Risk Management".

## ■ Customer Privacy

The "Personal Data Protection Executive Team" was established and the "Guidelines for TSC Personal Data Protection Management" was formulated. The "Personal Data Protection Operation Manual" was compiled based on the "Personal Information Protection Act", "Enforcement Rules of the Personal Information Protection Act" and "Guidelines for TSC Personal Data Protection Management". In 2021, there were no incidents of infringement of customer privacy rights and loss of customer data.

## NEWS !

### Fraud Prevention Statement



In 2021, our consumers of TSC's shopping website, Ego888 reported fraud incidents. After investigation, our investigation team concluded that there was no direct evidence of personal data leakage. Despite this, the company still took actions to strengthen information security, including improving personal computers (antivirus software), information security equipment and services (firewall, WAF, MDR, SOC), and the monitoring and management mechanism of the Ego888's back-end management system (weakness scanning, penetration testing, limited access to the back-end login by IP with OPT mechanism, keeping relevant logs) to reduce risks of information security and operation processing process so as to prevent incidents from happening again. In addition, we also implemented anti-fraud publicity on the Ego888 website to prevent the consumers from being deceived to exercise the due care of a good administrator.



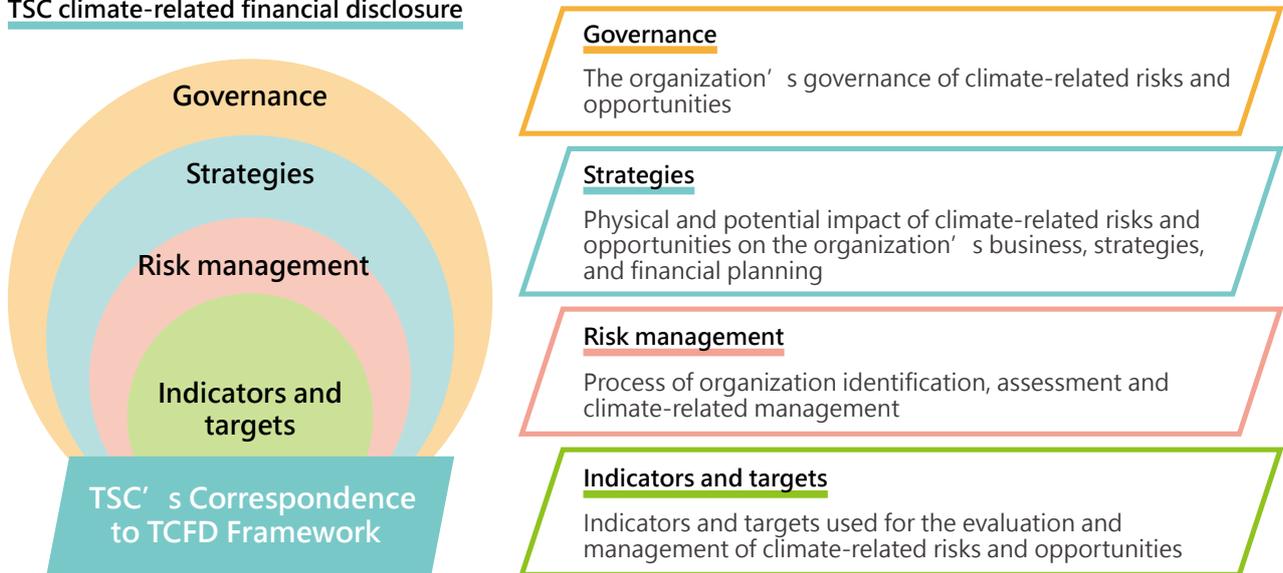
## 2.3.2 Responses to Climate Change Risks

### Climate Change Risk

Global climate change not only causes extreme weather but also directly or indirectly influences the operations of enterprises and consumption behavior of consumers. To work in line with the government’s energy transformation policy of Net Zero by 2050, TSC initiated a research project entitled Strategic Evaluation and Suggestions on the Net-Zero Transformation of Taiwan Sugar Corporation. TSC identifies its role in the national policy of Zero Net through collecting policies, relevant regulations, and consulting experts, scholars, and industry professionals and by taking inventory of the company’s resources for net-zero of carbon emission, aiming at making contributions to this national policy. We have actively planned the development of renewable energy and combined the plans with our own operating projects, such as the biogas power generation in the livestock farms and the cogeneration of bagasse in the sugar factory. We also cooperate with the government policy and provide detention ponds as solar power generation plants.

TSC refers to the framework of Task Force on Climate-related Financial Disclosures (TCFD) to take actions in response to climate change, demonstrating TSC’s responsibility and vision on climate issues in order to further allocate capitals more efficiently and move toward the sustainable development of a low-carbon economy. TSC will set up a TCFD Working Team in 2022 and it is scheduled to complete the TCFD Report and become a TCFD supporter by 2023. Our medium and long-term goal is to participate in CDP (Carbon Disclosure Project).

#### TSC climate-related financial disclosure



#### TSC’s Correspondence to TCFD Framework

<b>Governance</b>	Taiwan Sugar Corporation will set up a TCFD Working Team in 2022 to implement identification of climate-related risks and opportunities, make cross-organization assessment of climate change risks and countermeasures, and identify potential risks and possible opportunities.
<b>Strategies</b>	In response to the policy of Net Zero by 2050, the company conducts identification of climate-related risks and opportunities and develop action guidelines by combining carbon reduction and renewable energy development. In terms of climate change adaptation strategies, in addition to cooperating with the government policy to continue the development of renewable energy, we will also propose other countermeasures to respond to possible impact brought by climate change in advance.
<b>Risk Management</b>	TSC based its assessment on climate-related risks and opportunities provided by TCFD and divided climate-related risks into two major categories: (1) Transition risks related to low-carbon economy and (2) Physical risks related to climate change. Opportunity created by adapting to climate change for organization include improvement of resource use efficiency and costs, adoption of low-carbon energy, development of new products and services, entry to new markets and the increase of the resilience of the supply chain. TSC’s TCFD Climate Change Risk assesses climate-related risks and opportunities through the impact on the Company’s operations and the possible of occurrence.
<b>Indicators and Targets</b>	Introduce Greenhouse Gas Inventory system (ISO 14064-1), Carbon Footprint and Water Footprint to understand TSC’s GHG emission framework and adjust countermeasures for future climate change. In addition, energy intensity, GHG emission intensity, and wastewater and waste management in the GRI guidelines are used as the indicators for evaluation and management for the establishment of environmentally related reduction targets, such as GHG, energy resource use, waste reduction and so on.

Aspect of Risk	Description	Corresponding Measures/ Future Planning
Transition Risks	Market Risk	1. In 2021, TSC received the subsidy from Industrial Development Bureau, MOEA for the construction of 32 recharging (piles) stations for electric scooters. The construction was completed on December 1, 2021 and the official operation also started.
		2. On November 3, 2021, the outsourcing of projects of a total of 12 charging piles at the parking lot of 5 gas stations (Yuemei, Nanzhou, Chumghua, Chungshin, and HSR) were completed, and the design and the power supply application are in process. It is expected to start operation in May, 2022. We will continue to look for gas stations with potentials to increase the charging (piles) stations at these gas stations on important traffic routes to meet the public's recreational needs and promote the cooperative operation of e-vehicle charging pile services.
	The timing of bulk purchases may change since the market condition may be subject to climate change conditions	TSC set up a Bulk Cereal Procurement Team and a Bulk Sugar Reserve Price Setting Team. As required by the internal control system, the team members have to collect information of bulk materials such as soybeans, corn and sugar, the supply and demand situation and climate change situations at any time, and carefully select a procurement timing based on the production and inventory conditions.
	Policy and Regulatory Risk	The Kaohsiung City Government implements the Air Pollutant Emission Standards for power facilities may impact TSC's Sugar Business Division
Countermeasures to climate change and implementation of carbon fee		1. Training related to green energy saving and environmental protection was held in 2021 to promote the concept of energy conservation among our associates. A total of 3 sessions of such training were held, with a total of 112 trainees.
Physical Risks	Imminent Physical Risk	1. Increase the area of ratoon sugarcane planting to reduce the dependence on water sources for irrigation.
		2. Set up Goals of Wastewater Recovery Rate (R2) and relevant water conservation measures.
		3. Regularly check and repair the irrigation pipeline system, clean the storage pond and sprinklers, and maintain the wells and water supply pipelines.
Long-term Physical Risk	In a 2°C scenario, the rise of sea level will affect TSC's existing assets.	4. The water wall cooling equipment at the greenhouse in the orchid farm adopts water circulation mode to save water by reusing it.
		5. Recycle and reuse pig-raising wastewater.
		6. Install rainwater collection equipment on the roofs.
		1. Choose high-lying countries when making overseas investments.
		2. Evaluate the development of vertical farms to reduce the field planting area.





Type of Opportunity	Name of Project	Management Approaches
 Energy Opportunities	Renewable Energy	Produce renewable energy and obtain certificates or sell electricity to Taiwan Power Company
	Promote green energy	To work in line with the government's green energy policy, solar PV power generation equipment is installed on self-owned roofs and unfavorable farming land to reduce pollution and carbon emission. To implement the carbon reduction policy, TSC's affiliated livestock farms continue the collection of biogas for power generation, which is in line with the development of the green energy industry. As of 2021, a total of 96 solar power generation facilities as well as biogas power generation facilities in 4 livestock farms were installed, and the overall power generation totaled 1263.1 MWh in 2021.
 Market Opportunities	Establish a Green Benchmark Image	1. Obtain the BS 8001 Circular Economy Certification and product carbon footprint verification to establish a low-carbon brand image.
		2. We ask the government to lead the construction of a carbon sink trading platform to obtain trading certificates through TSC's forests, renewable energy and other carbon reduction methods.
	Promote green afforestation	3. Obtain the carbon footprint verification opinion statement of Refined White Sugar, Golden Brown Sugar, Fine Granulated Sugar and Refined Liquid Sugar, Refined Soybean Oil, Soybean Oil and Shortening. 4. A total of 51 items of TSC's processed meat products such as TSC's fresh meat, pork floss, and meat balls obtained the carbon label and the water footprint verification opinion statement.
 Product/Service Opportunities	TSC will launch low-carbon products.	1. Priority is given to local raw materials for the development of new products and product gift box packaging is simplified to reduce the carbon footprint of products.
		2. Design recyclable and reusable containers for our products, such as the reusable porcelain pots for the Phalaenopsis potted flowers. The beautiful gift box of the potted flowers of exquisite Phalaenopsis is specially designed and can be reused for item storage.
		3. We have launched special projects of "Green Stay Package", low-carbon tour itinerary, bicycle-friendly accommodation, and discounts for guests traveling with their own tableware and personal amenities.
		4. Continue to produce alcohol and other epidemic prevention products and develop health food and cosmetics for cleaning purposes to help the public maintain their health.
		5. Build a biological material plant that recycles oyster shells for manufacturing: During the growth process, oysters will absorb carbon dioxide and solidifies it onto the shells so that oyster shells contain high-purity calcium carbonate that can be recycled for industrial use as raw materials or agricultural feed and fertilizers.
 Resource Efficiency	Promote circular economy	Through the integration of agricultural integration, reuse of pig manure, biogas residues, and sugarcane bagasse and water recycling, a recycling network is created to reduce waste of resources and the use of fossil energy.





# The Collaborator of Policies that Resonate With the Public

# 3

## Related-Stakeholders



consumers/  
clients



Raw material  
suppliers/  
contractors/  
agents

As a state-run enterprise, TSC has taken the mission to support the positive cycle of the society. In addition to promoting organic and eco-friendly farming, we also attach importance to food safety and labeling, striving to implement food traceability management to meet social needs for and expectations of food safety. In addition, we also cooperate with the government in stabilizing commodity prices and people's livelihood. Furthermore, to facilitate local prosperity, land development through cooperation has been carried out to nurture important bases for the high-tech industries in Taiwan. Creating a multi-win situation for locals and the public.

Corresponding material topics & SDGs	Innovative Research, Customer Health and Safety, Marketing and Labeling, Sustainable Food								
Policy	<ul style="list-style-type: none"> <li>Enhance the power of product and the marketing capability (Innovative Research)</li> <li>Promotion of organic cultivation (Sustainable Food)</li> <li>Deepening the core businesses and providing safe and affordable products and implementation of production history and food traceability management (Customer Health and Safety, Marketing and Labeling)</li> </ul>								
Commitments and goals	<ul style="list-style-type: none"> <li><b>Short-term goals (within 3 years):</b> <ol style="list-style-type: none"> <li>To focus on health-oriented core technologies and products, increase input of resources, and strengthen brand marketing</li> <li>Completed the construction of a self-operated organic farm</li> <li>To maintain food safety, and build a more complete traceability system</li> <li>To provide land to cooperate with the government in the construction of social housing and complete the construction of the elderly residence by self-investment</li> <li>Upon expiry, agricultural production will be restored and tending will be continued on the afforestation land.</li> <li>To increase the ratio of contract farming zone, aiming at 1:1 for contract farming zone to self-operated organic farming area</li> <li>Continue to provide organic farms for the cooperation with professional farmers.</li> </ol> </li> <li><b>Medium and long-term goals (3 to 7 years):</b> <ol style="list-style-type: none"> <li>To combine new agriculture and make use of biotechnology for the R&amp;D of non-toxic, non-polluting, high value-added, and healthy products</li> <li>To promote new agriculture and circular economy policies, seek cooperation with external parties and internal self-improvement, and create a profitable business model</li> <li>To expand our cooperation with farmers to increase the yields of organic crop production</li> <li>To develop health care products and continue to increase number of items</li> <li>To work in line with government policies and make dynamic adjustment to provide land for social housing and elderly residence construction projects</li> <li>Make individual plans for the diversified utilization of afforested land in the future</li> </ol> </li> </ul>								
Responsible units	<ul style="list-style-type: none"> <li>Environmental Sustainability Group of Corporate Sustainable Development Committee</li> <li>Department of Planning</li> <li>Department of Secretariat</li> <li>Quality Management Committee</li> </ul>				<ul style="list-style-type: none"> <li>Food Factory Inspection Group</li> <li>Department of Land Development</li> <li>Department of Property Management</li> <li>Department of Agribusiness Management</li> <li>Department of Environmental Protection</li> <li>Land Use and Activation Group</li> </ul>				
Input resources	<ul style="list-style-type: none"> <li>Establishment of the Research and Development Committee and Taiwan Sugar Research Institute (TSRI)</li> <li>In 2021, R&amp;D expenses (including personnel expenses) were NTD 39,170 thousand</li> <li>The organic farming zone in Maguang Farm in Huwei Township, Yulin County has an area of 197.3 hectares.</li> <li>Participate in the Farm Apprenticeship Program of Council of Agriculture to cultivate new farmers aspiring to engage in organic farming in our organic farms in Yulin and Tainan.</li> <li>Stabilize prices to work in line with government policies</li> <li>Establishment of QC laboratories in all business divisions and carry out quality inspection every year</li> <li>Establishment of Food Safety Traceability Management System (FT)</li> <li>Construction of social housing and the elderly residence</li> <li>Continuous maintenance and management of fields such as Aogu Wetland, Danongdafu Forest Park in Hualien, Linhousilin Forest Park in Pingtung and Guantian Pheasant-tailed Jacana Ecological Education Park.</li> </ul>								
Recourse mechanism	Customer Complaints Handling Guidelines, Customer Service Hotline, Customer Service Email box, TSC Facebook Fan Page								
Management System and Action	<ul style="list-style-type: none"> <li>Research and Development Committee Charter, Guidelines for Intellectual Property Rights, Guidelines for Research Project Management, Guidelines for Technology Transfer and Authorization, Guidelines for R&amp;D Records and Document, Guidelines for Laboratory Safety and Use, Guidelines for Greenhouse Management, Taiwan Intellectual Property Management System (TIPS)</li> <li>Council of Agriculture of the Executive Yuan and Ministry of Economic Affairs coordinate TSC's land lease matters, Organic Agriculture Promotion Act, Food Safety Management System, the Key Points for the Reforestation Incentives Program, Guidelines for Forest Tending for Green Forest Park Avenue and Guidelines for Flatland and National Afforestation Program</li> </ul>								
Assessment management mechanism	Internal Control System, TSC Performance Assessment System, Corporate Sustainable Development Committee Work Plan and Implementation Review Meeting								



## 3.1 Sustainable Food

### 3.1.1 Support Farmers! Assistance in Agricultural Development

#### ■ Agricultural Land Leases and Value-added Service

To cooperate with the government’s agricultural policy to stabilize the balance of the production and sales of domestic agricultural products, TSC handles the affairs concerning the lease of land for the cultivation of regulatory crops in accordance with the “Coordination between Council of Agriculture of Executive Yuan and Ministry of Economic Affairs for the Lease of TSC-owned Land”. As of the end of December 2021, the area of farmland leased in cooperation with the policy to balance production and sales was 2,550.32 hectares.

TSC transforms the land tenants into partners, providing tenants with more services such as information of production technology, marketing and channel characteristics. We increase opportunities with young farmers to understand.

#### ■ Young Farmers Marketing Counseling and Channel Services

TSC also exerts its influence on agriculture and expands the target of service from TSC’s tenants to the entire Hualien Area in Eastern Taiwan. It is hoped that through various development of young farmer business, it can assist in the development of regional agriculture that can further encourage more young people to return to their hometown. Hualien Sugar Factory of Huatong Operation Branch is provided for the young farmers to set up Farmers’ Market to market the agricultural products produced by local young farmers via the tourism benefit of Hualien Sugar Factory.

#### ■ Taking Care of Sugarcane Farmers

To cooperate with the government in taking care of sugarcane farmers, TSC ensures the price of NTD 24,878 /tonne to purchase sugarcane sugar and to fulfill its strategic task of stabilizing the supply and demand of the domestic sugar market, and also subsidizes for the transportation charges of the raw material of sugarcanes, the cane field fire insurance fees, the purchase of bait and the eggs of corcyra cephalonica (stainton) as the materials to feed Chrysopidae to function as a pest control. In addition, TSC also provides low interest-rate loans with a monthly interest rate of 0.25% (simple interest method) to assist sugarcane farmers in financing for funds needed in the production process, stabilizing the economy in the rural areas.

#### ■ The Opening of the Academy of Agriculture and Animal Husbandry

##### Animal Husbandry Courses

To cultivate students with common ideals for the future through standardized and advanced training courses and inspiring teaching contents, assisting in the integration of pig farming and other related industries, enabling the sustainable development of the pig farming industry that suits Taiwan best.

##### Agricultural Economics Courses

Agricultural economics courses on crop cultivation, farm management, processing and marketing are open to young farmers to audit.

Since the opening of the courses in 2018, a total of 496 trainees have been trained as of 2021 (280 young farmers and 216 TSC employees). There were 256 trainees in the animal husbandry courses, among them, 158 were young farmers, and 149 young farmers completed the training program successfully. For agricultural economics courses, a total of 240 people were trained, including 122 young farmers taking the courses.

After the completion of the overall renovation of the pig farms scheduled in 2023, a brand new field is expected to be provided for trainees for hand-on courses. We also expect to cooperate with Council of Agriculture to cultivate experts in the industry and establish a team of consultants. With the diversified courses and training sessions, the learning content will further be enriched.



### 3.1.2 Organic and Eco-friendly Farming

Organic farming is an environmentally friendly and sustainable model for agricultural production. The government has also actively promoted related certification system. TSC has been devoted to an eco-friendly farming and organic production for many years and has gradually expanded the scale of cooperation with farmers year by year. In 2020, we released some self-operated farms and organic farming zones for lease and cooperation with young farmers. In 2021, we continued collaborating with farmers.

#### ■ Promotion of Organic and Eco-friendly Cultivation

For TSC to assist the government in the promotion of organic cultivation, TSC had contract farming projects with 32 organic farms as of 2021. In addition, to stay in line with the Organic Agriculture Promotion Act, we provide our tenants engaging in organic cultivation with a 10-year lease guarantee and a 40% rent discount to cooperate with the government's promotion of new agricultural policy for the promotion of organic cultivation

As of the end of December 2021, the Company has provided the government 266.09 hectares of leased land for the establishment of a special zone for organic agriculture; the area of other leased farmland for organic crops amounted to 873.38 hectares and ; 275 young farmers have been assisted to rent 1,563.16 hectares of TSC's farmland.

#### ■ Self-operated Organic Agricultural Products



TSC actively develops its own organic crop cultivation area to continue trial planning and mass production of economic crops. In 2021, the self-operated organic rice verification area reached 94.14 hectares, and the organic fruit and vegetable verification area amounted to 48.11 hectares. In addition, we also worked with great farmers who have passed the organic certification for the contract farming of organic vegetables and fruits (including remunerative organic agricultural products). In 2021, the sales of organic vegetables totaled 575.83 tonnes and those of organic rice amounted to 457.26 tonnes, mainly to schools & group meals, convenience stores and chain channels.

Year	2019	2020	2021
<b>Organic rice verification area</b>	116.59 hectares	94.14 hectares	94.14 hectares
<b>Organic fruit and vegetable verification area</b>	58.34 hectares	49.02 hectares	48.11 hectares

The production of indigenous soybeans in Taiwan is scarce, and most of the soybeans in Taiwan depend on imports, and the proportion of genetically modified soybeans is as high as 90% and above. Taiwan's indigenous non-GMO soybeans plantation area passed Eurofins 381 items of pesticide residues test. The decrease in the plantation area in 2021 was mainly because of the decrease in market demands and also partly because that the cooperation model of right to harvest was changed to general farmland leasing for the cultivation of other crops.

Year	2019	2020	2021
<b>Plantation area</b>	103 hectares	106.8 hectares	83.29 hectares



### ■ TSC's Maguang Organic Group Cultivation Farm in Huwei

We set up an organic farming zone with an area of 197.3 hectares in Maguang Farm in Huwei Town, Yunlin County, making it the very first circular agriculture demonstration park in Taiwan. This project was completed on December 15, 2021. After acceptance in 2022, it will become the first demonstration park for circular agriculture. The organic farm area is leased to Huwei University of Science and Technology, which will cooperate with the Council of Agriculture to recruit farmers to plant in this organic farm based on their qualifications, conditions and specific direction of implementation for the selection of farmers to station in the organic farm. Planning for future operation is as follows.

- (1) The open field cultivation area is approximately 93 hectares, with the cultivation of rain-fed crops and import substitute crops.
- (2) Protected cultivation area is approximately 43 hectares, with 150 greenhouse facilities, mainly for the cultivation of short-term leafy vegetables, melons and fruits and vegetables.
- (3) The rest 61 hectares belong to public facilities, and 2.3 hectares of it is the management & goods collection center.



### 3.1.3 Stabilizing Prices

The Company is a state-owned business and serves as the function of assisting the government in stabilizing the prices of pork, sugar, cooking oil and other large-scale staple merchandise.



In 2021, TSC worked in line with the policy and increased the supply of 20,715 hogs.



TSC works in line with the government policy of stabilizing prices. Salad oil (3 liters) has not increased and large-packed salad oil maintained the lowest market price.



The global commodity prices have surged in 2021. To cooperate with the government's price stabilization policy, the retail price of sugar remained at NTD 36/kg.



1.Strengthened channel distribution: We developed the TSC's Control and Distribution Mechanism of the Epidemic Prevention Alcohol Products to ensure sufficient production and supply of alcohol products that are distributed to the channels of all stores (convenience stores, PxMarts, wholesale stores, drug & cosmetic stores).

2.Stabilized retail prices: We fully work in cooperation with the government policies to stabilize retail prices. The information that the prices of epidemic prevention commodities will not go up and that the supply of such products will continue is released through media reports to appease consumers' panic buying so that the public can purchase at ease.

## 3.2 Food Safety

In order to pursue sustainable innovation with higher quality and service, TSC has set up a research and development business management and control organization of the Research and Development Committee whose chairman is the president with 2 deputy chairmen, 19 to 35 committee members, 1 executive secretary and 2-3 secretaries. Its main tasks include the development of R&D policies, R&D budget management and implementation, research program management, the application and follow-up of R&D results. Through regular R&D business integration meetings, various units involved in R&D can quickly resolve issues and problems they have faced, coordinate R&D resources across units and improve research energy.

### ■ Taiwan Sugar Research Institute (TSRI)

Taiwan Sugar Research Institute is divided into the Biological, Chemical and Engineering Groups responsible for technology development, and the Industry Information Group for scientific and technological management planning according to the task attributes. The three technical groups are set up in accordance with technical expertise and perform cross-disciplinary and product development tasks through close cooperation among the groups. The Industrial Information Group provides research-related services such as industrial information, intellectual property management, market research and technology transfer. It also acts as the Research Institute's window of contact with internal and external units of TSC. TSC's IPR Management Plan is as follows.

#### 1. Intellectual Property Rights (IPR) Management Plan

TSC respects the intellectual property rights (IPR) of others, and also strives to protect the IPR owned by the company. Under this principle, the internal control system of Guidelines for Intellectual Property Rights Management, and businesses related to patent, trademark, copyright, variety rights and trade secrets have to be compliant with this system to exert their effects and ensure the rights and interests of the company. Moreover, every year, the representatives of TRSI participate in the verification of Taiwan Intellectual Property Management System (TIPS) on behalf of the company to confirm the implementation status and appropriateness of the company's relevant systems. In addition, to enhance our associates' IPR knowledge and strengthen the concept of trade secrets, we will continue to carry out relevant education and training courses in 2022.

#### 2. Implementation Situation

TSC submitted and reported to the board regarding the IPR strategies and management system as well as the possible IPR risk and countermeasures in the 19th board meeting of the 34th session of board of director convened on Nov. 26, 2021.

TSC has introduced the TIPS system for 14 years. Through continuous verification to review the effectiveness of implementation, the TIPS System and the management framework are implemented in accordance with the spirit of PDCA (Plan-Do-Check-Action) of TIPS, and improvement is constantly reviewed. Through the establishment of the TIPS System, various units of TSC have acquired the IPR protection concept.

There were no cases of infringement of other patents or intellectual property rights at TSC in 2021. In 2021, intellectual property output included 2 invention patent, 1 invention patent approved, 7 SOPs of the process and 3 technology transfers of the business divisions.

Year \ Item	Invention patent		SOPs of the process	Technology transfer of business divisions
	Submitted	Approved		
2019	2	0	7	4
2020	1	1	6	7
2021	2	1	7	3

#### 3. Obtaining Verification

In 2020, TSC obtained the Certificate of Taiwan Intellectual Property Management system valid until Dec. 31, 2022, and the random verification was completed on Oct. 14, 2021.



### 3.2.1 Customer Health and Food Safety

There have been several major food safety hazard incidents in recent years, which has caused people in Taiwan to fear for and lose confidence in food safety. TSC has about 330 items of various products ranging from sugar, pork, organic fruits and vegetables, processed foods to beauty care products. We make annual investment in quality testing to check the food safety for consumers.

#### Statistics by Laboratories under Business Divisions in 2021

Business Division	Detection instrument	Test item	Inspection pass rate (%)	Related expenses
Taiwan Sugar Research Institute	Ultra Performance Liquid Chromatography (UPLC) (Spectrophotometer)	<ol style="list-style-type: none"> <li>Analysis of unknown components of natural products and fermentation products, determination of pollutants in spoilage and adulterated foods, detection of non-volatile harmful substances</li> <li>Measure and analyze the concentration of nucleic acid and protein samples, the bacterial count of microorganisms, and determine whether the test solution contains specific substances</li> </ol>	100% compliance	NTD 2,590 thousand (Expense center)
Sugar Business Division	Constant temperature incubators, water bath, colony meters, stirrers, pharmaceutical scales, sterile consoles, electrical driers, autoclaves, distilled water machines, and atomic absorption spectrometers	Microorganisms, E. coli, coliform group, sulfur dioxide, heavy metals (arsenic, lead, copper), and pesticide residues	100% compliance	NTD 72,484 thousand (1.23% of revenue)
Biotechnology Business Division	Sterile consoles, moisture balance, precision electronic balance, oscillators, electric hot plates, autoclaves, electrical driers, constant temperature incubators, constant temperature ovens, colony counting, pH meters, magnetic stirrers & heaters, HPLC, water activity meters, digital Brix spindle, Chemical Hood, and Biological Safety Cabinet	<ul style="list-style-type: none"> <li>◆ Microorganisms: 10 items</li> <li>◆ Can test: 2 items</li> <li>◆ Environmental monitoring: 1 item</li> <li>◆ General nature: 7 items</li> <li>◆ Residual analysis: 13 items</li> <li>◆ Others: 2 items</li> </ul>	100% compliance	NTD 14,796 thousand (7.66% of revenue)
Livestock Business Division (Fresh meat and processed meat)	Multimode microplate readers, muffle (furnace), autoclaves, concentrated sulphuric acid decomposition systems, water activity meters, pH meters, moisture ovens, bacterial incubators, mold incubators, salinity meters, fat extraction instruments, Kjeldahl nitrogen analyzers, sterile consoles and bacterial testing platforms	<ul style="list-style-type: none"> <li>◆ Microorganisms: 7 items</li> <li>◆ Chemical examination: 8 items</li> <li>◆ Sulfonamide ELISA: 2 items</li> <li>◆ Beta receptor ELISA test: 3 items</li> <li>◆ Bacterial susceptibility test: 8 items</li> </ul>	100% compliance	NTD 3,229 thousand (0.12% of revenue)

Note: The ratio of laboratory expenditures to the revenue = the business division's lab spending in 2021/ the revenue for the business division in 2021.

## Quality Control

In 2021, TSC has conducted 2 classes for quality management education and training, with 80 participants in total. TSC regularly holds quality control meetings or product quality meetings from time to time to discuss quality control issues and related improvement measures. Each business division has a "Quality Control Plan" every year. The business plans for quality policy, quality objectives, product realization, production management and customer service are used as the basis for implementation of quality control by each business division. Performance is reviewed on a quarterly basis. At the end of the year, the implementation results of quality control plans are reported. In addition, the Taiwan Sugar Headquarters randomly checks the execution status of quality control activities.

## Product safety certification

To enable consumers to feel confident about the purchase of TSC products and services, TSC has disclosed the necessary information for each product and service it provides, detailed information regarding various raw materials, ingredients, expiry dates, country of origin, storage conditions and instructions for use is listed on each product produced and on the packaging and description label of the product, so that consumers can understand the ingredients, sources and methods of safe use. In addition, consumer service hotlines are provided for questions and answers. All products and services that we provide to consumers comply with the relevant laws and regulations in their labeling and description. In addition, we also actively introduce Food Safety Management System and certification.

### Percentage of food categories that have passed food safety certification or obtained food safety certification

Food category	Certification					
	 TQF	 CAS	 IFS	 BRC	 健康食品 標章	 CAS 有機 農產品
Sugar (including processed sugar)	86.16%	-	-	-	-	-
Edible oil	100%	-	-	-	-	-
Organic rice	-	-	-	-	-	100%
Edible oil products (imported)	-	-	83.6%	83.6%	-	-
Brewed & reconstituted food	-	-	-	-	-	-
Canned food	-	57.01%	32.96%	14.81%	-	-
Mineral water and beverages	34.74%	-	-	-	-	-
Prepared frozen food	-	73.01%	-	-	-	-
Snack foods	-	-	-	-	-	-
Health foods	80.7 %	-	-	-	68.14%	-
Functional drinks	100%	-	-	-	80.55%	-
Fresh meat	-	95.89%	-	-	-	-
Processed meat	-	66.01%	-	-	-	-

Note1: The percentage in the above table indicates the proportion of food categories that have passed food safety certification or obtained food safety certification. For example, the percentage of products in the category of edible oil having obtained TQF (Taiwan Quality Food Association) label is 100%, that is, all edible oil products have obtained the TQF label. The calculation formula is: the purchase amount of the food category that has passed the food safety certification or obtained the food safety certification in 2021 / the total purchase amount of all products of the food category in 2021.

Note 2: Instant beverages and snacks are OEM products. Although there is no product-related label, the OEMs are compliant with ISO9001, ISO 22000 or the food safety system standard, HACCP. TSC also conducts on-site inspections from time to time (see Food supplier assessment and audit of OEM in 3.2.2).



### Traceability Management of Foods

To enable the public to eat healthy and safe food at ease, as a state-owned enterprise, TSC's unshirkable responsibility is to include 100% of TSC's food products in our own Food Safety Traceability Management System (FT). The system not only reveals all the food information for TSC management personnel to check and compare, food inspection reports are also disclosed on TSC's official website, allowing consumers to check complete information of the products online, and this FT system is also combined with the product flow checking mechanism of "sales and inventory system". In the future, the dual functions of product raw material traceability and product flow tracking can be combined for the fulfillment of the goal of "Food safety guaranteed at TSC".

In addition to our own Food Safety Traceability Management System (FT), TSC has joined the "TQF-ICT Service Platform" and "Food Traceability Management Information System" to establish a food safety protection network and enhance the safety and quality of TSC products for consumers.

TSC's Food Safety Traceability Management System is disclosed on TSC's official website for consumers to inquire at any time.



Food Traceability Report



Fadenbook



Ffacebook

TSC has registered on the Registration Platform of Food Businesses (Fadenbook) in accordance with the schedule stipulated by Food and Drug Administration. The business units at TSC in the announced category completed the reporting operation on Food Traceability Management Information System (Ffacebook) and the OEMs of business units in the announcement category also completed the reporting as prescribed.

### Health Care Products

Taisugar Mei Yang Xian (former "Sugar Care") had obtained national certification of health food in Oct. 2012 (Wei Shu Jian Shi Zi No. A00224)—"Regulation of Blood Glucose". As the diabetic population increases due to the refined diet, this product can help with blood glucose regulation. The second national certification of health food was obtained on Sep. 2020—"Prevention of Fat Accumulation" (valid until Oct. 2022), and the application for rename the product "Taisugar Mei Yang Xian" was filed in 2021. Obesity is the root cause of chronic diseases. This product can help people manage their health and embrace a beautiful life.



### Ratio of Low-burden and Nutrition-fortified Products

Product Category	Low-burden products					Nutrition-fortified products				
	Low (un) saturated fat	Low (no) trans fat	Low (no) sodium	Low (no) sugar	Low (no) sugar products containing artificial sweeteners	Fiber-fortified	Vitamin-fortified	Mineral-fortified	Plant Extract-fortified	Functionality-fortified
Health food	79.47 %	95.66 %	27.22 %	39.22%	0%	44.56%	1.93%	13.19%	25.57%	9.78%
Functional drinks	100 %	100 %	100 %	88.20%	13.89%	10.65%	8.93%	0%	28.36%	10.08%

Note: The calculation formula: The sales amount of low-burden and nutrition-fortified products in the food category in 2021/ the total sales amount of all products in the food category in 2021.

## 3.3 Sustainable Management of the Value Chain

### 3.3.1 Procurement Policies

The selection of suppliers follows the prescriptions of the Government Procurement Act. In addition, it is clearly stated in all relevant bidding documents that new suppliers shall comply with the principles of fair trade, environmental protection regulations, Labor Standards Act, and Occupational Safety and Health Act. Due to the complexity of human rights assessment mechanism, TSC currently screens the suppliers based on the self-assessment of the human rights compliance prescribed in the procurement agreement by the suppliers. In 2021, the percentage of new suppliers meeting the selection criteria reached 100%. To work in line with the implementation of green procurement promotion plan approved by the Executive Yuan, TSC purchases eco-friendly and green products. The green procurement ratio in 2021 was 99.83%.

Moreover, to support domestic industries, priority is given to the sources of goods manufactured or services provided by domestic suppliers. At present, apart from the 100% of bulk grain raw materials in the Livestock Business and sugar raw materials in the Sugar Business that are imported from abroad, domestic suppliers are prioritized for the supply of the remaining raw materials.

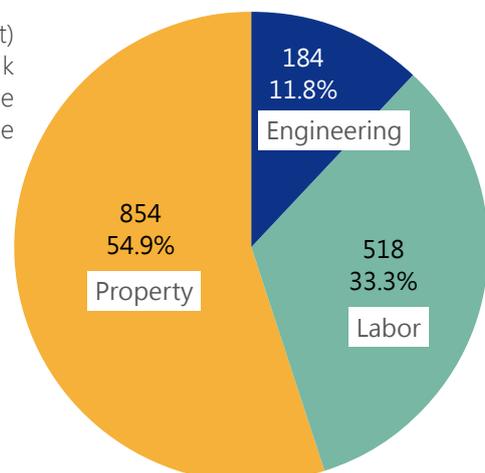
#### ■ Procurement Overview

All the procurement of TSC must comply with the relevant provisions of the Government Procurement Act in order to achieve justice, openness and fairness, and the results have been good. The internal control system set up the Key Points for Financial and Labor Procurement Operations, Key Points for Bulk Grain Purchase, Operating Points of Project Purchase and Performance Management, and Operating Points of Public Selection of Technical Service and Labor Procurement. TSC has set up an outsourcing center as a dedicated unit in charge of purchasing and organizes doubts, objections, complaints and consulting related to the Government Procurement Act so as to complete the procurement system and increase procurement efficiency. New suppliers and existing suppliers should all meet the requirements of the Procurement Act.

In 2021, the total purchase amount (based on the contract amount) was NTD 19.64 billion. Among them, the purchase amount of bulk grain purchase and imported sugar was NTD 5,497 million. In 2021, the amount of foreign purchases accounted for approximately 28% of the total purchase and the domestic purchases accounted for 72%.

#### Supplier profiles in 2021

categories	numbers	percentage
Labor	518	33.3%
Property	854	54.9%
Engineering	184	11.8%



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### Usage of Raw Materials

The main raw materials imported in 2021 include raw sugar, corn and soybeans. No recycled raw materials were used as the raw materials for the production of food products. TSC's new product packaging design is in line with the EPA's regulations on the restriction against excessive packaging of products to reduce both the amount of packaging materials used and the generation of waste as well as the environmental load.

Items	Usage amount in 2021	Country of origin	Renewable raw materials/ Non-renewable raw materials	Usage of recycled raw materials
 <b>Sugarcane</b>	568,752 tonnes	Taiwan 100%	Renewable raw materials	None
 <b>Imported cane sugar</b>	208,750 tonnes	Brazil 16.65%	Renewable raw materials	None
		Thailand 33.53%		
		Nicaragua 16.29%		
		Australia 16.77%		
		El Salvador 16.77%		
 <b>Corn</b>	106,315 tonnes	U.S. 47.40%	Renewable raw materials	None
		Brazil 13.15%		
		South Africa 4.44%		
		Argentina 35.01%		
 <b>Soybeans</b>	56,000 tonnes	U.S. 100%	Renewable raw materials	None
 <b>Meat</b>	1,168 tonnes	Taiwan 100%	Non-renewable raw materials	None
 <b>Oil products</b>	296,805 kL	Taiwan 100%	Non-renewable raw materials	None

### 3.3.2 Supplier Management

The reason for TSC to operate so steadily is because we have reliable partners throughout the value chain. TSC's suppliers, distributors, corporate customers, consumers and communities where our business is located are all the key elements for Taiwan Sugar to develop steadily. After analysis, the four major issues of concern to TSC and its partners in the value chain are Product and Service Labeling, Customer Health and Safety, Marketing Communication and Product Compliance.



#### Supplier Contract Performance Management

TSC signs contracts with all its suppliers. During the compliance period, the manufacturer acceptance is conducted before entering the factory. If quality and quantity do not comply with the purchase contract after acceptance, the supplier will be notified of a deadline for improvement. The terms of each contract require the suppliers to provide labor and health insurance to their employees. Once suppliers are found to be in violation of environmental protection, labor or human rights, they will be immediately requested for improvement within a limited time and may be fined for breach of the contract. If they do not listen to advice or repeatedly violate the terms, the contract with such supplier may be terminated.

We also strengthen the safety and health management of contract operations, and all units shall inform the work environment, hazard factors and safety and health related regulations of the units in advance when the project is delivered. In addition, TSC's "Precautions for Occupational Safety and Health of Engineering and Labor Services" shall be specified in the contract and obligate the contractors to implement safety and health management and conduct automatic inspections to prevent accidents during construction operations in accordance with Occupational Safety and Health Act and relevant regulations. To ensure that when occupational accidents occur, the contractors' workers can obtain reasonable claims to reduce the risk the company has to take, all units handling contracted projects with the contract amount exceeding the announced amount (contracting projects of engineering, labor, and property procurement including installation), employer's accident liability insurance (or third-party accident insurance) with the coverage of NTD 8 million or more should be insured (the claim amount from social insurance can be deducted). For any contracted project whose amount does not reach the announced amount, employer's accident liability insurance with the coverage of NTD 6 million should be insured (the claim amount from social insurance can be deducted). For labor services or construction contracts below NT 100,000, it is required to establish a simple contract and handle the prescribed safety and health management issues.

#### Human Rights and Security Personnel Management

Except for the office building of Marketing Business Division that adopts Security Alarm System, the access control and security of all units of Taiwan Sugar Corporation is entrusted to the security company. Security personnel all received professional courses and firstaid personnel training, and they also have to receive an 8-hour human rights related education every year. According to statistics, there are a total of 121 security personnel in Headquarters, Operation Branches, Divisions and Kaoshiung Branch in 2021, and 121 of them received human right education training, with the training rate reaching 100%.





## Food Supplier Assessment

TSC conducts assessment of its partner suppliers in terms of the technical capacity, production performance, corporate image and responsibility and contract performance reliability so as to maintain its market sensitivity and keep abreast of the dynamics of supplier and if necessary, TSC will perform or entrust a third impartial inspection agency to conduct on-site inspection of the factory and the assessment results will be included in the score. Related defects will be asked to improve to ensure all the products and services the suppliers provide meet the needs of TSC. The assessment results are also used as reference for contract renewal.

### List of the ratio of food suppliers meeting the food safety system standards

Business Division \ Compliant Standards	Sugar Business Division	Livestock Business Division	Marketing Business Division	Biotechnology Business Division
ISO 9001	80%	-	19.05%	10.53%
ISO 22000	80%	100%	80.95%	11.58%
FSSC 22000	80%	-	14.29%	3.16%
HACCP	80%	100%	90.48%	11.58%

Note1 : Ratio of food suppliers meeting the food safety system standards = the 2021 purchase amount of the food suppliers meeting the food safety system standards of the business division / the 2021 purchase amount of the business division \*100%

Note2: Definition of supplier: A manufacturer that provides raw materials (packaging materials, equipment, and labor services excluded). Definition of OEM: The manufacture not being TSC on the packaging is the OEM.

### Assessment results of food industry suppliers

Business Division	Number of suppliers	Number of suppliers assessed	Percentage	Assessment items	physical audit	Assessment results
Sugar Business Division	54	54	100%	Quality, price, and delivery situation	✓	Pass rate: 100%
Livestock Business Division	42	42	100%	Quality, price, and compliance deadline	✓	Pass rate: 100%
Biotechnology Business Division	160	160	100%	Quality, price, and delivery situation	✓	Pass rate: 100%
Marketing Business Division	43	43	100%	Purchase specifications, amount, and compliance deadline	✓	Pass rate: 100%

### ■ Audit of OEM Factories

To ensure the quality and safety of TSC branded foods, TSC conducts strict quality and safety management of the outsourced foods. In addition to sending non-scheduled staff from various units to station in the factories to supervise the manufacturing, the Quality Management Committee also organizes inspection teams irregularly to conduct on-site inspections without prior notice to thoroughly check and inspect the OEM factories. The inspection content shall follow the 72 items of inspection record of OEM factory listed in the Key Points for the Quality Management Operations of the Manufacturing Companies” and the audit results shall be included in the reference for assessment scores for annual contract renewal. The manufacturers with the total assessment score reaching 80 points are entitled to renew the contract.

#### Assessment results of OEM factories

Product Category	Number of entrusted manufacturers	Number of manufacturers audited	Percentage	Audit results	
 Domestic	Edible oil	1	1	100%	Excellent, acceptable OEM factory
	Brewed & reconstituted food	5	5	100%	5 ranked good, acceptable OEM factory
	Mineral water and beverages	4	4	100%	3 ranked excellent, 1 ranked good, acceptable OEM factory
	Prepared frozen food	3	3	100%	3 ranked good, acceptable OEM factory
	Snack foods	4	3	100%	2 ranked excellent, 1 ranked good, acceptable OEM factory, 1 was unable to cooperate (not to renew the contract)
	Canned food	3	3	100%	2 ranked excellent, 1 ranked good, acceptable OEM factory
	Health food	1	1	100%	Good, acceptable OEM factory
	Fresh meat	1	1	100%	Regular, acceptable OEM factory
 Imported	Edible oil	1	0	0%	TSC' s internal control is to conduct the audit every three years. This item was audited in 2018, so the auditing in 2020 and 2021 was not listed.
	Canned food	2	0	0%	TSC' s internal control is to conduct the audit every three years, and 3 factories were audited in 2019.
Total	25	21	84%		

Note 1 : On-site audits of foreign OEM factories are conducted every three years.

Note 2: There were 2 foreign canned food manufacturers in 2021, the number decreased by 1 compared with the previous year.



### Project Contractor Management

For TSC’s project contractors, the principle of inspection scope of the construction quality inspection is no less than 10% of the ongoing construction projects exceeding the announced construction costs of the year, as prescribed in the Key Points for the Establishment of TSC’s Construction Quality Inspection Team. For projects with the purchase amount of NTD 20 million or more, at least 1 inspection should be conducted. The selection of engineering contractors and product distributors is based on the prescriptions of the Government Procurement Act in an open, just and fair manner. Domestic companies are given priority, and contractors are screened by human right regulations. However, the conditions in each contract are the same as the requirements of suppliers in accordance with national human rights regulations and Labor Standards Act to protect human rights. In addition, the “Precautions for Occupational Safety and Health of Engineering and Labor Services” is formulated as part of the contract, and with the strategies of counseling, auditing and advocacy, TSC is actively engaged in the counseling of contractors’ safety management, strengthening the industrial safety counseling and reinforcing the safety awareness of the laborers in the workplace to safeguard the labor safety. There were no violations of relevant provisions of the contract in 2021.

### Dealer Management

The dealership is concerned with the quality of TSC products to consumers. We plan the dealership based on the overall marketing strategy and merchandise access strategies (access coverage, number of access levels, single access or multiple access, vertical marketing systems or horizontal marketing systems) and follow the Dealer Selection Criteria and the Government Procurement Act when selecting and auditing dealers. The performance management of dealers is handled in accordance with the principles of the management of suppliers and contractors.

### Supplier ESG Evaluation

TSC conducts a ESG evaluation system for suppliers with more than the amount of NTD 5 million purchase to complete a selfassessment questionnaire, whose content would be adjusted annually based on the current situation of TSC, the international trends and reference to GRI provisions. In addition to the introduction of GRI Standard Topics, specifications and regulations of RBA, Ecovadis and ISO 20400 were also referred in the revision of the questionnaire, which is divided into five aspects, including environmental, labor rights, human rights, social and product liability aspects. A total of 65 suppliers completed the self-evaluation in 2021.

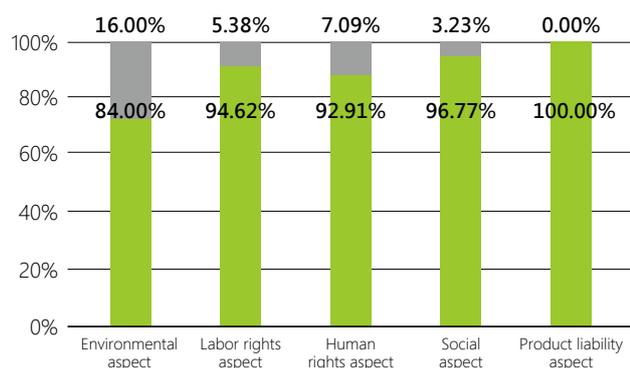
According to the self-evaluation results, the suppliers are divided into three levels, gold, silver and copper based on the scores. All the suppliers in this evaluation scored more than 60 points, with 100% of passing rate. Among them, 57 even scored more than 85 points, reaching gold level. In addition, further analysis of the five aspects was conducted, and each aspect scored more than 60 points averagely. The scores were lower only in the environmental aspect because TSC sets higher requirements in environmental management, leading to the lower scores among the suppliers. However, all the suppliers comply with relevant laws and regulations. We will refer to the results of the suppliers’ self-assessment and adjust the contents of the questionnaire. TSC will strengthen the management of suppliers with lower assessment scores to improve the procurement system and enhance the efficiency of procurement. In the future, we will also continue to promote the assessment of the five major aspects of corporate social responsibility in our suppliers of all categories to enhance our partners’ implementation and management of ESG.

#### Analysis of Supplier ESG evaluation



Scores of the aspects of supplier information disclosure

● Room for improvement  
● satisfaction



### 3.3.3 Customer Relationship Management

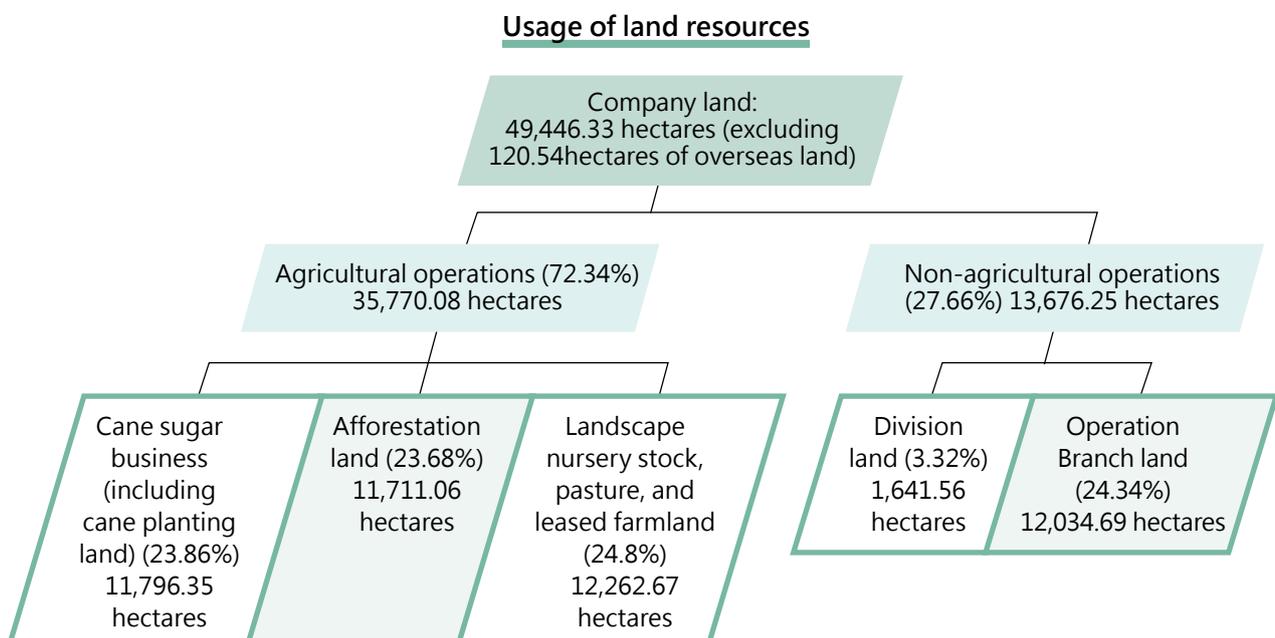
Taiwan Sugar Corporation has issued the “Customer Compliant Handling Guidelines” and established a customer service system which is also responsible for the protection of the confidentiality of customer information, to provide transparent and effective consumer complaint procedures to handle complaints from customers and clients in a fair and immediate manner. In addition, “Customer Opinion Management System” was established to gather customer feedback and the customer satisfaction survey is also conducted every year. The feedback would be dealt with quickly, and statistics and analysis could be conducted through the internal network as a reference for all units as reference for operations and improvement. At the same time, we set up various communication channels such as TSC Fan Page, Customer Service Line (0800-026-168), and online customer service mailbox (tsc01@taisugar.com.tw). In addition, the designated person will answer the questions for customers and respond to suggestions and customer complaints.

In cooperation with State Enterprise Commission, MOEA, TSC has entrusted an impartial third party to conduct the “Customer Satisfaction Surveys”. The score for customer satisfaction survey in 2021 was 95.49 points and the results of the survey and recommendations were submitted to TSC as a reference for improvement.



### 3.4 Land Activation and Utilization

As of 2021, the total land area of the existing land resources possessed by TSC is 49,446.33 hectares (120.54 hectares of overseas land not included). In accordance with the concept of business development and the sustainable management of land resources, TSC continues to cooperate with the government’s needs for public policies to maximize the value of land. In 2021, the total area of land activation was 142.01 hectares. TSC set the target land activation area of 100.46 hectares in 2022 according to the conclusion of the 25th meeting of MOEA’s Enhancement of Land Cleanup and Activation Group in 2019.





**Work in line with the government’s needs for public policy and provide land for major economic construction in 2021**

- 1.County and City Governments plan to develop 7 industrial parks and plan to use 597.86 hectares of land from TSC. In response to the return of Taiwanese businessmen from abroad, the Industrial Development Bureau of MOEA actively selected 9 locations for the development of industrial parks. A total of 876.15 hectares of area is scheduled to be developed, which can provide an area of 585.86 hectares of industrial land.
- 2.For the purpose of flood control needs, 11 detention ponds are planned, and it is planned to use a total of 266.56 hectares of land from TSC.
- 3.The Export Processing Zone Administration actively surveyed and selected about 26.86 hectares of land in Liukuaiquo Farm for the expansion of Pingtung Export Processing Zone.
- 4.Land for the STSP Kaohsiung Second Science Park (237.97 hectares), STSP Chiayi Science Park (87.9 hectares), STSP Pingtung Science Park (73.83 hectares) and land expansion area for STSP Tainan Science Park (90.86 hectares), altogether would use a total of 490.56 hectares of land from TSC.
- 5.Land expropriated and sold to government agencies for projects amounted to a total area of 94.05 hectares, including
- 6.TSC cooperated with the land demands of government agencies or state-run enterprises and provided land with a total of 137.72 hectares for the Chiayi Cultural and Creative Industries Park, the Yujing Agricultural Product Processing and Cold Chain Logistic Center of Tainan City Government, social housing, long-term care institutions, detention pond treatment projects, distributing reservoir of water purification plants, and roads.

**Lease and Investment Plan of Self-built Housing**

To satisfy the needs for residence for the general public and to promote the re-utilization of TSC’s land for sustainable development, Taiwan Sugar Corporation targets at students and young people and chooses appropriate bases throughout Taiwan to build residential housing with green building materials and low-carbon building design. In addition, we also entrust professional property management companies to station in and make intelligent management by using the Internet and monitoring equipment system, creating a shared space with excellent quality of life.

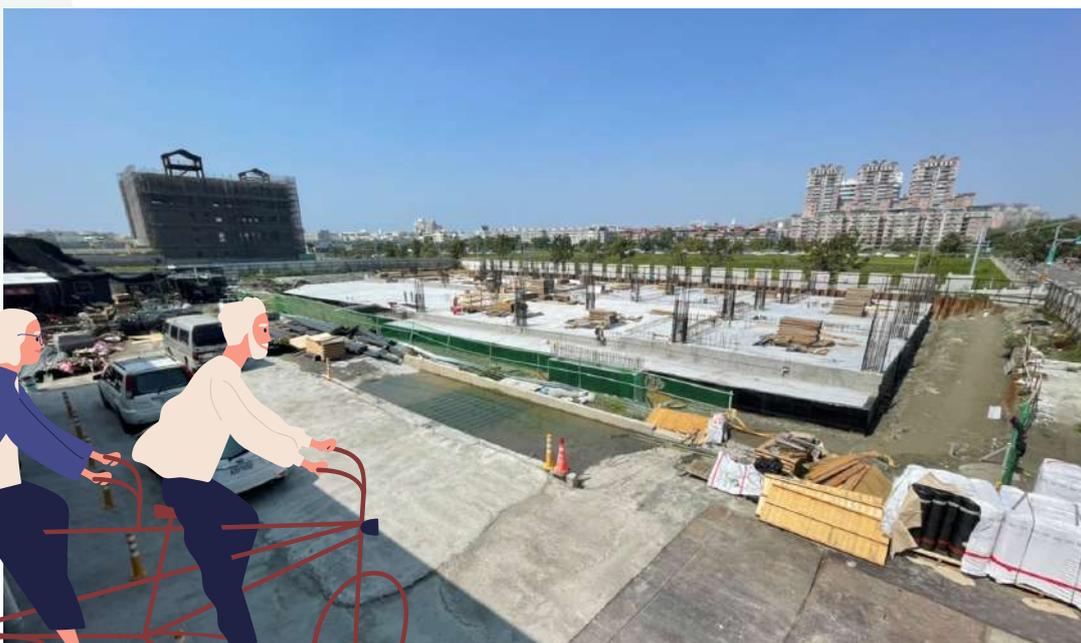
Project schedule	Location
The projects will be completed in mid-2022, and operation will start in the 2nd half of 2022	Huajiang Section of Wanhua District in Taipei City (130 units)
	Baowen Section of Nantun District in Taichung City (136 units)
	Xinduxin Section of East District in Tainan City (161 units)
	Guanghua Section of Quanzhen District in Kaohsiung City (145 units)
The projects will be completed in mid-2023, and operation will start in the 2nd half of 2023	Gaosong Section of Xiaogang District in Kaohsiung City (240 units)
The projects will be completed in mid-2025, and operation will start in the 2nd half of 2025	Qiaozhong Sections of Qiaotou District in Kaohsiung City (170 units)



### Plan for Elderly Residence for Rent

Taiwan has officially entered an aged society, and according to estimation, it will become a super-aged society by 2026. To work in line with the government's elderly service policy, TSC started the planning of the elderly residence in 2018 and has visited various elderly housing and long-term care institutions for the Research on the Changes in the Trends of Needs for Elderly Residence in 2019 and Research on the Trends and Development of Long-term Care Industry and System in 2020 conducted by Taiwan Sugar Research Institute (TSRI) as a reference for the construction and operation.

TSC will build the first elderly residence in the East District of Tainan City, and operation will start in the 1st half year of 2024. It is planned to have 103 units in the residential space. On the first floor, it is planned to introduce stores selling elderly products, clinics, convenience stores, restaurants and other stores. Furthermore, we also design open spaces such as classrooms, multifunctional activity space, gym, lounge and sky gardens. In addition to creating a comfortable residential environment, we also hope to enhance personal value by establishing lifelong learning activities and sense of happiness in life to fulfill the goals of "ageing together", "learning together", and "staying well together"



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### Related-Stakeholders



communities



consumers/  
clients



Raw material  
suppliers/  
contractors/  
agents

# The Producer with Reversal Process 4

TSC actively promotes green production and has autonomously established an environmental management system. During the production process, we focus on the maintenance of natural resources, resource recycling, pollution control and ecological conservation to achieve the ideal of “non-polluting production and non-destructive growth” and continue to improve the environmental performance to reach the goal of sustainable operation.

Corresponding material topics & SDGs	Energy, Water and Effluents, Emissions, Circular Economy
Policy	<ul style="list-style-type: none"> <li>◆ Be devoted to the source management, waste reduction in the process and pollution prevention (Energy, Water and Effluents, Emissions).</li> <li>◆ Construct the circular utilization of green products, such as whole pig utilization and whole sugarcane utilization (Circular economy).</li> <li>◆ To construct a value chain of the green circular economy (Circular Economy).</li> </ul>
Commitments and goals	<ul style="list-style-type: none"> <li>● <b>Short-term goals (within 3 years):</b> <ol style="list-style-type: none"> <li>1. Wastewater recovery rate (R2) at 80%.</li> <li>2. Implementation of ISO 14001 Environmental Management Standards to improve environmental management performance.</li> <li>3. To obtain carbon and water label for fresh meat, pork floss, and meat balls.</li> <li>4. Promote the products to obtain carbon footprint verification opinion statement and certification of carbon footprint label as the basis for Carbon Reduction Label application in the future.</li> <li>5. To increase the use of renewable energy.</li> <li>6. Increase the recycling rate of oyster shells in Taiwan.</li> <li>7. Continue the renewal of equipment for efficiency improvement to conserve energy and reduce carbon emissions.</li> </ol> </li> <li>● <b>Medium and long-term goals (3 to 7 years):</b> <ol style="list-style-type: none"> <li>1. To comply with relevant environmental laws and regulations.</li> <li>2. The livestock manure and urine recovery rate exceeds 10% stipulated by the law.</li> <li>3. Replace the more polluting heavy oil with natural gas for the reduction of GHG emissions.</li> <li>4. Continue to study the recycling of agricultural waste and develop the recycling business in various fields.</li> </ol> </li> </ul>
Responsible units	<ul style="list-style-type: none"> <li>◆ Environmental Sustainability Group of Corporate Sustainable Development Committee</li> <li>◆ Energy Sustainability Group of Corporate Sustainable Development Committee</li> <li>◆ Department of Environmental Protection</li> <li>◆ Environmental Protection Committee</li> <li>◆ Department of Planning</li> <li>◆ Department of Agribusiness Management</li> </ul>
Input resources	<ul style="list-style-type: none"> <li>◆ All the livestock farms invested NTD 509,165 thousand in the equipment improvement projects for pollution prevention and control.</li> <li>◆ Environmental protection expenditure of NTD 5,224,894 thousand (capital expenditure of NTD 4,496,254 thousand, operating expenditure of NTD 728,640 thousand).</li> <li>◆ Invested NTD 10.74 billion to remodel 13 livestock farms into modern livestock housing.</li> <li>◆ Invested NTD 170 million to build a biological material plant that recycles oyster shells for manufacturing.</li> <li>◆ Continue the research and development projects for the recycling of various waste.</li> </ul>
Recourse mechanism	Customer Complaints Handling Guidelines, Customer Service Hotline, Customer Service Email box, TSC Facebook Fan Page, Environmental Protection Committee.
Management System and Action	Guidelines for Environmental Management, Guidelines for Online Declaration and Follow-up Management of Business Wastes, Guidelines for Taiwan Sugar Corporation Checking and Accepting Land Pollution Prevention, Guidelines for Land Patrol, Guidelines for Providing Land as General Waste Disposal Sites for Local Governments, Environmental Accounting System, Environmental Management Standard (ISO 14001), Greenhouse Gas Inventory (ISO 14064), Carbon Footprint (PAS2050, ISO 14067), Water Footprint (WFN), and BS 8001 Circular Economy Standards.
Assessment management mechanism	Internal Control System, TSC Performance Assessment System, Corporate Sustainable Development Committee Work Plan and Implementation Review Meeting.



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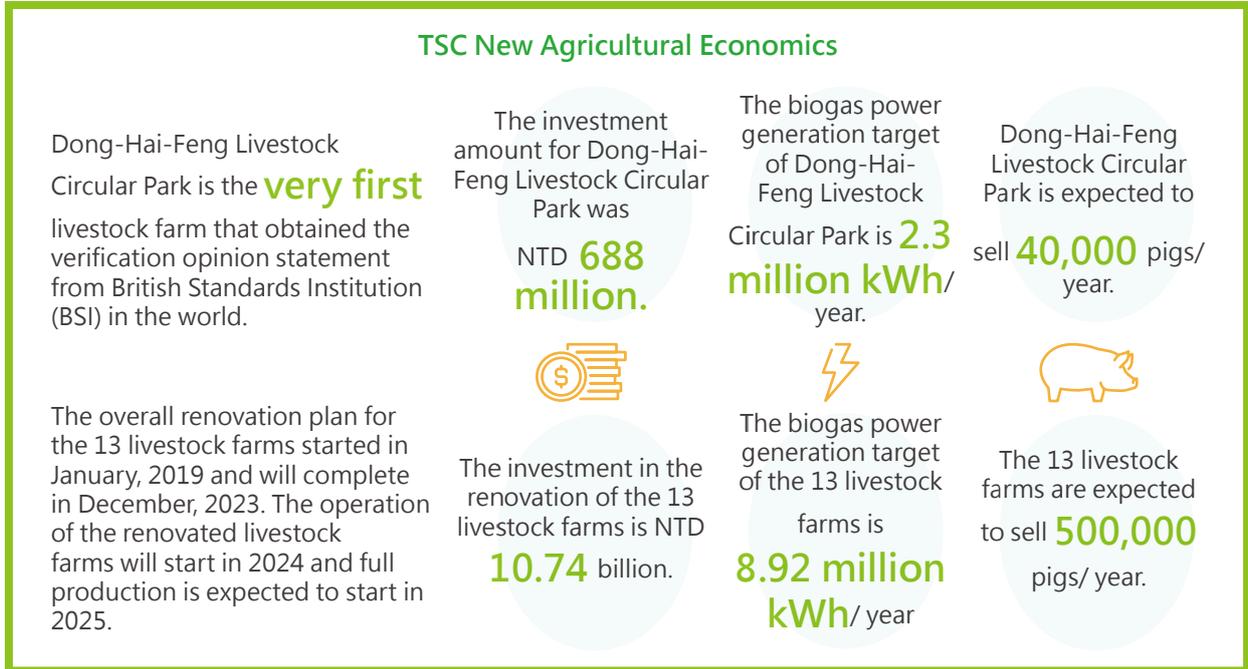
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## 4.1 New Agricultural Economics

### 4.1.1 Renovation Plan of Modern Livestock Housing- Dong-Hai-Feng Livestock Circular Park



Since 2016, TSC has actively drawn up a blueprint for a circular economy that echoes the UN' s SDGs and cooperated with the government' s Five Plus Two Industrial Innovation Plan to plan business guidelines incorporating with ecological balance, environmental protection and green concept, and fruitful results have been achieved. In terms of the physical construction, TSC constructed the very first modern green energy pig farm, the Dong-Hai-Feng Livestock Circular Park in Pingtung County, where the business model of "secondary raw material recycling/by-products" is carried out. After the verification by British Standards Institution (BSI), the model complies with the BS 8001:2017: Framework for implementing the six principles of the circular economy, making it the very first livestock farmer in Taiwan and even in the world to obtain a standard verification statement, and the overall cycle maturity reaches the highest level- the optimization of the business model.

### Circulation Design in the Dong-Hai-Feng Livestock Circular Park x Green Energy Pig House and Water Resources Sharing

Dong-Hai-Feng Circular Park introduces modern systems, including systems for ventilation and odor reduction, automatic feeding and water regulator, pig manure and urine collection system and public facilities of power supply system, water supply system, reclaimed water system, rainwater recovery system, sewer collection system and drainage system. The production cost can therefore be effectively reduced, and the annual output is approximately 40,000 pigs. The official operation started in 2020.

The Circular Park has a design of separate sewer systems for excreta and rainwater and the recovered rainwater is introduced to the pig housing to replenish water for water curtain and pig housing cleaning. In addition, the establishment of the biogas energy center and sewage treatment facilities can help with treatment of pig manure and urine inside and outside the farm, wastewater and agricultural waste in the neighborhood can also be disposed. It is planned to treat 200



tonnes of pig manure and urine inside and outside the farm as well as external agricultural waste, and 200 CMD of domestic sewage and treated biogas slurry in the biogas center. After pig manure and urine are collected, the anaerobic fermentation treatment method is used for wastewater. Solid-liquid separation is carried out, and the separated pig manure is dried or fermented before reuse. Part of the liquid is provided for biogas power generation through anaerobic fermentation, and the biogas slurry is used as the fertilizer in the farmland. On the other hand, some part of treated sewage meeting the water discharge standards is used for irrigation within the circular park, aiming at reaching the goal of zero discharge of wastewater. The target for biogas power generation is 2.3 million kWh/year and solar power generation is 1.5 million kWh/year. The landscape greening and beautification in the whole area is expected to be completed, and the environmental education and tourism planning are combined with the scenic spots and local characteristics.

### 2021 performance of Dong-Hai-Feng Green Energy Pig Housing

Traditional Pig Farming		Dong-Hai-Feng Green Energy pig housing
N/A	Rooftop solar panels in livestock housing 	2,516,437 kWh
Open	Type of livestock housing 	Closed negative pressure water curtain
Equivalent to outside temperature	Temperature of livestock housing 	24-28°C
Pig manure on the farm	Biogas Center 	Treatment of the pig farm and assisting with the disposal of surrounding agricultural waste
N/A	Biogas power generation 	1,126,698 kWh
Entrusted cleaning	Organic fertilizer 	2,086 tonnes
Manual	Management mode 	IOT-Automatic management
Groundwater pumping	Water resources management 	Rainwater, wastewater recovery, reduction of groundwater pumping
N/A	Carbon reduction 	1,947.18 tonnes
N/A	Environmental education 	Cooperate with the promotion of government policies

### Extra!



### Circular Pig Farming Experience Sharing X Promotion of the Sustainable Development of Pig Farming Industry

TSC' s Dong-Hai-Feng Livestock Circular Park is the very first livestock farm that obtained the verification opinion statement from British Standards Institution (BSI) in the world. TSC invited representatives from the Citizen of the Earth, Taiwan, Taiwan Environmental Protection Union, Taiwan Environmental Information Association, and Tainan Environment Protection Union to visit the Circular Park for the exchange of opinions. The representatives of the environmental groups affirmed TSC' s endeavor to reverse the livestock farming industry and expressed their expectation of TSC to lead and guide all pig farmers in Taiwan to change their traditional practices to jointly create a circular economy model to create sustainability and thoroughly improve and create a better living environment.



## ■ The Renovation Project for the 13 Livestock Farms

TSC's Dong-Hai-Feng Circular Park is the first new green livestock housing, and we will continue to change the negative impression of polluting animal husbandry industry into one with "eco-friendly space, green pig farming, and green energy". The features of the modern livestock housing include the followings.

Item	Description
Comfortable pig housing with negative pressure ventilation and water curtain	It can effectively reduce the consumption of water resources, improve ventilation and reduce odor, keeping the environmental clean.
Separating rainwater from sewer and recycling	The new livestock farms adopt the system to separate rainwater from sewer to fully recycle and reuse water resources.
Smart management system	RFID ear tag positioning and transferring management system, image monitor system.
Automatic feeding system	All the pigs bred by TSC are fed with "green feed" (with no antibiotics). The feed formulation is improved and adjusted or new feed formula is developed. In addition, breeding selection is conducted for production of hogs with low-use drugs, no pollution and no drug residues. The traceability system is also introduced to implement food safety compliance.
Animal welfare	Good animal welfare is closely related to food safety and epidemic risks. Feeding management is carried out based on "Guidelines for Production Management in Pig Farms" of the internal control system and the "Animal Industry Act" promulgated by the Council of Agriculture, Executive Yuan is also complied with. In 2021, the slaughterhouses complied with transportation, handling and slaughter regulations for animals and aquatic animals. There were no violations of laws and regulations and the voluntary standards were followed.
Manure and urine collection system + renewable energy	Biogas is produced through the eco-digestion of the mixture of pig manure and urine as well as other agricultural waste. Fermented biogas residues and slurry can be used as fertilizer of the farmland, and the corn, soybeans and other farm produces on the farmland can be made into pig feed, enabling the circular utilization of resources available in the livestock farm. It is expected to set up vertical pig manure and urine resource recovery facilities (the biogas energy center and compost huts) to reduce GHG emissions and generate biogas power. The biogas power generation is expected to be 8.92 million kWh/ year.

Invested  
NTD 10.74  
Billion



Comfortable pig housing with negative pressure ventilation and water curtain



Smart management system



Separating rainwater from sewer and recycling



Automatic feeding system



Animal Welfare



Manure collection system

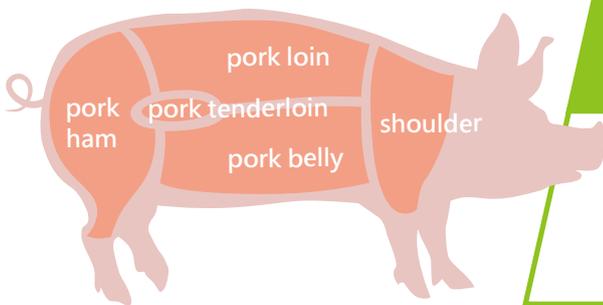


Renewable energy (biogas power generation)

## 4.1.2 Circular Economy

### Whole Pig Utilization

The Whole Pig Utilization Project started in 2017, and the project will focus on the refinement and high price of meat products, and development of products for medical use also started. The long-term goal is to pass Specific Pathogen Free (SPF) verification, and the tissues and organs of the pigs are used to develop medical materials.



### The actual performance of the Whole Pig Utilization 1.0 in 2021

- ◆ revenue: NTD 11,917/per pig
- ◆ gross profit: NTD 392 /per pig
- ◆ gross profit margin: 3.29%

## Whole Pig Utilization 1.0



Fine-cutting of the carcass, and processing of the remaining parts.

#### Food application



#### Animal farming use

The pigs' intestinal beneficial bacteria are used to control pig diseases, the pig blood extracts replace the iron and protein in the feed, while the lard extracted is used to supply the farming of pigs.



#### Biotechnology use

Pig placenta and pigskin extracts are used in cosmetics, liver essence extracted from pig livers is used for health food, and pig galls are used in shampoo.



#### Value-added use of pig blood

The company outsources the slaughter of about 80,000 hogs annually, producing about 240,000 kilograms of pig blood. Currently, the technology of extracting heme iron from pig blood cells has been developed, and the iron content is 4 times more than that in the market, making it an excellent source of iron supplement. The plasma remained after heme iron is taken is planned to be made into plasma protein powder in the future that can be used as raw material for food or feed.

### TSC Circular Economy Website/ Whole Pig Utilization

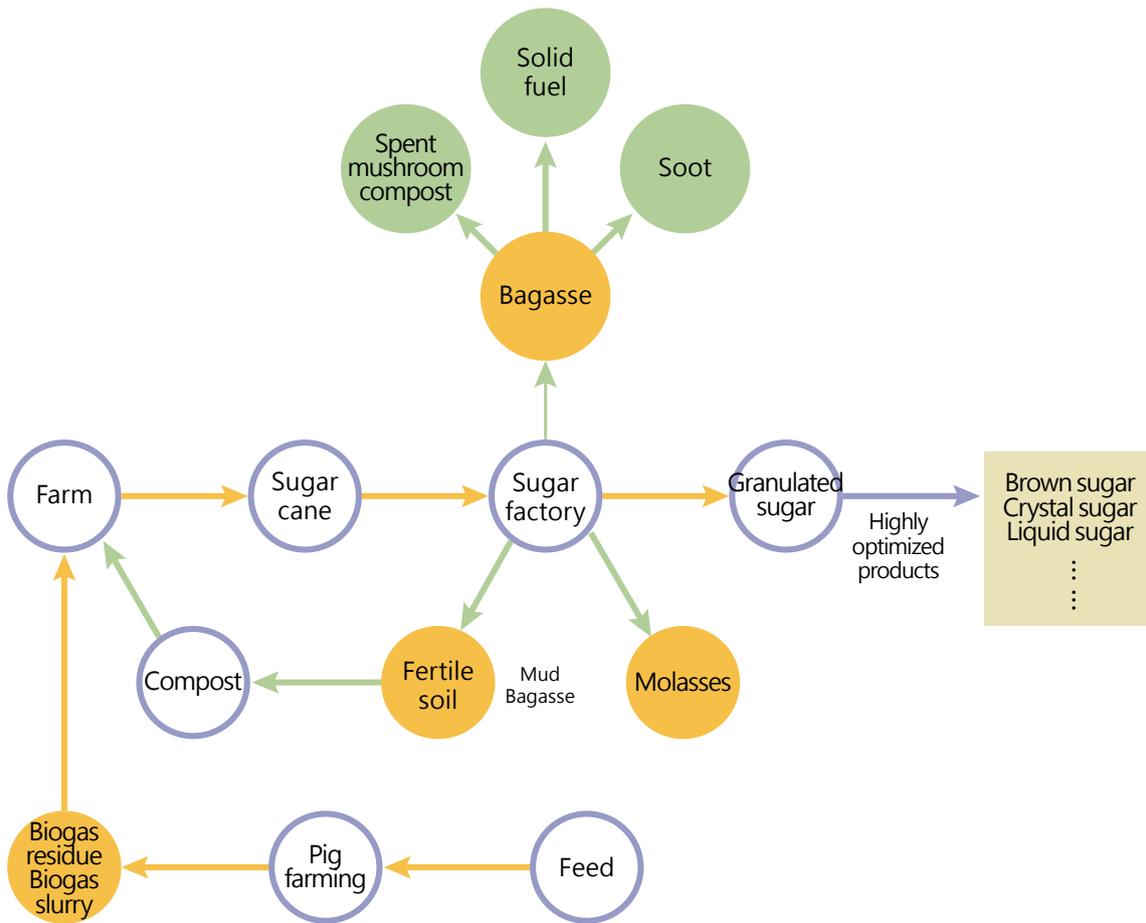
Please go to TSC Circular Economy Website for detailed information of whole pig utilization. Information of the concept of TSC's development of circular economy and results of various projects is all available.





### ■ The Use of Whole Sugarcane

Through the redesign of products and process, value is added to the by-product of sugar refining, sugarcane bagasse, for the reuse of it. We have developed to provide materials of composted bagasse. This circular economy model not only makes use of bagasse to replace natural sawdust in the cultivation of mushrooms but also reduces tree logging while increasing mushroom production. The residual nitrogen fertilizer in bagasse can even shorten the composting time, and the introduction of the recycling mechanism also reduces the processing costs for mushroom farmers. It not only extends the life cycle of bagasse but also achieves the innovative business model of secondary recycling and continuous reuse, creating not only the products but also the value, fully embodying the spirit of circular economy.

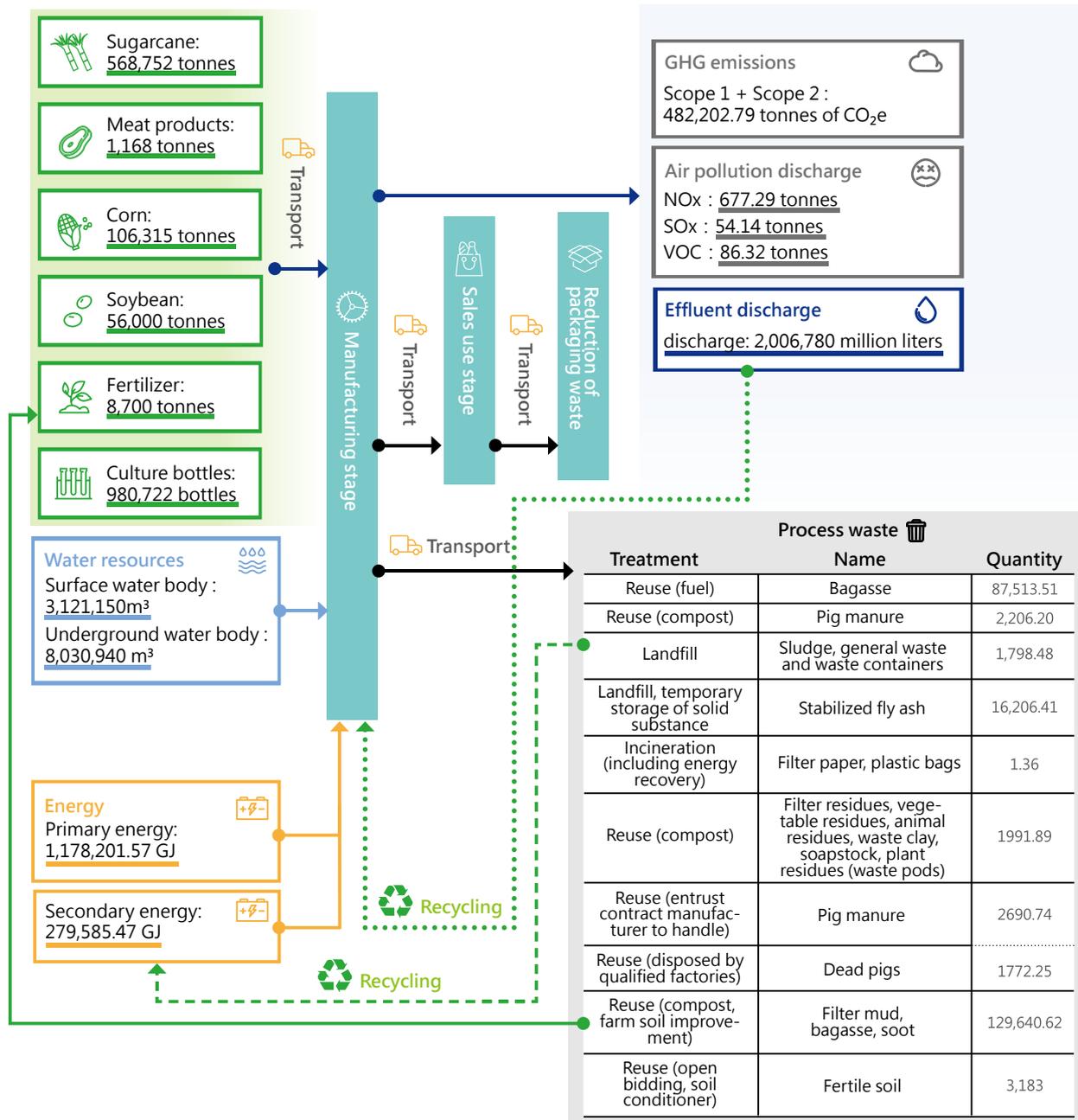


Recycle		Tonnes of 2021	Remark
Xiaogang Factory	Filter mud	3,098	TSC' s farms (Soil improvement)
Shanhua Sugar Factory	Bagasse	21,578	Recycle
	Filter mud	25,618	TSC' s farms (Soil improvement)
Huwei Sugar Factory	Fertile soil	3,183	For sale
	Bagasse	24,021	Recycle
	Filter mud	19,462	TSC' s farms (Soil improvement)

## 4.2 Energy Resources Management

Based on the consideration of cherishing natural resources and reducing the environmental impact, TSC actively promotes a green value chain so that the stages of birth, growth, decline and abandonment of a product can be completed under the conditions of consuming the least resources possible in the most eco-friendly way.

**TSC' s Environmental Footprint in 2021**



# TSC' s Environmental Footprint

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## 4.2.1 Consumption of Energy Resources

### Statistics of Energy Consumption

In 2021, the energy consumption within the organization was 6,396,561.75 GJ, and the energy intensity was 0.24 GJ/thousand of revenue. The energy intensity in 2021 was a decrease of 14.29% compared with 2020, which was mainly because the operation contracts of Gangshan and Kanting Refuse Incineration Plants expired in Nov. and Dec. in 2021 respectively, resulting in the reduction in the incoming waste in the whole year, leading to the reduced overall energy consumption and the decrease in the overall energy intensity.

**Table of annual energy consumption within the organization**

Energy category	2019	percentage of total energy consumption (%)	2020	percentage of total energy consumption (%)	2021	percentage of total energy consumption (%)
Primary energy (GJ)	1,331,461.36	18.25%	1,223,746.43	16.9%	1,178,201.57	18.42%
Secondary energy (GJ)	311,198.35	4.26%	284,738.72	3.93%	279,585.47	4.37%
Renewable energy and agricultural waste-to-energy (GJ)	5,653,789.49	77.49%	5,733,635.44	79.17%	4,938,774.71	77.21%
Total energy consumption (GJ)	7,296,449.21	—	7,242,120.59	—	6,396,561.75	—
NTD thousand of revenue	26,409,607	—	25,435,173	—	27,122,957	—
Total energy consumption intensity (GJ/ NTD thousand of revenue)	0.28	—	0.28	—	0.24	—

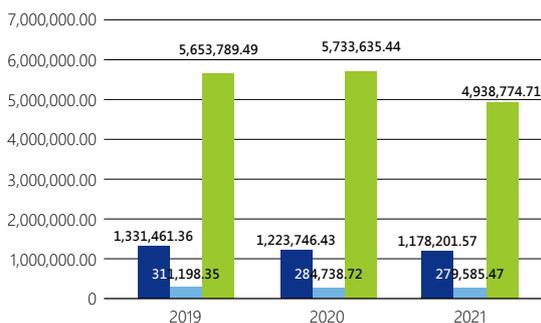
Note:

1. Primary energy includes gasoline, diesel, heavy oil, natural gas (NG), liquefied natural gas (LNG), liquefied petroleum gas (LPG), coal and motor oil.
2. Secondary energy is purchased electricity.
3. Renewable energy is biogas power generation.
4. Agricultural waste-to-energy refers to biomass power generation from bagasse cogeneration and power generation by the use of solid waste and cogeneration.
5. All the energy consumption was actual measured values.

The energy conversion coefficient refers to the calorific value coefficient of various energy sources in the content of 6.0.4 version of EPA' s GHG Emission Coefficient Management Table.

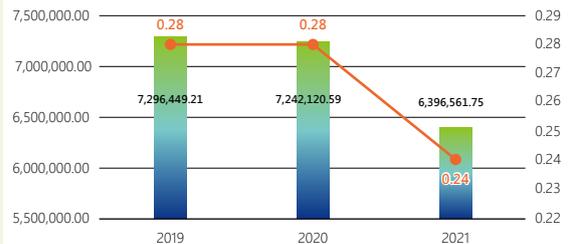
**Table of annual energy consumption within the organization**

- Primary energy (GJ)
- Secondary energy (GJ)
- Renewable energy and agricultural waste-to-energy (GJ)



**Total energy consumption intensity**

- Total energy consumption (GJ)
- Total energy consumption intensity (GJ/ NTD thousand of revenue)



## Water Resources Management

In order to properly use water resources, TSC is committed to the enhancement of water management and wastewater recycling. TSC actively promotes the recycling and reuse of wastewater to reduce the impact of wastewater discharged on the environment, and we also continue to improve the effectiveness of water conservation to reduce the consumption of water resources. According to the Aqueduct Water Risk Atlas of the World Resources Institute, all areas in Taiwan belong to Low – Medium (1-2). All the TSC operating bases are not set up in national or international protection areas, and the water intake is from the legal water resources authorized by the government, having no significant influence on water resources. The used water from TSC is legally discharged to the sewage system or approved water body. The quality of discharged water meets the effluent standards required for various industries by law.

In 2021, the amount of water intake was 11,152.1 million liters, a 22.94% decrease compared with 2020, and the water intensity decrease by 28.07% compared with the previous year. The reason for the decrease in water intake and the increase in water intensity was mainly because of a 6.64% increase in operating revenue. The consumption of water of 2021 was 9,145.31 million liters.

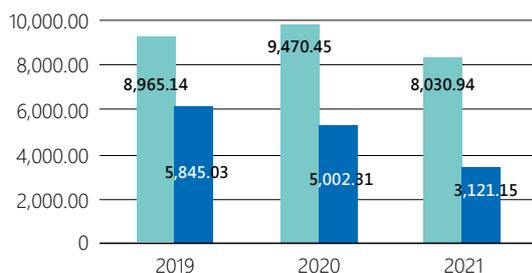
### Water consumption and water intensity

Year	2019		2020		2021	
Water body	Groundwater body	Surface water body	Groundwater body	Surface water body	Groundwater body	Surface water body
Individual water consumption (million liter)	8,965.14	5,845.03	9,470.45	5,002.31	8,030.94	3,121.15
Total water consumption (million liter)	14,810.17		14,472.76		11,152.10	
NTD thousand of revenue	26,409,607		25,435,173		27,122,957	
Water intensity (million liter / NTD thousand of revenue)	0.00056		0.00057		0.00041	

Note:  
 1. The statistics of water consumption of groundwater body and surface water body were measured values on water meters.  
 2. Water consumption = Water intake - Water discharge = 11,152.09- 2,006.78 = 9,145.31 million liters.

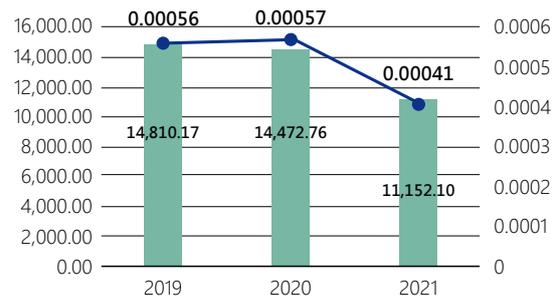
#### Individual water consumption (million liter)

- Groundwater body
- Surface water body



#### Water consumption and water intensity

- Total water consumption (million liter)
- Water intensity (million liter / NTD thousand of revenue)



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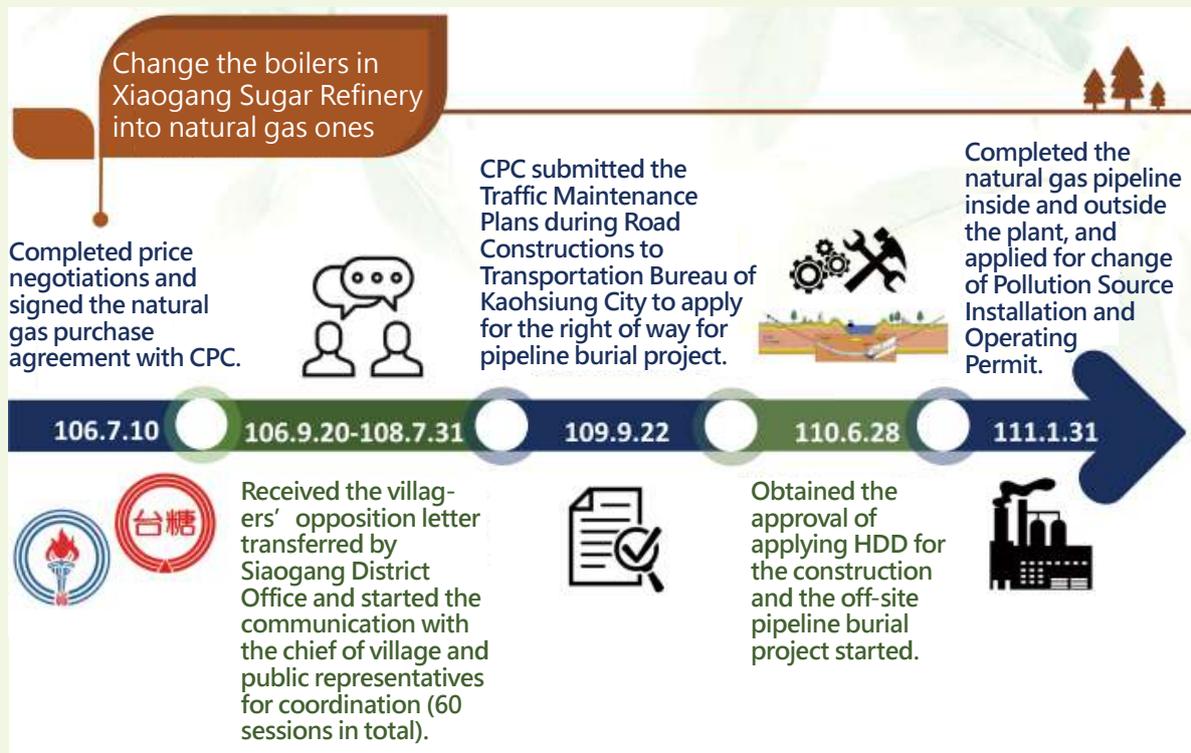
## 4.2.2 Energy Conservation and Carbon Reduction

In order to effectively implement energy conservation and carbon reduction policies and to continue to promote energy conservation movement. In 2021, the results in electricity and energy saving (including fixed and mobile sources) in all units were converted to a total of 23,294.78 GJ, reducing approximately 2,094.36 tonnes of CO<sub>2</sub>e.

### Energy saving measures and effectiveness of all business units

Business unit	Energy saving measures and effectiveness	Energy saving(GJ)	Tonne(s) of CO <sub>2</sub> e
Agriculture Business Division	1. Renewed the A/C equipment and saved a total of 42 MWh.	2,857.41	222.43
	2. Stationary heat sources, saving 77 m <sup>3</sup> of diesel.		
Leisure Business Division	1. Turned off lights when not using, saving 4.44 MWh.	1,578.38	220.10
	2. Updated air-conditioning equipment, saving 407 MWh.		
	3. Updated the lighting equipment, saving 27 MWh.		
Sugar Business Division	1. Cleaning of the boiler energy-saving equipment (ECO, GAH), saving fuel oil by 210,000 liters.	9,111.51	749.78
	2. Solar power generation in each plant, reducing power purchase by 187.934 MWh.		
Environmental Protection Business Operation Center	1. Replaced the lighting with the T8-LED300, saving 52.4 MWh.	7,498.56	588.45
	2. Updated transformer TR08, saving 68 MWh.		
	3. Improved production efficiency and energy conservation, saving a total of 200,000 liters of diesel.		
	4. Improved boiler efficiency and recovered waste heat, saving a total of 10 MWh.		
Kaohsiung Branch	1. Updated the lighting equipment, saving a total of 5 MWh.	1,213.20	169.17
	2. Updated air-conditioning equipment, saving 322 MWh.		
	3. Improved the efficiency of cooling tower, saving 10 MWh.		
Headquarters	1. Updated the lighting equipment, saving a total of 86.2 MWh.	1,035.72	144.43
	2. Updated air-conditioning equipment, saving 43.1 MWh.		
	3. Changed the habit of electricity use, saving 14.4 MWh.		
	4. Saved oil for cars, saving 144 MWh and 100 liters of gasoline.		
Note: 1. The data are all from actual calculation. 2. The table above only lists business units with better energy saving effects and does not include all business units.			

## Change of the Boiler to Natural Gas Ones in Xiaogang Sugar Refinery of Sugar Business Division



Due to the increasingly stringent environmental regulations and the impact of heavy oil combustion on the environment and to reduce the carbon emissions of the Xiaogang Sugar Refinery, after completing the negotiations on price and the signing of the natural gas purchase with Chinese Petroleum Corporation (CPC), TSC not only conducted the installation project to change the fuel oil and backup boilers into natural gas ones but also continued to visit the Xiaogang District Head and 5 relevant heads of the subdivisions of the district for coordination. We actively communicated with the neighboring residents and elected representatives, and after many times of communication, joint survey, and trial excavation, the off-site gas supply pipeline project was finally successfully contracted in June, 2020, and the Horizontal Directional Drilling (HDD) was approved in June, 2021, and the off-site pipeline burial project started. In January, 2022, the natural gas pipelines inside and outside the plant were completed, and the boiler operation permit were renewed, The test run of the natural gas is expected to be carried out during the annual overhaul period in 2022.

After the completion of the test run and completely change into natural gas, it is expected to make an annual contract purchase of 32 million kWh of natural gas, which can reduce the CO<sub>2</sub> emissions by 18,000 tonnes every year, saving NTD 40 million on fuel costs and NTD 7 million on waste gas treatment. The burden and risks of the boiler waste gas treatment personnel can further be reduced.



## Greenhouse Gas Inventory

The company has been dedicated to carbon reduction for years. In 2021, our Xiaogang Sugar Refinery of the Sugar Business Division passed the external verification of ISO 14064-1 GHG Inventory. TSC's overall GHG emissions in 2021 was 482,202.79 tonnes of CO<sub>2</sub>e, an increase of 3.28% compared with 2020. The GHG emission intensity was 0.018 tonne of CO<sub>2</sub>e/thousand of revenue, remaining flat compared with 2020. This was mainly because of the increase in the overall revenue of the entire company and the equipment renovation in the Environmental Protection Business Operation Center, resulting in the increase in purchased electricity, leading to increased GHG emissions and the same emission intensity. The total GHG emission amount and emission intensity of TSC and its affiliations is shown below.

### GHG emissions within the organization over the years

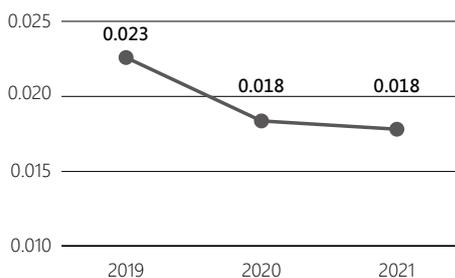
	2019	2020	2021
GHG emissions (tonnes of CO <sub>2</sub> e)	596,095.94	466,910.22	482,202.79
NTD thousand of revenue	26,409,607	25,435,173	27,122,957
GHG emissions within the organization (tonnes of CO <sub>2</sub> e)	431,930.30	348,593.85	-
GHG emission intensity (tonne(s) of CO <sub>2</sub> e/ NTD thousand of revenue)	0.023	0.018	0.018

Note:

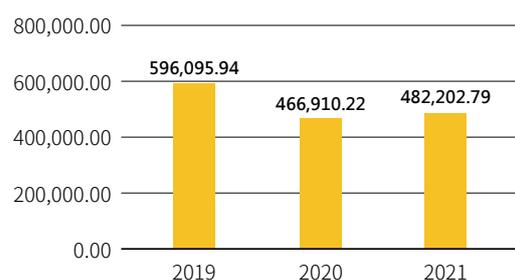
1. Scope: Taiwan Sugar Headquarters, 7 Business Divisions, 6 Operation Branches, Environmental Protection Business Operation Center, Taiwan Sugar Research Institute and Kaohsiung Branch. (The data was calculated based on the formula in which the amount of oil, water, electricity and gas usage is multiplied by the carbon emission factor).
2. The reference parameter description is based on the content of 6.0.4 version of EPA's GHG Emission Coefficient Management Table, and the CO<sub>2</sub>e equivalent conversion GWP value referred to that from the fourth announcement by IPCC.
3. The GHG inventory data disclosed were data verified as of 2020. The inspection units were Environmental Protection Business Operation Center (Gangshan and Kanting Refuse Incineration Plants) and Xiaogang Sugar Refinery of the Sugar Business Division. In 2020, the GHG inventory in Scope 1 was 344,691.26 tonnes of CO<sub>2</sub>e. The GHG inventory in Scope 2 was 3,902.59 tonnes of CO<sub>2</sub>e. 4. The greenhouse gases investigated for the GHG inventory were carbon dioxide, methane, and nitrous oxide.
4. The GHG inventory data for 2020 will be disclosed in the 2021 CSR Report after verification
5. The GHG Inventory Survey is mainly based on the emission coefficient method and supplemented by the mass balance method.
6. Due to the frequent organizational adjustment recently, the selection of the base year of GHG inventory is based on the previous year.

### GHG emissions within the organization over the years

GHG emission intensity (tonnes of CO<sub>2</sub>e/ NTD thousand of revenue)

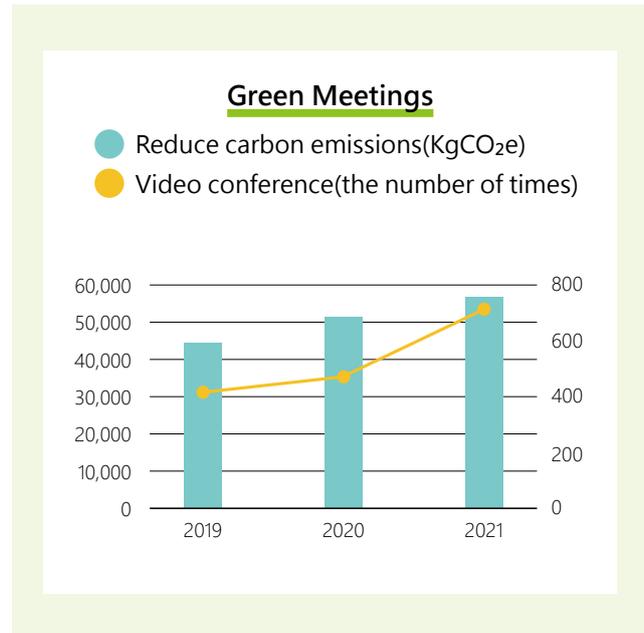


GHG emissions (tonnes of CO<sub>2</sub>e)



## Green Meetings

TSC continues to promote the use of video conference to replace physical meetings not only to reduce time and cost for longdistance travel and to increase work efficiency, but also to achieve the benefits of energy conservation and carbon reduction. Based on the assumption of "one person/ per business division", there were a total of 712 video conferences held in 2021, and the calculated traveling distance saved (round-trip) was 494,122 km; in addition, according to the EPA's carbon footprint calculation service platform, the carbon footprint coefficient of a small passenger car (petrol) was 0.115 KgCO<sub>2e</sub>/passenger-kilometer (the GHG emission generated from the small passenger cars used for carrying passengers, including emissions from the fuel production, distribution and vehicle consumption) was reduced by 56,824 KgCO<sub>2e</sub>.



## 4.3 Pollution Control

TSC combines pig farming, biogas, green energy, organic fertilizer and bio-refining technologies as the beginning of the promotion of circular economy in agriculture and livestock industries, which can reduce the dependence on raw materials and also reduce the environmental impacts.

### 4.3.1 Air Pollution Prevention

In order to comply with the environmental protection laws and regulations, TSC has formulated Key Points for Environmental Management for the Operations of Air Pollution Prevention, and also included the ISO 14001 Environmental Management Standards to establish operations, inspections and emergency response measures to ensure compliance with laws and regulations related to air pollution. Prevention of air pollution begins with the rational reduction of pollutants in the process before being emitted into the exhaust gas, and air pollution control equipment handles pollutants in the exhaust gas. The Biotechnology Business Division has provided the roof space of the administration building for Environmental Protection Bureau of Chiayi County to monitor air quality since 2011.

The actual test results of the concentration of air pollutants over the years all met the emission standards stipulated by EPA. The NO<sub>x</sub> emission intensity in 2021 decreased by 11.97% compared with 2020, and the SO<sub>x</sub> emission intensity in 2021 decreased by 37.5% compared with 2020, mainly because the operation contracts of Gangshan and Kanting Refuse Incineration Plants expired in November and December in 2021 respectively, resulting in the reduction of the incoming waste in the whole year, leading to the reduced overall air pollutant emissions. However, the overall revenue of the company increased, resulting in a reduction in emission intensity. The air pollution control situation is shown as follows, and the emission concentrations all met legal standards.

### Air pollutant emissions

Unit: tonne(s)

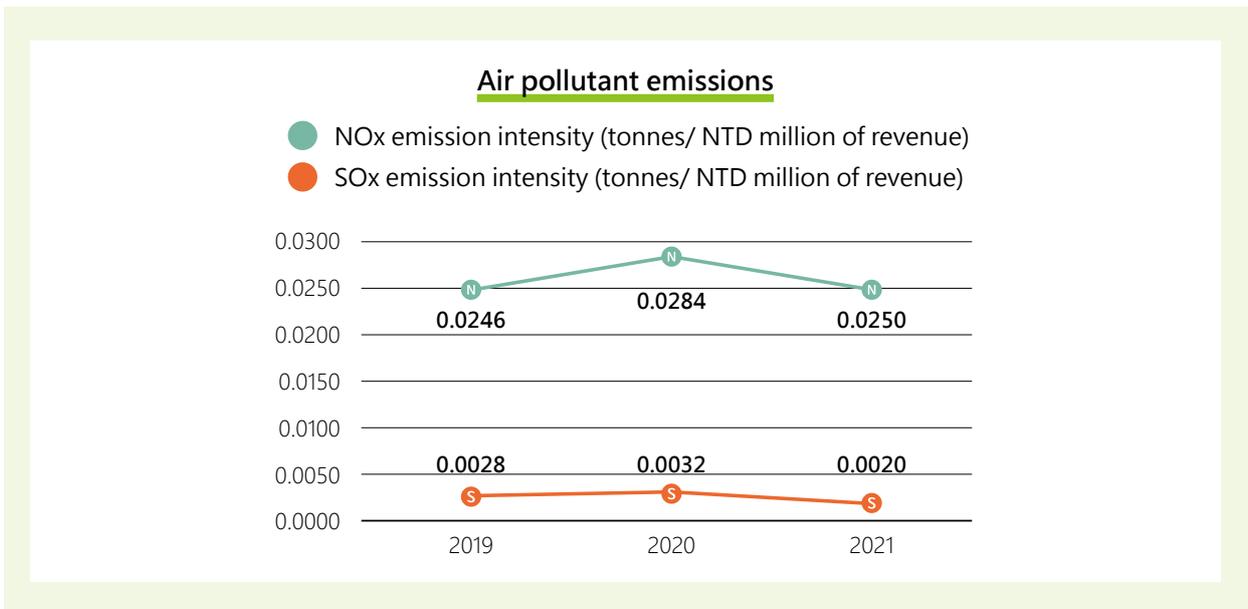
Item	2019	2020	2021
Particulate matter (PM)	28.31	53.29	33.81
NO <sub>x</sub>	650.94	722.22	677.29
SO <sub>x</sub>	74.84	81.35	54.14
VOC	135.20	116.09	86.32
HCL	57.95	62.65	49.58



### Air pollutant emissions

Unit: tonne(s)

Item	2019	2020	2021
CO	124.68	140.62	134.2
Ammonia	6.34	8.71	8.04
NTD million of revenue	26,410	25,435	27,123
NOx emission intensity (tonnes/ NTD million of revenue)	0.0246	0.0284	0.025
SOx emission intensity (tonnes/ NTD million of revenue)	0.0028	0.0032	0.002



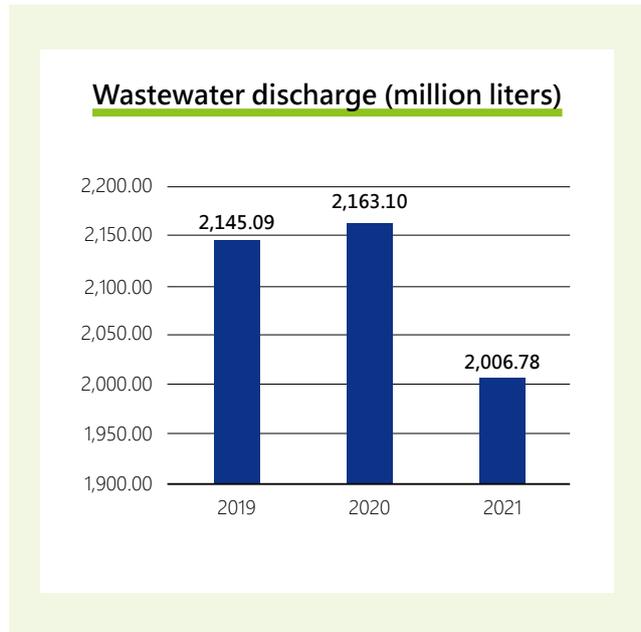
### 4.3.2 Water Pollution Control

#### Wastewater Discharge

In accordance with the Water Pollution Control Act, wastewater (sewage) generating units shall have wastewater treatment procedures and obtain approval documents of water pollution prevention and shall be sampled and analyzed by qualified testing agencies in accordance with the prescribed schedules. Regular reporting shall be done on the website designated by the EPA, and all the wastewater (sewage) discharged shall meet the effluent standards. Wastewater is finally discharged into the sea and does not have major impacts on the water sources. The amount of discharged wastewater in 2021 was 2,006.78 million liters, an decrease of 7.23% compared with 2020.

#### Wastewater discharge over the past 3 years

Year	2019	2020	2021
Total wastewater discharge (million liters)	2,145.09	2,163.10	2,006.78

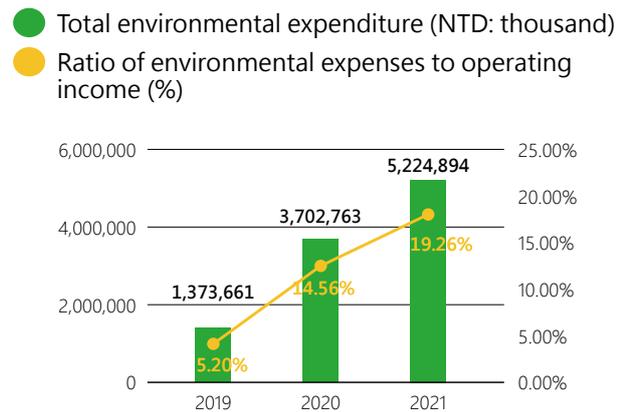


## Investment in Environmental Protection

In addition to strengthening the wastewater and waste handling process in the field, we also review and improve the operation process, added pollution control equipment with a total expense of NTD 509,165 thousand in 2021, and have prepared budgets for the installment of pig houses with water curtain and environmental protection facilities related to biogas power generation to meet the standards for wastewater discharge and reduce the occurrence of odor.

To fulfill our social responsibility for the environment, TSC has invested funds for environmental protection related work. In 2021, the environmental protection expenses amounted to NTD 5,224,894 thousand, a 41.11% increase from 2020.

### Total environmental expenditure



### Environmental protection expenditures over the past 3 years

Item/ Year	2019	2020	2021
Total environmental expenditure (NTD: thousand)	1,373,661	3,702,763	5,224,894
Ratio of environmental expenses to operating income (%)	5.20%	14.56%	19.26%

### Wastewater Treatment and Recycling Measures of the Livestock Business Division (Pig Farms)

- ◆ The wastewater adopts secondary aeration treatment system.
- ◆ In 2021, Livestock Business Division initiated the application for the reuse of the wastewater in the farm, and 13 pig farms (Waipu, Huwei, Douliu, Annei, Nanjing, Lucao, Haipu, Shanhua, Nan Shalun, Xincuo, Silinfan and Da-er ChangPig Farms) were approved for the reuse, with the accumulative amount of 729,364 tonnes of reclaimed wastewater.
- ◆ We work with the Environmental Protection Agency' s promotion of the use of biogas slurry and residues for farmland fertility and the reuse of agricultural business waste. As of 2021 the cumulative irrigation with biogas slurry and residue on the farmland amounted to 70,178 tonnes (Nanjin, Xincuo, Shilinfan and Da Xiang Er Chang), and the amount of reused liquid waste irrigated in Douliu Breeding Farm reached 2,524 tonnes. The biogas slurry is used on the farmland to increase soil fertility, reducing wastewater discharged to rivers and thus reduced pollution.
- ◆ Wastewater discharge standards: BOD: 80 mg/L, COD: 600 mg/L, SS: 150 mg/L.
- ◆ All the livestock farms of the Livestock Business Division entrusted qualified inspection agencies to conduct sampling analysis every 6 months in accordance with the Water Pollution Prevention and Control Law. Regular reporting shall be done by filling out the animal husbandry wastewater (sewage) test declaration form on the website designated by the EPA, and the declaration is handled through network transmission.

### Water Pollution Prevention and Control Permit

TSC cares about environmental protection and fulfills its corporate social responsibility. As of 2021, five locations, including Taisugar Hotel Taipei, Taisugar Chong-de Building, Evergreen Plaza Hotel, Jianshanpi Jiangnan Resort, and Chinshang Pastoral Farm Resort have obtained water pollution control permits.

### Product Water Footprint Inventory

In 2021, big and small packages of frozen meat, small frozen packages of TSC safety pig series, meat crisps and meatballs produced by Livestock Business Division were issued the water footprint verification statements by SGS. Moreover, the 50kg-packaged Refined White Sugar and Gangshan Incineration Plant had both passed SGS verification in 2019 and obtained product water footprint verification statement, Business water footprint, and service water footprint verification respectively.



### 4.3.3 Waste Management and Reuse

In 2021, the amount of general business waste handled included 18,004.89 tonnes for landfill, 1.52 tonnes for incineration, and 228,998.21 tonnes for reuse (compost or soil amendments). In 2021, the waste disposal amount increased by 18.32% compared with 2020.

All pig carcasses and discarded afterbirths in all pig farms shall be destroyed, rendered or processed with measures necessary in accordance with the Statute for Prevention and Control of Infectious Animal Diseases and Waste Disposal Act, and shall not be cut, processed, transported, stored or sold for human consumption or intended for human consumption. Our Livestock Business Division complies with the government regulations and entrusts qualified rendering plants to handle pig carcasses and afterbirths in all farms with chemical processing procedures to avoid misappropriation by unscrupulous vendors, preventing them from entering the meat supply market, endangering the health of people in Taiwan and damaging the goodwill of TSC.

#### Waste treatment capacity

Unit: tonne(s)

Non-hazardous waste			
Treatment method		Composition of Waste	Waste generation
On-site Treatment method	Reuse (fuel)	Bagasse	87,513.51
	Reuse (compost)	Pig manure slag	2,206.2
Off-site Treatment method	Landfill	Sludge	4.34
		Waste general items and containers	1,794.14
	Landfill, solidification treatment	Fly ash stabilizer	16,206.41
	Incinerated (including energy recovery)	Filter paper	0.21
		Plastic bags	1.15
	Reuse (compost)	Filter residue	0
		Plant residue	1.32
		Animal residue	32.2
		Waste clay	255.59
		soap stock	1,673.35
	Plant residues (waste bean meal)	29.43	
	Reuse (treated by contract vendors)	Pig manure slag	2690.74
	Reuse (processed in qualified rendering plant)	Died pigs	1,772.25
	Reuse (compost, farm soil improvement)	Filter mud	48,178.54
		Bagasse	62,473.63
Reuse (public auction, soil amendments)	Soot	18,988.45	
	Fertile soil	3,183	
Hazardous waste			
Treatment method		Composition of Waste	Waste generation
Off-site Treatment method	Incinerated (excluding energy recovery)	Waste liquid	0.16

Note:

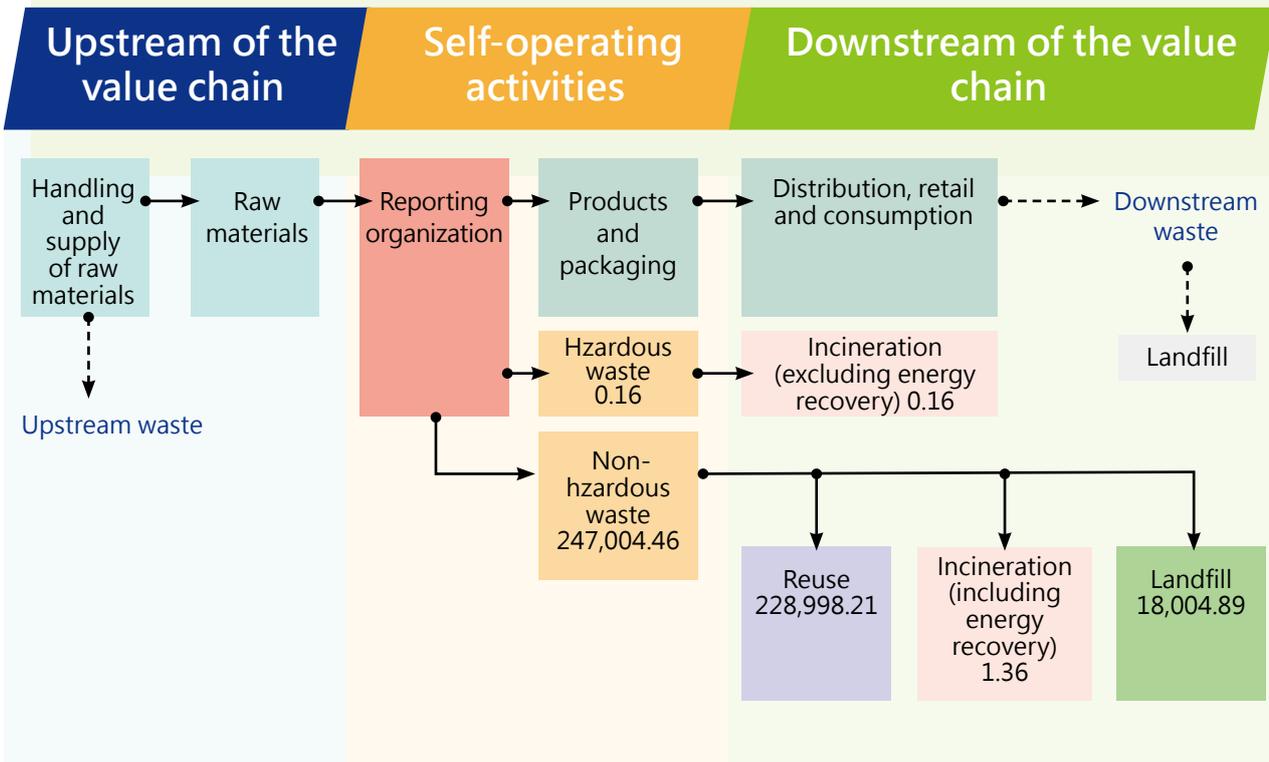
1. "On-site" refers to the scope within the physical boundary or administrative control of the reporting organization; "off-site" refers to the scope outside the physical boundary or administration control of the reporting organization.
2. Fly ash stabilizer is produced after incineration while treating public environmental waste problem. The unit responsible for the treatment of it is prescribed in the contract with the local environmental protection agency. Here only the amount treated in Gangshan Refuse Incineration Plant is listed.

Composition of Waste	Hazardous waste		Non-hazardous waste		Total
	On-site	Off-site	On-site	Off-site	
Transfer during disposal	0	0	89,719.71	139,278.5	228,998.21
	0		228,998.21		
Direct disposal	0	0.16	0	18,006.25	18,006.25
	0.16		18,006.25		
Total	0.16		247,004.46		247,004.62
Total waste	247,004.62				
Recycle ratio	92.71%				

Note:

- Transfer during disposal: recycling for reuse.  
Direct disposal: incineration (including energy recovery), incineration (excluding energy recovery), landfill.
- The calculation of Recycle ratio = Recyclable waste treatment volume/ Total waste volume x100%.

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## Reduction of Waste Generation

In 2021, the process waste reduction measures were implemented, and the proportion of waste recycling reached 92.71%, an increase of 3.57% compared with 2020, mainly due to the increase in sugarcane production in 2021, which resulted in the increase in the processing volume of bagasse, filter mud, soot, and so on and also the decrease in non-recyclable waste such as fly ash stabilizers, leading to the increase in recycling proportion. This shows TSC's determination to reach the recycling, stabilization, detoxification, and economization of waste.

### 2021 Achievements of the promotion of green products and services of all units



Marketing Business Division and Biotechnology Business Division

The new product packaging design of the Marketing Business Division is in line with the policy of limiting over-packaging of products announced by the Environmental Protection Administration (EPA), Executive Yuan, to reduce the use of packaging materials and generation of waste, easing off the environmental load. Take the packaging of the Clam Essence for example, the lining frame strengthens the structure and texture of the box with folded edges while the size of the gift box is reduced to meet the requirements of the prescription. In 2021, the Biotechnology Business Division continued to use 2,826,118 glass bottles with reduced weight for the Clam Essence Products, a 7.6% decrease in weight compared with the old glass bottles, which is converted to a 22,609 kg reduction in glass use, reducing the impact of glass to the environment.



Sugar Business Division

The Shanhua Sugar Factory of Sugar Business Division changed business waste of bagasse and filter mud into recycled materials as the soil amendment, reaching the purpose of circular economy. In 2021, 16,875.11 tonnes of bagasse from Shanhua Sugar Factory were used within the company and 6,884.06 tonnes were sold; the filter mud is officially named Fertile Soil, and the Company received 27,449.55 tonnes internally and sold 3,183 tonnes externally, achieving the reuse of resources and reducing the use of chemical fertilizers.



Livestock Business Division

In 2021, the egg cards of Trichogramma chilonis were provided to our self-operated farms and contracted sugarcane gardens. In addition, TSC was also entrusted to provide the eggs of corcyra cephalonica (stainton) as the materials to feed Chrysopidae to function as a pest control for fruits and vegetables, which can significantly reduce the use of pesticides.



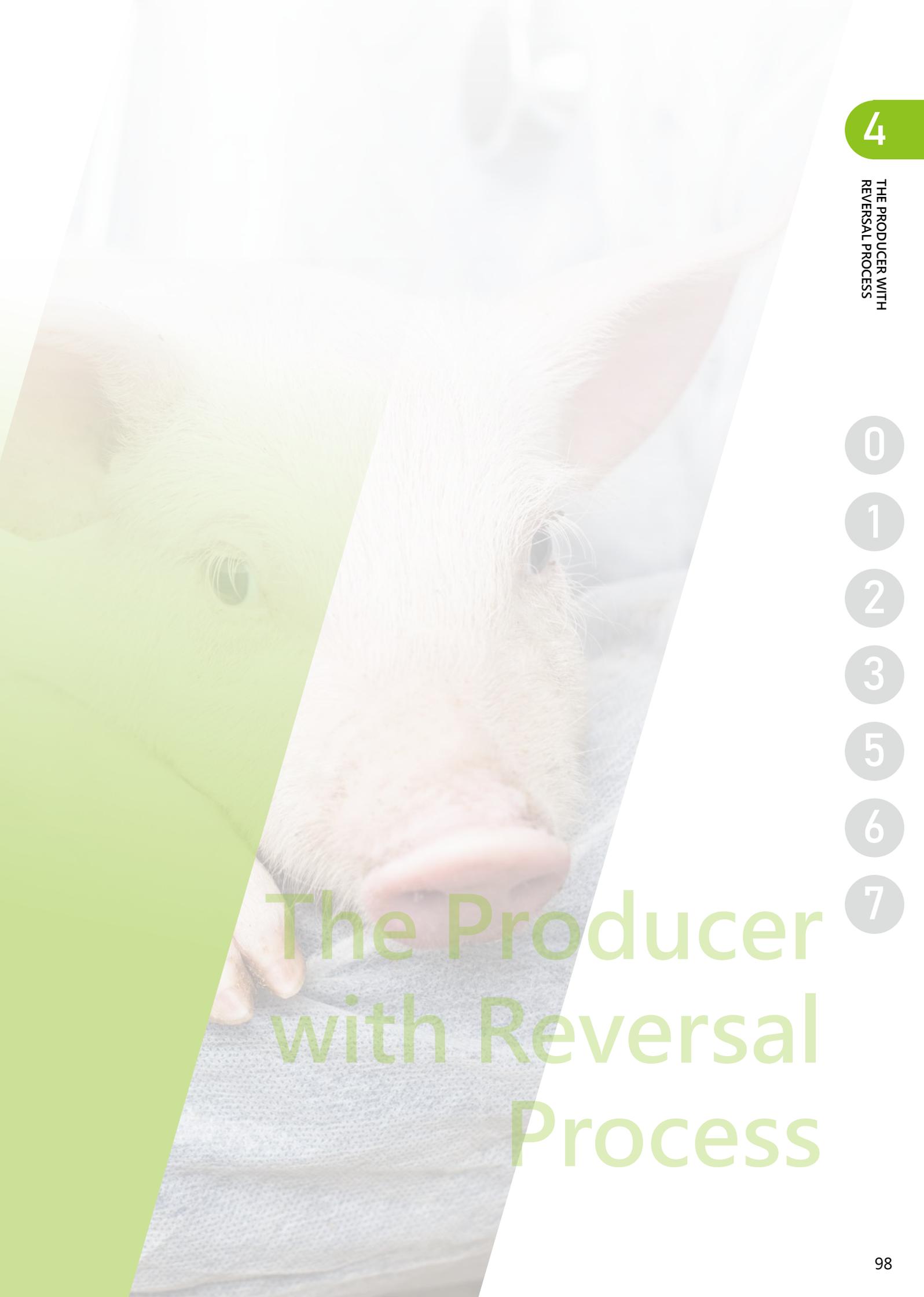
Agriculture Business Division

The tissue culture bottles used for the production of Phalaenopsis seedlings are reusable glass culture bottles instead of non-reusable plastic cases. From January to December in 2021, a total of 980,722 glass culture bottles were used, and all of them were recycled for reuse, with the reuse rate of 100%. (The statistics of 2021 was the same as the year of 2020)



Leisure Business Division

The 770.50 tonnes of general business waste and 4.09 tonnes of waste cooking oil generated by the Leisure Business Division were centrally collected and recycled as well as reused by legal operators, producing 139,584 m<sup>3</sup> of wastewater, which was transported to Jiangnan Resort and treated by equipment, and finally recycled for irrigation use in the park.



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# The Producer with Reversal Process

## Related-Stakeholders



employees

# The Operator Protecting Talents

# ESG



Talent cultivation and improvement of organizational efficiency are the key points of TSC's management innovation.

Corresponding material topics & SDGs	Labor/ Management Relations, Occupational Health and Safety	 
Policy	<ul style="list-style-type: none"> <li>◆ The labor-management meeting of each unit is held at least once every 3 months as prescribed to maintain good relations with our employees and strengthen the professional abilities of employees for the cultivation of talents of the next generation and improve the overall operational management capabilities (employee relationship management).</li> <li>◆ Foresight, prevention, compliance, implementation, establishment of systems, self-management, follow-up inspection, continuous improvement, continuous promotion of the establishment of Taiwan Occupational Safety and Health Management System (TOSHMS) and ISO 45001 Occupational Health and Safety Management System for all units, and arrange staff training to improve workplace safety (occupational safety and well-being).</li> </ul>	
Commitments and goals	<ul style="list-style-type: none"> <li>● Short-term goals (within 3 years):             <ol style="list-style-type: none"> <li>1.To implement the responsibility center system and practice goal management</li> <li>2.To check the contents of the job responsibilities and make plans for the company's manpower needs in 7 years</li> <li>3.To create more diversified channels for talent acquisition and strengthen talent cultivation</li> <li>4.To promote engineering contract source management, build online operations of "engineering hazard assessment", and specify that when proposing the project budget, an engineering hazard assessment form must be submitted, and the safety and health protection costs should be listed in accordance with the "engineering hazard assessment form" for further precautions to avoid listing in an irregular format</li> <li>5.Proactive performance target achievement rate: To have 100% compliance rate of regulations and other requirements as well as the improvement rate of deficiencies in safety and health inspections, and more than 98% of education and training participation rate</li> <li>6. In 2022, the establishment and verification of the ISO/CNS 45001 Occupational Safety and Health Management will be promoted in 4 units, including the Leisure Business Division, Marketing Business Division, Chungchang Operation Branch, and Huatung Operation Branch.</li> <li>7. Achievement rate of passive performance target: Strengthen industrial safety inspections, implement the safety and health management of the contractors, keeping the annual injury frequency rate below 0.61, the severity rate below 61, and the comprehensive disaster indicator below 6.1. To have 100% completion rate of event investigations, and the Disabling Injury Frequency Rate and the Disabling Severity Rate to be the average value of the middle three years of the previous five years</li> </ol> </li> <li>● Medium and long-term goals (3 to 7 years):             <ol style="list-style-type: none"> <li>1. To publicly and selectively recruit manpower to reinforce the core and to meet the needs for sustainable management operations</li> <li>2.To introduce contract professional managers and introduce professional advisors from different fields to provide professional advice</li> <li>3.To achieve the highest occupational safety and health goals of "zero disaster", "zero accident" and "zero injury" for TSC</li> </ol> </li> </ul>	
Responsible units	<ul style="list-style-type: none"> <li>◆Social and Employee Care Group of Corporate Sustainable Development Committee</li> <li>◆Department of Occupational Safety and Health</li> <li>◆Department of Human Resources</li> <li>◆Industrial union of TSC</li> <li>◆Internal and external units</li> </ul>	
Input resources	<ul style="list-style-type: none"> <li>◆ To foster the future talents for basic-, mid- and high-level executives through the reserve cadre plan to facilitate the succession. This plan is expected to be implemented in 2018~2022, with a budget of NTD 46.26 million</li> <li>◆ Set up Employee Welfare Committee and the Recreational Activities Promotion Committee to actively handle various sports, arts and cultural activities, and develop the cohesion and team spirit of the employees</li> <li>◆ In 2021, TSC's education and training expenses were NTD 37,133 thousand</li> </ul>	
Recourse mechanism	<ul style="list-style-type: none"> <li>◆Set up an Employee Care Group to actively help employees with problems that can affect work, life and health, providing subsidies, condolence money and leave</li> <li>◆Established grievance channels for employees when their rights are infringed or when they face improper disposal which is not able to be solved properly</li> <li>◆Established the "Personnel Appraisal Committee" to review employee rewards and penalties</li> <li>◆Formulated "Taiwan Sugar Corporation Complaint Investigation and Discipline Guidelines for Sex Harassment Prevention" to free employees and job-seekers from a workplace with sexual harassment and to prevent sexual harassment in the workplace</li> <li>◆"Precautions against Illegal infringement in Duties"</li> </ul>	
Management System and Action	<ul style="list-style-type: none"> <li>◆Implement job rotation operations to expand personnel work functions and improve the flexibility of manpower utilization</li> <li>◆Incorporate specific KPIs into the individual annual performance assessment as a measurement indicator and add the mechanism for assessment interview and counselling to assist employees to understand the functional items and work competence needed to be strengthened</li> <li>◆Labor-management conferences, Organizational Rules for Employee Welfare Committee, Taiwan Sugar Corporation Complaint Investigation and Discipline Guidelines for Sex Harassment Prevention, Guideline of Grievance for TSC Staff, Working Rules for Practitioners, Guidelines for Employees' General and Project Evaluation, training-related rules and regulations</li> <li>◆Occupational Safety and Health Management System (TOSHMS, OHSAS18001), Disasters Handling Guidelines, Guidelines for Disasters Emergency Response, Fire Safety Equipment Inspection and Guidelines for Maintenance and Report, Precautions for Diseases Caused by Abnormal Workloads,Precautions for Musculoskeletal Disorders Caused by Repetitive Tasks</li> </ul>	
Assessment management mechanism	Internal Control System, TSC Performance Assessment System, Corporate Sustainable Development Committee Work Plan and Implementation Review Meeting	



## 5.1 Talents and Organization Optimization

The future planning of manpower and organization will be in line with the direction of business development and rolling adjustment will be adopted. In addition, through appropriate incentives and punishment systems, the Company can be united as one for smooth operation.

### 5.1.1 Talent Acquisition and Turnover

#### ■ Talent Acquisition

The recruitment is based on the Employment Services Act, Labor Standards Act and “Regulations for the Employment of the Personnel of Business Units Affiliated with the Ministry of Economic Affairs” . In addition, for specialized or technical personnel with special business nature, it is possible to hire them in an open manner as contract employees. Recruitment of talents complies with legal regulations that require the protection of employee human rights, personal privacy, and the prohibition of improper discrimination. In the recruitment of talents, the Company upholds the principles of fairness, justice and integrity. Recruitment, selection, and hiring of employees are all in compliance with government regulations. There will be no discrimination and differential remuneration based on race, class, language, ideology, religion, political party, place of origin, place of birth, gender, sexual orientation, age, marriage, appearance, facial features, physical or mental disabilities, or membership in a union.

The terms of each contract require the suppliers to provide labor and health insurance to their employees, shall not perform forced labor or employ child labor (15 years old and above, under 16 years old), and shall implement gender equality in work in accordance with the national human rights regulations and Labor Standards Act. Once suppliers are found to be in violation of gender equality in work, freedom of association, sexual harassment prevention, normal leave and non-payment of overtime, they will be immediately requested for improvement within a limited time and may be fined for breach of the contract. If they do not listen to advice or repeatedly violate the terms, the contract with such supplier may be terminated. Human rights protection requirements also apply to companies for major investment. Suppliers we have been working with for long can gradually attach more importance to human rights.



## ■ Talent Retention

In order to retain competitive talents, TSC strives to establish a friendly working environment, pay attention to the balance between work and life, provide employees with training and development opportunities and encourage employees to continuously improve themselves to achieve the development of individual careers. In recent years, new blood has been activated and most new employees recruited are under 30 years old. The number of employees entering and leaving TSC in the last three years was as follows.

### The number of new employees in the last three years

Year	2019				2020				2021			
	No. of male employees	New Hires Male (%)	No. of female employees	New Hires Female (%)	No. of male employees	New Hires Male (%)	No. of female employees	New Hires Female (%)	No. of male employees	New Hires Male (%)	No. of female employees	New Hires Female (%)
Under 30 years old	97	37.3%	84	42.0%	79	32.6%	23	12.9%	44	15.1%	32	18.0%
31-50 years old	72	7.3%	21	9.7%	45	5.0%	16	6.9%	23	2.9%	7	2.5%
51 years old and above	5	0.3%	1	1.0%	2	0.1%	0	0%	1	0.1%	0	0%
Total number of new employees	280				165				107			
Total number of employees	3,451				3,288				3,241			
New hire rate (%)	8.1%				5.0%				3.3%			

Note:

1. New employee numbers include those retired/left within the recruiting year.
2. New hire rate (%): Number of new employees in the category for the current year/ Total number of employees in the category at the end of the year.
3. The total number of employees does not include the number of those on leave without pay for the current year.

### The number of retired/resigned employees in the last three years

Year	2019				2020				2021			
	No. of male employees	Turnover rate of male employees (%)	No. of female employees	Turnover rate of female employees (%)	No. of male employees	Turnover rate of male employees (%)	No. of female employees	Turnover rate of female employees (%)	No. of male employees	Turnover rate of male employees (%)	No. of female employees	Turnover rate of female employees (%)
Under 30 years old	15	5.8%	4	2.0%	12	5.0%	7	3.9%	13	4.5%	3	1.7%
31-50 years old	44	4.4%	20	9.2%	16	1.8%	4	1.7%	16	2.0%	3	1.1%
51 years old and above	215	12.8%	22	21.0%	151	9.2%	15	15.6%	221	13.8%	15	17.0%
Total number of retired/resigned employees	320				205				271			
Total number of employees	3,451				3,288				3,241			
Turnover rate (%)	9.2%				6.2%				8.4%			

Note:

1. Turnover rate (%) = the number of retired/resigned employees in that category for the current year/the total number of employees in that category at the end of the year.
2. The number of retired/resigned employees includes employees who volunteer to resign or are fired, retire, or who die while on duty.
3. The total number of employees does not include the number of those on leave without salary for the current year.



## 5.1.2 Labor Structure

TSC has no foreign employees. We hire employees based on professional competence and experience, and all the employees are protected by the Labor Standards Act. The ratio of male to female employees is approximately 4.92 : 1. However, there is no differential treatment or discrimination in terms of employment, salary, performance appraisal and promotion due to gender or marriage status.

TSC is mainly in the agriculture and animal husbandry industry, with a majority of employees being males. Male employees account for 83.12% while female ones account for 16.88% of all employees. A joint examination is established based on medium and long-term manpower planning and the manpower needs of the respective units to recruit new employees, those who are enrolled will be assigned to the units in need of manpower for adequate jobs. The distribution and composition of TSC's staff in recent three years are as follows.

### Total number of employees

Item\ Year	2019		2020		2021	
Item\ Gender	Male	Female	Male	Female	Male	Female
Total number of employees	3,451		3,288		3,241	
Dispatched personnel	1,343	346	1,312	340	1,314	364
Employed personnel	1,575	125	1,462	118	1,371	141
Contract-based personnel	7	2	6	1	6	1
Contracted personnel	4	49	3	46	3	41

Note:  
According to Article 5 of the "Regulations for the Employment of the Personnel of Business Units Affiliated with the Ministry of Economic Affairs", personnel dispatched with rank 6 or above are called dispatched personnel; those who are employed with rank 5 or below are called employed personnel. In addition, for the needs of the business, for specialized or technical personnel with special business nature, it is possible to hire them in an open manner. Employees with rank 6 or above are contract-based personnel, the ones with rank 5 or below are contracted personnel.

Looking at the distribution of age and gender among the employees, the total number of females have increased by 8.3% compared to 2020, showing that the manpower structure in the Company is now being adjusted.

### Age and gender distribution of employees

Year	2019		2020		2021	
Age group \ Gender	Male	Female	Male	Female	Male	Female
Under 30 years old	260	200	242	178	291	178
31-40 years old	311	147	294	149	329	185
41-50 years old	681	70	606	82	478	96
51 years old and above	1,677	105	1,641	96	1,596	88
Total	2,929	522	2,783	505	2,694	547

### Category, education background and age distribution of employees in 2021

Age group / category		High-level executives		Mid-level executives		Basic-level executives		Administration		Techniques	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Age	Under 30 years old	0	0	0	0	4	2	97	115	190	61
	31-40 years old	0	0	3	1	11	7	134	129	181	48
	41-50 years old	0	0	21	3	35	6	217	67	205	20
	51 years old and above	69	6	202	7	214	5	521	62	590	8
Education background	Graduate school	42	2	99	10	62	13	191	131	208	64
	University/ College	27	4	121	1	185	7	555	221	561	72
	High school and below	0	0	6	0	17	0	223	21	397	1
Aborigines		0	0	0	0	0	0	13	4	9	2
People with disabilities		2	0	17	0	4	0	57	18	20	2

Note: High-level executives include chairman, president, VP and all bosses and deputies herein in each unit.

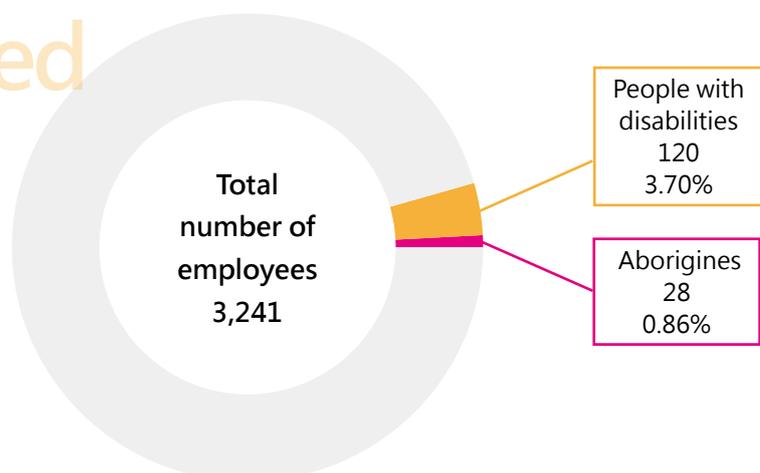
#### ■ Hiring and Caring for Disadvantaged Groups

In order to protect equal employment opportunities for disadvantaged and related ethnic groups, we have complied with the relevant provisions of People with Disabilities Rights Protection Act and Indigenous Peoples Employment Rights Protection Act in the employment of physically and mentally disabled persons and indigenous peoples. The Company now employs 28 aborigines and 120 people with disabilities in compliance with the employment regulations. There has been no report of infringement of the aborigines' right in the Company in 2021.

#### Employment rate of disadvantaged workers in 2021

# Employment rate of disadvantaged workers in 2021

Total number of employees	3,241	100%
People with disabilities	120	3.70%
Aborigines	28	0.86%





### 5.1.3 Talent Cultivation

TSC attaches great importance to the development of each employee's work function and lifelong learning. By the end of November each year, we ask the various departments and units to organize curriculum that enhance the operation and management performance of each unit. The minimum number of training hours per person per year is set according to the positions and ranks of employees. The promotion system and education and training are implemented to improve the knowledge and skills of employees and cultivate correct working attitudes.

#### Training Hours

TSC will immediately carry out relevant education and training on its own rights, safety and health and internal control of the Company after the employment. We constantly explore the needs of organizations and individuals, review them at all times and gradually carry out all necessary trainings to enhance their knowledge and skills required for career development.

In 2021, the number of trainees was 3,319 (average number from January to December), with 111,471 training hours in total, and the average training hours per person (physical and online) were 33.59 (111,471/3,319=33.59) hours respectively, and the staff training expenses totaled NTD 37,133 thousand.

#### The category and gender of the trainees and average number of training hours

Year		2019			2020			2021		
Item / Gender		Total no.	Total training hours	Average training hours	Total no.	Total training hours	Average training hours	Total no.	Total training hours	Average training hours
Management	Male	1,115	61,671	55.31	1,079	53,949	50.00	1,075	39,835	37.06
	Female	131	7,764	59.27	127	6,792	53.48	146	5,839	39.99
Permanent employees	Male	1,803	73,979	41.03	1,745	71,500	40.97	1,685	43,560	25.85
	Female	340	35,800	105.29	353	24,995	70.81	359	20,717	57.71
Temporary employees	Male	27	698	25.85	10	250	25.00	9	224	24.89
	Female	60	1,878	31.30	50	1,543	30.86	45	1,296	28.80
Dispatched workers	Male	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0	0

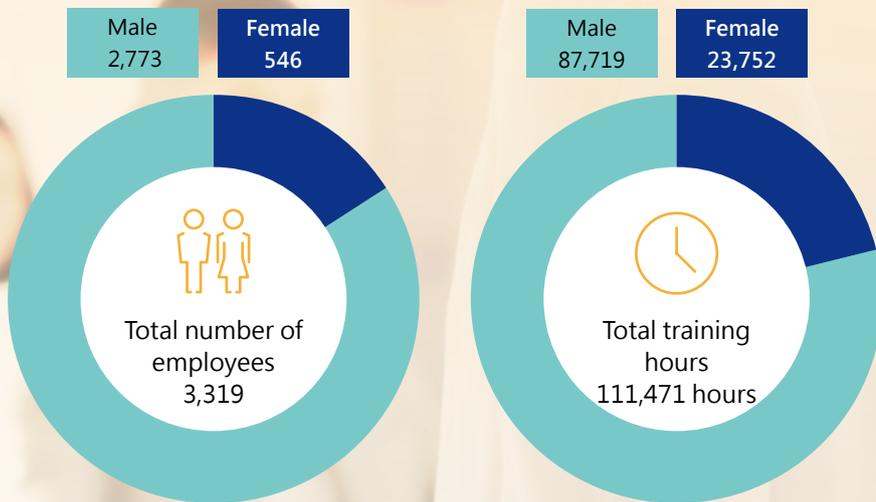
Note:

1. Formula: Average training hours of male employees in 2021= Total training hours of male employees in 2021/ Total number of male employees in 2021.
2. Management includes the personnel with rank 7 (inclusive) or above; formal employees include the personnel with rank 6 or below and the evaluators; permanent employees include assigned and employed ones; temporary employees include contract-based personnel and contract personnel.
3. The Company was in sugar manufacturing industry in early days. Due to the business model, the proportion of male and female employees was very different (about 10:1). In recent years, the proportion of newly recruited female employees has increased significantly (male/female: 4.92 : 1). The Company has arranged intensive training courses (about 70 hours/ person) so that new recruits can get familiar with the business earlier. The proportion of female new recruits in 2021 was higher (the number of female new recruits was 39/ the total number of female employees was 547: the number of male new recruits was 68/ the total number of female employees was 2,694 in 2021), resulting in their higher average training hours than male employees.

## Average hours for employee learning and development in 2021 (by gender)

	Total number of employees	Male	Female
Total training hours	111,471	87,719	23,752
Total number of employees	3,319	2,773	546
Average training hours per person	33.59	31.63	43.5

Note: The total number of employees was the statistical data as of December 2021.



### Average training hours per person

- ▲ Female : 43.5 hours
- All Employee : 33.59 hours
- ▼ Male : 31.63 hours

Note: The total number of employees was the statistical data as of December 2021.



## ■ All-around Development

The employee training is based on the long-term development of the enterprise, with the indicators of promoting and activating the development of talent function. TSC attaches importance to the all-round learning of employees and provides diversified and innovative training channels to implement life-long learning to create a learning-type organization. The Company has formulated the “TSC Education and Training Operation Guidelines” to cultivate professional manpower meeting the company’s business needs.

The Company provides regular and comprehensive training resources and learning environment, including the common training organized by the Company, independent training organized by each unit in accordance with the individual business needs, second expertise and transfer training, participation in training outside the company, on-the-job training, knowledge sharing activities, digital learning courses. We enable more efficient growth and learning of our employees with a solid education and training system, creating a company brand with value and competitiveness.

### Number of employees in various courses in 2021

Course Type	No. of trainees	Male	Female
New staff training	88	58	30
Primary supervisor training	0	0	0
Mid-level supervisor training	0	0	0
Expertise and technology training	27,670	23,639	4,031
Total	27,758	23,697	4,061

Note: The number of new employees trained was 88, different from the number of 107 as written on P105 because 107 was the number after the replacement of personnel and that part of the new employees in 2021 were trained with new employees in 2022.

## 2021 The Performance and Results in education and training

### Promotion of digital education



- ◆ TSC implemented a mixed course model of digital course + physical course for the “New Staff Training Camp”, and different digital courses were assigned to the trainees in accordance with the nature of their work.
- ◆ TSC’s total reading certification hours in 2021 was 14,883 hours.



### In-service education advancement subsidies

There were 71 applications with a total subsidy of NTD 1,116,449.



### Tuition subsidies for foreign language studies

32 applications were submitted with a total subsidy of NTD 200,030.



### Knowledge sharing activities

A total of 11 units participated in knowledge sharing activities in 2021. There were 46 sessions in total with 1,150 participants.



### The book review competition held by the Ministry of Economic Affairs

A total of 28 articles.



## 5.2 Labor Relations

### Performance Assessment and Rewards & Punishments

The purpose of employee appraisal not only focuses on the annual performance assessment of the employees but also on the stimulation of the development of their potentials. 100% of the employees at TSC are subject to annual performance assessment. The direct supervisors conduct initial appraisal of the performance and submitted it to the indirect supervisor of the department for reassessment, and the performance is verified in accordance with their responsibilities. Starting from 2015, the Company formulated the procedures and matters regarding the annual assessment of employees in order to promote the spirit of performance appraisal, awarding superior and eliminating the inferior and encourage performance of the employees. In addition, in order to make the system prudent and careful, we enhanced the audit level and established a review team to enforce the controversial administrative power based on the harmony of the employer-employee relationship.

The operational performance bonus is divided into "assessment bonus" and "performance bonus" as prescribed in the "Key Points for the Implementation of Performance Bonus Plan of the State-owned Enterprises Affiliated to the Ministry of Economic Affairs". Assessment bonus has to be granted in accordance with the results of work assessment; performance bonus is distributed when there is surplus in the company. The operational performance bonus of the year in all units is divided into "assessment bonus" and "performance bonus". The total allocated amount of the bonuses was amended in 2012 by MOEA to the limit of no more than 4.4 months' salary.



### Collective Agreement

The TSC Federation of Labor Unions entered the annual agreement with the Company for both parties to abide by in 2010 to protect the rights and interests of both parties, improve work efficiency and respect each other's exercise of rights of operation and labor to create a business development. The ratio of employees being protected by the collective agreement reaches 100%. In response to some changes in part of the labor conditions announced in the Labor Standards Act, TSC and TSC Federation of Labor Unions restarted the negotiation and completed the signing of the collective agreement on August 10, 2020.

### Maintaining Employee Rights

TSC has been upholding the concept that the employees are the Company's most important assets as well as the cornerstone of the Company's growth, and it also attaches great importance to the employees' working environment, development and care. We have established diversified communication channels. Continue to promote various employee care measures in an attempt to establish a warm and caring working environment and create an organizational culture of good interaction. The protection of human rights is handled in accordance with government regulations at TSC. During the reporting period in 2021, there were no violations against human rights or discrimination among the employed (hired) employees, nor were there any labor grievance cases.

In order to strengthen and implement human rights, regular human rights-related courses are held, including the implementation of gender mainstreaming, sexual harassment prevention and control, the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) and seminars or courses related to gender equality, labor laws and Labor Standards Act. There were 2,708 participants in 2021, and the total number of training hours was 5,385 hours, accounting for 81.59% of the total number of employees.

In terms of labor rights, TSC strictly abides by various labor laws. We have established employee opinion mailboxes and held employee seminars which allow the employees to offer open and unimpeded advice and appeals. TSC also commits itself to prevention and control measures for sexual harassment. Apart from advocating in orientation training, it also sets up special hotlines, faxes or e-mail boxes to handle sexual harassment complaints. If a complaint is received, the privacy of the parties should be protected during the investigation process in order to provide employees with a work environment free from sexual harassment. Education and training programs such as gender mainstreaming, sexual harassment prevention and gender impact assessment are continuously arranged from time to time to enhance employees' awareness of gender sensitivity and gender mainstreaming. In 2021, there was no occurrence of violation of human rights and discrimination nor labor complaints. If there is feedback from the employees, TSC will immediately reply and help them solve the problem.



### ■ Labor Conference

The Labor Conference aims to dissolve differences and seek consensus. It consists of representatives of both employers and employees and discusses and effectively communicates relevant issues such as labor rights and working conditions. The proposals of the labor conference are all documented, tracked and understood at any time. All employees are provided with timely information on the meeting and an interactive mechanism is established. In addition, it also strengthens the relationship between the Company and its employees through multiple practices such as timely communication with labor representatives, issuing company publications and setting up mailboxes to enhance employee satisfaction. Both employers and employees timely exchange opinions or negotiate with each other in terms of the issues of common concern between them. In 2021, all units held a total of 65 labor conferences, and no labor dispute or loss was caused by it.

### ■ Advance Notice of Operation Change

Where TSC terminates a labor contract pursuant to Article 11 or the provisions of Article 13, the provisions set forth below shall govern the minimum period of advance notice:

- ◆ Where a worker has worked continuously for more than three months but less than one year, the notice shall be given ten days in advance.
- ◆ Where a worker has worked continuously for more than one year but less than three years, the notice shall be given twenty days in advance.
- ◆ Where a worker has worked continuously for more than three years, the notice shall be given thirty days in advance.

After receiving the advance notice referred to in the preceding paragraph, a worker may, during working hours, ask for leave of absence for the purpose of finding a new job. Such leave of absence may not exceed two work days per week. Wages shall be paid during such leave of absence. Where an employer terminates the contract without serving an advance notice within the time limit prescribed in the first paragraph of this article, he/she shall pay the worker wages for the advance notice period.

### ■ Remuneration System

The overall employee remuneration includes the monthly salary and variable pay (including bonuses). The monthly salary is based on the employee's professional functions and job title, and the variable pay is distributed in accordance with the company's operating performance and individual work performance regardless of gender or region. The salary was not adjusted in 2021. The self-employed personnel through independent exams was NTD 26,896. The salary of new recruits is higher than the local (Taiwan) minimum wage, and the ratio of standard salary of female and male entry-level employees to the local minimum salary was 107%. The ratio of basic salary and remuneration of women and men in the same department, seniority, position and rank is 1:1. The ratio of TSC's highest annual personal income to the median annual income of all employees was 206%. The percentage of the Company's highest annual total salary increase is consistent with the median percentage of other employees' average annual total salary increase.

### ■ Welfare

In addition to providing basic protection for employees, TSC has also established the "TSC Employee Welfare Committee" in accordance with the "Employee Welfare Fund Act" and "Organization Regulations on Employee Welfare Committee" in order to strengthen the implementation of employee welfare programs in the affiliated units. Handle the planning and implementation of employee welfare issues. A harmonious working environment is therefore created by the perfect welfare system.



## Welfare Items

Employee and children education loans	Condolatory supplement for death of employees' parents and spouses	Condolatory supplement for major illness/injury	Subsidies for kindergarten education for employees' children
Condolatory supplement for natural disasters	Accommodation subsidy in TSC' s own tourist attraction	Employees' and their Children' s Award and Scholarship	Emergency loans for employees and dependents
Employees' maternity allowance	Employees' and the dependents' medical benefits	Condolatory supplement for employees suffering from cancer	Wedding gift money
Subsidy of Consultation fee	Employee Welfare Committee Group Insurance	Employee health examination subsidy	Loans for natural disasters

### ■ Nursery Benefits

There is no difference regarding parental leave without pay due to gender, job titles and work areas. Both male and female employees can apply for parental leave without pay. In 2021, 13 employees applied for parental leave without pay and 9 were reinstated. In 2021, the retention rate for women reached 100%.

Year	2019			2020			2021		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
The number of employees eligible to apply for parental leave without pay (A)	74	42	116	75	36	111	32	24	56
The number of employees who actually applied for parental leave without pay in the current year (B)	1	10	11	3	5	8	4	9	13
The number of employees who were expected to be reinstated after parental leave without pay in the current year (C)	0	7	7	2	5	7	4	5	9
The number of employees who were actually reinstated in the current year (D)	0	7	7	2	5	7	4	5	9
The number of employees who were actually reinstated in the previous year (E)	1	4	5	0	7	7	2	5	7
The number of employees who were actually reinstated in the previous year and has been reinstated for 12 months (F)	1	4	5	0	7	7	2	5	7
Reinstatement rate in the current year % (D/C)	-	100%	100%	100%	100%	100%	100%	100%	100%
Retention rate in the current year % (F/E)	100%	100%	100%	-	100%	100%	100%	100%	100%

Note: The reinstatement rate and retention rate of male employees was 0% in 2019 because there were no male employees who should be reinstated and nor were there actually reinstated in 2019 (all of those who applied for parental leave can be reinstated, and no one resigned for leave without pay).

### ■ A Sound and Complete Retirement System

TSC handles retirement, compensation and severance in accordance with the "Regulations Governing the Pension, Severance and Survivor Payments for Employees of State-owned Enterprises Administered by the Ministry of Economic Affairs". The pensions contributed are deposited in the special accounts of the trust department of the Bank of Taiwan. The Employee Pension Management Committee and the Supervisory Committee of Business Entities' Labor Retirement Reserve are responsible for management and supervision. Pensions were allocated in accordance with the ratio of the total salary paid in 2021 (staff: 4.73%; worker: 2.0%). The pensions contributed are deposited in the special accounts of the trust department of the Bank of Taiwan managed and supervised by the Employee Pension Management Committee and the Supervisory Committee of Business Entities' Labor Retirement Reserve. For workers choosing new pension system, 6% of their monthly salary is set aside as their retirement pension. In addition, job tenure settlement of the old pension system was conducted in July, 2020, and 830 people participated among the 1,217 qualified candidates.



## 5.3 Reinforced Occupational Safety

In order to promote workplace safety, prevent accidents, improve working conditions and safeguard the health of employees, the Head Office, the units and their subordinate units meeting the conditions prescribed in Article 10 of the “Regulations for Management of Occupational Safety and Health” all established the Occupational Safety and Health Committees. Members of the committee include safety and health managers, full-time nurses and members in different areas within the organization. Through regular meetings, the policy of TSC Labor Safety is communicated and the opinions between representatives of labor and management are exchanged through the Health and Safety Committee to prevent occupational disasters and to protect occupational safety and health.

In the collective agreement signed on August 10, 2020, the Company and the TSC Federation of Labor Unions agreed that the Company should handle safety and health issues in accordance with the Occupational Safety and Health Act and other relevant regulations and carry out occupational disaster prevention in accordance with government regulations. The trade union members should strictly abide by the relevant provisions of the Occupational Safety and Health Act and the rules made by the Company to prevent the occurrence of occupational hazards. In the collective agreement, the percentage of health and safety related topics is about 7%.

### 5.3.1 Occupational Safety and Health Management System

A total of 13 units of TSC, including the Headquarter, Xiaogang Sugar Refinery, Shanhua Sugar Factory, and Huwei Sugar Factory of the Sugar Business Division, Biotechnology Business Division, Petroleum Business Division, Kaohsiung Branch, Kanting Incineration Plant and Gangshan Incineration Plant of the Environmental Protection Business Operation Center, Kaohsiung Operation Branch, Pingtung Operation Branch, Livestock Business Division and Agriculture Business Division implement ISO 45001 and CNS 45001 Occupational Safety and Health Management System and passed the verification and obtained certificate in accordance with Article 23 of the Occupational Safety and Health Act where the scale of business entities in the preceding paragraph reaches or exceeds a certain level or have workplaces as stipulated in Article 15 Paragraph 1, the business entities shall establish an occupational safety and health management system. It is planned for the establishment and verification of the ISO/CNS Occupational Safety and Health Management in 4 units, including Agriculture Business Division, Tainan, Yunchia, and Pingtung Operation Branch. Among them, Agriculture Business Division and Pingtung Operation Branch have passed the verification, while on-site counseling could not be carried in Tainan and Yunchia Operation Branch due to the COVID-19 epidemic, leaving the verification process at 90% in 2021. For 2022, we plan to carry out the establishment and verification of ISO/CNS 45001 Occupational Safety and Health Management System in 4 units, including the Leisure Business Division, Marketing Business Division, Chungchang Operation Branch, and Huatung Operation Branch.

In order to integrate matters regarding occupational safety and health management and improve performance in industrial safety management, the “TSC Occupational Safety and Health Management Information System” was established to manage occupational safety online. In addition to sharing information on industrial safety and saving data online, it also accelerates data transmission and simplifies the procedures. Meanwhile, it also achieves the purpose of saving paper for environmental protection. In addition, the Environmental Protection Information Webpage on TSC International Information Network and TSC Workplace Safety and Health Improvement Business Reporting System were established to establish a communication channel with employees to improve workplace safety and health.

Items of Occupational Safety Risk Assessment	Description
Hazard Identification and Risk Assessment	Establish a platform for risk assessment based on projects or accidents and routine work for each department.
Contractor Management	The projects contracted by all units and documents for contracting management are required to register online for the daily management.
Industrial Safety Reporting and Management	For emergency and incidents (including natural disasters), all levels of units can be immediately notified through this system.
Occupational Disaster Management	Industrial safety or pollution in all units can be notified through the system.
The System of Occupational Disaster Statistics	The occupational disaster statistics regarding employee workplaces, contractors, traffic accidents, contractors’ occupational disaster statistics, and industrial safety environmental performance indicators are input online by each unit and are calculated and output automatically.

Items of Occupational Safety Risk Assessment	Description
License Management System	Employees with licenses for industrial safety in all units and the number of HS licenses required will be managed online and the licensees will be notified of on-duty training period by email beforehand.
Health Management	The employees' general health checkups and special health checkups will be managed online. The employees who do not undergo the checkups will be notified by email before the next inspection time expires.
Industrial Safety Inspection	The platform is for sharing the supervisor's management by wandering around and content of inspection for industrial safety and improvement measures of each unit.
Database Management	A platform for sharing industrial safety information, industrial safety reporting, regulations regarding industrial safety and documents about industrial safety.

### ■ Hazard Identification and Risk Assessment

The head of each unit assigns personnel for "hazard identification and risk/opportunity assessment operations" for the relevant education and training organized by Occupational Safety and Health Department for 3 hours and more, and such personnel will be responsible for hazard identification and risk/opportunity assessment operations within the unit. Every September, it is necessary for them to confirm the hazard identification and risk/opportunity assessment operations online at the "TSC Occupational Safety and Health Management Information System" and publicize the hazards in the workplace and preventive measures.

The head of each department should also establish corresponding control measures based on the results of the hazard identification and risk assessment (risk level). Occupational Safety and Health Department also visits the workplace from time to time to discover potential hazards, make suggestions, propose improvement measures, and organize the List of Unacceptable Risks.

### ■ Guidance and Inspection of Industrial Safety

In order to implement the management of industrial safety and strengthen the inspection of industrial safety, the annual "Industrial Safety Inspection Plan" is established according to the nature of business. Items to be improved are proposed and tracked until they are improved to ensure the safety of factory sites, business sites and workplaces and prevent disasters from happening so as to improve occupational safety and health management performance. In addition, through the walking management of high-level executives, senior executives at all levels will be sent to each unit for guidance and inspections from time to time.

Year/Item	2019	2020	2021
No. of annual industrial safety audits	936	917	853
No. of the walking management of high-level executives	3,074	3,088	2,931
No. of industrial safety audits for contractors	784	778	780





## Occupational Safety Performance Indicators

TSC attaches great importance to the safety of the working environment of employees and contractors; and is committed to creating a safe operating environment. In 2021, there have not been any occupational disease related cases among our employees and contractors.

### Statistics of occupational injury

Category		2019	2020	2021
 Employees	Working hours	8,015,174	7,185,352	6,962,470
	number of serious occupational injury	0	0	1
	Recordable occupational injury	4	3	4
	Serious Occupational Injury Rate	0	0	0.14
	Recordable occupational injury rate	0.50	0.42	0.57
 Nonemployee workers (contractors)	Working hours	6,584,754	6,080,579	6,853,250
	number of serious occupational injury	0	1	1
	Recordable occupational injury	3	2	4
	Serious Occupational Injury Rate	0	0.16	0.15
	Recordable occupational injury rate	0.46	0.33	0.58

Note :

- A total of 4 work-related injuries occurred in 2021, including 1 being clamped and rolled and 3 traffic accidents during work.
- For non-employee workers (contractors), a total of 4 work-related injuries occurred in 2021, including 2 falls, 1 slip, and 1 exposure to hazardous poison. Among the contracting projects in 2021, there was 1 major occupational accident involving fall and death. The Occupational Safety and Health Administration of Ministry of Labor determined that TSC was the project owner, and therefore, this case was not included in TSC's occupational disaster statistics. However, to fulfill our corporate responsibility, we still conducted a review from the perspective of the original business unit and required the supervision and construction units to fulfill their responsibilities for supervision and overall improvement, reinforce the safety and health facilities for work at heights, conduct the inspection of proper personal protective equipment on site, and implement daily toolbox meeting for hazard notification and publicity of safe construction.
- After the accident, every unit has to file the report to the Occupational Safety and Health Management Information System in accordance with the guidelines of injury filing and statistical analysis operation standards.
- Severe occupational injuries (SOI) refer to cases taking 6-month work-related injury leave or longer.
- Recordable occupational injuries include fatalities, severe occupational injuries, and number of those asking for leave of more than 1 day but less than 6 months.
- Related calculation formulas:
  - Serious Occupational Injury Rate= Number of serious occupational injuries (excluding deaths)/ working hours\* 1,000,000
  - Recordable occupational injury rate= recordable occupational injury number(including death)/ working hours\* 1,000,000

### 5.3.2 Safe Working Environment

To reduce occupational safety risks, the company has formulated corresponding operation management process, adopted appropriate preventative measures and implemented necessary control methods. In addition, through training, advocacy, drills and inspections, hazard identification continues to be carried out to control risks within an acceptable level and positively creates a safe working environment. Jianshanpi Jiangnan Resort under the Leisure Business Division and Xiaogang Sugar Refinery of the Sugar Business Division were awarded the "Occupational Safety and Health Promotion Unit Award in 2021" by the Labor Affairs Bureau of Tainan City Government. Jianshanpi Jiangnan Resort in particular, won this award for two consecutive years, which is quite an achievement. In addition, Kaohsiung Branch was also awarded "Award of Excellent Unit of Occupational Safety and Health Promotion in 2021" by Export Processing Zone Administration, MOEA.





### Equipment Safety Management

TSC classifies risks based on the contents of the equipment and operating conditions, formulates the procedures of equipment safety management and plans a plant maintenance and service system based on critical levels. Detailed inspections are planned for dangerous equipment to ensure safe operation of the equipment. During the use of dangerous equipment, automatic inspections, key inspections, operating inspections shall be carried out according to laws. In addition, regular inspections shall be carried out by labor inspection agencies within the statutory period.

For hazardous gas and chemical supply systems, toxic gas monitoring systems, process exhaust gas treatment systems, there are regular inspections and maintenance procedures in place. In the area of equipment, safety management methods are proposed in response to the safety needs of people, incidents, places and objects and they are controlled by standard operating procedures.

### Emergency Response Management

Taiwan Sugar Corporation has also developed various types of emergency contingency plans for various situations, such as natural disasters, chemical spills and hypoxia operations and established an emergency reporting system based on the internal control system of Disasters Handling Guidelines, Guidelines for Disasters Emergency Response and TSC Operation Guidelines for Various Disasters and Emergency Incident Reporting to achieve the purpose of preventing fires, earthquakes and other disasters to ensure the safety of lives.

Each unit has developed the "Fire Protection Plan". The employees are organized into teams for fire protection and training for disaster prevention and contingency are provided (including reporting, fire extinguishing, evacuation guiding, safe protection and rescue courses) which helps all employees establish the correct earthquake-proof concept and develop the emergency evacuation and response capabilities at the early stage of the earthquake so as to achieve the purpose of earthquake prevention for employees. In 2021, we cooperated with the National Disaster Prevention Day and organized earthquake disaster prevention education and emergency evacuation drills. We organized 121 sessions in total and 3,750 participants attended the training and drills.





### Industrial Safety Educaiton and Training for Zero Disaster

TSC has developed the annual training program to ensure the industrial safety of the laborers based on the "Occupational Safety and Health Education and Training Rules". Besides, to increase the knowledge and management ability of the persons in charge of workplaces in occupational safety and health, letters are sent to the persons in charge who have not yet received the training to require them to participate in the "Occupational Safety and Health Training" they need.

Before the newly employed or transferred personnel commence their work, each unit must provide training to them based on the nature of their business and work requirements and keep records of the training for review. In 2021, a total of 10 sessions of occupational safety and health-related education and training were conducted, with 25 classes, and 1,924 people were trained.

To strengthen the hazard identification of our employees, 16 units organized "danger prediction training for zero disaster" and "traffic safety promotion activity" in 2021, with 1,337 participants in total, and the performance was included in the annual assessment to encourage all units to organize such training and activity.



### Industrial Safety and Environmental Protection Month and Occupational Safety Promotion Assembly

To promote employees' awareness of industrial safety and environmental protection, prevent incidents of occupational hazards and pollution, promote employee safety and health, protect the environment and show good will, the "Industrial Safety and Environmental Protection Month" was introduced in November 2021 to promote content in environmental protection. The content of promotion includes the gate layout, greening, beautification, disaster prevention, earthquake resistance, safety and health, and environmental education of each unit. Safety training is organized, and various promotional activities are carried out. We also implement industrial safety management and inspection of our contractors, 5S activities in area under control, industrial safety inspection, disaster prevention and rescue, various emergency response drills, management of dangerous machinery or equipment and the licenses of the operators, reduction of industrial waste, recycling of waste, and classification of garbage.

To cooperate with the Ministry of Labor, TSC organized the national Occupational Safety Health Promotion Assembly, focusing on the enhancement of the employees' knowledge and skills of workplace safety and disaster prevention, promoting occupational safety, reinforcing autonomous management and health promoting activities to reduce the occurrence of occupational accidents. This year, each unit organizes the related activity separately based on the characteristics of the business unit. In the Headquarters, the President will lead the employees to make a declaration of labor safety in the meeting of the Occupational Safety and Health Management Committee in the third quarter this year.



## Establishment of Safety and Health Family

To continue to expand the local project of occupational safety and health, TSC's Environmental Protection Business Operation Center took the initiative in establishing the Sustainable Environmental Protection & Safety and Health Family in 2011, serving as the leader and leading family member manufacturers to improve their occupational safety performance through education and training, safety inspections, disaster case discussions or simulation drill of emergency response. In addition, through on-site counseling, advice related to industrial safety improvement can be provided to family member manufacturers to effectively improve the working environment in the workplace and improve labor safety and health. Currently, there are a total of 24 members in this family. In 2021, various occupational safety and health related training was organized in the factories for the family member manufacturers to participate for free. A total of 6 sessions of training were organized.

Jianshanpi Jiangnan Resort under the Leisure Business Division also followed the same pattern and called on 24 regional leisure industries and tourism accommodation companies to form a "All for Your Safety and Health Family" in 2020, and a total of 2 sessions of occupational safety and health related training were provided to family members for free in 2021.

In 2021, Xiaogang Sugar Refinery of the Sugar Business Division established the TSC Xiaogang Safety and Health Family with the Labor Affairs Bureau of Kaohsiung City Government. Based on the experience sharing and cooperation model of "big factory leading small factory" and through the organization platform, experience of improving safety and health can be exchanged to assist and guide small and medium-sized enterprises with relatively disadvantaged industrial safety to improve their working environment. It was also invited to participate in the Kaohsiung City High-Risk Industry Executive Forum and Safety and Health Promotion Presentation Event held by the Labor Affairs Bureau in May and completed the safety oath to safeguard labor safety and well-being with other high-risk industries within Kaohsiung City. Moreover, it is also selected the 2021 Occupational Safety and Health Unit by Ministry of Labor and was commended by Kaohsiung City Mayor, Chen Chi-Mai in November.





### 5.3.3 Employee Health Management

We attach great importance to the health and safety of our employees. In accordance with the Regulations of the Labor Health Protection, we have employed ten nursing staff in the Headquarters, the Sugar Business Division and Xiaogang Sugar Refinery, Yunchia Operation Branch and Huewei Sugar Factory, Tainan Operation Branch and Shanhwa Sugar Factory, Agriculture Business Division, Petroleum Business Division, Livestock Business Division, Kaohsiung Operation Branch and Pingtung Operation Branch respectively, which is superior to the regulations. The total number of employed or contracted nursing staff service covers 100% of the total number of employees.

We cooperate with contracted on-site physicians to promote the four comprehensive health management programs of special protection, health care, health promotion and employee assistance. We hope to comply with the regulations and meet the practical needs and focus on risk management and employee care. In addition, we strive to prevent occupational injuries and diseases and promote the physical and mental health of our employees.

#### Occupational Hazard Prevention

In order to prevent employees from diseases caused by shift work, night work, long hours of work and other abnormal workloads, we planned a management plan for "brain and cardiovascular disease prevention". We arranged for doctors to predict the risk of brain and cardiovascular disease associated with workload. Employees with high risks need to consult with the doctors for specific guidance and follow-up. In 2021, 90 events and 458 employees were arranged for this management plan. For employees taking long-term sick leave and public injury leave, injury management and recovery tracking was carried, and the evaluation report of a total of 44 people returning to work was completed.

#### Health Promotion Activities

We held relevant health education lectures to promote employees' self-health management ability and professional growth. There were 33 sessions with 1,240 participants in total. In order to encourage the employees for the follow-up and early treatment, we provide the official leave for self-paid health examination and the Employee Welfare Committee subsidizes up to NTD 10,000 of self-paid health examination fee per person per year. The employees informed of major abnormalities in the health checkups would receive re-inspection notice for the return visit within 10 working days, and a total of 84 people paid return visits.

In addition, free cancer screening services and Maternal Health Protection Plan are provided. In 2021, 830 employees received colorectal cancer screening and 4 employees received breast cancer screening. The regular birth inspection rate among the 27 pregnant female workers was 100%, and the rate of health instruction and promotion of the 8 female workers during lactation also reached 100%.

By upholding the concept that the talent is the most important asset of the Company, TSC has been committed to the development of a healthy and friendly workplace, planning complete physical and mental balance measures. In addition to requiring all units to actively promote the employee assistance programs, the Heart to Heart Consulting Room has also been set up to help the employees to relieve their mental stress. TSC held health check once two years for employees. Various parent-child activities are also organized. Basketball courts, badminton courts and tennis courts as well as walking trails are also established in the company to enable the employees to train their body for health. We also encourage our employees to establish sports associations to set autonomous training. Company Cup badminton, tennis, 3 to 3 basketball games are also held to allow our employees to show the results of their usual training and to condense the team spirit.





▲ Participated in 2021 Tainan City Sports Competition between Labor and Management



▲ 2021 TSC Cup Table Tennis



▲ 2021 Headquarters' Ecological Education and Hiking Activities (Liuqiu Island)

Extra!

Embracing 75th Anniversary with Lightness and Happiness



competition, including our chairman and many first-level supervisors also joined the competition. 84% of the participants successful lost weight, losing 1,706.7 kg in total, and 10% of the participants even regained their standard body mass index (BMI).

To embrace the 75th anniversary of Taiwan Sugar Corporation, the company used Taisugar Mei Yang Xian as the incentive, along with a series of well-designed memes for the activities to call on our overweight associates to join a 3-month weight loss competition from May 1 (TSC's birthday).

Before the competition started, dietitians and health educators from the Municipal Hospital were invited to teach our associates the dietary control skills while taking balanced nutrition into account. In addition, physical fitness instructors also led our associates to do Body Combat and taught them correct sports skills. To achieve mutual encouragement, participants could join the competition individually or in groups, and the "weight loss ratio" was used as the basis for the ranking of the competition.

A total of 569 employees signed up for the





Related-Stakeholders



communities

# The Creator of Social Value

# 9



TSC continues its commitment to social participation and actively holds public welfare activities to give back to the society. In addition, we also attach great importance to the regeneration of cultural assets, aiming at reshaping the sugar culture industry and boosting tourism to further facilitate local development. In addition, TSC also cooperates with government policies and makes use of our advantage of our own cultivation technology to work on multiple projects with our diplomatic allies to maintain good cooperative relationships with these allies.

Corresponding material topics & SDGs	Participation of social  
Policy	<ul style="list-style-type: none"> <li>◆ In cooperation with the Ministry of Culture' s promotion of "Cultural Assets Protection, Restoration, Management and Maintenance Project" , TSC promotes the utilization and development of the area of sugar refineries, shaping them into fields for cultural education and tourism to market the culture of sugar industry.</li> <li>◆ Work in corporation with and promote the afforestation policy of the Council of Agriculture, maintain the natural ecology, promote the development of biodiversity, and maintain the ecological balance.</li> <li>◆ Make use of TSC' s own cultivation technology to continue good cooperative relationships with our diplomatic allies.</li> </ul>
Commitments and goals	<ul style="list-style-type: none"> <li>● Short-term goals (within 3 years):               <ol style="list-style-type: none"> <li>1. To combine with local government resources, interpret the cultural value, transformation and linking resources of the sugar factory area, and develop a cultural and educational sightseeing.</li> <li>2. Obtained Environmental Education Facility and Venue Certification.</li> <li>3. To strengthen relations with neighboring communities, improve the well-being of the surrounding residents, and establish a good neighbor image.</li> </ol> </li> <li>● Medium and long-term goals (3 to 7 years):               <ol style="list-style-type: none"> <li>1. To integrate cultural assets, transform sugar factory space into a cultural and creative base, providing employment opportunities and developing cultural and business opportunities with the local communities.</li> <li>2. To make a commitment to continue to abide by the code of ethics, contribute to economic development, and improve the quality of life in the local community and society as the company's sustainable business objectives.</li> <li>3. Continue to promote environmental education to enhance the overall environmental protection awareness in Taiwan.</li> </ol> </li> </ul>
Responsible units	<ul style="list-style-type: none"> <li>◆ Social and Employee Care Group of Corporate Sustainable Development</li> <li>◆ Environmental Sustainable Group of Corporate Sustainable Development</li> <li>◆ Department of Planning</li> <li>◆ Department of Secretariat</li> <li>◆ Department of Land Development</li> <li>◆ Department of Agribusiness Management</li> <li>◆ Internal and external units</li> </ul>
Input resources	<ul style="list-style-type: none"> <li>◆ Continue the maintenance and management of fields such as Aogu Wetland, Danongdafu Forest Park in Hualien, Linhousilin Forest Park in Pingtung and Guantian Pheasant-tailed Jacana Ecological Education Park.</li> <li>◆ Apply for the Environmental Education Facility and Venue Certification.</li> <li>◆ Allocated a budget of NTD 70,920 thousand for cultural asset management and maintenance in 2021, TSC conducts maintenance, planning and restoration of cultural assets of sugar industry and organizes cultural activities of the sugar industry.</li> <li>◆ Developed the "Guidelines for developing neighborly relations by TSC" and allocated a budget of NTD 11 million in 2021 to assist local governments, student associations, associations and foundations in handling various activities.</li> </ul>
Recourse mechanism	Customer Complaints Handling Guidelines, Customer Service Hotline, Customer Service Email box, TSC Facebook Fan Page.
Management System and Action	◆ Guidelines for Cultural Asset Management, Guidelines for Developing Neighborly Relations by TSC.
Assessment management mechanism	Internal Control System, TSC Performance Assessment System, Corporate Sustainable Development Committee Work Plan and Implementation Review Meeting.





## 6.1 Cultural Preservation

### 6.1.1 Environmental Education

#### Food and Agriculture Education- Wandan Sugarcane Cultural Festival

##### Come to the Sugarcane Field x Take a Glimpse of the Century-old Sugarcane Breeding Technology

The 24<sup>th</sup> Wandan Sugarcane Cultural Festival was held on Dec. 4, 2021. A “Walk for Thousands, an Intellectual Tour” was held at the sugar railway and in the Wandan sugarcane breeding field. By promoting the local government’s concept of local industry culture, the characteristics of TSC’s sugarcane breeding could be widely known. There were guided tours and displays of sugarcane breeding procedures, enabling the public to take a glimpse of the century-old sugarcane breeding technology. Delicious food such as brown sugar ginger tea, puffed rice treats with Taisugar organic rice, Taisugar popsicles, and so on were provided to the visitors. In addition, there were also activities such as sugar themed poems and sketches competition and exhibition of century-old photos of Wandan. TSC constantly incorporates our corporate culture into the social welfare activities to not only enhance our corporate value but also demonstrate to all that TSC is a heartwarming enterprise.



The 24th Wandan Sugarcane Cultural Festival

#### Environmental Education- Jianshanpi Jiangnan Resort Obtained the Environmental Education Certification

Taiwan Sugar Corporation attaches great importance to environmental education, and diversified courses are actively planned in its environmental education centers. Among them, Xihu Sugar Factory, Jianshanpi Jiangnan Resort and Ciatou Sugar Factory have successively obtained the Environmental Education Field Certification. Hualien Tourism Sugar Factory has submitted the application for the certification in 2019, and obtain environmental education site certification in November 2021. It is hoped that all the people living on this land can make rediscovery of the environment through the power of education.



##### Educational Entertainment- Ecological Restoration in Jianshanpi Jiangnan Resort

Currently, there are ecological areas for bees and Hercules beetles and habitats for fireflies in the resort, and animal nest boxes are also provided for animals in the low elevation mountains to settle and reproduce their next generation. During July and August in 2021, the Firefly Education Promotion activity was held in Xushan Community. We also cooperated with the field trip of Sinshan Elementary School and provided educational promotion of the reservoir for sugar-making, birds-friendly windows, and firefly rehabilitation.

Jianshanpi Jiangnan Resort was awarded its first Taiwan Sustainability Action Award (TSAA) in 2021 after being awarded the “2019 Excellence Award for the Promotion of Environmental Education in Tainan City and obtained the Environmental Education Certificate. It will continue to carry out ecological restoration and environmental education to give back to the society.



### 6.1.2 Preservation of Historical Culture

In cooperation with the Ministry of Culture’s promotion of “Industrial Cultural Asset Regeneration Project” and “Guidelines for Subsidies for Preservation and Maintenance & Management of Cultural Assets from Bureau of Cultural Heritage, Ministry of Culture”, TSC’s units, including Yuemei Sugar Factory, Beigang Sugar Factory, Huwei Sugar Factory, Suantou Sugar Factory, Xingying Sugar Factory and Ciaotou Sugar Factory to accelerate the development and utilization of the idled cultural assets in the area of sugar factories, activate the utilization to enhance the cultural added value of the sugar industry culture, achieving sustainable development of industrial heritage.

## Heritage Preservation and Activation of Sugar Railways

Sugar Train Culture has been regarded as an important cultural asset by the government. It witnessed the live history of the development of local industries and is also a resource for future tourism development. Therefore, there is a need to repair it for good preservation. Promotion of relevant plans as of 2021:

### Project

 <p><b>Repair and maintenance of Sugar Train Station with historical value</b></p>	<p><b>Project Content</b> In the period of 2019-2021, investments would be made in "Restoration Plan and Project of Wufen Station of Suantou Sugar Factory" .</p> <p><b>Execution Status</b> The planning and design of the Restoration Plan and Project of Wufen Station of Suantou Sugar Factory was completed in 2020. The construction of the Restoration Plan was completed in the end of November, 2021.</p>
 <p><b>Repair and restore sugar trains with characteristics</b></p>	<p><b>Project Content</b> In 2020, the restored SL370 Steam Locomotive started to resume its service in the Wushulin Sugar Railway Cultural Park, reappearing the magnificence of sugar train culture.</p> <p><b>Execution Status</b> The restoration completed in March, 2022, and it will provide visitors with charter experience and also serves as a dynamic display in cultural festival events.</p>
 <p><b>Training for driving and maintenance techniques for internal combustion and steam locomotives</b></p>	<p><b>Project Content</b> In 2021, the Department of Land Development of the Headquarters organized the training courses for driving internal combustion engine train for new drivers, practical class for mechanical affairs and maintenance and engineering works of railway dedicated for sugar train, and on-the-job training course for railway operators.</p> <p><b>Execution Status</b> The training courses have been completed in 2021, and the professional knowledge and practical experience of sugar train operators was also increased.</p>
 <p><b>Cooperation with the Policy for Survey on Sugar Railway Routes and National Greenway</b></p>	<p><b>Project Content</b> Take inventory of sugar railway routes and national greenway</p> <p><b>Execution Status</b> Suitable sections were chosen from Cultural Heritage' s sugar railway routes, and it was decided by the National Development Council in Jan. 2021 that the Changhua Section (Xihu Sugar Factory to Mingdao University) and the Tainan Section (Annei Sugar Factory to Wushulin Sugar Factory) are the National Greenway of Sugar Railway. This project is outsourced by the county and city governments and is expected to complete by the end of 2022.</p>
 <p><b>Sugar Train Extension to HSR Chiayi Station and the Southern Branch of National Palace Museum</b></p>	<p><b>Project Content</b> To connect the surrounding attractions and boost local tourism development, the first phase of the project is to extend the sugar train east southwards by 1.41 km from Suantou Sugar Factory to HSR Chiayi Station. TSC invested NTD 80 million in construction; At Phase 1.5, the sugar train will be extended west southwards to by 1.49 km from Suantou Sugar Factory to the Southern Branch of National Palace Museum, and the investment in this expansion project amounts to NTD 250 million.</p> <p><b>Execution Status</b> To cooperate with the policy and boost local tourism industry, the Phase 1 sugar train extension project is expected to be completed and commence in Aug. 2022, and Phase 1.5 project is expected to be completed for commence in Aug. 2023.</p>

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### Repair of Japanese Style Houses and Industrial Facilities

During the Japanese Colonial Period, wooden structures and the industrial facilities in sugar factories had their own styles. These structures not only witnessed the process and transformation of the sugar industry but are also unique historical landscape and a symbol of memories. After restoration, business invitation will be conducted for art and commercial purposes, and the houses and facilities will also be reused for accommodation experience, cultural relics exhibitions, film shooting activities and other activities. They have become cultural elements in the cultural and creative industry and enhanced the value of cultural assets of the sugar industry.

For a long time, TSC cooperates with cultural units of the government for the application of “Regeneration Project of Industrial Cultural Assets” and “Management and Maintenance Subsidy Plan for Cultural Assets Preservation” to plan repair and reutilization. In 2021, the ongoing projects include:

- ◆ Restoration project for 6 cultural landscape structures in Douliu Sugar Factory.
- ◆ Restoration and Reutilization of Yuemei Sugar Factory.
- ◆ The re-utilization project of the 11 buildings of the dormitory group and alcohol tanks in Huwei Sugar Factory and the restoration of Beigang Sugar Factory.
- ◆ Planning and Design of the Restoration of the Depot of Steam Locomotive in Beigang Sugar Factory.
- ◆ Planning and Design of the Restoration Sugar-Making Workshop in Beigang Sugar Factory.
- ◆ The restoration project of the dormitory group of Huwei Sugar Factory on No. 2 & 4, Ming Zhu 9th Road.
- ◆ The planning and design of the 1st Guest House and the factory director’s dormitory in Huwei Sugar Factory.
- ◆ The restoration project of the old clinic and barbershop in Huwei Sugar Factory.
- ◆ The restoration project of Wufen Station of Suantou Sugar Factory.
- ◆ The restoration project of the headquarters office of Ensuiiko Sugar Factory Co., Ltd. in Xinying
- ◆ Restoration and Reutilization Project of the Original Plastic Factory Office and Staff Canteen in Xinying Sugar Factory.
- ◆ Planning and Design of the Ciaotou Security Unit in Kaohsiung Sugar Factory.



To celebrate the 120th anniversary of the establishment of Kaohsiung Sugar Factory, a series of sugar seeking activities were held in the Kaohsiung Sugar Museum on Nov. 6, 2021, inviting young visitors to be the little factory managers and join the activities. Visitors could take a stroll in the sugar factory and experience the sugar train. This is a good way to market local agricultural specialties and revitalize cultural tourism benefits, enabling more people to savour the sweet taste of Ciaotou Sugar Factory.



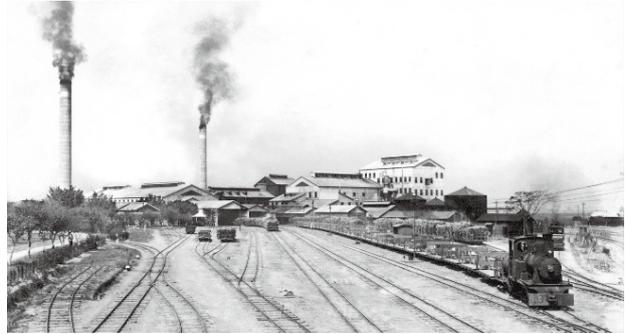
To celebrate the 100th anniversary of Hualien Tourism Sugar Factory, a series of activities were held on Nov. 13 and 14 in 2021. There were a variety of stalls, photo exhibition with the theme of Hualien Tourism Sugar Factory, picnic concert, and various photo-taking for point-collecting activities, attracting visitors at all ages to have a great time.



TSC worked with the Ministry of Culture for a long time and has compiled budgets for restoration and reutilization of historical sites and buildings. We were awarded the 15th Arts and Business Award by the Ministry of Culture, showing their recognition of our long-term efforts and investment in a lot of resources for the preservation and activation of sugar industry culture. The award ceremony was held at the Sun Yat-Sen Memorial Hall on Jan. 25, 2022, and the Director of Land Development, Roger Chang (Rung-Ji Chang), accepted the award on behalf of TSC. We will continue to work on culture preservation and activation and actively organize activities related to sugar industry culture. In addition to fulfilling our corporate social responsibility, we also aim at becoming the endless nutrient for the arts and culture in Taiwan with abundant sugar culture.



Award ceremony for the 15th Arts and Business Award, photo provided by Ministry of Culture.



We cooperate with the National Development Council's policy in the planning of National Greenway of Sugar Railway, connecting the important tourism sugar factories and sugar train stations in Xihu Sugar Factory, Xinying Sugar Factory, Annei Sugar Factory, and Wushulin Sugar Factory, aiming at promoting sugar industry culture.

We work in line with the investment policy for the sugar train extension project from Suantou Sugar Factory to HSR Chiayi Station (Phase 1) to Southern Branch of National Palace Museum (Phase 1.5). This project is expected to be completed in August, 2022, and the route for the sugar train is scheduled to be open in August, 2023, which will be beneficial for the development of local tourism industry and the preservation and marketing of sugar industry culture.

For years, TSC has cooperated with local governments and loan locomotives for exhibitions, such as the exhibitions of steam train and passenger cars in Cishan Train Station and the locomotive exhibition in Yanshui Station. In 2021, we cooperated with the Local Revitalization Project with Xingang Township Office of Chiayi County and loaned 2 diesel locomotives for exhibition to jointly boost local tourism and community beautification work while on the other hand promote the sugar train culture.





## 6.2 Maintenance of Natural Resources

TSC has a vast area of land resources and has cooperated with COA's afforestation policy for the greening of idle land. As of December in 2021, the area for afforestation and tending has amounted to 11,711.06 hectares in total, including afforestation for all, environmentally friendly forests, self-funded afforestation and flatland afforestation. The current 20-year subsidy period for afforestation will expire, and afforestation will still continue in the ecology maintenance forests and 3 flatland forests.

### Ecological Maintenance Project in Danongdafu (Masadi) Forest Park, Hualien

It is planned to set up a flatland forest park across the East Rift Valley in the MASADIFOREST, connecting the coastal mountains and the Central Mountain Range. This is the first flatland forest successfully recovered in Taiwan. The development of the park is divided into two cultures (sugar culture and aboriginal culture) and two ecological systems (low-carbon ecotourism and ecological conservation). This is the first flatland forest park in Taiwan, with more than 20 common tree species of low-altitude plants and more than millions of trees being planted. Inside the park, the ecological corridor for the National Ecological Conservation Green Network is established, making Danongdafu (Masadi) Forest Park an important habitat for birds. According to the survey, there are more than 100 species of birds inhabiting in this park, among which there are many rare and valuable species of birds, various mammals, insects, amphibians, reptiles, and other creatures, making it a park with biodiversity.



### Aogu Wetland in Dongshi Township, Chiayi

There are a large number of migratory birds and aquatic birds in Aogu Wetland. Besides, it is near tourist attractions like Gangko Temple of Bungang Port and Dongshi Fishing Harbor, rich in environmental educational significance. Aogu Wetland is planned to be developed into a wetland park and the affiliated Dongshi Farm was planned to serve as a wildlife reserve. Among it, 1,462 hectares of land was planned as a flatland forest park by the Forestry Bureau (including 664 hectares of land proclaimed by COA as a habitat for wildlife and 512.1 hectares of national important wetland proclaimed by Ministry of Interior).

It is worth mentioning that the Haipu Livestock Farm located in Aogu Wetland Forest Park has an area of 17.815 hectares. It is a legal pig farm approved by Chiayi County Government. The water discharged from this site has long provided bio-nutrients to Aogu Wetland, and it is also an important factor for this region to maintain diversified biological phase and ecological balance.



## Jacana Ecological Education Park in Guantien



In 1980, due to the development of Taiwan's highspeed railway, the route planned happened to pass through this important habitat of pheasant-tailed jacana, Hulupi in Guantien Township. After coordination, Tainan City Government rented TSC's property at Fanzitian Section No. 767 and others with a total of eight pieces of land, with the area of approximately 15 hectares to establish the Jacana Ecological Education Park in Guantien for the implementation of the breeding plan, creating a pond-based breeding area for pheasant-tailed jacana. The Jacana Ecological Education Park in Guantien has been established for the implementation of the breeding plan to conduct the habitat restoration by planting water chestnut, lotus, prickly water lily, water lily and other plants. As of 2021, the number of adult birds was 64, the number of nests was 69, that of eggs was 246, that of the hatched was 99, and that of fledglings was 58. So far, the number of pheasant-tailed jacana in the Great Tainan Area has reached 2,252, and among them, 1,806 are in Guantien alone.



Source:  
Guantien  
Pheasant-tailed  
Jacana Ecological  
Education Park

## Haifeng Wetland



Haifeng Wetland is located near the Chonglan Jiuzhen (canal) in Haifeng Area. Pingtung County Government rented the 13.74-hectare land from TSC and planned a primary sedimentation tank, natural purification channels and a 6-hectare ecological pond as the means of purifying the water quality of Chonglan Jiuzhen (canal), injecting water into the old waters. There are 66 species of birds, 2 species of crustaceans, 13 species of fish, 83 species of insects, 8 species of amphibians, 13 species of reptiles, 16 species of mammals, 2 species of snails, and 318 species of plants in this wetland. This wetland is with biodiversity, ecological function and scientific research value, and various aquatic birds and insects live and prosper here.



### Chinshang Pastoral Farm Resort in Taitung

Chinshang Pastoral Farm Resort in Taitung has a vast area of rich grassland resources. The pasture adopts rotational grazing for the management of the cattle to make it easier to centralize the cattle manure to be scattered in the small grazing areas to improve the fertility of the grassland, and the growing grass can then be provided to the cattle. The grassland resources and the animal nature can form a complete cycle between the pasture and the animals.



### Beach Cleanup and Protection

TSC initiated the “Beach Cleanup to Guard Taiwan” event in 2017, and as of mid-May, 2021, TSC has organized 5 beach cleanup events in the area from Wangung Fishing Port in Changhua to Masakau Beach in Tainan, mobilizing a total of 242 employees to pick up coastal garbage to maintain the coastal environment to embody and promote the concept of environmental sustainability.

As of the end of 2021, TSC has organized 58 beach cleanup activities and mobilized 2,918 people, clearing 12.61 tonnes of waste in total. We will continue the beach cleanup activity to set an example for others to follow, aiming at evoking the corporate social responsibility to invite other enterprises to jointly protect the marine ecology and further to promote the sustainable development of the environment.



## 6.3 Collaboration with Allies

Taiwan Sugar Corporation continue to deepen and expand overseas investment and cooperation with our diplomatic allies to strengthen the operation of our existing bases overseas. In Southeast Asia, we continue the supervision of the invested business, Vietnam-Taiwan Sugar Co. Ltd., and keep the close grasp of the government's policy for local sugar industry in Vietnam and information of the domestic needs for sugar industry to make timely adjustment of our operational strategies and evaluate the feasibility to increase production of white sugar or invest in high-value sugar products. In the face of the African swine fever epidemic in Vietnam, there still remains too many uncertainties for pig farming in Vietnam before the vaccine is available. Therefore, TSC withdrew from the Taiwan-Vietnam Livestock Farm and transferred the land use right while the other Han Guan Livestock Farm continues its operation to reduce operating losses.

For highly developed regions such as Japan, the United States and Canada, we have established production bases and channels for TSC's orchids which enjoy international reputation globally. Therefore, we will continue to deepen the existing overseas markets, accurately grasp the market information, actively reduce the costs, focus on the strains meeting market demands and seek opportunities for profits. Furthermore, a team was formed with the collaboration among the diplomatic, agricultural agencies and the industry to plan suitable high-quality orchid species for special orchid exhibitions presented in a way combining Taiwanese culture, art and stories based on the local market needs. The exhibitions will not only increase the orchid marketing markets and brand exposure but also promote the international competitiveness and sales volume of domestic orchid industry.

### Assisting Smallholder Coffee and Giving Back to Locals with School Building Projects in Honduras

Honduras is an important country we have diplomatic relation with. Honduran coffee is imported to Taiwan for sale through trade. In addition, TSC assists Taiwan Agricultural Investment and Development Co., Ltd. to expand the international supply chain of agricultural products (such as avocado) from contract farming and integrated production and marketing. Coffee is an important export commodity of Honduras. Based on the consideration of overseas agriculture and humane care for coffee farmers, TSC directly purchases coffee from smallholders in Honduras and cooperates with domestic companies to bring excellent Honduran coffee to people in Taiwan and give back partial of the profits to projects to enhance the smallholders' production technology and quality of life in Honduras. Purchases from smallholders and marketing activities of the project will continue from 2018-2022 to establish TSC's Honduran coffee brand and consumer groups.

Since the introduction of special highland smallholder coffee from Honduras at the end of 2017, the coffee has been well received, and the smallholder coffee farmers were substantially helped. In July, 2018, TSC worked with an international social enterprise, IMPCT in the Coffee For the Future Project and promoted TSC's Honduran Smallholder Coffee with its story, and part of the income from the coffee trade would be directly given back to the coffee plantation area in the construction of high schools. Two middle schools, Las Delicias and Chaguite were officially commenced on June 25 and July 23 in 2021 respectively. They are the second and third schools TSC and the NPO, IMPCT, constructed together in the cooperative project. Each of the three newly constructed schools have approximately 20 to 30 students aged between 12 and 18.

Taisugar Honduras Highland Smallholder Coffee is delicate and mellow, and the coffee itself has its own taste and story behind it. The coffee also has its own significance in terms of public welfare. TSC hops to bridge with our allies through coffee to pass on the good deeds and positive influence from Taiwan to Honduras. We would like to invite our consumers to continue your support of the highland smallholder coffee from Honduras and give our love to local farmers and children in Honduras to help children on the other end of the earth have future with visions.



Check the designated website for more details



### ■ Taiwan-Paraguay Phalaenopsis Industry Development Project

In recent years, the economic development in Paraguay has grown rapidly and the demands for flowers has also gone up sharply. When Paraguayan President Mario Abdo Benitez visited Taiwan on the occasion of Taiwan National Day in 2018, Taiwan President Tsai Ing-Wen proposed the "Taiwan-Paraguay Phalaenopsis Industry Development Plan", hoping to assist Paraguay in establishing the Phalaenopsis Industry, creating employment opportunities so as to improve the economic income and people's lives in Paraguay through the successful experience in Taiwan.

To carry out the "Taiwan-Paraguay Phalaenopsis Industry Development Plan", TSC cooperated with the Council of Agriculture, the Ministry of Foreign Affairs, the Paraguayan Embassy, the International Cooperation and Development Fund and Taiwan Orchid Growers Association and organized the Taiwan Orchid Exhibition in Asuncion, the capital of Paraguay during the National Day of Paraguay in 2019. This orchid exhibition combined the elements of Taiwanese culture, art and storytelling and was well received, enhancing the understanding of Phalaenopsis among people in Paraguay and laying the foundation for cooperation in the Phalaenopsis Industry between Taiwan and Paraguay.



▲ Inspection of TSC project members and the Phalaenopsis Industry investment team in Paraguay



▲ Taiwan-Paraguay Cultural Exhibition, showing the results of the project

TSC, International Cooperation and Development Fund and Taiwan Agricultural Investment and Development Co., Ltd. formed a team and sent personnel to Paraguay in December 2019 to assist them in the production of high-quality Phalaenopsis and establishment of a business model to open up the high-end market locally. In 2020, the team overcame the impact of COVID-19 and produced high-end Phalaenopsis locally, and even organized a Valentine's Day orchid exhibition in February 2021, attracting interviews from many local TV station. Many local people also went to buy the orchids, took pictures and inquired about investing in Phalaenopsis industry. To advance the commercial production model of Phalaenopsis, the preliminary test of transporting flaked orchid seedling by air was successfully completed in July, 2021, paving a path for future industrial localization and cooperation between Taiwan and Paraguay. The short-term industrial goal is to target at the domestic market in Paraguay, and it is expected to expand to foreign markets. The four goals of this project, including "meeting the domestic demands", "creating job opportunities", "increasing output value", and "foreign exchange earnings" are to be realized step by step.

2018

Proposed the Taiwan-Paraguay Phalaenopsis Industry Development Project

2020

Paraguay produced high-end Phalaenopsis

2019

- Organized the Orchid Exhibition
- TSC formed a team with International Cooperation and Development Fund and Taiwan Agricultural Investment and Development Co., Ltd.
- Dispatched personnel to Paraguay to assist in the output of high quality Phalaenopsis and the establishment of a business model

2021

- Organized a Fair on Valentine's Day
- Completed the preliminary test of transporting flaked orchid seedling by air



## 6.4 Community Care and Relationship Maintenance

TSC and its affiliated units not only implement the promotion of the good neighborly relations to provide help and assistance to the communities but also continue to invest in the public welfare to care for the society and the disadvantaged groups so as to fulfill our corporate social responsibility. In 2021, due to the impact of the epidemic of COVID-19, the number of public welfare activities decreased compared with 2019, with a total of 100 public welfare activities, donating NTD 4.79 million in total.

### 2021 public welfare activities (only some of the activities are listed here)



#### TSC's Headquarters and the Petroleum Business Division held the "Caring for the Neighbors, Giving Warmth on Moon Festival" public welfare activity

To support local farmers and high-quality agricultural products, TSC purchased 7,500kg of fresh pomelos as gifts to the community and police and fire units where the Headquarters and the Chongde Gas Station are located. We also shared them at our gas stations as gifts once the customers spent over a certain amount of money. We take concrete actions to support farmers, have neighborly interaction with neighbors, and give back to our customers, creating a mutually beneficial, friendly, and co-prosperous society.

#### Love Points Collecting Card for the exchange of materials to support the disadvantaged groups through social welfare foundations

With the Love Points Collecting Card, materials can be exchanged at TSC gas station. The total points collected could exchange materials worth NTD 458,519, which were provided to 10 social welfare groups like Huashan Social Welfare Foundation and others to exchange for daily necessities used to take care of the disadvantaged.



#### Walking for health, walking for public welfare

Sugar Business Division invited residents near Xiaogang Sugar Refinery to participate in the Walking for Health event, where Taisugar Ginger Tea, puffed rice treats made of Taisugar organic rice, TSC products, and a concert were all provided. By organizing this event, we can enhance the concept of healthy and happy life in the neighborhood, establish good interaction with the residents, and jointly create a great community environment and achievements of caring for the earth.

#### 2021 Warm Winter, Fuel for Love Achievement Presentation and Public Welfare Market

TSC gas station has been dedicated to constructing a charity platform. In 2021, the event of Donating Gas Filling Points for Charity attracted more than 50,000 participants, and more than NTD 700,000 of materials were donated to 11 social welfare groups. The 2021 Warm Winter, Fuel for Love Achievement Presentation and Public Welfare Market was held on Dec. 18 in Xihu Sugar Factory.



### Sponsored the "Passionate Darlin Cittaslow- A Gift that Saves Lives" Event

On July 18, 2021, Petroleum Business Division and Biotechnology Business Division sponsored the "Passionate Darlin Cittaslow- A Gift that Saves Lives" Event organized by Dalin Cittaslow Development Association, China Youth Corps for Dalin, and Dalin Township Office and provided TSC products (Alcohol Wipes Single Piece Packing and 11 packs of Black Sesame Mixed Instant Cereal) to increase people's willingness for blood donation.

### Epidemic prevention and delivery of daily necessities

Tainan Operation Branch donated 30 boxes of TSC alcohol, 3 boxes of Alcoholic Tissue, and 15 boxes of healthy instant cereal powder to Luway Opportunity Center, Pumen Nursing Home and Shyen Nursery.



### Donation of daily necessities to Tainan City Polio Care Association, neighborly and public welfare activities

Taiwan Sugar Research Institute through the material donation, the company's positive image of caring for the disadvantaged and enthusiastic about public welfare was further enhanced



### Kaohsiung Branch co-organized the Workshop on Circular Economy with the Circular Taiwan Network

Assisted other enterprises with conceiving the way to apply the concept of circular economy to their own business and to work hand in hand with them for environmental protection



### Connecting Hearts and Passing on Love- public welfare activity of material distributing

Pingtung Operation Branch continued to pass love to the disadvantaged groups in Pingtung area. Each household was given materials including Taisugar biscuits, golden brown sugar, canola oil, and canned food, and the materials were distributed to 105 households in total.

Provided high-quality products for charity sale for Genesis Social Welfare Foundation, and the proceeds were all donated (as funds to support people in a vegetative state)



### Material support for disadvantaged residents in the community

Livestock Business Division donated materials to about 300 disadvantaged residents, including the low-income families and the elderly in Tianliao Community Development Association, Liufen Community Development Association, Liude Community Development Association, realizing the idea of taking care of the elderly, showing our care for our neighbors and spreading warmth to the society



### Yuemei Tourism Sugar Factory 's Giving back to the community series activities

1. Cooperated with Houli District Office in Taichung City for the cultural activity of the vegetable and fruit industry.
2. Organized the "Good Neighbor, Clean Homeland" activity.
3. To cooperate with the 5th Emergency and Rescue Corp in Houli District to strengthen safety and efficiency of firefighting, Yuemei Tourism Sugar Factory organized firefighting drills and simulated the operation of equipment operation and fire extinguishing procedures.
4. We cooperated with the Orphan Welfare Foundation and cared for families with the elderly and the weak in the remote villages such as Chishang, Guanshan, and Haiduan areas and provided meeting venues for free.



### TSC Million Convenience Stores provide deepened community services

To provide friendly and convenient services and to be a sweet and good neighbor in the community to fulfill our corporate social responsibility:

1. Provide temporary and safe base for school children.
2. Provide a platform for employment matchmaking and referral information of long-term care and repairmen.
3. Provide community residents with free health consultation for blood pressure measurement every Wednesday.
4. Renovated and expanded the seating area in our Minquan Branch in Yonghe District and also serves as the service station for elementary school students.



### Community Caring Activity of "Reversing Miracles, Embracing Happiness" - Meal delivery to spread love in cold winter

TSC' s Evergreen Plaza Hotel established a Volunteer Team to provide services for charity persistently. On 2021/2/1~2021/2/3, volunteers delivered more than 450 chef' s special meals and gifts to 15 social welfare organizations, sharing love and care to those in need in our society.



### Sending orchid to show our care

Agriculture Business Division organized the "sending orchid to show our care" event and set orchid to Chi Mei Hospital, Liouying and Puli Christian Hospital.



### Sending Warmth in Winter

Yunchia Operation Branch initiated charitable donations and collected NTD 127,500. NTD 15,000 and TSC products equivalent to NTD 12,000 were donated to Anuna, Mindao Home and Anren Home in Chiayi, while NTD 10,000 and TSC products equivalent to NTD 12,000 were donated to Huashan Social Welfare Foundation and Taiwan Fund for Children and Families, passing the seeds of love and bring peace and stability to the society, showing our love and spirit of giving back to the society.



### Good Neighbor Activities of Kaohsiung Operation Branch

1. Obtained the certification of environmental education facility, and accepted 47 sessions of visits and teaching activities for neighboring communities and schools.
2. Assisted in Ciaonan Community Development Association with the epidemic prevention publicity and hiking activity.
3. Assisted Kaohsiung City Yongsan Charity Association with the organization of 2021 "Love You, Love Me, Love All Happy Gathering" and sponsored 90 boxes of Taisugar biscuits (with the value of NTD 3,000) for the prize drawing.
4. Assisted Kaohsiung City Ciaonan Community Development Association with the organization of the epidemic prevention publicity and hiking activity. TSC also dispatched staff to participate in the activity to interact with the residents and sponsored NTD 12,160 in cash.



### Sending Love in Winter- material donation to the elderly living alone in Guangfu Township

Caring for the disadvantaged and showing love to those who are in need. To do good deeds during the COVID-19 epidemic period, Huatung Operation Branch provided daily necessities produced by TSC to the elderly living alone in Guangfu Township to support them to go through cold winter and to fulfill our corporate social responsibility as an enterprise with warmth.

### Material support for local social welfare groups

Chungchang Operation Branch takes actual actions to actively care for local social welfare groups. On Dec. 8, 2021, the Operation Branch Manager led our associates to visit Changhua County Private Christian Joy Nursery and Tsz-Ai Education and Nursing Institute, interacted with the children, and donated rice, brown rice, soybean salad oil and other daily necessities worth of NTD 130,000 in total to continue passing on positive support and warmth. This not only improves the employees' sense of identity as a member of TSC and enhances an excellent corporate image but also shows the company's determination to give back to the local communities and pursue sustainable development to create the great value of co-prosperity of the society.



### Negotiation with community residents



In Gangxin Village near Xiaogang Sugar Refinery, due to the frequent heavy traffic of large vehicles in the sugar refinery on Xiaogang Road, the residents gathered and held the Neighborhood Residents Assembly of Gangxin Village to seek improvement measures to reduce the traffic flow with Xiaogang Sugar Factory. The CEO attended the assembly in person to explain the improvement plan proposed by Xiaogang Sugar Refinery for the reduction of traffic flow of large vehicles on Xiaogang Road and won understanding and support from the residents in the assembly.



# Appendix I : British Standards Institution(BSI) Verification statement



## INDEPENDENT ASSURANCE OPINION STATEMENT

### Taiwan Sugar Corporation 2022 Sustainability Report

The British Standards Institution is independent to Taiwan Sugar Corporation (hereafter referred to as Taiwan Sugar in this statement) and has no financial interest in the operation of Taiwan Sugar other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of Taiwan Sugar only for the purposes of assuring its statements relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by Taiwan Sugar. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Taiwan Sugar only.

#### Scope

The scope of engagement agreed upon with Taiwan Sugar includes the followings:

1. The assurance scope is consistent with the description of Taiwan Sugar Corporation 2022 Sustainability Report.
2. The evaluation of the nature and extent of the Taiwan Sugar's adherence to AA1000 AccountAbility Principles (2018) in this report as conducted in accordance with type 1/ type 2 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process expect for food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance.

This statement was prepared in English and translated into Chinese for reference only.

#### Opinion Statement

We conclude that the Taiwan Sugar Corporation 2022 Sustainability Report provides a fair view of the sustainability programmes and performances during 2021. The sustainability report subject to assurance is free from material misstatement and its data relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance is materially correct without voluntary omissions based upon testing within the limitations of the scope of the assurance, the information and data provided by the Taiwan Sugar and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are correctly represented. The sustainability performance information disclosed in the report demonstrate Taiwan Sugar's efforts recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that Taiwan Sugar's description of their approach to AA1000AS v3 and their self-declaration in accordance with GRI Standards: Core option were fairly stated.

#### Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top level review of issues raised by external parties that could be relevant to Taiwan Sugar's policies to provide a check on the appropriateness of statements made in the report
- discussion with managers on Taiwan Sugar's approach to stakeholder engagement. However, we had no direct contact with external stakeholders
- interview with 13 staffs involved in sustainability management, report preparation and provision of report information were carried out
- review of key organizational developments
- review of the extent and maturity of the relevant accounting systems for financial and non-financial reports relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance
- review of the findings of internal audits
- the verification of performance data and claims made in the report through meeting with managers responsible for gathering data relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance
- review of the processes for gathering and ensuring the accuracy of data, followed data trails to initial aggregated source and checked sample data relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance
- the consolidated financial data are based on audited financial data relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance, we checked that this data was consistently reproduced
- review of supporting evidence relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AP (2018)

## Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness and Impact of AA1000AP (2018) and sustainability performance information as well as GRI Standards is set out below:

### Inclusivity

In this report, it reflects that Taiwan Sugar has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the Taiwan Sugar's inclusivity issues and has demonstrated sustainable conduct supported by top management and implemented in all levels among organization.

### Materiality

The Taiwan Sugar publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of Taiwan Sugar and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the Taiwan Sugar's management and performance. In our professional opinion the report covers the Taiwan Sugar's material issues.

### Responsiveness

Taiwan Sugar has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for the Taiwan Sugar is developed and continually provides the opportunity to further enhance Taiwan Sugar's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the Taiwan Sugar's responsiveness issues.

### Impact

Taiwan Sugar has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. Taiwan Sugar has established processes to monitor, measure, evaluate and manage impacts that lead to more effective decision-making and results-based management within an organization. In our professional opinion the report covers the Taiwan Sugar's impact issues.

### Performance information

Based on our work described in this statement, specified sustainability performance information such as GRI Standards disclosures disclosed in this report, Taiwan Sugar and BSI have agreed upon to include in the scope. In our view, the data and information relating food industry specific management approach and performance indicators concerning the aspects of supply chain management and procurement practices, protection of customer health and safety, product and service label and legal compliance contained within Taiwan Sugar Corporation 2022 Sustainability Report are reliable.

### GRI Sustainability Reporting Standards (GRI Standards)

Taiwan Sugar provided us with their self-declaration of in accordance with GRI Standards: Core option (For each material topic covered by a topic-specific GRI Standard, comply with all reporting requirements for at least one topic-specific disclosure). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the Taiwan Sugar's sustainability topics.

### Assurance level

The moderate and partial high level assurance provided is in accordance with AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.

### Responsibility

This sustainability report is the responsibility of the Taiwan Sugar's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

### Competency and Independence

The assurance team was composed of Lead auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064 and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

  
Peter Pu, Managing Director BSI Taiwan



...making excellence a habit.™

Statement No: SRA-TW-2021068

2022-05-19

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## Appendix II: GRI Sustainability Reporting Standards (GRI Standards) Reference Table (including supplementary indicators of GRI G4 Sector Disclosures- Food and Processing)

The following content has been verified by an independent third-party and the result is published in the independent assurance report in Appendix IV.

" \* " indicates major aspects while, " ● " indicates external verification.

Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>1. Organizational Profile</b>						
GRI102 General disclosure 2016 : Core	102-1	Name of the organization	●	1.1.1 Company Overview	26	
	102-2	Activities, brands, products, and services	●	1.1.1 Company Overview	26	
	102-3	Location of headquarters	●	1.1.1 Company Overview	26	
	102-4	Location of operations	●	1.1.1 Company Overview	26	
	102-5	Ownership and legal form	●	1.1.1 Company Overview	26	
	102-6	Markets served	●	1.1.1 Company Overview	26	
	102-7	Scale of the organization	●	1.1.1 Company Overview 1.1.2 Financial Performance 5.1.2 Labor Structure	26 30 103	
	102-8	Information on employees and other workers	●	5.1.2 Labor Structure	103	
	102-9	Supply chain	●	3.3.1 Procurement Policies	70	
	102-10	Significant changes to the organization and its supply chain	●	1.1.1 Company Overview	26	
	102-11	Precautionary Principle or approach	●	2.3.1 Risk Management	54	
	102-12	External initiatives	●	Editing Principles Implementation of SDGs and Objectives	1 9	
	102-13	Memberships of associations	●	1.1.1 Company Overview	26	
<b>2. Strategy</b>						
GRI102 General disclosure 2016 : Core	102-14	Statement from senior decision-maker	●	Message from the Top Management	3	
<b>3. Ethics and Integrity</b>						
GRI102 General disclosure 2016 : Core	102-16	Values, principles, standards, and norms of behavior	●	1.1.1 Company Overview 1.1.3 Sustainable Operation and Practices 2.2.1 Internal Control Management	26 32 50	
<b>4. Governance</b>						
GRI102 General disclosure 2016 : Core	102-18	Governance structure	●	2.1.1 Board of Director Structure	43	
<b>5. Stakeholder Engagement</b>						
GRI102 General disclosure 2016 : Core	102-40	List of stakeholder groups	●	1.2 Identification of and Communication with Stakeholders	34	
	102-41	Collective bargaining agreements	●	5.2 Labor Relations	108	
	102-42	Identifying and selecting stakeholders	●	1.2 Identification of and Communication with Stakeholders	34	

Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
GRI102 General disclosure 2016 : Core	102-43	Approach to stakeholder engagement	●	1.2 Identification of and Communication with Stakeholders	34	
	102-44	Key topics and concerns raised	●	1.2 Identification of and Communication with Stakeholders	34	
<b>6. Report Profile</b>						
GRI102 General disclosure 2016 : Core	102-45	Entities included in the consolidated financial statements	●	1.1.1 Company Overview	26	
	102-46	Defining report content and topic Boundaries	●	1.3.2 The Value Chain Boundary of Material Topics	40	
	102-47	List of material topics	●	1.3.1 Identification of Material Topics	39	
	102-48	Restatements of information	●	Editing Principles	1	
	102-49	Changes in reporting	●	Editing Principles 1.3.1 Identification of Material Topics	1 39	
	102-50	Reporting period	●	Editing Principles	1	
	102-51	Date of most recent report	●	Editing Principles	1	
	102-52	Reporting cycle	●	Editing Principles	1	
	102-53	Contact point for questions regarding the report	●	Editing Principles	1	
	102-54	Claims of reporting in accordance with the GRI Standards	●	Editing Principles	1	
	102-55	GRI content index	●	Appendix II: GRI Sustainability Reporting Standards (GRI Standards) Reference Table (including supplementary indicators of GRI G4 Sector Disclosures- Food and Processing)	135	
102-56	External assurance	●	Editing Principles	1		
<b>Topic-specific disclosure: 200 series (Economic topics)</b>						
<b>Due to the consolidation of the Material Topics, economic-related topics are classified in "GRI Consolidated Topics"</b>						
<b>Topic-specific disclosure: 300 series (Environmental topics)</b>						
<b>* Energy</b>						
GRI 103 Management approach of Energy 2016	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 4 The Producer with Reversal Process	40 79	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	
GRI 302 Disclosure of Energy topics 2016	302-1	Energy consumption within the organization	●	4.2.1 Consumption of Energy Resources	87	
	302-3	Energy intensity	●	4.2.1 Consumption of Energy Resources	87	
	302-4	Reduction of energy consumption.	●	4.2.2 Energy Conservation and Carbon & Waste Reduction	89	



Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>*Water and Effluents</b>						
GRI 103 Management approach of Water and Effluents 2018	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 4 The Producer with Reversal Process	40 79	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	
GRI 303 Disclosure of Water and Effluents 2018	303-1	Interactions with water as a shared resource	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park 4.2.1 Consumption of Energy Resources 4.3.2 Water Pollution Control	81 87 93	
	303-2	Management of water discharge-related impacts	●	4.3.2 Water Pollution Control	93	
	303-3	Water withdrawal	●	4.2.1 Consumption of Energy Resources	87	
	303-4	Water discharge	●	4.3.2 Water Pollution Control	93	
	303-5	Water consumption	●	4.2.1 Consumption of Energy Resources	87	
<b>*Emissions</b>						
GRI 103 Management approach of Emissions 2016	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 4 The Producer with Reversal Process	40 79	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 4The Producer with Reversal Process	9 79	
GRI 305 Disclosure of Emissions topics 2016	305-1	Direct (Scope 1) GHG emissions	●	4.2.2 Energy Conservation and Carbon Reduction	89	
	305-2	Energy indirect (Scope 2) GHG emissions	●	4.2.2 Energy Conservation and Carbon Reduction	89	
	305-4	GHG emissions intensity	●	4.2.2 Energy Conservation and Carbon Reduction	89	
	305-5	Reduction of GHG emissions	●	4.2.2 Energy Conservation and Carbon Reduction	89	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	●	4.2.1 Consumption of Energy Resources	87	

Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>Topic-specific disclosure: 400 series (Social topics)</b>						
<b>*Customer Privacy</b>						
GRI 103 Management approach of Customer Privacy 2016	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 2 The Manager of Operational Risks	40 41	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
GRI 418 Disclosure of Customer Privacy topics 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	●	2.3.1 Risk Management	54	
<b>Supplementary disclosure of GRI G4 Food Processing Sector</b>						
GRI Disclosure of labor relations topics	FP3	Percentage of working time lost due to industrial disputes, strikes and/or lockouts, by country	●	5.2 Labor Relations	108	
GRI Disclosure of Customer Health and Safety topics	FP5	Percentage of production volume manufactured in sites certified by an independent third party	●	3.2.1 Product Health and Food Safety	67	
	FP6	According to internationally recognized food safety management system standards	●	3.2.1 Product Health and Food Safety	67	
		Percentage of total sales volume of consumer products, by product category, that are lowered in	●	3.2.1 Product Health and Food Safety	67	
<b>*Healthy and reasonably priced food</b>						
GRI 103 Management approach of Healthy and reasonably priced food	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 3 The Collaborator of Policies that Resonate with the Public	40 61	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	



Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>GRI Consolidated Topics</b>						
<b>*Corporate Governance</b>						
GRI 103 Management approach of Corporate Governance	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 2 The Manager of Operational Risks	40 41	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
GRI 205 Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	●	2.2 Implementation of Integrity Management	50	
	205-2	Communication and training about anti-corruption policies and procedures	●	2.2 Implementation of Integrity Management	50	
	205-3	Confirmed incidents of corruption and actions taken	●	2.2 Implementation of Integrity Management	50	
GRI 206 Anti-competitive Behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	●	2.2 Implementation of Integrity Management	50	
<b>*Legal Compliance</b>						
GRI 103 Management approach of Legal Compliance	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 2 The Manager of Operational Risks	40 41	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
GRI 307 Disclosure of Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	●	2.2.2 Compliance and Information Disclosure	51	
GRI 419 Disclosure of Social-Economic Compliance topics 2016	419-1	Non-compliance with laws and regulations in the social and economic area	●	2.2.2 Compliance and Information Disclosure	51	
<b>*Food Safety and Labeling</b>						
GRI 103 Management approach of Food Safety and Labeling	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 3 The Collaborator of Policies that Resonate with the Public	40 61	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	

Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
GRI 416 Disclosure of Customer Health and Safety topics 2016	416-1	Assessment of the health and safety impacts of product and service categories	●	3.2.1 Customer Health and Food Safety	67	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	●	2.2.2 Compliance and Information Disclosure	51	
GRI 417 Marketing and Labeling 2016	417-1	Requirements for product and service information and labeling	●	3.2.1 Customer Health and Food Safety	67	
	417-2	Incidents of non-compliance concerning product and service information and labeling	●	2.2.2 Compliance and Information Disclosure	51	
	417-3	Incidents of non-compliance concerning marketing communications	●	2.2.2 Compliance and Information Disclosure	51	
<b>*Employee Relationship Management</b>						
GRI 103 Management approach of Employee Relationship Management	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 5 The Operator Protecting Talents	40 99	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 5 The Operator Protecting Talents	9 99	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 5 The Operator Protecting Talents	9 99	
GRI 202 Market Presence 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	●	5.2 Labor Relations	108	
	202-2	Proportion of senior management hired from the local community	●	5.1.2 Labor Structure	103	
GRI 401 Employment 2016	401-1	New employee hires and employee turnover	●	5.1.1 Talent Acquisition and Turnover	101	
	401-2	Benefits provided to full-time employees that are not provided to temporary or parttime employees	●	5.2 Labor Relations	108	
GRI 402 Disclosure of Labor/Management Relations 2016	402-1	Minimum notice periods regarding operational changes	●	5.2 Labor Relations	108	
GRI 405 Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	●	5.1.2 Labor Structure	103	
	405-2	Ratio of basic salary and remuneration of women to men	●	5.2 Labor Relations	108	



Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>*Occupational Health and Safety</b>						
GRI 103 Management approach of Occupational Health and Safety 2018	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 5 The Operator Protecting Talents	40 99	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 5 The Operator Protecting Talents	9 99	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 5 The Operator Protecting Talents	9 99	
GRI 403 Disclosure of Occupational Health and Safety 2018	403-1	Occupational health and safety management system	●	5.3.1 Occupational Safety and Health Management System	111	
	403-2	Hazard identification, risk assessment, and incident investigation	●	5.3.1 Occupational Safety and Health Management System	111	
	403-3	Occupational health services	●	5.3.3 Employee Health Management	117	
	403-4	Worker participation, consultation, and communication on occupational health and safety	●	5.3 Reinforced Occupational Safety	111	
	403-5	Worker training on occupational health and safety	●	5.3.2 Safe Working Environment	113	
	403-6	Promotion of worker health	●	5.3.3 Employee Health Management	117	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	●	5.3.2 Safe Working Environment	113	
	403-8	Workers covered by an occupational health and safety management system	●	5.3.1 Occupational Safety and Health Management System	111	
	403-9	Work-related injuries	●	5.3.1 Occupational Safety and Health Management System	111	
	403-10	Work-related ill health	●	5.3.1 Occupational Safety and Health Management System	111	
GRI 404 Training and Education 2016	404-1	Average hours of training per year per employee	●	5.1.3 Talent Cultivation	105	
	404-2	Programs for upgrading employee skills and transition assistance programs	●	5.1.3 Talent Cultivation 5.2 Labor Relations	105 108	
	404-3	Percentage of employees receiving regular performance and career development reviews	●	5.2 Labor Relations	108	

Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>*Social Participation</b>						
GRI 103 Management approach of Social Participation	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 6 The Creator of Social Value	40 119	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 6 The Creator of Social Value	9 119	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 6 The Creator of Social Value	9 119	
GRI 203 Disclosure of Indirect Economic Impacts topics 2016	203-1	Infrastructure investments and services supported	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park 6.2 Maintenance of Natural Resources 6.4 Community Care and Relationship Maintenance	81 125 130	
	203-2	Significant indirect economic impacts	●	3.1 Sustainable Food 3.4 Land Activation and Utilization 4.2.1 Consumption of Energy Resources	63 76 87	
GRI 413 Disclosure of Local Communities topics 2016	413-1	Operations with local community engagement, impact assessments, and development programs	●	6.2 Maintenance of Natural Resources 6.4 Community Care and Relationship Maintenance	125 130	
	413-2	Operations with significant actual and potential negative impacts on local communities	●	4.2.1 Air Pollution Prevention 4.3.2 Water Pollution Control	87 93	
<b>*Circular economy</b>						
GRI 103 Management approach of Circular Economy	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 4 The Producer with Reversal Process	40 79	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 4 The Producer with Reversal Process	9 79	



Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
GRI 306 Disclosure of Waste topics 2020	306-1	Waste generation and significant waste-related impac	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park 4.3.2 Water Pollution Control	81 93	
	306-2	Management of significant waste-related impacts	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park 4.3.3 Waste Management and Reuse	81 95	
	306-3	Waste generated	●	4.3.3 Waste Management and Reuse	95	
	306-4	Waste diverted from disposal	●	4.3.3 Waste Management and Reuse	95	
	306-5	Water bodies affected by water discharges and/or runoff	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park 4.3.2 Water Pollution Control 4.3.3 Waste Management and Reuse	81 93 95	
<b>TSC' s Sustainability Topics</b>						
<b>*Innovative Research</b>						
GRI 103 Management approach of Innovative Re- search	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 3 The Collaborator of Policies that Resonate with the Public	40 61	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	
TSC' s sustainability topics Supplementary disclosure of Innovative R&D topics	PT1	Types and quantities of patents applied and passed in the year	●	3.2 Food Safety	66	
	PT2	Number of cases infringing patents or intellectual property rights (IPR) of others in the year	●	3.2 Food Safety	66	
<b>*Sustainable food</b>						
GRI 103 Management approach of Sustainable food	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 3 The Collaborator of Policies that Resonate with the Public	40 61	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 3 The Collaborator of Policies that Resonate with the Public	9 61	

Category/ Material Aspects	No.	GRI Index	External Verification	Chapter and Section	Page	Omit/remark
<b>*Climate Action</b>						
GRI 103 Management approach of Climate Action	103-1	Explanation of the material topic and its Boundary	●	1.3.2 The Value Chain Boundary of Material Topics 2 The Manager of Operational Risks	40 41	
	103-2	The management approach and its components	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
	103-3	Evaluation of the management approach	●	Implementation of SDGs and Objectives 2 The Manager of Operational Risks	9 41	
<b>Supplementary disclosure of non-material GRI G4 Sector Disclosures- Food and Processing</b>						
GRI Disclosure of Procurement Practices topic	FP1	Proportion of raw materials purchased from suppliers meeting the Company' s procurement policy	●	3.3.1 Procurement Policies	70	
	FP2	Proportion of raw materials purchased in accordance with internationally reliable production standards, listed in accordance with different production standards	●	3.3.2 Supplier Management	72	
GRI Disclosure of Animal welfare topic	FP9	List of all quantities and percentages of breeding and processed animal species and varieties	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park	81	
	FP10	Policies and regulations of physiological modification and use of anesthetics according to animal species and varieties	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park	81	
	FP11	The quantities and percentages of breeding and processed animal species and varieties by type of housing	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park	81	
	FP12	Policies and regulations of the use of antibiotics, hormones and growth hormones according to animal species and varieties	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park	81	
	FP13	Total number of violations of law and regulations and total number of voluntary standards during the process of transportation, handling and slaughtering of animals and aquatic animals	●	4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park	81	



## Appendix III : Reference table of Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies (Article 4, Item 1)

Number	Content of indicator	Chapter and section	page
(1)	The evaluation and improvement regarding the company's personnel, work environment, hygiene management of facilities and quality control system to improve food sanitation, safety and quality, as well as the significant product categories and the percentage affected.	3.2.1 Product Health and Food Safety	67
(2)	The applicable laws relating to the management of food safety and sanitation which the listed company shall observe, as well as the types and number of incidents of violation by the listed company against the aforesaid laws.	2.2.2 Compliance and Information Disclosure	51
(3)	The percentage of the listed company's purchased volume in accordance with internationally recognized responsible production standards.	3.3.2 Supplier Management	72
(4)	The percentage of the production volume manufactured in sites certified by an independent third party according to internationally recognized food safety management system standards.	3.2.1 Product Health and Food Safety	67
(5)	The number and percentage of suppliers audited by the listed company, and the audit items and results.	3.3.2 Supplier Management	72
(6)	The product trace and track management conducted by the listed company voluntarily or according to the applicable laws, and the percentage of such relevant products to the whole products.	3.2.1 Product Health and Food Safety	67
(7)	The food safety laboratories established by the listed company voluntarily or according to the applicable laws, testing items, testing results, relevant expenses and the percentage of such expenses to the net revenue.	3.2.1 Product Health and Food Safety	67

## ☑ Reference table of Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies (Article 4, Item 4)

Content of indicator	Chapter and section	page
The number of its full-time employees who are not in a managerial position, the average and medium of the salaries of the full-time employees who are not in a managerial position, and the difference of the three figures from the previous year	5.2 Labor Relations	108
The company' s governance around climate-related risks and opportunities, actual and potential climate-related impacts, how to identify, assess and manage climate-related risks, and metrics and targets used to assess and manage relevant climate-related issues.	2.3.2 Responses to Climate change risks	57

## Appendix IV : Sustainable Development Goals (SDGs) Index

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APPENDIX

Item	Sustainable Development Goals	Chapter and section	page
Goal 1	End poverty in all its forms everywhere	Implementation of SDGs and Objectives	9
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	Implementation of SDGs and Objectives	9
Goal 3	Ensure healthy lives and promote well-being for all at all ages	Implementation of SDGs and Objectives	9
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	5.1.3 Talent Cultivation	105
Goal 6	Ensure availability and sustainable management of water and sanitation for all.	Implementation of SDGs and Objectives	9
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all.	Implementation of SDGs and Objectives	9
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Implementation of SDGs and Objectives	9
Goal 9	Build resilient infrastructure, promote inclusive and Sustainable industrialization and foster innovation.	Special Feature on TSC' s ESG Actions : Circular Economy Action- Circular Use of Oyster Shells Special Feature on TSC' s ESG Actions : Circular Economy Action- Shalun Smart Green Energy Recycling Residential Park 4.1.1 Renovation Plan of Modern Livestock Housing-Dong-Hai-Feng Livestock Circular Park	20 21 81
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable.	Implementation of SDGs and Objectives	9
Goal 12	Ensure sustainable consumption and production patterns.	Implementation of SDGs and Objectives	9
Goal 13	Take urgent action to combat climate change and its impacts.	Implementation of SDGs and Objectives	9
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Implementation of SDGs and Objectives	9
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	Implementation of SDGs and Objectives	9
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	Implementation of SDGs and Objectives	9
Goal 17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Implementation of SDGs and Objectives	9

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## Appendix V : Sustainability Accounting Standards Board (SASB) Index

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	Chapter and section	page
Energy Management	(1) Total energy consumed	Quantitative	Gigajoules (GJ)	FB-PF-130a.1	4.2.1 Consumption of Energy Resources	87
	(2) Percentage grid electricity		Percentage (%)			
	(3) Percentage renewable		Percentage (%)			
Water Management	(1) Total water withdrawn percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m <sup>3</sup> )	FB-PF-140a.1	4.2.1 Consumption of Energy Resources	87
	(2) Total water consumed percentage of each in regions with High or Extremely High Baseline Water Stress		Percentage (%)			
	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	Quantitative	Number	FB-PF-140a.2	2.2.2 Compliance and Information Disclosure	51
	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	FB-PF-140a.3	4.3.2 Water Pollution Control	93
Food Safety	(1) Global Food Safety Initiative (GFSI) audit non-conformance rate	Quantitative	Rate	FB-PF-250a.1	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	(2) associated corrective action rate for (a) major and (b) minor non-conformances				There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	Percentage of ingredients sourced from Tier 1 supplier facilities certified to a Global Food Safety Initiative (GFSI) recognized food safety certification program	Quantitative	Percentage (%) by cost	FB-PF-250a.2	3.2.1 Customer Health and Food Safety	67
	(1) Total number of notices of food safety violation received	Quantitative	Number	FB-PF-250a.3	2.2.2 Compliance and Information Disclosure	51
	(2) percentage corrected		Percentage (%)		n/a	-
	(1) Number of recalls issued	Quantitative	Number	FB-PF-250a.4	n/a	-
	(2) total amount of food product recalled		metric ton (t)		n/a	-
Health & Nutrition	Revenue from products labeled and/or marketed to promote health and nutrition attributes	Quantitative	Reporting currency	FB-PF-260a.1	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	Discussion of the process to identify and manage products and ingredients related to nutritional and health concerns among consumers	Quantitative	n/a	FB-PF-260a.2	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
<p>Note: Due to many industries TSC owns, TSC only disclosed "Processed Food" of SASB standards in the 2022 Sustainability Report and will disclose more SASB standards in line with TSC's major operation bases.</p>						

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	Chapter and section	page
Product Labeling & Marketing	(1) Percentage of advertising impressions made on children	Quantitative	Percentage (%)	FB-PF-270a.1	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	(2) Percentage of made on children promoting products that meet dietary guidelines					-
	(1) Revenue from products labeled as containing genetically modified organisms (GMOs)	Quantitative	Reporting currency	FB-PF-270a.2	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	(2) Revenue from products labeled as containing genetically non-GMO					
	Number of incidents of non-compliance with industry or regulatory labeling and/or marketing codes	Quantitative	Number	FB-PF-270a.3	2.2.2 Compliance and Information Disclosure	51
	Total amount of monetary losses as a result of legal proceedings associated with labeling and/or marketing practices	Quantitative	Reporting currency	FB-PF-270a.4	2.2.2 Compliance and Information Disclosure	51
Packaging Lifecycle Management	(1) Total weight of packaging	Quantitative	Metric tons (t) Percentage (%)	FB-PF-410a.1	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	(2) percentage made from recycled and/or renewable materials					-
	(3) percentage that is recyclable, reusable, and/or compostable					-
	Discussion of strategies to reduce the environmental impact of packaging throughout its lifecycle	Discussion and Analysis	n/a	FB-PF-410a.2	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
Environmental & Social Impacts of Ingredient Supply Chain	Percentage of food ingredients sourced that are certified to third-party environmental and/or social standards, and percentages by standard	Quantitative	Percentage (%) by cost	FB-PF-430a.1	3.3.2 Supplier Management	72
	(1) Suppliers' social and environmental responsibility audit non-conformance rate	Quantitative	Rate	FB-PF-430a.2	3.3.2 Supplier Management	72
	(2) Suppliers' social and environmental responsibility associated corrective action rate for (a) major and (b) minor non-conformances					72
Ingredient Sourcing	Percentage of food ingredients sourced from regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by cost	FB-PF-440a.1	There was no data breach in 2021, but TSC will plan to disclose more in the future.	-
	List of priority food ingredients and discussion of sourcing risks due to environmental and social considerations	Discussion and Analysis	n/a	FB-PF-440a.2	3.3.2 Supplier Management	72

Note: Due to many industries TSC owns, TSC only disclosed "Processed Food" of SASB standards in the 2022 Sustainability Report and will disclose more SASB standards in line with TSC's major operation bases.



TAIWAN SUGAR CORP.,

