2022

Formosa Petrochemical Corporation

Sustainability Report

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About this Report

This is the ninth Sustainability Report published by Formosa Petrochemical Corporation (FPCC). The period of information disclosed herein is from January 1, 2022 to December 31, 2022. A note will be provided if any statistics have a different period. The boundary is Taiwan, relevant information that exceeds this scope will be footnoted in the report, and four-year data are provided in principle. Please download previous reports at ESG website.

Overview of issuance

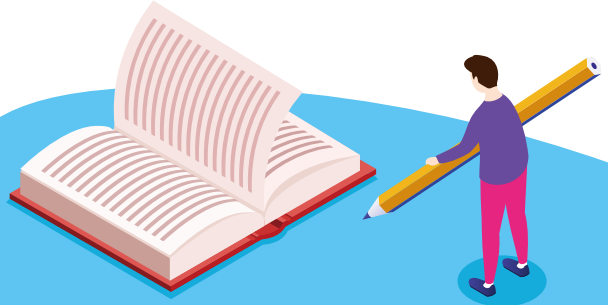
- Issue Date of First Version | December 2015
- Issue Date of Current Version | May 2023
- Issue Date of Previous Version | May 2022
- Issue Date of Next Version | May 2024

Report Boundaries and Scope

This report mainly discloses information on FPCC. Affiliates of FPCC in the consolidated financial statements include Formosa Oil, Formosa Petrochemical Transportation Corp., and FPCC USA. The level of impacts from revenue of individual affiliates, however, are minimal. As such, this report features primarily data of FPCC. Hence, the boundary has not changed compared with the previous year.

Editing Principles

Issued by	Standards framework/Regulation
Global Sustainability Standards Board (GSSB)	▪ Universal Standards 2021 ▪ GRI 11 Oil and Gas Sector 2021
International Sustainability Standards Board (ISSB)	▪ SASB (Sustainability Accounting Standards Board) Standards
Financial Stability Board (FSB)	▪ Task Force on Climate-related Financial Disclosures (TCFD)
Taiwan Stock Exchange Corporation	▪ Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies



Report Verification and Assurance

The information and data disclosed in this report are all verified by a third party institution to ensure the transparency and reliability of information disclosure. Any projections will be specified in each section.

Items	Standard	Third party institution
Sustainability Report	▪ AA1000AS v3 Type 1 Moderate Level Assurance	AFNOR Asia Ltd.
Financial management	▪ Generally Accepted Auditing Standards and Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants	Ernst & Young
Customer relationship management	▪ ISO 9001:2015 Quality Management Systems ▪ For inspection and certification of gasoline, diesel, and aviation fuel products, please refer to the Company's website (http://www.fpcc.com.tw/tw/guarantee).	Metal Industries Research & Development Centre Ministry of Economic Affairs Bureau of Standards, Metrology and Inspection
Environmental management	▪ ISO 14064-1:2018 GHG Inventory ▪ ISO 14001:2015 Environmental Management Systems Verification	British Standards Institution (BSI) SGS Taiwan
Labor safety management	▪ ISO 45001:2018 Occupational Safety and Health Management System	SGS Taiwan

Sustainability Report Management Method

Internal Review	FPCC established operating procedures for report preparation and verification in accordance with requirements of the Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies, and included the operating procedures into the internal control system. The scope of this report includes economic, environmental, and social aspects. Various business departments provide data and the President's Office is responsible for reviewing and verifying the data to comply with the disclosure principles of integrity and transparency. The report is submitted to the Board of Directors after review and approval by the Company's Sustainable Development Committee, and is disclosed and reported before the end of June each year.
External Verification	All information disclosed in this report was independently verified by Afnor Asia according to AA1000AS v3 Type 1 Moderate Level, and the company issued an Independent Assurance Statement, see Appendix 5 for details. Verify that the information in this report complies with the AA1000 Account Ability Principle Standard for materiality, inclusiveness, response, and impact.

Contact information

Feel free to contact us through the following channels if you have any questions or suggestions concerning this report :

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Message from the Chairperson

As we enter the third year of the pandemic, we see changes in areas as large as the international situation and as small as everyday life. We are on the cusp of a new phase of human development. Extreme climate change and turmoil in the international political and economic situation in recent years has accelerated the arrival of a new era. In the post-pandemic era, the structure and development process of industries will be entirely different from the past, but FPCC will not change its pace on the path towards sustainable development. We established the Sustainable Development Committee in May 2022, and believe that sound governance and risk management will help increase our company value. FPCC focuses on accelerating industry transformation for its sustainable development, and becomes aligned with the world through a people-oriented model for co-existing and mutual prosperity, actively combining its sustainable development strategies with its core business.

Providing resilient and affordable energy to accelerate industry transformation

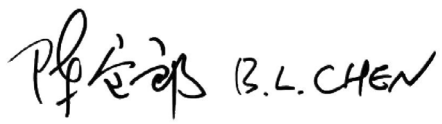
The Russo-Ukrainian War in 2022 has made energy synonymous with "long-term risk" and "short-term crisis." European countries were not the only ones to be profoundly impacted by the war, as it also caused high volatility in global natural gas, coal, electricity, and oil prices. Due to the impact of war and high inflation, the government prioritized energy stability and affordable commodities, which impacted our profit performance and delayed the progress of carbon reduction in the short-term. We continue to fulfill our corporate social responsibility and direct our efforts to reducing coal use, developing low carbon processes, and searching for investment opportunities in green energy. The energy shortage caused by the war showed the vulnerability of global energy systems in the current stage. Countries around the world have thus made many major changes to accelerate their energy transition, including carbon reduction policy, green energy, carbon trading platform, and carbon border tax. FPCC responds to climate change issues with action and set the mid-term goal to reduce carbon emissions in 2030 by 28% compared with the baseline year of 2007, as well as the goal to achieve carbon neutrality by 2050. As the industry's pioneer, we accelerated the implementation of low carbon business models, and continue to search for new technologies related to raw materials, processes, fuel, and transportation, working together with supply chain partners in developing green business models. We utilize automation and big data technologies to assist partners with decision management, and make adjustments to carbon reduction strategies and action plans whenever necessary.

People-oriented with responsible care

People are the prerequisite for society to exist and develop, and also a decisive force in social development. Concern about life and society is particularly important during the volatile pandemic. As an important member of the global refining and petrochemical industry, FPCC emphasizes a people-oriented occupational safety and health culture, provides employees with a safe and healthy workplace environment, and also implements the responsible care system, continuously making improvements to achieve the goal of zero accidents. Furthermore, we show how much we value employees, and provide a complete career development path along with training to fully develop employees' potential, so that they can grow together with the Company. We not only take care of our employees, but also their families. FPCC began providing childbirth subsidies in 2022, and share the joy of life with expecting parents. FPCC also provides childcare subsidies and scholarships to support and accompany the next generation as they grow. FPCC strives to become an enterprise full of happiness. FPCC has closely followed local education for years with the goal for sustainability to strike root. We worked with National Changhua University of Education in organizing science education activities, and engaged in industry-academia collaboration to enrich the knowledge of the next generation, increase children's creativity, and allow the land to flourish.

In the post-pandemic era, the world is in a crucial process of transition and development. How FPCC adjusts its business model to maintain a competitive advantage in the changing situation is something we must learn in order to become sustainable. We will continue to dedicate our efforts and invest our resources to achieve sustainability, and will follow various issues to make actual contributions to global sustainability, so as to create long-lasting value in sustainability.

Formosa Petrochemical Corporation
Chairman



Sincerely
2023

New Path to Sustainability

Recognition in 2022

Won **the Best Trade Contribution Award** in the 2022 International Trade Awards

"2022 Manufacturing Industry Happy Enterprise" **Gold Award** of 1111 Job Bank

Continue to be selected into the Taiwan **High Compensation 100 Index, FTSE4Good TIP Taiwan ESG Index, and TWSE Corporate Governance 100 Index** of Taiwan Index Plus Corporation

A- (leadership level) in CDP climate change and water security questionnaire

Top 20% in the Corporate Governance Evaluation of Public Companies

Mailiao Port obtained the **EcoPorts certification** for the third time

Business Strategy

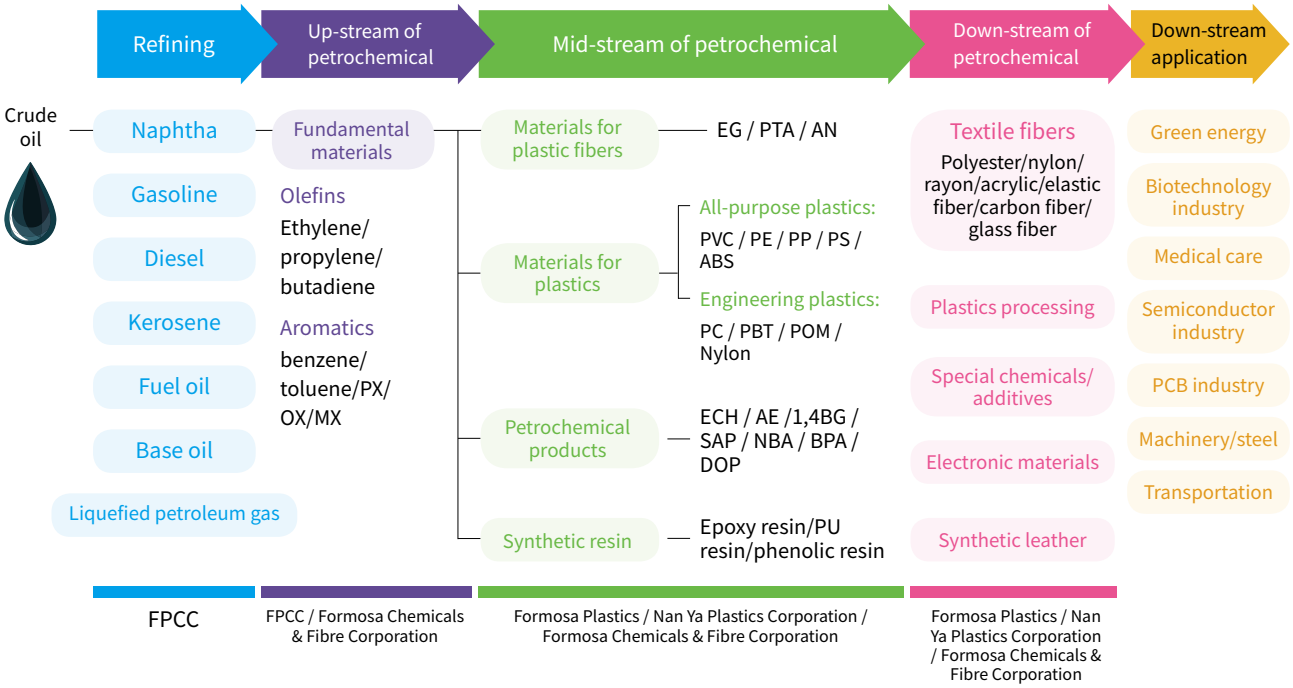
All sectors are highly concerned about developments in corporate sustainability due to the impact of the pandemic and extreme weather events in recent years. FPCC is working to become aligned with international standards with the group's past and future in mind, and is actively combining its sustainable development strategy with its core business as it continues to expand markets.

Industry value chain:

The Company established its value creation process through the identification and evaluation of the industrial chain. We analyzed the industry from a macro perspective through stakeholder communication and engagement, evaluated the future direction of our operations, and formulate related action plans.

Correlation map of products manufactured by the Formosa Plastics Group:

The petrochemical industry generally consists of fundamental materials, intermediate materials, and applied and processed products in the down-stream, which are quite closely related with one another. FPCC is located at the upstream of the industrial chain and its main material is crude oil imported from overseas. Main products include a variety of oil products and petrochemical raw materials.



FPCC's Industry Value Chain:

Crude oil is the main raw material used by FPCC. Hence, the value chain's upstream includes the process of obtaining crude oil, from drilling and mining by oil producing countries to purchasing crude oil from oil companies and traders.

Includes transportation of crude oil imported by FPCC, refining and production of oil products and petrochemical materials, to the transportation of products to sales channels.

Includes FPCC's product sales and after-sales services, as well as a series of measures to giving back to local residents, green environment, and giving back to society.

Industry value chain results

FPCC understands the needs of stakeholders in the industry value chain through smooth communication and exchanges, and evaluates which fields to invest resources in. We periodically review the benefits obtained to achieve a meaningful positive cycle, maximizing the synergies from resource use. FPCC's performance in 2022 is described below.

Inputs

Business model and innovation

- Investment in AI projects amounted to NT$47.67 million
- R&D expenses was NT$760 million

Labor safety and health inputs

- Industrial safety and occupational health related expenses totaled NT$4.56 billion

Human capital

- Total amount invested in education and training was NT$23.8 million
- Implementation of measures to encourage employee childbirth

Environmental inputs

- Environment related investments amounted to NT$20.4 billion
- Invested NT$1.22 billion in energy conservation and carbon reduction improvement projects
- Investment in VOCs equipment amounted to NT$220 million

Social capital

- Donated NT$330 million to charity
- Provided NT$200 million in subsidies for 13,421 Mailiao Township residents to receive health examinations
- Provided 301 personnel to organize science camps and contests

Business model

Upstream

Crude oil drilling/ mining

Crude oil purchasing

Stakeholders

Suppliers

(Oil producing country and oil company)

Operations

Oil products transportation

Refining

Fundamental materials

Stakeholders

Employee, investors/ shareholders, contractors

Downstream

Sales

Community services

Stakeholders

Customers, local residents

Impact

Industry・New development

- Benefits from AI projects amounted to NT$100 million
- 5,591 tons of refuse derived fuel was used to replace a portion of coal use and reduced carbon emissions by 4,237 tons CO_2e/year

Green・New Appearance

- Received a rating of A- (leadership level) in CDP climate change and water security questionnaire
- Completed 250 energy and water conservation improvements in 2022, reduced carbon emissions by 195 thousand tons CO_2e/year, reduced electricity consumption by 32.89 million kWh/year, and reduced water consumption by 360 thousand tons/year
- VOCs emission per unit product decreased 12.2% compared with the previous year

Talent・New Concepts

- Total training participation was 107,883 participants, average hours of training received by each employee was 69.4 hours
- A total of NT$9.36 million in childbirth subsidies was provided to 745 newborns and infants

Labor Safety・New Culture

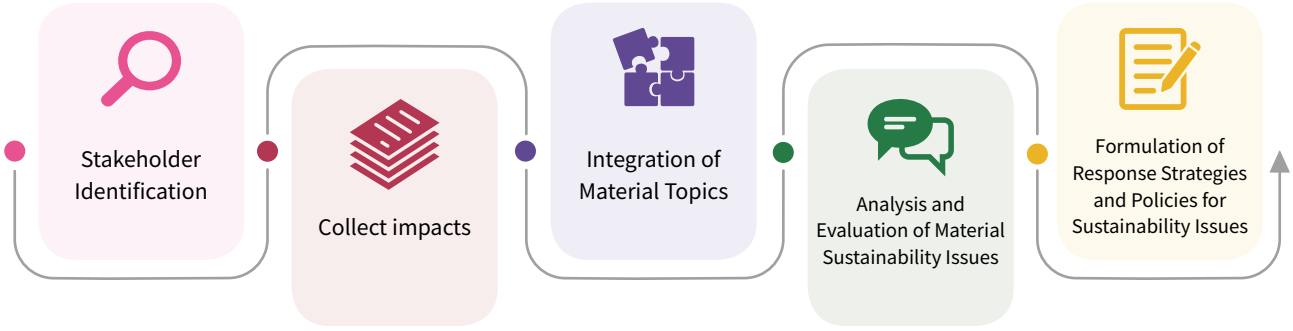
- The frequency-severity indicator of 0.03 was lower than the industry average
- There were no leakage incidents involving long-distance pipeline or finished product transportation
- Organized 1,719 EHS communication and training sessions for employees and contractors with a total of 90,281 participants
- Organized 202 emergency response drills

Communities・New Value

- Distributed NT$200 million in friendly neighbor funds to 46,062 residents of Mailiao Township and Taixi Township
- Subsidized the lunch and breakfast expenses of 1,182 students in 29 junior high schools and elementary schools
- Organized 30 science camps, contests, and workshops with a total of approximately 2,000 participants

Sustainability Issue Management

We are fully aware that management of sustainability issues is key to making continuous improvement and achieving long-term development. It includes how companies integrate internal resources to formulate a management approach and engage and communicate with stakeholders when facing issues. We collect related responses and recommendations through different channels and include them into the Company's business plan.



Stakeholder Communication and Engagement

The Company comprehensively evaluates global sustainability trends and FPCC's business development goals, and collects sustainability issues that stakeholders are concerned about through different communication channels. After discussions between internal and external experts on sustainability trends and impact analysis, and referencing the AA1000 Stakeholder Engagement Standard, the stakeholder communication process was established based on five principles, namely dependence, level of concern, influence, responsibility, and diverse perspective.

FPCC's 8 main stakeholders were jointly identified by departments and the President's Office. By analyzing the issues stakeholders are concerned about, departments were selected to gain a better understanding and communicate with their corresponding stakeholders. We have designated departments responsible for communicating with, listening to the opinions of, and responding to the needs of different stakeholders.

Stakeholders	Communication results	Responsible Department
Employees	▪ Employee profile and benefits: 95% completion of proposals at employer-employee meetings 94% completion of Welfare Committee proposals ▪ Occupational health and safety: Organized CPR+AED training and a total of 3,763 people completed the training	President's Office
Investors/ shareholders	▪ Corporate governance: Board performance and individual member performance were found to be excellent after evaluation ▪ Economic performance: Obtain the latest information on company operations in a timely manner	President's Office
Residents at the operation site	▪ Local community development and communication: Donated NT$330 million to charity, including friendly neighbor funds, gifts for low income household during the three holidays, and rapid test kits ▪ Air pollution prevention There were 0 complaints of odor by nearby residents	Regional Management Department

Stakeholders	Communication results	Responsible Department
Customers	▪ Customer service satisfaction: Indicators with performance higher than "Satisfied" in the satisfaction survey	Operation units under each business department
Government agencies	▪ Corporate governance: The Company was not fined by TWSE or FSC for any violation of reporting obligation ▪ Climate change strategy: FPCC set the path and goal for carbon neutrality by 2050 in response to regulatory changes ▪ GHG management: GHG inventory compiled in accordance with the law	President's Office
Suppliers and contractors	▪ Supply chain management: The social responsibility commitment's response rate was 99% and the questionnaire's response rate was 97% Suppliers/Contractors do not have major risks, such as child labor and forced labor ▪ Industrial and public safety 598 Supplier educational training sessions	Safety and Health Management Office of each business department
Environmental protection organizations	▪ Climate change strategy: Environment related investments amounted to NT$20.4 billion ▪ Air pollution prevention: Completed the installation of 14 MGGH and 2 WESP in 2022	President's Office
Experts and scholars	▪ Green transition and investment in innovation: FPCC and Toyota Tsusho Corporation (Taiwan) installed 6 wind turbines outside the Mailiao Plant, and environmental impact assessment is currently being carried out ▪ Local community development and communication: FPCC signed a MOU with the Research Center for Global Change Biology to carry out Zhuoshui River estuary ecological conservation	President's Office

Material topic analysis process

FPCC analyzes issues of concern to stakeholders through the materiality analysis process, and ranks issues based on level of concern to effectively respond to the issues that stakeholders are most concerned about.

Understand the Organization's Sustainability Context

01 Stakeholder Identification

We reviewed our business activities and sustainability context, and identified 8 main stakeholders based on the AA1000 Stakeholder Engagement Standard

8 categories of stakeholders

02 Collect impact items

We summarized 98 impact items after referencing GRI 11, SASB, TCFD, Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies, ISO 26000 Social Responsibility, international ratings, industry issues, UN SDGs, global trends and issues, and media reports, and determined their positive and negative impact on the Company

98 impact items

16% Industry trend	**54%** International sustainability framework/rating
4% Domestic regulations and policies	**26%** News event

Evaluate issue Identify actual and potential impacts

03 Integrate company impact items into sustainability issues

We integrated impact items into sustainability issues for each theme based on the consulting team's recommendations. After discussions between the President's Office and external consultants, we integrated 25 sustainability issues for identification

25 sustainability issues

E	S	G
8 sustainability issues	**8** sustainability issues	**9** sustainability issues

04 Sustainability issue analysis and prioritization

We identify the source of impacts in related issues through self-evaluations, business evaluations and complaint mechanisms, and analyze the "level of concern of stakeholders" and "impact of operations on sustainability issues" to determine the importance of an issue

263 questionnaires

35 senior managers	**228** stakeholders

Assess the significance of impact

05 Material topic impact assessment and discussion

The President's Office and consultant team jointly discuss material topics of FPCC. We look into the significance and probability of moderate and high impact topics. We identified 12 material topics of FPCC through double materiality analysis

12 material topics

E	S	G
4 material topics	**3** material topics	**5** material topics

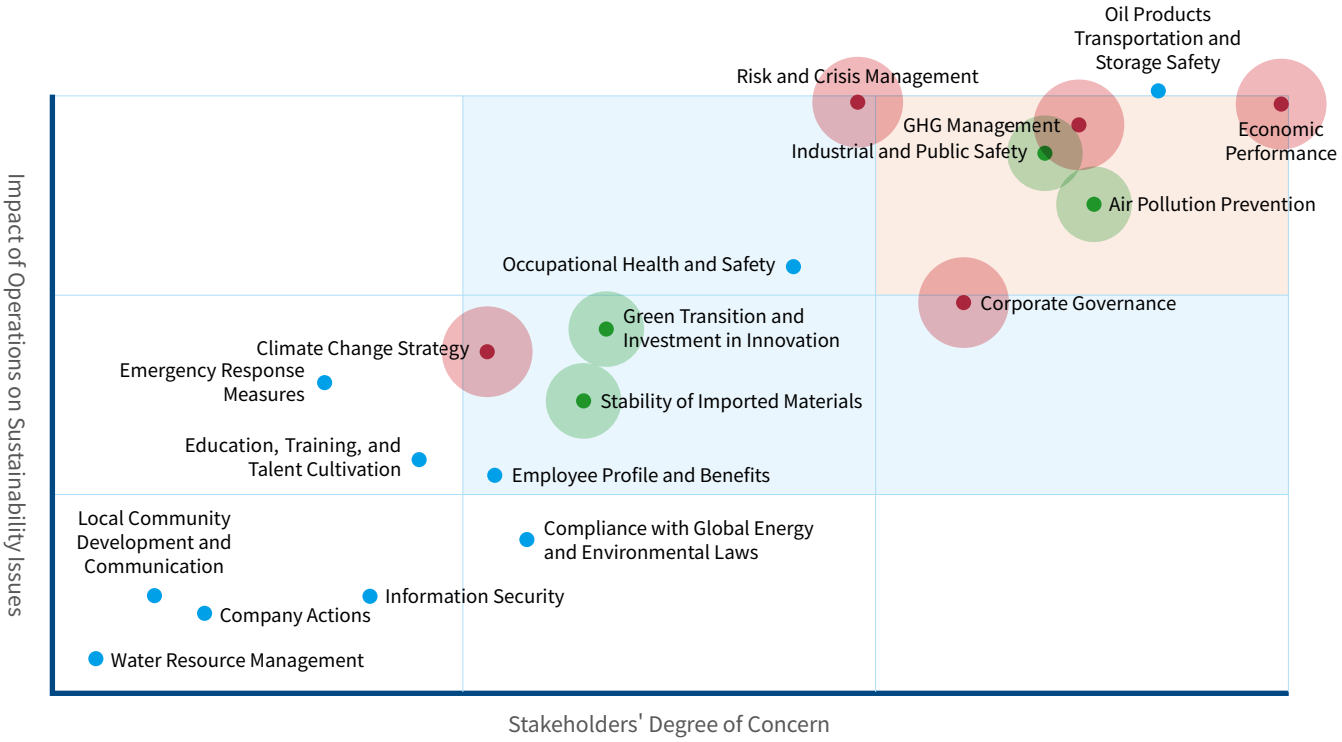
Disclosure and reporting of issues with significant impact

06 Disclosure and reporting of material topics

The President's Office and the consultant team used GRI 11 to comprehensively evaluate the significant of topics based on analysis results for each material topic. Discuss the probability that the issue will occur in the future, and verify that moderate and high impact issues are disclosed and reported. Communicate with and respond to stakeholders through the website and report

Materiality Analysis Matrix

FPCC identified 25 sustainability issues that stakeholders were concerned about. After discussions between each unit and the President's Office, 12 material sustainability issues with moderate and high levels of impact were used as the foundation for preparing this report, and their management method and performance results are disclosed in this report.



Method for presenting probability

H	High probability : 5 items	M	Moderate probability : 4 items	L	Low probability : 16 items

Material Topics of High Impact
Material Topics of Moderate Impact
Track Topics of Low Impact

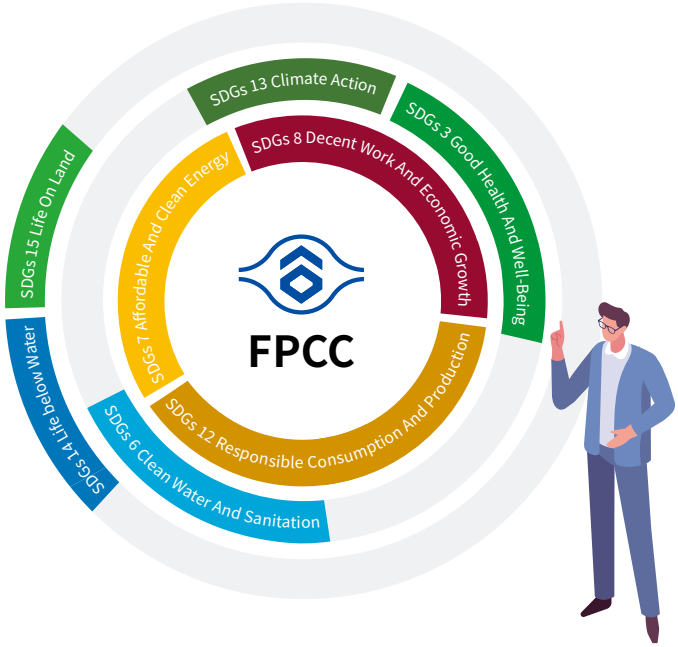
Materiality	Topic	Corresponding indicator			Chapter
		Specific GRI topics	GRI 11	SASB indicators	
High materiality (5)	Economic Performance	GRI 201：Economic Performance 2016	GRI 11.14 Economic Impact	—	1.2 Operational Performance
	GHG Management	GRI 305：Emissions 2016 GRI 302：Energy 2016	GRI 11.1 Greenhouse Gas Emissions	Greenhouse Gas Emissions	2.2 GHG Management
	Air Pollution Prevention	GRI 305：Emissions 2016	GRI 11.3 Air Pollutant Emissions	Air Quality	2.3 Air Pollution Management and Prevention
	Industrial and Public Safety	GRI 403：Occupational Health and Safety 2018	GRI 11.9 Employee Health & Safety	—	3.1 Creating a Labor Safety Culture
	Oil Products Transportation and Storage Safety	Industry Issue	GRI 11.8 Asset and Emergency Event Management	—	3.2.3 Finished Goods Transportation and Traffic Safety
Moderate materiality (7)	Corporate Governance	Industry Issue	—	—	1.1 Corporate Governance
	Risk and Crisis Management	Industry Issue	—	Severe Accident Risk Management	1.2 Operational Performance
	Green Transition and Investment in Innovation	Industry Issue	—	—	1.3 Creating a Green Future
	Stability of Imported Materials	Industry Issue	—	—	1.4 Partnership Maintenance
	Climate Change Strategy	GRI 201： Economic Performance 2016; GRI 305： Emissions 2016	GRI 11.2 Climate Adaptation, Resilience, and Transformation	Greenhouse Gas Emissions	2.1 Climate Change Mitigation and Adaptation
	Occupational Health and Safety	GRI 403：Occupational Health and Safety 2018	GRI 11.9 Employee Health & Safety	Healthy and Safe Workplace	3.4 Employee Occupational Health Management
	Employee Profile and Benefits	GRI 401：Employment 2016	GRI 11.10 Employment Practices	—	4.3 Employee Benefits and Care

Explanation of the list of changes to sustainability issues

2022 Questionnaire issues	Materiality of topic			Description of changes to issues
	2022	2021		
Compliance with Global Energy and Environmental Laws	Low	-	Rise	New issue. The priority of "Compliance with global energy and environmental laws" increased the most compared with last year due to changes in energy policies and regulations of domestic and foreign governments. FPCC continues to improve its operational strategies and competitiveness in the industry by holding itself to higher standards than required by law
Information Security	Low	-		New issue. Due to the frequency occurrence of information security incidents in recent years, FPCC lowers the risk of high cost or damage to reputation caused by information security issues by formulating information security strategies, security control measures, and employee education and training
Company Actions	Low	-		New issue. The Company continues show the spirit of ethical corporate management by responding to the global emphasis on due diligence and transparency of corporate governance, which increases stakeholders' trust in the Company
GHG Management	High	Medium		Stakeholders have become more concerned about this issue due to global regulatory changes and sustainability trends. FPCC continues to implement carbon reduction strategies with the vision to achieve carbon neutrality by 2050; improve the efficiency of energy and resource use through green factories, green energy, and green innovation; accelerates the development of AI applications, clean energy, and decarbonization technology in response to the concerns of stakeholders
Corporate Governance	Medium	High	Decline	FPCC continues to strengthen competencies of functional committees under the Board of Directors and increases the transparency of information disclosures, which will increase the trust of stakeholders, such as investors/ shareholders, in the Company. Stakeholders' level of concern has declined in recent years due to the Company's excellent performance in related issues
Water Resource Management	Low	Medium		FPCC continues invest resources in related issues and achieved excellent performance in recent years, without any major incidents. Hence, stakeholders' level of concern has somewhat declined, and FPCC will continue to observe the impact on issues
Emergency Response Measures	Low	Medium		
Education, Training, and Talent Cultivation	Low	Medium		

Impact on the Sustainable Development Goals (SDGs)

As a leading industry that is closely connected to the economy, FPCC sets out from its core business on the path towards sustainable development, closely follows international trends in sustainability issues, and comprehensively reviewed the connection between its sustainability practices and the 17 SDGs of the UN, actively responding to targets of each SDG. SDGs are integrated with FPCC's material sustainability issues for a comprehensive evaluation, sequentially incorporating the SDGs into the decision-making process for corporate sustainability, laying out the blueprint for FPCC's sustainability. The Company identified 8 SDGs to provide the framework for the sustainability blueprint. After a comprehensive evaluation of global sustainability trends, industry issues, and material sustainability issues, the SDGs are prioritized and incorporated into the sustainability strategies and policies of business plans.



		Strengthen climate and business models Link (G)	Energy conservation and carbon reduction, low-carbon energy, air pollution prevention, and zero waste (E)	Care for the disadvantaged, health protection, education and growth, and mutual prosperity with ecology (S)
		8 DECENT WORK AND ECONOMIC GROWTH · 12 RESPONSIBLE CONSUMPTION AND PRODUCTION · 13 CLIMATE ACTION	6 CLEAN WATER AND SANITATION · 7 AFFORDABLE AND CLEAN ENERGY	3 GOOD HEALTH AND WELL-BEING · 14 LIFE BELOW WATER · 15 LIFE ON LAND
Prioritization of material topics	high	▪ Economic Performance	▪ GHG Management ▪ Air Pollution Prevention ▪ Oil Products Transportation and Storage Safety	▪ Industrial and Public Safety
	Medium	▪ Corporate Governance ▪ Risk and Crisis Management ▪ Green Transition and Investment in Innovation ▪ Stability of Imported Materials	▪ Climate Change Strategy	▪ Occupational Health and Safety ▪ Employee Profile and Benefits
Highlights		▪ Top 20% in the Corporate Governance Evaluation of Public Companies ▪ Completed a total of 23 AI carbon reduction projects and reduced carbon emissions by 246 thousand tons CO_2e/year ▪ Mass-burning of 5,591 tons of fuel derived from waste and reduced carbon emissions by 4,237 tons CO_2e/year ▪ Promotion of paperless operations reduced company-wide paper consumption in 2022 by 30% compared to 2021	▪ Received a rating of A- (leadership level) in CDP climate change and water security questionnaire ▪ Completed a total of 2,608 energy and water conservation improvement projects and invested NT$14.8 billion ▪ VOCs emissions per unit product decreased by 12.2% compared with 2021	▪ Industrial safety and occupational health related expenses totaled NT$4.56 billion ▪ Donated NT$330 million to charity ▪ Implemented measures to encourage employee childbirth and provided NT$9.36 million in subsidies

CH1

Driving New Industrial Developments

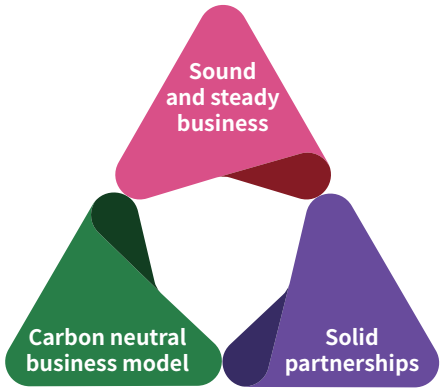
Chapter Summary

In terms of corporate governance, FPCC referenced Corporate Governance Blueprint 3.0 of the FSC and global trends, and actively disclose information in accordance with international standards, while strengthening competencies, risk management, and information transparency. Furthermore, we systematically formulated sustainability strategies in response to the international trend of net zero emissions. As we improved the production efficiency of current products based on the three themes – green factories, green energy, and green innovation, we are also accelerating the development of digital transformation, AI applications, clean energy, and decarbonization technologies, in hopes of increasing the Company's resilience to external risks and diversifying revenue aligned with sustainability trends.

Strategic actions

Commitment in operations

FPCC's core value is sustainable development in hopes of protecting stakeholders' interests while developing the Company. Hence, we continue to improve our corporate governance performance, provide transparent information to shareholders/investors in a timely manner, and develop green investments and innovations for transition, showing our determination to achieve environmental sustainability. Furthermore, we maintain good relationships with customers, suppliers, and contractors through related management policies, growing together on the path to sustainability.



Development strategy

- Steady operation – Improve corporate governance, increase information transparency, and protect the rights and interests of shareholders
- Sustainable development – Continued business expansion, develop green factories, green energy, and green innovation
- Strong partnerships – Strict supply chain management and customer relations for joint growth

Scope of impact of material topic

Value chain		Upstream		Operations			Downstream	
Material topics	Financial impact	Crude oil drilling/ mining	Crude oil purchasing	Oil products transportation	Refining	Fundamental materials	Sales	Community services
Corporate Governance	Low	▲		●			▲	
Risk and Crisis Management	high	▲		●			▲	
Economic Performance	high	●		●			●	
Green Investment and Innovative Transformation	high	●		●			●	
Stability of Imported Materials	high	●		●			▲	

● Cause : An organization's activities cause an impact

▲ Contribute to : The activities of an organization causes, contributes to, or induces another entity to cause an impact

■ Directly linked to : Despite an organization not causing or contributing to an impact, its operations, products, or services may still cause an impact through business relationships

Stakeholders

Investors/ shareholders | customers | government agencies | environmental protection groups | suppliers and contractors | experts and scholars | local residents | employees

Targets in 2022	▪ Top 20% in the Corporate Governance Review	✓
	▪ Completed the internal audit plan approved by the Board of Directors, and effectively improved 100% of deficiencies	✓
	▪ Evaluate the effectiveness of the internal control system	✓
	▪ We fulfilled our obligation of information disclosure and were not fined for any violation of this obligation	✓
	▪ Evaluate the establishment of other functional committees to enhance Board functions	✓
	▪ Strengthen the Board supervision mechanisms for climate-related risks and opportunities	✓
	▪ Promote smart factories and the low carbon transformation of processes	✓
	▪ Improve the energy conservation and waste reduction performance of offices and processes	✓
	▪ Continue to develop clean energy	Δ
	▪ Evaluate the development of green low-carbon products	Δ
	▪ E-Invoice use reached 90%	✓
	▪ Electronic operations for concentrated delivery by suppliers reached 90%	✓
	▪ Indicators that reached "Satisfied" in the customer satisfaction survey	✓
Targets in 2023	▪ Maintain in the Top 20% in the Corporate Governance Evaluation	
	▪ Completed the internal audit plan approved by the Board of Directors, and effectively improved 100% of deficiencies	
	▪ Evaluate the effectiveness of the internal control system	
	▪ We fulfilled our obligation of information disclosure and were not fined for any violation of this obligation	
	▪ Continue to strengthen supervision mechanisms of the Board of Directors and Sustainable Development Committee for climate-related risks and opportunities	
	▪ Continue to promote AI carbon reduction applications, circular economy, and low carbon transformation of processes	
	▪ Continued promotion of paperless operations further reduces company-wide paper consumption in 2023 by 30% compared to 2022	
	▪ Make progress in the environmental impact assessment for the 6 wind turbines outside Mailiao Plant, and expand solar power plants in factory areas, on the rooftop of offices, and in parking lots	
	▪ e-Invoice use reached 90%	
	▪ Electronic operations for concentrated delivery by suppliers reached 90%	
	▪ Indicators that reached "Satisfied" in the customer satisfaction survey	
Mid-term and Long-term Goals	▪ Ensure that corporate governance operations strictly comply with regulatory requirements, that the Company's material information is immediately and transparently disclosed according to regulatory requirements, and that plans are made in advance to achieve the goal of steady operation	
	▪ To achieve sustainable development, besides ensuring the competitiveness of the Company's current products and further developing eco-friendly green products, we are also searching for new investment and development opportunities	
	▪ Work closely with supply chain partners to build a sustainable supply chain while maintaining quality and lower risk	

✓ Achieved Δ Ongoing

1.1 Corporate Governance

Management approach (MA) for material topic

Material topics	Material topic management policy
Corporate Governance	The Board of Directors is the highest level governance unit of FPCC and complies with the law, Articles of Incorporation, and internal control system, so that corporate governance affairs are handled in accordance with regulations, and stakeholders can access important information on the Company in a timely manner.

Description of positive/ negative impact		Good corporate governance can effectively improve business performance, core competitiveness, and the implementation of corporate social responsibility, and also avoid making the wrong decisions, corruption, and failure of internal controls that may damage the Company's value or shareholders' interests. ○ Improve company performance ○ Fulfill corporate social responsibility ○ Increase company value and protect the rights and interests of shareholders △ Corruption incidents △ Lowers the Company's resilience to market and geopolitical risks ○ positive △ negative		
Management actions		Operations of functional committees	Internal control and audit	Strengthen information disclosure and transparency
Results tracking		▪ A total of 6 board meetings, 5 Audit Committee meetings, and 2 Remuneration Committee meetings were convened in 2022 ▪ Completed board performance evaluations and results show that meetings are operating smoothly, recognizing its implementation performance ▪ Established the Sustainable Development Committee to supervise tasks related to sustainable development; the committee convened 2 meetings in 2022	▪ Completed 52 audit plans, including lending to others, internal control and audit, related party transactions, and land management; improvement of deficiencies reached 100% ▪ Amended the Corporate Governance Code of Conduct, Procedures for Handling Material Inside Information, and Guidelines for the Prevention of Insider Trading, in order to strengthen operations of functional committees and internal controls	▪ Investor conferences are held on a quarterly basis to describe the Company's operating status; a total of 4 investor conferences were held in 2022 ▪ We reported information and disclosed material information in accordance with the law, and was not fined for any violation of this obligation in 2022
Stakeholder engagement	Stakeholder group	▪ Investors/shareholders	▪ Government agencies	▪ Employees
	Communication channel and frequency	▪ Shareholders' meeting (1 times/year) ▪ Investor conference (4 times/year) ▪ Information reporting/ Material information (Disclosure in accordance with the law) ▪ Email/phone number (Whenever they occur)	▪ Official documents/e-mail/ phone number (Whenever they occur) ▪ Business promotion event (As needed) ▪ Announcement of laws and regulations (As needed)	▪ Complaint form ▪ Establishing Systems and Rules ▪ Self-discipline document signing
	Engagement results	▪ Investors/shareholders obtain information on the Company's operating status, material events, and industry development in a timely manner	▪ Implement the contents of laws and regulations and adjust the Company's business policy and plans in coordination with government policy	▪ Strengthen employees' concept of professional ethics to implement ethical corporate management and prevent corruption cases

Organizational Structure, Ethical Corporate Management

Company Overview

Formosa Petrochemical Corporation (FPCC) was founded in 1992 and deals mainly with the production and sales of oil products and fundamental petrochemical materials. It was the first private oil refining business in Taiwan to produce and sell oil products such as gasoline and diesel. Its naphtha crackers, on the other hand, produce fundamental petrochemical materials such as ethylene, propylene, and butadiene, with a throughput scale topping the domestic list. In addition, there are the qualified heat and power combined co-generation system to supply various public utility fluids such as steam and power at its facilities in the Formosa Plastics Group Mailiao Industrial Park.

▪ Company Name	Formosa Petrochemical Corporation	▪ Date of Establishment	April 6, 1992
▪ Listing Date	December 26, 2003	▪ Capital	NT$95,259,596,520
▪ Number of employees in 2022	5,218 employees	▪ 2022 Consolidated Revenue	NT$848,048,496 thousand dollars
▪ Location of operations	Headquarters: No. 1-1, Formosa Plastics Group Industrial Zone, Zhongxing Village, Mailiao Township, Yunlin County Taipei Office: 4F, No. 201, Formosa Building, Dunhua N. Rd., Songshan Dist., Taipei City		
▪ Credit rating	Taiwan Ratings: twAA; Standard & Poor's BBB+		

Note: As of December 31, 2022

台塑企業 FORMOSA PLASTICS GROUP

FPCC is a member of the Formosa Plastics Group Identification System. The corporate identification system features a stylized chain as its common symbol, indicating the horizontal and longitudinal connections, assistance and cooperation, harmony and smooth fusion among all members, and is symbolic of the consistency, sustainability, and continuous development power of the Formosa Plastics Group.

Business Philosophy

The Formosa Plastics Group has now developed into a comprehensive industrial group, and is active in a variety of fields. The Formosa Plastics Group has now developed into a comprehensive industrial group, and is active in a variety of fields. The momentum that drives the organization to constantly expand itself, grow, and become strong is exactly the underlying spirit that its two founders, Mr. Yung-Ching Wang and Mr. Yung-Tsai Wang, have emphasized and lived up to: hard work, being down-to-earth, aiming at perfection, sustainable management, and giving back to society.

Hard Work and Being Down-to-earth

Diligence is demonstrated in applying intelligence, and simplicity is a down-to-earth attitude at work. Improvements are sought in honor of the spirit to get to the bottom of everything and every effort is made to seek reasonable management.

Aiming at Perfection

In a rapidly changing external environment, enterprises have to get better and better in rationalizing their operation and management and realize innovation and development by making breakthroughs in the midst of continuous improvements.

Giving Back to Society

In honor of the theme that you must put back into society what you have taken out, business in the public interest such as medical care and education is prioritized for investment of corporate resources in the pursuit of overall mankind welfare.

Sustainable Management

Individual operations are in explicit compliance with rules and regulations to improve quality and efficiency at work. Long-term profit-making potential is strengthened through rationalized management and quality fair-priced raw materials are provided to customers, creating a win-win and robust partnership.

Governance Structure and Sustainable Governance Organization

The Board of Directors is the highest level governance unit of FPCC, and Bao-Lang Chen serves as the chairman. To ensure clear responsibilities in the organizational structure and the independence of company operations, the chairman does not hold any managerial positions. For the Company's organizational structure, please visit the company website (http://www.fpcc.com.tw/tw/about/organization). The Board of Directors passed the Corporate Social Responsibility Code of Practice in 2020 to set forth the CSR policy, system, management approach, and communicate and disclose information to stakeholders. Please refer to the company website (http://www.fpcc.com.tw/tw/corporate/policies) and annual report for the shareholders' meeting.

Role of Formosa Petrochemical Corporation's Board of Directors

Purpose of the Board of Directors	▪ Establish the Company's sustainable development vision and ensure that the Company maximizes value within a reasonable risk appetite ▪ Supervise manager to ensure operational effectiveness and efficiency goals are achieved ▪ Listen to stakeholders' needs and evaluate the reliability, immediacy, and transparency of reporting, as well as compliance with laws and regulations.
Sustainable development vision	▪ Implement corporate governance, develop a green environment, maintain social welfare, and strengthen disclosures of CSR information to achieve the goal of sustainable development
Strategies and policies for facing ESG	▪ Authorize senior managers conduct evaluations based on the principle of materiality according to the vision established by the Board of Directors, and periodically report the implementation status of ESG to the Board of Directors to ensure that policies are implemented

To promote and implement the vision of sustainable development, FPCC's Board of Directors approved the establishment of a Sustainable Development Committee in May 2022, and appointed the President's Office as the staff department responsible for handling tasks related to risk management, corporate social responsibility, and climate change adaptation. Multiple smooth communication channels are used to understand what stakeholders are concerned about and their needs, and serve as an important basis for establishing the corporate sustainability policy.

Organizational Chart of the Sustainable Development Committee

Board of Directors

Sustainable Development Committee

Staff departments: President's Office

Management Division, Technology Division, Safety and Health Management Office, Water and Energy Saving Group	Personnel division	Operation Analysis division
Environmental issues	**Social issues**	**Governance issues**
Climate change, water resource management, GHG management, energy management, air pollution management, waste management, supplier management, and hazard risks	Human rights, source of talent and development, workplace safety and health, social engagement, and giving back to society	Corporate governance, strategic operations, code of ethics, regulatory compliance, information security, and financial risks

Board of Directors, Audit Committee, Compensation Committee

Overview of Board Operations

15 Members for the Board of Directors

6 Number of meetings held in 2022

94% Attendance rate

FPCC directors are elected to three-year terms via the candidate nomination system. The Corporate Governance Best Practice Principles was established to ensure the Board of Directors diversity policy is implemented and that directors have the knowledge, skills, competencies, and conflicts of interest avoidance mechanisms required to perform their duties. Please see the company website (http://www.fpcc.com.tw/tw/corporate/policies).

The Board of Directors currently has 15 members with an average age of 69 years old. Directors on average serve about 12 years at FPCC, in which 6.7% of directors are female, providing the most suitable strategies and guidance for the Company's development. To improve directors' professional competencies, legal literacy, and sensitivity to sustainability trends and green technology development, FPCC arranges courses for directors to gain new knowledge each year. For details on the academic background and experience of directors, their professional knowledge and independence, continuing education, and shareholding, please refer to our website (http://www.fpcc.com.tw/tw/corporate/board-of-directors) and the annual report disclosed at shareholders' meetings.

The Board of Directors, in principle, meets at least once a quarter. A total of 6 board meetings were held in 2022 with an attendance rate of 94%. The Board of Directors established the "Board of Directors Performance Evaluation Guidelines" in 2020. Annual performance evaluations are conducted for the Board of Directors and functional committees. Performance results of the overall Board of Directors and individual directors were excellent, and were submitted to the Board of Directors on December 8, 2022.

Company	Number of directors (including independent directors)	Independent directors		Female directors		Average age	Average period that directors serve at FPCC
		Number of seats	Percentage	Number of seats	Percentage		
FPCC	15	3	20%	1	6.7%	69 years' old	12

The shareholding ratios of directors and supervisors at FPCC has been around 76% for the past five years, which is far higher than the FSC's minimum requirement of 2% for public companies of the same size. Meanwhile, the shareholding pledge ratio of directors and supervisors is 0%. These ratios show that the Board of Directors and shareholders of FPCC are highly correlated in terms of interest and the former is thus trustworthy for the latter. The shareholding structure is disclosed on the company website (http://www.fpcc.com.tw/tw/corporate/ownership).

Shareholding ratios of directors/supervisors

76%

Shareholding pledge ratios of directors and supervisors

0%

Overview of Audit Committee Operations

FPCC's Audit Committee is formed by 3 independent directors. The Audit Committee supervises the Company's business condition and financial position based on the principles of integrity and independence. It helps the Board of Directors carry out supervisory and other duties as set forth in the Company Act, the Securities and Exchange Act, and other related laws. Detailed data in Appendix ESG performance data – Economic.

2022
● The Audit Committee convened **5** meetings
● Actual attendance rate reached **100%**

Overview of Operation of the Compensation Committee

The Remuneration Committee's 3 members are all independent directors. The committee is responsible for evaluating the remuneration policy and system for the Company's directors and managers, and provides the Board of Directors with suggestions. This prevents remuneration policies from guiding directors and managers to violate business ethics and engage in behavior that exceeds the Company's risk appetite. Detailed data is provided in the Appendix ESG performance data – Economic.

2022

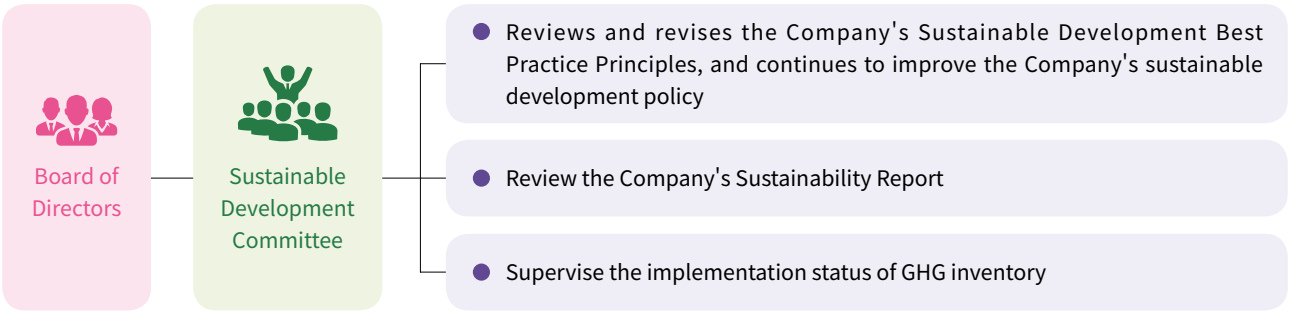
- The Remuneration Committee convened **2** meetings
- Actual attendance rate reached **100%**

Operating status of the Sustainable Development Committee

To meet requirements of the Corporate Governance Evaluation, the Sustainable Development Committee has 5 members and is responsible for reviewing the Company's sustainable development policy and management approach. The committee also supervises the implementation of tasks related to sustainable development, in order to strengthen the Company's resilience to climate change risks.

2022

- The Sustainable Development Committee convened **2** meetings
- Actual attendance rate reached **100%**



Compensation for directors and managers

Currently, only independent directors receive fixed compensation on a monthly basis. All directors do not receive variable compensation, and only receive transportation subsidies based on their actual attendance in Board meetings. Annual compensation for managers mainly includes the salary, incentives, and bonuses in addition to the pension fund and the welfare fund. The chairperson rates managers' overall performance and attainment of personal "annual objectives at work" within the scope of responsibilities, such as business performance, labor safety incidents, and energy and water conservation, so as to ensure that executives understand and work together to accomplish corporate strategic goals and to link the incentive system to the personal performance of supervisors as well as the overall corporate performance. Detailed data in Appendix ESG performance data – Economic.

Strengthening Information Transparency

FPCC's measures to strengthen two-way communication with stakeholders:

- Information is regularly and irregularly disclosed on the Market Observation Post System in accordance with the law. All information was disclosed in accordance with the law in 2022, and we were not fined by the Taiwan Stock Exchange and Financial Supervisory Commission for violating our reporting obligation.
- Attend 4 investor seminars each year.
- Continue to optimize the Company website and strengthen information disclosures, including disclosing the human rights policy in the corporate governance section, employee compensation and salary adjustment mechanism, and implementing ethical corporate management education.
- Set up an Investor Section (https://www.fpcc.com.tw/tw/ir/material-information) on the company's website to provide investors with related information, appoint a dedicated contact person to answer related questions.
- Appoint a spokesperson as the liaison with shareholders and institutional investors.

Concrete results are reflected in each accreditation performance review. In the Information Disclosure and Transparency Ranking System of the Taiwan Stock Exchange, FPCC has secured a Grade A or higher rating for ten consecutive years, starting from the 3rd session of the ranking system in 2006. In addition, in the first corporate governance accreditation that started in 2014, FPCC ranked in the Top 20% for eight consecutive years among listed companies that took part in the rating. Improvement are made in response to evaluation results and disclosed in the annual report for the shareholders' meeting (http://www.fpcc.com.tw/tw/ir/shareholders-meeting).

Code of Conduct, Anti-corruption Policy, Internal Audit System

Code of Conduct

We established 17 rules and regulations, including the Corporate Governance Best Practice Principles and Ethical Corporate Management Best Practice Principles based on anti-corruption, prevention against malfeasance, and strict discipline, to ensure that the business philosophy is upheld. We also organize education and training, sign self-discipline documents, and provide grievance channels in coordination. The regulations are disclosed in the corporate governance section and investor section of the Company website (http://www.fpcc.com.tw/tw/corporate/policies).

Anti-corruption policy

Anti-corruption	Accepting invitations to social events and financial offers by manufacturers is explicitly prohibited in the internal system, and anyone found with fraudulent personal gains, embezzlement of public funds, receipt of briberies, or commissions will be dismissed.
Prevention against malfeasance	The periodic rotation policy is enforced comprehensively among people involved in business operation, procurement, warehousing of final products, construction supervision, and budgeting, thereby preventing improper conduct with vendors.
Strict discipline	Employees violating regulations will absolutely not be pardoned once it is found to be true and their direct supervisors will be punished together, depending on the circumstances, for warning purposes and to earn public trust.

Complaints channel

- Fill out an application form
- Employee Complaint Operating Guidelines
- Regulations for Reporting Unlawful and Unethical Conduct of Internal and External Personnel

Framework of the Code of Ethics

- Anti-corruption
- Compliance with labor laws
- Environmental protection
- Protection of intellectual property rights
- Personal information and privacy protection
- Gender equality

Self-discipline document

- Signing the "Letter of Commitment"
- Compliance with the "Trade Secrets Act"
- Individual "Work Rules" Manual
- The Company's "Ethical Corporate Management Best Practice Principles"
- Corporate Governance Best Practice Principles
- Personnel Management Regulations
- Self-discipline Conventions
- Work Ethics Guidelines for directors and managers
- Regulations for the Prevention of Insider Trading

Training category

- New employee training
- On-the-job training
- Basic job training
- Professional job training
- Professional job re-training
- Reserve management training
- High-level management training course
- Physical face-to-face course
- Online course

Execution

Based on the policy described above, we conducted a corruption risk assessment for all of our business locations in 2022, and found there was no severe corruption risk. In additional to physical courses, we further promoted online training courses and sent information on online courses to all employees, in hopes further promoting online courses.

2022

Corruption risk assessment
No material corruption risk

Internal Audit

FPCC has computerized all operations, and uses technology-based management to link together six major functions, namely personnel, finance, business operation, production, materials, and engineering. The effectiveness of the internal control system is evaluated by the Board of Directors each year, and a statement of the internal control system's effectiveness is issued.

According to the 2022 audit plan approved by the Board of Directors, items to be audited include sales and receivables, purchase and payment, production, salaries and wages, financing, fixed assets, computer information, and investment in a transaction cycle – 52 items in total, in order to accomplish goals relating operational effectiveness and efficiency, reliability of financial reports, and compliance with applicable laws. Results of the actual audit showed 11 areas with deficiency and most of them had to do with documentation or incomplete data; they were not major deficiencies. Internal control system deficiencies and abnormalities found in the inspection were already included in the produced audit report and have been followed up periodically, and have been completed corrected as of now. The improvement rate is 100%. Detailed data in Appendix ESG performance data – Economic.

Implementation status of internal audits

52 items
Audit projects

100%
Improvement completed

Intellectual Property Management

The Company established a virtual laboratory and installed an R&D digital management system to accelerate the development of new high-value and differentiated products or technologies. We are actively developing Industry 4.0 and AI production, and established the "Regulations Governing Incentives for Research and Development Results of Research and Development Personnel", specifying incentives for R&D of key products and patent licensing, in order to encourage R&D personnel to actively engage in innovative R&D that will further enhance the Company's competitiveness.

With regard to patent and trademark management, the Company established "Computerized Operations for Patent and Trademark Management" to manage related applications, review, and implementation progress. This allows us to monitor the progress of patent and trademark cases, and handle extensions of period of exclusive use for trademarks according to schedule. Furthermore, the Company requires all employees to issue a statement that they will respect intellectual property rights and also provides training courses on regulations governing intellectual property rights, so as to improve employees' understanding of intellectual property rights.

The Company obtained a total of 14 trademarks (56 certificates) in 2022.

1.2 Operational Performance

Risk and Crisis Management

Management approach (MA) for material topic

Material topics	Material topic management policy
Risk and Crisis Management	We will respond to and analyze business risks in a timely manner, and understand the probability and subsequent impact of the risks to implement appropriate risk aversion strategies.

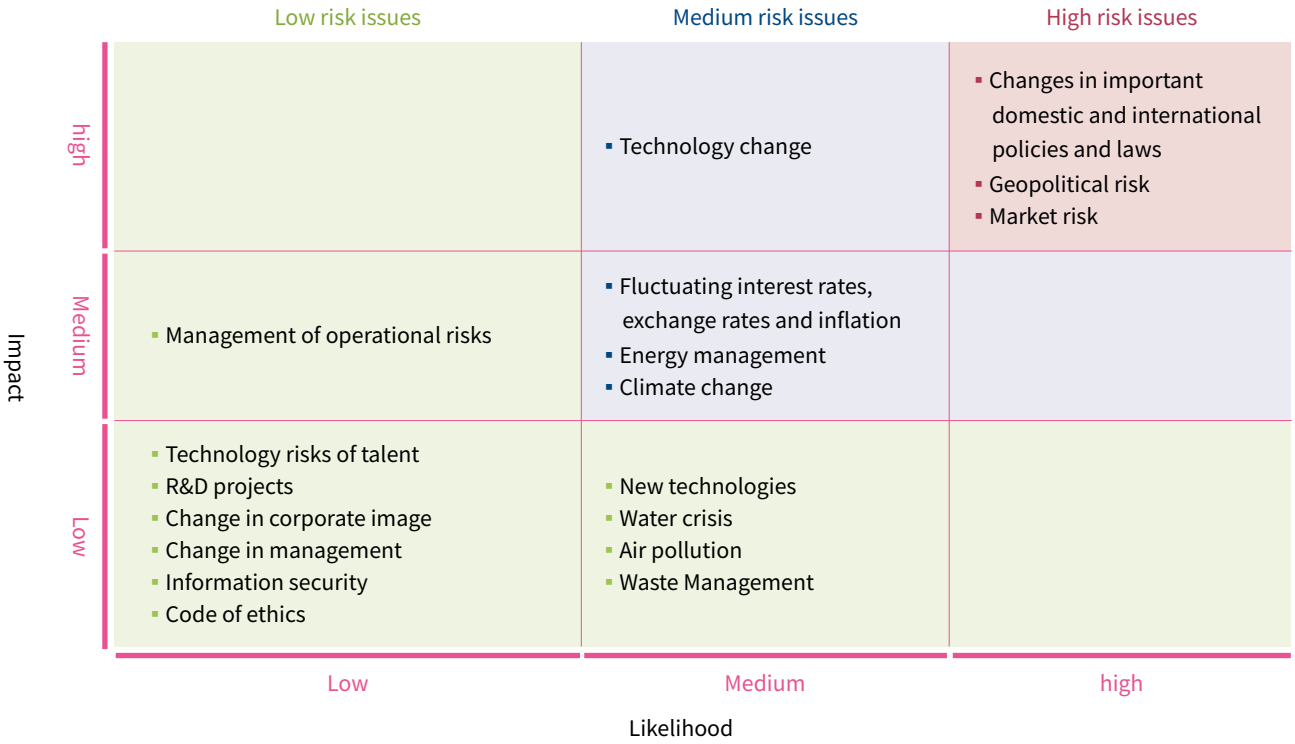
Description of positive/ negative impact		If potential operational risks are not identified and response strategies are not formulated in advance, the Company will pay corresponding costs when a risk event occurs in the future. ○ Identify the potential opportunities brought by risk events △ A risk event impacts operations and causes financial losses ○ positive △ negative	
Management actions		Risk Identification and Formulation of Countermeasures	The status of management is periodically reported to the Board of Directors
Results tracking		▪ Weekly meetings are convened to review and evaluate the Company's business situation, including various risks (strategic risks, operational risks, financial risks, hazardous risks, information security risks, and other risks) convened 2 meetings in 2022	▪ The operating status of risk management was reported to the Board of Directors on May 31, 2022.
Stakeholder engagement	Stakeholder group	▪ Investors/shareholders	▪ Government agencies
	Communication channel and frequency	▪ Shareholders' meeting (1 times/year) ▪ The Company's Annual Report (1 times/year) ▪ The Company's official website (Whenever they occur)	▪ Official documents/e-mail/phone number (Whenever they occur) ▪ Business promotion event (As needed) ▪ Announcement of laws and regulations (As needed)
	Engagement results	▪ Understand the Company's response measures for various risks	▪ Continue to track the formulation of major policies and changes in laws, in order to make timely adjustments to the Company's operational strategy and mitigate the impact of related risks

Risk management system

FPCC continues to observe trends in global risks to achieve sustainable development. The Board of Directors passed the Risk Management Regulations on December 10, 2020, in which FPCC's risk management is mainly carried out by the Sustainable Development. The committee identifies potential business risks and jointly evaluates the probability and impact of the risks together with related business departments based on the nature of the risks, appropriately informing management to adjust the Company's business strategy.

Pursuant to the Risk Management Regulations, our risk management system shall include risk identification, risk analysis and assessment, risk management and response, risk management and response, and risk information communication and reporting.

Risk analysis matrix



Risk management and response

Response measures for issued that were assessed to have high risk are disclosed below. Please refer to FPCC's official website (https://www.fpcc.com.tw/tw/corporate/risk- management) and annual report for shareholders' meeting for response methods to other risks.

Risk assessment item	Risk management unit	Risk review	Response measure
Risk of changes in important domestic and international policies and laws	President's Office, Legal Office	▪ The Company is significantly affected by the government's energy policy, and the Petroleum Administration Act, Electricity Act, and various environmental protection related laws and regulations all have a significant effect on the Company	▪ FPCC remains highly attentive to any changes to domestic and international political and economic situations, establishment of major policies, and regulatory changes, and arranges staff to receive professional training if necessary
Geopolitical risk	President's Office	▪ The Company's main source of raw materials is major oil producing countries in the Middle East, which occasionally has the risk of supply being cut off and shipping risks resulting in unstable raw material supply. We have signed sales contracts with major customers, which are relatively concentrated	▪ In response to the risk of purchase concentration, we utilize refining technologies and processes that allow flexible feed, and sign long-term contracts with foreign suppliers to disperse risk ▪ With regard to sales risks, we periodically respond to customers' credit checks for domestic sales, which has been stable; for exports, we make adjustments based on the production and sales of oil refineries and the international market for oil products
Market risk	President's Office, Manager's Office at each business department	▪ Mainly due to the change in energy use structure, such as more energy-efficient electric vehicles and regular vehicles, and many competitors have gained the support of policies from their local government, increasing the difficulty of competition	▪ We are seeking to increase the value of products, diversify products, and find new opportunities for investment in other regions, so as to diversify our market risk

Risk supervision and review

We established risk monitoring mechanisms and performance assessment indicators for risk assessment results. This is to ensure the efficiency and benefits from implementing risk management, and suitable adjustments are made in a timely manner to continue making improvements.

Risk information communication and reporting

With regard to the Company's risk management policy and implementation status, besides submitting risk information management reports to the authorized supervisor, we convene risk management meetings for reporting, review, and supervision of risk management. When necessary, we report major risks to the Board of Directors based on the attributes and impact of the risk. Our risk management information is disclosed on the Market Observation Post System, FPCC's official website, and the annual report in shareholders' meetings for stakeholder communication in accordance with related laws and regulations.

Economic Performance

Management approach (MA) for material topic

Material topics	Material topic management policy
 Economic Performance	Our operations focus on steady production, and we make flexible adjustments to production and sales based on the market situation, aiming to maximize shareholder equity and maintain stable finances. We do not engage in unrelated financial operations to maintain the Company's stability

Description of positive/negative impact		The Company fulfills its corporate social responsibility while pursuing sustainable operation and long-term profits. We actively communicate with stakeholders to ensure that our business strategies and future development meets expectations ○ Shareholders receive stable return △ Reduces capital expenditures and slows the Company's growth ○ positive △ negative	
Management actions		Management reviews the business situation on a monthly basis and adjusts production and sales based on the market situation	Continuous to invest in R&D to improve technologies
Results tracking		▪ Steady dividends each year	▪ R&D expenses was NT$764,406 thousand
Stakeholder engagement	Stakeholder group	▪ Investors/shareholders	▪ Employees
	Communication channel and frequency	▪ Shareholders' meeting (1 times/year) ▪ Investor conference (4 times/year) ▪ Email/phone number (Whenever they occur) ▪ Market Observation Post System (Whenever they occur)	▪ Employee Welfare Committee (6 times/year) ▪ Labor-Management Meeting (6 times/year) ▪ Labor Union (4 times/year) ▪ Discussions (As needed)
	Engagement results	▪ Investors/Shareholders are able to obtain the latest information on company operations, and suitable channels are provided for investors/shareholders to ask questions and exchange opinions	▪ Employees' year-end bonus and a portion of their efficiency bonus is linked to FPCC's business performance, sharing profits with employees while driving employees to fulfill their duties and improve the Company's business performance

Company Business Model, Products, and Production Capacity

FPCC's business items:

FPCC is located at the upstream of the industrial chain; gasoline, diesel, and aviation fuel produced by oil refining plants are sold domestically and overseas; ethylene propylene, and butadiene produced by naphtha crackers are mainly supplied to downstream companies in the group; the co-generation plant's primary goal is to provide steady and adequate supply of electricity and steam to meet the needs of the Sixth Naphtha Cracker. For details on the Company's supply of main raw materials and main suppliers/ customers, please refer to the contents disclosed in the Company's annual report for the shareholders' meeting (http://www.fpcc.com.tw/tw/ir/shareholders-meeting).

FPCC's production capacity and organizational scale in 2022:

Business Department	Refining business	Olefins business	Utilities business
Main production capacity	Daily volume refined of crude oil **540** thousand barrels	Ethylene **2,935** thousand tons/year	Power generated **2.75** GW

2022 Production Volume

In terms of production volume, we maintained stable production throughout 2022. Besides improving the utilization rate of production capacity in coordination with positive investment spread of exported oil products, RDS#2 was repaired and began production, and refining volume increased 10.7% compared with 2021. For details, please refer to our website (http://www.fpcc.com.tw/) and the annual report disclosed at shareholders' meetings.

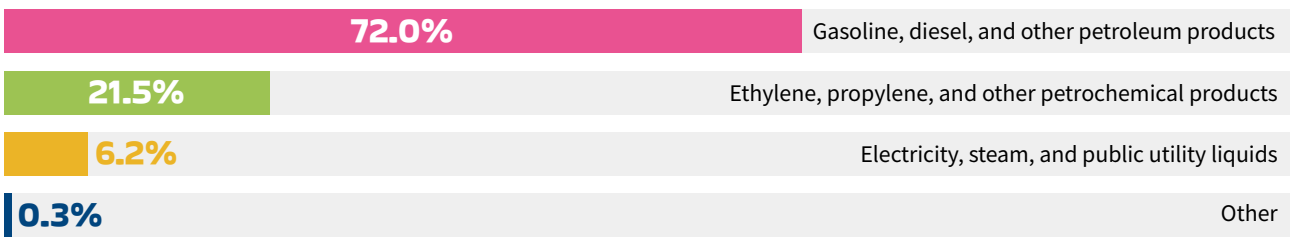
Refining volume

Increased by **10.7%** compared to 2021

Main products and services:

FPCC's main products and services include gasoline, diesel, and other petroleum products, ethylene, propylene, and other petrochemical products, and public utility fluids. For details on products and services, please refer to our website (http://www.fpcc.com.tw/) and the annual report disclosed at shareholders' meetings.

Key products / As a percentage of revenue



Assessment of the impact and hazard of products to customer health:

All products of FPCC comply with the National Standards of the Republic of China (CNS), and passed the inspection of the Bureau of Standards, Metrology and Inspection. We strictly assess and manage products from raw materials until products are delivered. Please refer to the company website for related inspections and certification (http://www.fpcc.com.tw/tw/guarantee).

Crude oil import

- Crude oil assessment, catalyst assessment

Process quality control

- Engine testing : Additive assessment, field test performance test, test bench dust accumulation and chassis power test
- Power test: Oil blending test, road performance test

Product bin leaves the factory

- Oil products pass all tests, real car and engine tests meet standards, quality must be verified through a filter and dehydrator when oil products leave the factory in bottles, and irregularly inspect oil tanks containing finished products.

Storage and transportation quality control

- Dedicated tanks for oil tankers, vehicle inspection before oil tankers are dispatched, seal oil tanks with lead for shipment, and GPS monitoring of vehicles

Gas stations quality control

- Oil tankers arrive at stations for sampling and inspection, regular quality inspections at gas stations, irregularly quality inspections at gas stations

Quality certified products and services:

We strive to provide high quality products and services. In oil products, we developed the new formula "95 Plus Lead-free Gasoline" through process improvement, as well as experiments and actual road tests conducted by an international engine laboratory. The new formula super diesel meets the standards for the highest level diesel used in Japan and Europe; food-grade white oil products 380N and 550N were certified by the JHOSPA; petrochemical products ethylene propylene, butadiene, IPM, PIPS, and DCPD obtained REACH Registration of Chemicals, which will aid product sales to the EU.

With regard to services, the Flow Calibration Laboratory at FPCC's Maintenance Center and the Gasoline and Diesel Engine Laboratory under the Refining Department both obtained the Chinese National Laboratory Accreditation (CNLA) certification, which certifies that the laboratories have technical capabilities and quality standards mutually recognized by international institutions. Once certified, test reports and calibration certificates issued by the laboratories can bear the certification symbol to prove applicable capabilities. For contents of products and services, please see the company website (http://www.fpcc.com.tw/).

Creative Thinking, Integrated Research and Development, Lower Risk

Individual facilities under FPCC are configured with their own process improvement department, where professional chemical engineering technicians are devoted to researching process improvements; they research and develop technologies to improve specific items so as to stabilize production, enhance the production volume, bring down costs, increase the production value, reduce energy consumption, and minimize pollution and emissions, among other goals to lower operating risks.

Operational performance

FPCC's consolidated revenue was NT$848,048,496 thousand in 2022, up 36.8% compared to 2021. Consolidated net profit before tax was NT$16,968,396 thousand, down 71.9% compared to the previous year. The decline in profits was mainly due to the policy to stabilize domestic prices and weak demand on petrochemical products eroding profits, and return on equity and dividend yield were also lower compared with the previous year.

1.3 Creating a Green Future

Management approach (MA) for material topic

Material topics	Material topic management policy
Green Transition and Investment in Innovation	Combine the trend of circular economy and green processes, continue to improve production efficiency and product value, and improve energy use efficiency through clean energy investments to lower external environmental costs and achieve the vision of sustainable development

Description of positive/ negative impact		Green transition and investment in innovation enhances the Company's competitiveness and enables the Company to respond to changes in regulations and trends related to climate change. However, it may cause a change in the Company's production and sales structure, and some technologies are not yet mature or have not reached commercial scale, so it will have a negative impact on short-term business performance. ○ Strengthens resilience to climate risks or regulatory changes ○ Increases production efficiency and product value and diversifies revenue △ Short-term impact on business performance ○ positive △ negative		
Management actions		Increase production efficiency	AI applications and digital transformation	Diversify the energy supply structure
Results tracking		▪ Completed 250 process improvements in 2022, reduced carbon emissions by 195 thousand tons CO_2e/ year, reduced electricity consumption by 32.89 million kWh/year, and reduced water consumption by 360 thousand tons/year	▪ Completed a total of 23 AI carbon reduction projects and reduced carbon emissions by 246 thousand tons CO_2e/year ▪ Promotion of paperless operations through the electronic signature platform reduced company-wide paper consumption in 2022 by 30% compared to 2021	▪ 5,591 tons of refuse derived fuel was used to replace a portion of coal use and reduced carbon emissions by 4,237 tons CO_2e/year ▪ Continue to make progress in the installation of a wind power plant outside the Mailiao Plant, inventorize all land, plants, and dormitories of the Company, and plan the construction of solar power plants
Stakeholder engagement	Stakeholder group	▪ Investors/shareholders	▪ Government agencies	▪ Experts and scholars
	Communication channel and frequency	▪ Shareholders' meeting (1 times/year) ▪ Sustainability Report (1 times/year) ▪ TCFD Report (1 times/year) ▪ ESG section of FPCC's official website (As needed) ▪ Email/phone number (Whenever they occur)	▪ Official documents/e-mail/ phone number (Whenever they occur) ▪ Business promotion event (As needed) ▪ Announcement of laws and regulations (As needed)	▪ Industry-academia collaboration (As needed) ▪ Academic exchanges and conferences (As needed)
	Engagement results	▪ FPCC immediately updates the official website if there are any major changes to its policies or sustainability measures. Investors/ Shareholders can also understand the Company's sustainability performance and mid-term and long-term sustainability plans through the Sustainability Report and shareholders' meetings.	▪ Stay up-to-date on changes in government policy or laws related to industry and commerce, and exchange opinions through various channels, such as official documents, to dynamically adjust FPCC's sustainability strategies	▪ Engage in exchanges with experts and scholars in different fields through various channels, and combine FPCC's practical experience with the professional knowledge of experts and scholars to optimize the Company's sustainability strategies and production efficiency, forming a positive cycle for green innovation

Meaning to FPCC and management approach

The economic outlook is still full of uncertainties due to the potential recession brought by inflation and rising interest rates, as well as the geopolitical risks brought by the Russo-Ukrainian War and deteriorating U.S.-China relations. To maintain FPCC's leadership, we have monitored the progress in clean technology and industry innovations, and comprehensively evaluated market trends, investment conditions, and expected benefits according to internal investment management regulations. We conduct rolling reviews of investment results to protect stakeholders' interests while obtaining environmental benefits.

Selection of investment items

After referencing internal and external industry trends, we selected suitable green investment targets for environmental impact and investment return assessments.

Green action practices

Implement investment projects while giving consideration to both environmental benefits and investment returns, in order to maximize synergies

Sustainable experience feedback

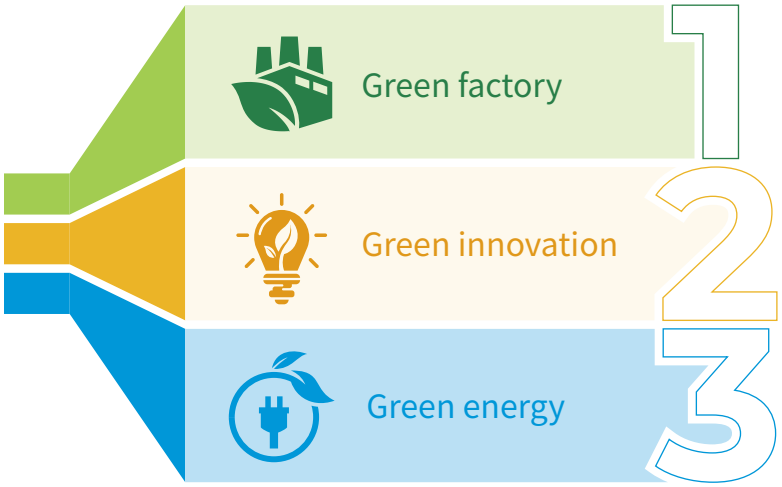
Evaluate if the benefits of investment projects match the Company's ESG goals, and take related experience and results into consideration for future investments

Investment results tracking

Continue to track the implementation status of investment projects, and ensure that the implementation process and results meet environmental and economic goals

The Company has dedicated years of effort to AI process optimization, and has made eco-friendly improvements. We have focused on process optimization and circular economy to improve the efficiency of resource use and mitigate environmental impact. In response to the trend of environmental protection in recent years, we further planned an energy conservation and carbon reduction path and searched for more active and comprehensive environmental measures, including green factory, green energy, and green innovation.

Clean investment opportunities



Green factory

Item	2022 Performance	Short-term plans (1 to 2 years)	Mid-term plans (3 to 5 years)	Long-term plans (5 years and above)
Smart factory	▪ Completed a total of 23 AI carbon reduction projects and reduced carbon emissions by 246 thousand tons CO_2e/year	▪ The 22 ongoing AI carbon reduction projects is expected to reduce carbon emissions by 76 thousand tons CO_2e/year ▪ Continue to deepen the application of AI, Internet, and automated production technologies in processes, and exert every effort in digital transformation to improve production/ sales efficiency		▪ Continue to expand the application of digital technology in production/ sales and management, and evaluate application scenarios and the necessity of adopting emerging technologies, such as 5G and blockchain
Circular economy	▪ Process waste gas recycling and reuse, reduce coal consumption by 33 thousand tons/year, and reduce carbon emissions by 22 thousand tons CO_2e/year ▪ Application for the GHG offset project for the "Low Temperature Thermal Electric System and Waste Heat Recycling Project" is currently being reviewed by the Environmental Protection Administration, and is expected to obtain 13 thousand tons CO_2e of carbon rights and reduce electricity consumption by 1.6 million kWh/year. ▪ Completed 36 projects to improve wastewater recycling and rainwater storage and use in 2022, which reduced water consumption by 360 thousand tons/year	▪ The 73 ongoing circular economy projects are expected to reduce water consumption by 2.362 million tons/year ▪ Plan the recycling of waste lubricant for reuse by blending in fuel after treatment, completed the design of recycling equipment and method, site selection, and detailed construction planning, and 201 tons of waste lubricant is expected to be reused each year after completion at the end of 2024 ▪ A MBR will be constructed at the end of 2024 and increase process wastewater recycling by 1.4 million tons/year ▪ Continue to develop process waste gas recycling and reuse methods, and carry out cross-plant resource and energy integration and reuse. ▪ Evaluate the recycling and refining of waste plastic/waste oil to produce green oil products. Trial production will begin after processes are selected in the future		▪ Continue to look into the recycling and reuse methods of process resources through industry-government-academia collaboration and international exchanges, in order to achieve carbon reduction, decontamination, and maximization of resource efficiency
Low carbon transformation of processes	▪ Completed 214 process improvements in 2022, reduced carbon emissions by 195 thousand tons CO_2e/ year, reduced electricity consumption by 32.89 million kWh/year, and reduced fuel consumption by 38 thousand tons/year	▪ The 447 ongoing process optimization and energy conservation and carbon reduction projects are expected to reduce carbon emissions by 594 thousand tons CO_2e/year, reduce electricity consumption by 330 million kWh/year, and reduce fuel consumption by 129 thousand tons/year. ▪ Continue to promote the reduction of process energy use, manufacturing process optimization, equipment efficiency improvement, and various energy conservation and carbon reduction projects at each factory	▪ Evaluate the feasibility of using low carbon raw materials (e.g. biomass naphtha) in processes ▪ Gradually expand the scope of carbon footprint from raw materials procurement to product sales, and reduce carbon emissions in the process	▪ Continue to implement process optimization and improvement, and use more efficient production technologies and equipment based on industry trends
Green buildings	▪ Use LED lights in offices and process areas, and improvement projects that have been completed can reduce electricity consumption by 580 thousand kWh/year	▪ There are currently 66 ongoing electricity and lighting system improvement projects, which is expected to reduce electricity consumption by 2.59 million kWh/year ▪ Gradually adopt the use of solar power in administrative areas and dormitories		▪ Implement improvements for building energy conservation, waste reduction, and eco-friendly goals according to the 9 indicators of green buildings

Green energy

Item	2022 Performance	Short-term plans (1 to 2 years)	Mid-term plans (3 to 5 years)	Long-term plans (5 years and above)
Solar power	▪ Inventorized all rooftops of plants and land owned by the Company, reviewed the feasibility of establishing solar power plants after comprehensively considering safety and benefits, and then include them in future plans for renewable energy	▪ Expected to complete 24 solar power plants with total installed capacity of 16MW and reduce carbon emission by 18 thousand tons CO_2e/year	▪ Expected to complete 20 solar power plants with total installed capacity of 15.7MW and reduce carbon emission by 17 thousand tons CO_2e/year	▪ 17 solar power plants with total installed capacity of 15.4 MW are currently being evaluated, and are expected to reduce carbon emission by 17 thousand tons CO_2e/year
Wind power	▪ Planned the installation of 6 wind turbines with total installed capacity of 25.2 MW outside the Mailiao Plant, which is expected to reduce carbon emissions by 50 thousand tons CO_2e/year; an environmental impact assessment is currently being conducted	▪ Continue to make progress in the environmental impact for the wind turbines ▪ Carry out geological exploration, airline survey, preliminary engineering design, and construction of wind power plants	▪ The wind power plant outside Mailiao Plant is expected to begin construction in the middle of 2024 and begin commercial operation at the end of 2025	▪ Continue to evaluate the feasibility of independently or jointly investing in onshore and offshore wind power plants
Hydroelectric power	▪ Complete the feasibility evaluation for constructing a 300 kW S-type hydroturbine at Luchangke canal and small hydroelectric power plant in Yunlin County	▪ Handle tasks related to the construction of a 300 kW S-type hydroturbine at Luchangke canal and small hydroelectric power plant in Yunlin County, including equipment requisition, land permit application, electricity purchase contract, and construction; the power plant is expected to be completed and begin electricity generation in 2025		▪ Continue to evaluate the feasibility of hydroelectric power applications at each site
Low carbon energy development	▪ 5,591 tons of refuse derived fuel was used to replace a portion of coal use and reduced carbon emissions by 4,237 tons CO_2e/year, while reducing waste	▪ Continue to conduct review and communicate with government agencies to increase the ratio of mass-burning of fuel derived from waste ▪ Evaluate the feasibility of mass-burning biomass fuel, such as wood pellets, from the Utilities Department		▪ Evaluate the feasibility of applying hydrogen power, including hydrogen power generation, hydrogen fuel cells, and related applications ▪ Evaluate the use of ammonia to replace a portion of coal used by the Utilities Department as fuel for electricity generation

Green innovation

Item	2022 Performance	Short-term plans (1 to 2 years)	Mid-term plans (3 to 5 years)	Long-term plans (5 years and above)
Carbon capture/ sequestration	▪ Evaluate the development and application of carbon capture/sequestration technology around the world, and engage in industry-academia collaboration in evaluating the potential of Yunlin's land-sea coastal border for geological storage of carbon dioxide and conducting seismic tests	▪ Continue to engage in industry-academia collaboration; carry out the construction, grouting, and monitoring of a small scale carbon storage testing site to evaluate the feasibility of developing commercial operations; related tasks include site selection, geological modeling, reflection profiling on land, drilling design, environmental assessment, and related construction work ▪ In the future, we will cooperate with the government's net zero path and strategy, continue to track global development trends in carbon capture/sequestration technology, as well as related reuse paths, and then gradually apply them when technologies are relatively mature		

Highlight case

Electric company cars and subsidies for employees to purchase electric scooters

Electric vehicles have benefited from rising environmental protection awareness and policy subsidies over the past year, and their market share significantly grew as a result. FPCC implemented a series of electric vehicle policies in coordination with related trends, in hopes of jointly fulfilling corporate social responsibility and carrying out carbon reduction work together with employees.

01

FPCC will mainly purchase and lease hybrid or electric vehicles as company cars. In the current stage, we will first replace company cars that 13 years or older with electric or hybrid vehicles, or even switch to energy-efficient transportation tools, such as electric bicycles. In the future, we will expand the use of electric vehicles as our plants construct complete infrastructure, such as charging stations.

02

To encourage employees to support the government's energy conservation and carbon reduction policy by replacing gas scooters with a relatively high impact on the environment, FPCC will subsidize the purchase of electric scooters by employees; NT$10,000 for the purchase of a new electric scooter and NT$16,000 for a trade-in for an electric scooter. FPCC assisted employees with new purchase/trade in of **122** electric scooters in 2022.

Popular heavy electric scooter in Taiwan Selling price of approximately NT$70,000

Local government, Industrial Development Bureau, and Environmental Protection Administration subsidy; in the case of Taipei City, the subsidy for trade-in is **NT$28,300** and the subsidy for new purchase is **NT$19,000**.

FPCC provides a subsidy of **NT$16,000** for trade-in and **NT$10,000** for new purchase.

FPCC employees only need to spend NT$25,700-NT$41,000 to purchase an electric scooter, which is approximately **37%–59%** of the selling price of an electric scooter.

Highlight case

Promotion of paperless operations

The Company began promoting paperless operations in 2019 to protect trees and improve its operational efficiency. Besides establishing an electronic signature platform to reduce paper use in the approval process, we continue to promote the use of electronic displays to view reports, statistics, and records.

01

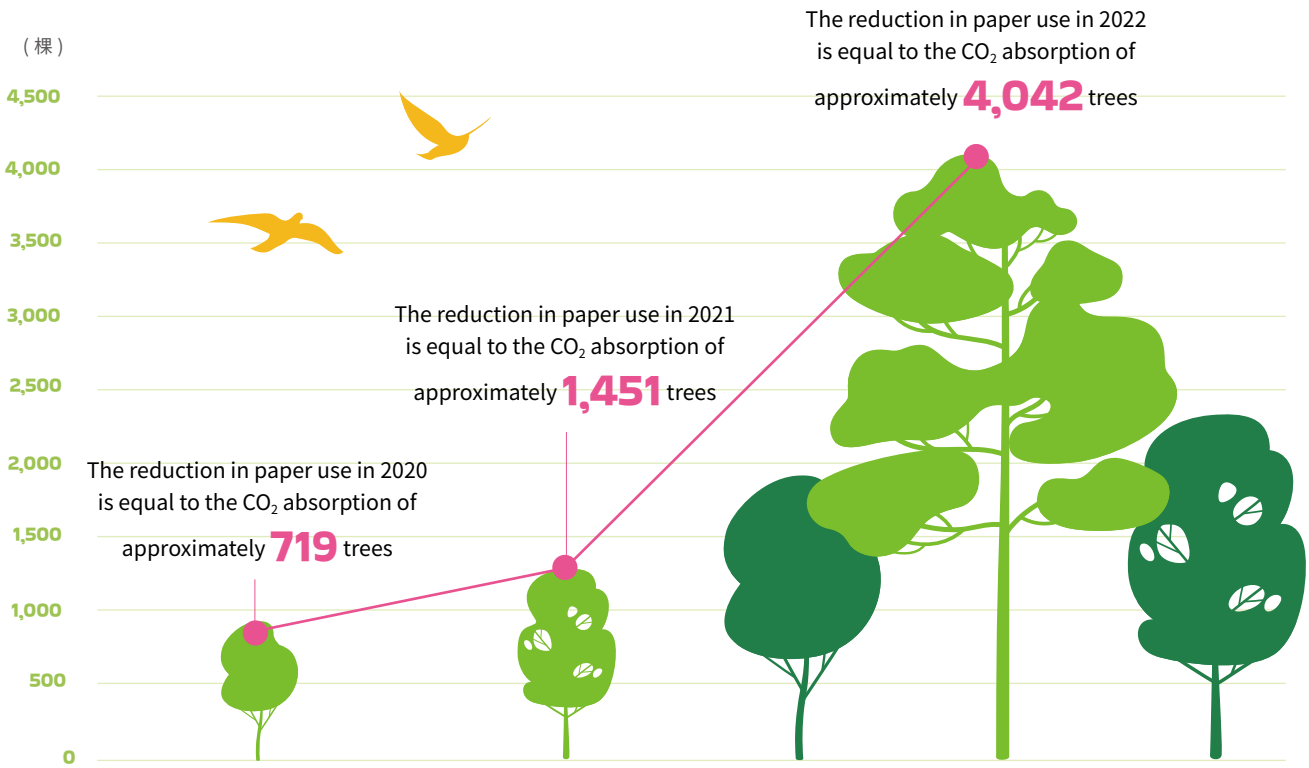
Reduce company-wide paper consumption in 2022 by **30%** compared to 2021 and by **41%** compared to 2019

02

Besides further expanding promotion of electronic signatures in 2023, the Company has planned 10 improvements, including a countersign function for each level, operations page, and filing, which are expected to further reduce company-wide paper consumption by **49%** compared to 2022

03

While optimizing current electronic signature tools and the administrative document process, we will also evaluate the application of electronic shelf labels in production, sales, and asset management



Note 1: According to the EPA Carbon Footprint Information Platform, the carbon footprint of one sheet of A4 size paper is approximately 8gCo_2e and the carbon absorption of each tree is 10 kg/year.

1.4 Partnership Maintenance

Management approach (MA) for material topic

Material topics	Material topic management policy
Stability of Imported Materials	Our main raw materials include crude oil and naphtha. Raw material purchase affects the steady operation and production cost of our processes. Hence, it is necessary to effectively maintain stable raw material supply.

Description of positive/ negative impact		If management is neglected, it may result in supply shortage or severe financial loss. ○ Stable raw materials prices allow production cost to be controlled ○ Stable raw material supply will allow processes to operate stably ○ positive △ negative		
Management actions		Documentary evaluation of suppliers/contractors	Require suppliers/contractors to fill out the Corporate Social Responsibility Commitment and questionnaire	Track responses to customer feedback
Results tracking		▪ Supplier/Contractors did not have any major risks, such as child labor, forced labor, freedom of association, and collective bargaining, in 2022.	▪ The commitment's response rate was 99% and the questionnaire's response rate was 97% in 2022.	▪ All indicators where higher than "Satisfied" in the 2022 customer satisfaction survey
Stakeholder engagement	Stakeholder group	▪ Investors / shareholders	▪ Suppliers/Contractors	▪ Customers
	Communication channel and frequency	▪ Shareholders' meeting (1 times/year) ▪ Investor conference (4 times/year) ▪ Email/phone number (Whenever they occur) ▪ Market Observation Post System (Whenever they occur)	▪ Complaint platform (Whenever they occur) ▪ Email/phone number (Whenever they occur)	▪ Email/phone number (Whenever they occur)
	Engagement results	▪ Stay up-to-date on the Company's operating status	▪ Suppliers expressed their opinions in 79 cases in 2022	▪ The result of the 2022 Customer Satisfaction Survey reached 4.6 points

Supply chain management

In the industrial value chain, FPCC has been keeping a desirable relationship with all partners. Our suppliers and contractors mainly include manufacturers, distributors, or dealers and engineering contractors (construction or outsourced design, etc.).

Management Policy

We have MAs in place for the management of suppliers and contractors. These policies fulfill quality and industrial safety requirements. In addition, efforts are made to require that manufacturers doing business with us meet environmental protection, industrial safety, and human right requirements in compliance with fair trade principles. Suppliers are required to 100% comply with the Company's suppliers and contractors' management policy. If suppliers are found to have a negative impact on the environment and do not comply with the Company's regulations, they will be rejected and rated for subsequent dispositions. It is our hope to jointly pay attention to and minimize environmental impacts associated with operations with the value chain, and help each other on the road to sustainability.

Raw Materials Procurement Management Policy

Local procurements accounted for 7% of the Company's total procurement amount in 2022 due to the special nature of the industry, which relies on imports for the main raw materials (crude oil, naphtha), accounting for 90% of all procurements. If the main raw materials are excluded, local procurements account for 66% of procurements. Hence, raw material procurement has a massive effect on the Company, and the Company has adopted the following methods to maintain stable raw materials supply:

- Raw materials import: FPCC, with our optimal refining techniques and sufficiently flexible processes, can purchase different types of crude oil from different oil producing countries. We have entered into long-term purchase agreements with overseas oil and coal suppliers to diverge risks
- Development of diversified feed: We replaced part of naphtha operations with LPG, and minimized our dependency on naphtha. This helps properly mitigate the effects of an unstable supply of raw materials and controls our material purchase costs
- Adjustment of own capabilities: Ensures stable supply for processes

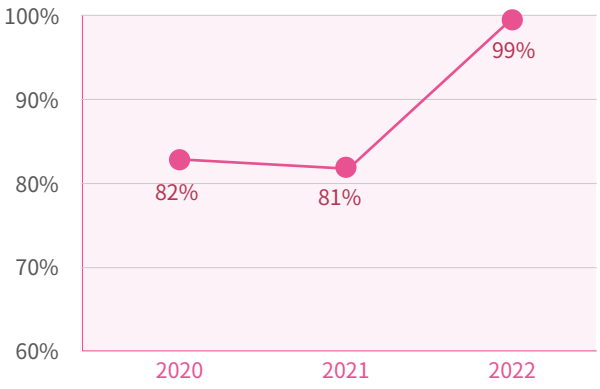
Implementation of management and evaluation

Suppliers that intend to apply for business dealings with the Company must pass a documentary evaluation, and will be subjected to an on-site evaluation when necessary. We will only begin business dealings with suppliers that pass the evaluation and a profile is set up. If a supplier makes a late delivery, delivers products with poor quality, or is found in violation of labor safety rules, the supplier will be automatically listed in the supplier evaluation mechanism, and the Procurement Department will evaluate whether or not to blacklist the supplier. This allows us to select excellent partners for long-term cooperation.

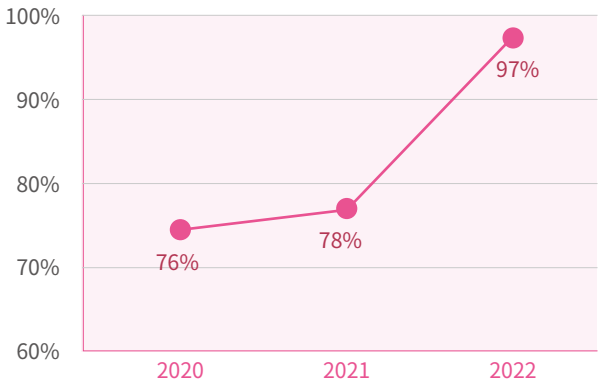
We require suppliers to comply with government laws and regulations during each procurement, including: applicable industrial safety qualification, ISO qualification, indication of hazardous materials, and illustration. Manufacturers need to properly recycle used containers or carrying aids, and give priority to products made by organizations for persons with disabilities. Suppliers are asked to precisely follow the requirements in the Quotation and Order Notice, and the Company's stance on upholding the spirit of sustainable management and requirements to comply with fair trade principles is stated in the forms above. Our goal is for vendors we do business with to meet requirements on environmental protection, labor safety, and human right, otherwise we will reject their products.

We began requiring vendors to sign the "supplier/contractor social responsibility commitment" and administering the "supplier/contractor social responsibility questionnaire" in 2019, so that vendors will understand our philosophy and jointly fulfill their social responsibility. Vendors are required the sign the commitment and respond to the questionnaire when they log into Formosa Technology E-Market Place or after placing an order, and are required to comply with related regulations.

Vendor evaluations are arranged in the following year as needed based on the response to the "supplier/contractor social responsibility commitment" and "supplier/contractor social responsibility questionnaire" in the previous year, ensuring that our vendors fulfill their CSR according to requirements. Supplier evaluation results in 2022 showed that there were no major risks, such as child labor, forced labor, freedom of association, and collective bargaining.



Supplier/Contractor Corporate Social Responsibility Commitment



Supplier/Contractor Corporate Social Responsibility Questionnaire

Supplier Opinion/Complaint Mechanism

Formosa Technology E-Market Place has a professional customer service center to provide suppliers with complete consultation services around the clock for questions regarding use of the Company's online price quotation platform or questions about the Company. Furthermore, Formosa Technology E-Market Place has a report and complaint platform with dedicated personnel to look into and respond to reports. Suppliers expressed their opinions in 79 cases in 2022, which can be broken down as follows: (a) Inquiry about the contents of procurements: 55.6%; (b) Questions about the system: 16.5%; (c) Withdraw inquiry about related issues: 1.3%; (d) Procurement revision: 1.3%; (e) Complaint: 13.9%; (f) Other: 11.4%.

Green Procurement

To reduce carbon emissions from vehicles making deliveries, we worked together with freight forwarders in implementing electronic operations for concentrated delivery by suppliers. As of the end of 2022, electronic operations for concentrated delivery by suppliers reached 97%.

Furthermore, we have replaced paper invoices with electronic invoices, and 89.4% of the vendors we do business with are also using electronic invoices as of the end of 2022.

The use of products with the Green Mark reduces resource consumption, reduces environmental pollution, and mitigates the impact on Earth. It can also drive suppliers to develop green products, and elevate the production of green products in Taiwan. We procure 257 green products, including plastic pallets, toner cartridges, and fluorescent lamps, and the procurement amount of green products recognized by the government was NT$75.12 million in 2022.

Authorized Economic Operator (AEO) Certification

AEO certification means that government-approved businesses and their up-stream and down-stream partners, that is, the overall supply chain, are safe and the trade safety measures meet the criteria for quality businesses. This will be a growing trend for international trade in the future, and also one of the prioritized policies to be promoted by our customs authority.

We started the AEO certification process in June 2013 and completed all the items requiring certification in less than six months. We became a certified AEO on December 6, and also became the largest business to obtain the AEO certification in Taichung Customs' history.

Customer Relationship Management

Building good partnerships is an important issue that FPCC has always been highly concerned about. We are constantly engaging in innovation and assist customers in obtaining high quality competitive products. We strive to become a trustworthy business partner of our customers that grows together with them. In order to strengthen customer relations, representatives from our business department will periodically visit customers and create interactive and timely communication channels that help include feedback from customers in our operations, and use the feedback to make future improvements.

Disclosure of Product Information

On the FPCC's official website (http://www.fpcc.com.tw/tc/products1.php), descriptions of specifications and safety data sheets of various oil products and the latest oil price information are available in the "Products and Services" section.

Customer Feedback and Management

To understand the precious opinions of our customers, we have defined specific procedures for customers to file complaints, return or exchange goods, and apply for compensation. Customers can express their opinions through the Customer Feedback Form, service hotline provided on our website, and e-mail. We will periodically summarize issues of concern to customers, and then classify and analyze the issues based on their importance and urgency. The priority of improvements that need to be made is determined on this basis. For complaints about products, sales representatives fill out the "Complaint Handling Form" and keep records of the handling status in the computer. With regard to channels for customers to express their opinions, we did not receive any customer complaints about privacy violation or data leakage in 2022.

Customer satisfaction survey

In order to enhance customer satisfaction, opinions about and suggestions for various products and services of FPCC are collected from customers. Meanwhile, to fulfill the commitment to quality of ISO 9001 and to demonstrate our emphasis on customer satisfaction, we will perform customer satisfaction survey at least once a year at present targeting domestic and international customers. The survey covers eight major domains, namely, product characteristics, product quality, product lead time, product price, service attitude, technical service, brand image, and overall satisfaction. Questions included in the survey will be modified as per issues of concern for customers. Revise issues that customers are concerned about.

The results of the 2022 Customer Satisfaction Survey show that we received a score higher than "satisfied" in all aspects. FPCC will include the suggestions provided by customers into our operational policy in order to live up to the expectations of the general public.

Customer feedback

We attach great importance to the feedback of all customers. It is the greatest motivation for us to make progress. Besides strictly maintaining quality to provide high quality products, we are also developing employees' character and service attitude, transforming slogans into actual actions, so that customers will gain a satisfying experience through every interaction in the purchase process, and thereby build trust in our brand.

Hello, we would like to express our gratitude to the 3-4 staff members (a long-haired girl, a short-haired girl, and a young man) who were on duty at your Banqiao Xinyi Road Station (No. 267, Xinyi Road, Banqiao District, New Taipei City) on 2/3 (Thursday) from around 21:00 to 22:00.

On that day, our mother was tripped and fell on the sidewalk nearby. My husband and I helped her to the gas station for a short rest, while my husband went to the nearby parking lot to retrieve our car. Suddenly, our mother's limbs became weak, and she felt disoriented. The staff members responded quickly and immediately came to our aid. They even provided a chair to help transport our mother to the car.

Afterward, our mother didn't suffer any significant injuries; she only had her right wrist in a cast, and her brain was unaffected.

If the headquarter could come across this letter, please convey our heartfelt gratitude. Not only working diligently during the Lunar New Year period, your staff members also remained devoted to helping others. We are truly, incredibly thankful!

Wishing you a Happy and Safe New Year, filled with good health and well-being.

Public Policy and Membership in Associations

Donation and political contribution policy

Our donations are based on considerations to give back to communities and fulfill our CSR. We did not make any political donations for lobbying, and any donations to a related party or a major donation to a non-related party must be approved by the Board of Directors.

Donation proposals submitted to the Board of Directors for approval in 2022

Date approved by the Board of Directors	2022 / 11 / 3
Recipient	Chang Gung University
Donated value	4,853

Unit: Thousand NTD

Participation in non-profit organizations:

In order to help industries in Taiwan improve their operation outlook, FPCC has been proactively participating in various industrial associations and societies by serving as chairman, director/supervisor, and representative at the said organizations. We conduct exchanges with counterparts on operational experience through associations and organizations, and share the latest market intelligence, supply and demand changes, and technical information, in hopes of making contributions to the industry as a whole. Important positions held by the Company in various associations are described below:

Name	Role	The Company's representative
Chinese Petroleum Institute	Standing Director	Chairman Bao Lang Chen
	Director	President Mihn Tsao
Petrochemical Industry Association of Taiwan	Director	President Mihn Tsao
	Consultant	Chairman Bao Lang Chen
Sino-Arabian Cultural & Economic Association	Standing Director	Chairman Bao Lang Chen
Taiwan Institute of Chemical Engineers	Director	President Mihn Tsao
Center for Corporate Sustainability	Director Representative	Chairman Bao Lang Chen
Taiwan Russia Association	Vice Chairperson	President Mihn Tsao
Taiwan Chemical Industry Association	Standing Director	President Mihn Tsao
Taiwan Responsible Care Association	Director	Senior VP Heng-Sheng Wu

CH2

Creating a New Green Appearance

Chapter Summary

To achieve sustainable development, FPCC promotes the circular economy of raw materials, water resources, energy, and waste across plants and companies, and aims to achieve energy conservation and carbon reduction, resource integration, and zero waste.

CDP Questionnaire	**2019** rating	**2020** rating	**2021** rating	**2022** rating
Climate Change	**A–** (Leadership level)	**A–** (Leadership level)	**A–** (Leadership level)	**A–** (Leadership level)
Water Safety	**A–** (Leadership level)	**A** (Leadership level)	**A** (Leadership level)	**A–** (Leadership level)

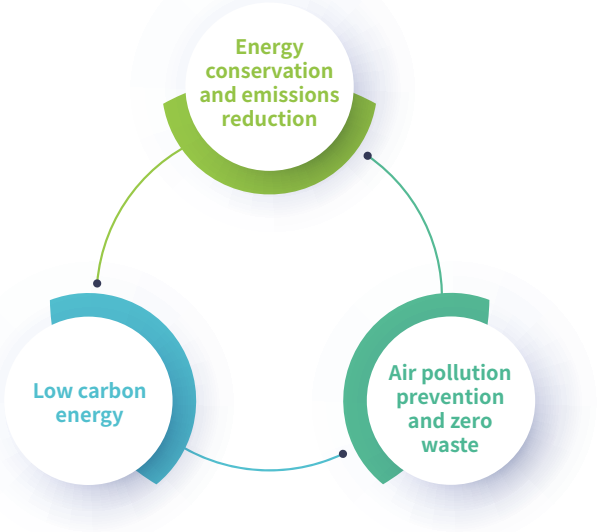
Strategic actions

Commitment in operations

Effective management is carried out in four aspects, namely GHG reduction, air pollution prevention, water resource treatment, and waste reduction, to achieve water conservation, energy conservation and emission reduction, low carbon energy, and zero waste.

Development strategy

- Energy conservation and emissions reduction: Continue to implement projects for process improvement, circular economy, and energy management to improve carbon reduction, water conservation, and electricity conservation performance
- Low carbon energy: Accelerate the development of renewable energy, continue to develop low carbon fuel and materials, improve energy use efficiency, and develop multiple streams of revenue
- Air pollution prevention and zero waste: Use advanced process equipment to reduce air pollution and waste, and strengthen air pollution monitoring and waste disposal ability



Scope of impact of material topic

Value chain		Upstream		Operations			Downstream	
Material topics	Financial impact	Crude oil drilling/ mining	Crude oil purchasing	Oil products transportation	Refining	Fundamental materials	Sales	Community services
Climate Change Strategy	Medium	-		●			▲	
GHG Management	High	-		●			▲	
Air Pollution Prevention	Low	-		●			●	

● Cause : An organization's activities cause an impact

▲ Contribute to : The activities of an organization causes, contributes to, or induces another entity to cause an impact

■ Directly linked to : Despite an organization not causing or contributing to an impact, its operations, products, or services may still cause an impact through business relationships

Stakeholders

Investors/ shareholders | customers | government agencies | suppliers and contractors | environmental protection groups | experts and scholars | local residents | employees

Targets in 2022	▪ Participate in the Carbon Disclosure Project (CDP)	✓
	▪ Continue to reduce unit energy consumption by 3% and electricity consumption by 1% each year	✓
	▪ Continue to implement energy conservation measures	✓
	▪ Establish an internal carbon pricing system	✓
	▪ Install MGGH and WESP	✓
	▪ Added the most suitable amount of ammonia to improve the concentration of NOx emissions from discharge channels in 2022	✓
	▪ Installation of high voltage shore power system for cargo ships	✓
	▪ Application for an environmental impact assessment for the oil product quality improvement plan	Δ
Targets in 2023	▪ Continue to disclose risks and opportunities brought by climate change for the Company to make policy decisions	
	▪ Continue to participate in the Carbon Disclosure Project (CDP)	
	▪ Continue to engage in low carbon transformation	
	▪ Continue to reduce unit energy consumption by 1.5%, water consumption by 1.5%, waste burial by 1%, and electricity consumption by 1.5% each year	
	▪ Continue to implement energy conservation measures	
	▪ Continue to support the industry GHG reduction audit by the Industrial Development Bureau, Ministry of Economic Affairs	
	▪ Added a WESP to improve the concentration of particulate emissions	
	▪ Added the most suitable amount of ammonia to improve the concentration of NOx emissions	
	▪ Continue to coordinate professional technicians to conduct tests for connecting high voltage shore power to cargo ships	
Mid-term and Long-term Goals	▪ Evaluate investments in renewable energy generation facilities (wind power, solar power) and energy storage systems	
	▪ Evaluate investments in hydrogen power and ammonia industries	
	▪ Evaluate investments in carbon capture and use (CCU)	
	▪ Evaluate investments in the recycling and reuse of waste oil and plastic	
	▪ Cooperate with the long-term goal of achieving carbon neutrality by 2050	

✓ Achieved Δ Ongoing

2.1 Climate change mitigation and adaptation

Management approach (MA) for material topic

Material topics	Material topic management policy
Climate Change Strategy	Formulate and plan the Company's sustainability strategies based on the risks and opportunities brought by climate change according to the four-core framework of the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Description of positive/ negative impact		Lower climate change risks through mitigation and adaptation ○ Set carbon neutrality goals ○ Invest in renewable energy △ Increase in carbon costs △ Pressure from collective bargaining ○ positive △ negative	
Management actions		Respond to the International Carbon and Water Disclosure Project	Implement energy conservation plans in each plant
Results tracking		CDP score of A- in 2022	Conduct energy conservation and carbon reduction performance evaluations of factories each month, and distribute rewards to factories with excellent performance.
Stakeholder engagement	Stakeholder group	▪ Investors / shareholders	▪ Government agencies
	Communication channel and frequency	▪ Email/phone number (Whenever they occur)	▪ Meeting (once / quarter)
	Engagement results	▪ Disclosed the Company's 2021 TCFD Report	▪ Invested approximately NT$1.22 billion in energy conservation and carbon reduction plans in 2022, and reduced GHG emissions by approximately 195 thousand tons CO_2e ▪ Used 5,591 tons of solid recycled fuel (RDF or SRF) to replace coal in 2022, and reduced GHG emissions by approximately 4,237 tons CO_2e

FPCC discloses information on climate change and the risks and opportunities they bring according to the four-core framework of the TCFD, and formulates adaptation and mitigation strategies on this basis. Disclosures are as follows:

	Management Strategies and Action Plans	Implementation Status
Governance	The chairperson serves as the convener and supervisors are separately appointed for environmental (E), social (S), and governance (G) affairs.	▪ Cooperate with policies to achieve the goal of carbon neutrality by 2050 ▪ Disclosed the Company's "2021 TCFD Report" in June 2022 ▪ Convene quarterly work meetings to supervise environmental protection plans and report implementation results to the chairman
Strategy	▪ Understand the impact of climate change on FPCC through scenario analysis ▪ Adjust FPCC's business direction in response to the government's carbon reduction policy ▪ Incorporate the SDGs into the decision-making process	▪ Identify the impact of acute extreme weather events and chronic climate trends on financial risks ▪ Develop low carbon products

	Management Strategies and Action Plans	Implementation Status
Risk Management	Use the risk make and reference recommendations in the TCFD report to identify and assess risks and opportunities	▪ Consider transition risks and physical risks, and describe the risk of events that may potentially occur, including the degree of financial impact, time of impact (short-, mid-, and long-term), subjects impacted in the value chain, and probability of risk. ▪ Aspects considered in the evaluation of opportunities include: improving the efficiency of resources, other alternative energy, low carbon products and services, low carbon product market, and adaptability.
Indicators and Goals	▪ Departments reduce energy consumption by 1.5%, water consumption by 1.5%, waste by 1%, and electricity consumption by 1.5% each year ▪ Set short-, mid-, and long-term goals for GHG emissions ▪ Plan and implement energy conservation and carbon reduction measures	▪ Conduct energy conservation and carbon reduction performance evaluations of factories in the Company, and distribute rewards to factories with excellent performance. ▪ Greenhouse gas emissions in 2021 decreased by 16.4% compared to 2007. ▪ Invested approximately NT$1.22 billion in energy conservation and carbon reduction plans in 2022.

2.1.1 Climate Governance and Strategy

The Company established the Sustainable Development Committee with the chairperson as the convener (as shown in Section 1.1 Corporate Governance), and is a functional committee under the Board of Directors. The President's Office serves as the staff department that brings together supervisors of business units for cross-departmental communication. We identified climate change related risks, and formulated management strategies for strategic risk management. Division of authority and responsibility under the TCFD is shown in the figure below:

Board of Directors

- Make decisions on strategies/goals for climate change management
- Supervise petrochemical companies in climate change

Sustainable Development Committee Staff Departments: President's Office

- Cross-departmental communication and strategy planning for climate change risks and opportunities
- Manage strategies and plans for climate change risks and opportunities
- Manage action plans for climate change risks and opportunities

Business Units

- Disclose information on risks and opportunities
- Implement action plans related to risks and opportunities

2.1.2 Climate Risks and Opportunities

After identifying climate risks and opportunities, risk indicators are evaluated based on the degree of impact and probability. After determining the level of risk and opportunity, short-, mid-, and long-term goals are set for mitigation, transfer, control, and acceptance.

Analysis process for climate change risk issues

Plan & Do

Step 01 Background Data Collection

Collection period: **2022/1~2022/12**

Collect information on issues

- Background data is collected from news media outlets, online sources, or incidents in other countries or companies.
- Consider transition risks (including policy and law, market, technology, and reputation) and physical risks (including acute and chronic)

Step 02 Scope of Risk and Operation Evaluation

Assess climate change risks within the scope of direct and indirect operations upstream and downstream the value chain

Step 03 Risk and Operational Impact Analysis

Frequency of analysis: Annually
Analysis method: Risk Mapping

Inventorize and identify material risks

- An impact of over NT$1 million is defined as substantial impact.
- High risk: A material risk exceeds NT$800 million with probability of occurrence greater than 80%, such as carbon fee collection
- Moderate risk: A moderate risk exceeds NT$400 million with probability of occurrence greater than 50%, such as typhoon and water shortage
- Low risk: Remaining issues

Check & Action

Step 04 Control Measures and Goal-Setting

- Establish measures for mitigation, transfer, control, and acceptance
- Commission an impartial third party to verify energy conservation and carbon reduction performance, and make rolling adjustments to carbon reduction goals and pathway to align them with international trends.
- Periodically convene "energy conservation and water conservation results review meetings" to review implementation results.
- Setting carbon fees
  Implement internal carbon pricing management, set carbon emission costs and goals, and include them into the operating costs of each plant.

Analysis results of climate risk issues

Issue management approach

Risk Type	Risk Identification Bracket		Describe the Risk Management Approach	2022 Occurrence of Events
	Financial Impact	Likelihood		
High Risk	Over NT$800 million	Probability of greater than 80%	A corresponding management plan must be prepared to reduce the losses caused by risks, such as reducing the frequency, reducing the financial impact, transferring risks, and avoiding risks	The Climate Change Response Act was announced in February 2023 and carbon fees may be collected as soon as 2024.
Moderate Risk	Over NT$400 million	Probability of greater than 50%	No actions currently need to be taken, but changes still need to be monitored	-
Low Risk	Remaining issues	Remaining issues	Acceptable risk	-

Financial impact of risk issue

Transition risks

Unit of financial impact: NT$1,000

Risk Issues	Risk Type	Main Climate-Related Risk Factors	Risk Management Plan
Policies and Regulations	High risk	Greenhouse Gas Reduction and Management Act – Carbon fee collection: Carbon emissions not exceeding the quota With regard to carbon reduction legislation, the government announced amendments to the Greenhouse Gas Reduction and Management Act and Climate Change Response Act in 2023. Estimating based on the GHG emissions of approximately 26.6 million metric tons CO_2e in 2021, if carbon reduction measures are not implemented, the financial impact will be NT$1.735 billion assuming that carbon fee is NT$100 per metric ton Carbon emissions exceeding the quota For carbon emissions exceeding the quota allocated by the central competent authority, the limit on fines for the volume exceeding the quota is maintained at NT$1,500 per metric ton. The Company's GHG emissions in 2021 was approximately 26.6 million metric tons CO_2e. If carbon emissions are not reduced by 2050 and carbon rights are not purchased to offset emissions, then the Company might need to pay NT$1,500/ton in carbon fees	The Company already established an internal carbon pricing system and included the cost of carbon emissions in the profit and loss statement Implementation of energy conservation and carbon reduction plans, gradually transition towards low carbon emissions, and evaluate investments in: ▪ renewable energy generation facilities (wind power, solar power) and energy storage systems ▪ Recycling and reuse of waste oil and plastic ▪ Hydrogen power and ammonia industries ▪ Use biomass fuel to replace a portion of coal consumption by coal-fired power plants ▪ Evaluate the adoption of CCUS technology ▪ Process technology optimization
Changes in customer behavior	High risk	The International Energy Agency indicated that there will be approximately 300 million electric vehicles on the road before 2040, and will lower global demand on oil by 3.3 million barrels a day. Estimating based on the daily demand of 45.1 million barrels a day for transportation in 2022, the demand on oil for transportation will decrease 7%	The Company's domestic and export sales of gasoline was approximately NT$118.9 billion in 2022. If the demand on oil for transportation decreases 7%, gasoline sales will decrease NT$8.32 billion

Physical risks

Unit of financial impact: NT$1,000

Risk Issues	Risk Type	Main Climate-Related Risk Factors	Risk Management Plan
Acute extreme weather Strong rainfall/ Flood/ Typhoon	Moderate risk	The frequency of extreme weather events has gradually increased due to climate change, and torrential rain and strong typhoons may cause flooding that damages equipment, affecting the stable operation of processes and causing losses due to suspension	Instead of constructing a drainage system, we adopted a closed water barrier (+1.2M) and installed water pumps in low-lying areas, in order to improve puddles in low-lying areas, pump water into the drainage system, and increase drainage capacity. (Completed in April 2019 and invested NT$60,418 thousand)
Acute extreme weather Water shortage/ Drought	Moderate risk	Climate anomalies have caused the impact of water shortage/drought, and processes will need to reduce production when water supply is limited if the Company cannot respond. Severe water shortage will cause processes to reduce capacity or be suspended	The Company plans a budget of NT$40 million and above for water conservation plans. The Company invested a total of NT$50 million to implement 36 water conservation improvement plans in 2022, which saved 985 tons a day with annual improvement benefits reaching NT$3.54 million. Main water conservation plans include wastewater recycling/water consumption reduction and improvement, and installation of rainwater collection system

Financial benefits of opportunity

Opportunity Issues	Opportunity Category	Main Climate-Related Risk Factors	Risk Management Plan
Low-carbon energy technology transition	Transformation opportunity	Low Temperature Thermal Power System and Waste Heat Recycling Technology Project	We plan to implement a ten-year GHG offset project (waste heat recycling at low temperatures for electricity generation), which is currently being reviewed by the EPA, and currently expect to obtain carbon rights for 13,220 tons CO_2e. Using a carbon fee of NT$100/ ton CO_2e for estimation, the potential profit is approximately NT$1.32 million. The project will generate 1,559,160 kWh of electricity, and the cost of electricity will be reduced by NT$6.56 million over 10 years using an average price of NT$4.18/kWh for calculation
		Refuse Derived Fuel Project	We began using RDF to replace a portion of coal consumption starting in 2019, and up to 49,932 metric tons of RDF is expected to be used each year. With the cost of each metric ton at NT$900, we expect this to increase fuel cost by NT$45 million. It will reduce coal consumption by 23,349 metric tons. Calculating the price of coal at US$275 per metric ton, this will reduce energy purchasing cost by NT$193 million. Furthermore, we reduced GHG emissions by approximately 72,000 tons, if carbon fee is NT$100/ton, then carbon fees will be reduced by NT$7.2 million and the potential financial income of the project is approximately NT$200 million

Opportunity Issues	Opportunity Category	Main Climate-Related Risk Factors	Risk Management Plan
Increased energy efficiency	Transformation opportunity	The Company generates tail gas from the production process, and recycles 70,000 tons of tail gas for use as fuel each year to reduce air pollution, which reduces fuel consumption	We recycled 69,000 tons of excess process gas in 2022, reducing GHG emissions by an average of approximately 150,000 tons CO_2e a year, and further reducing coal use by approximately 107,000 tons. If each ton of coal is calculated at US$275, it will reduce coal expenses by approximately NT$890 million (using an exchange rate of 1 USD to 30 NTD)
Installation of renewable energy facilities	Transformation opportunity	The installation and purchase of renewable energy are all considerations of the Company's carbon reduction strategy, and aim to reduce fuel consumption	▪ The Renewable Energy Electricity Generation System Establishment Project has planned 58 solar power sites with total installed capacity of 20.992 MW ▪ The total investment amount of the solar power sites is NT$1.01 billion, and is expected to generate 27,778 MWh of electricity each year, reducing electricity fees by NT$61 million each year (the solar power capacity factor in Yunlin = 14.26% and each kWh is NT$2.2)

Climate physical and transition scenario analysis

FPCC mainly uses the 4 Representative Concentration Pathways (RCPs) defined in the Intergovernmental Panel on Climate Change (IPCC) AR5, in which RCP2.6 is the warming mitigation scenario. RCP4.5 and RCP6.0 are stable scenarios. RCP8.5 is a climate change model for a scenario with high GHG emissions to make predictions of the future.

FPCC considers scenarios for 2030-2050. All plants and upstream and downstream the supply chain are included in FPCC's scenario analysis. The scenario analyzes energy use, water shortage, and flooding of plants under different physical risks, such as different temperatures, climate change, and rainfall.

Summary of assumptions in climate change scenarios

Physical risk scenario Mailiao Industrial Park	Sea level rise Impacted	Area lower than the tidal line (Has risk of flooding) Partially impacted	Lower than the flood level in 2050 Partially impacted
Average length of drought is two months	Temperature rise of 2.59	Total rainfall of 1,085mm	Maximum rainstorm intensity Maximum number of consecutive days with rainfall

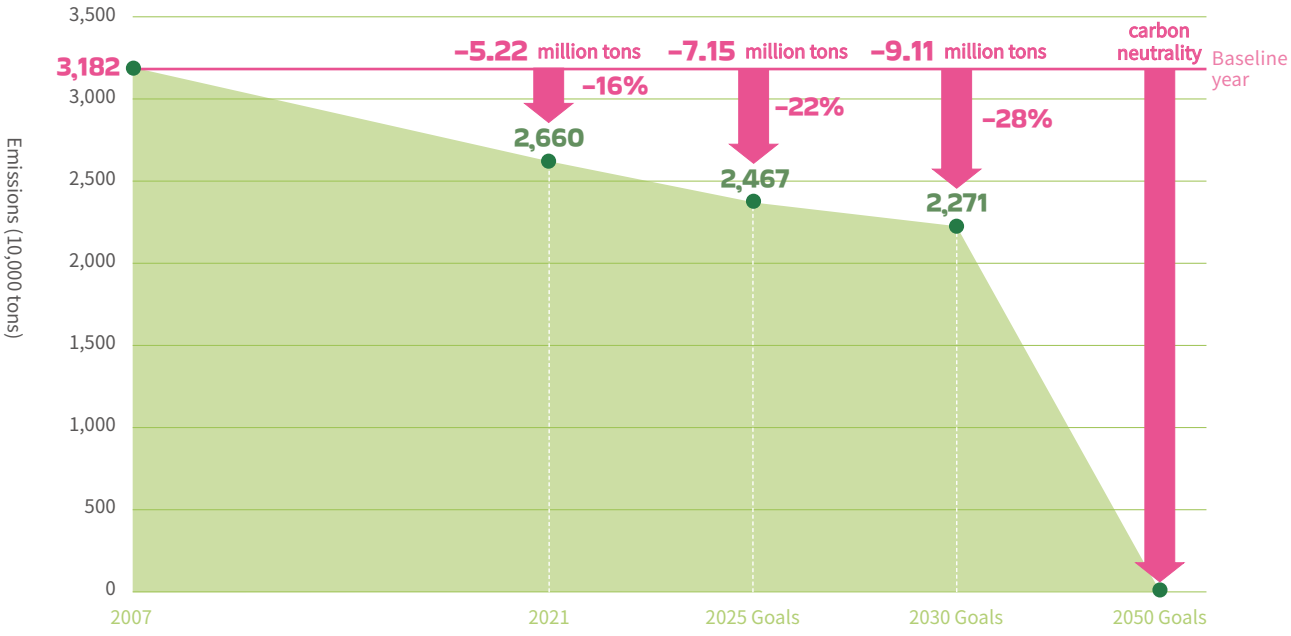
	BAU scenario	NDC scenario	Active mitigation scenario
Scenario Description	RCP8.5	RCP4.5 RCP6.0 Reduce emissions in 2025 to 22% of emissions in 2007 Reduce emissions in 2030 to 28% of emissions in 2007	RCP2.6 The goal is to achieve carbon neutrality by 2050
Analysis Results	Average temperature rise exceeds 2 °C , maximum number of consecutive days without rainfall in Yunlin County in 2050 increases 5.76 days compared to 1986-2005	Limit average temperature rise to within 2 °C , maximum number of consecutive days without rainfall in Yunlin County in 2050 increases 2.56 days compared to 1986-2005	Limit average temperature rise to within 1.5 °C , maximum number of consecutive days without rainfall in Yunlin County in 2050 increases 1.28 days compared to 1986-2005

	BAU scenario	NDC scenario	Active mitigation scenario
Risks	▪ Global temperature rise will directly impact process cooling ability and increase electricity consumption by air conditioners, which will further affect the productivity of naphtha and lower the performance of compressors. ▪ Climate anomalies have caused the impact of water shortage/drought, and processes will need to reduce production when water supply is limited if the Company cannot respond. Severe water shortage will cause processes to reduce capacity or be suspended. ▪ If the dependence of Mailiao Plant on natural water resources cannot be lowered, it may increase production cost and operational risks in the future, which will lower our competitiveness.		
Action Plans	▪ We formulated a water resource management strategy the plant was first established, including: Water conservation plans, wastewater recycling and reuse plans, rainwater recycling and reuse plans, and the 100,000 ton/day desalination plant establishment project in recent years. We plan a budget of NT$40 million or more every year to implement water conservation plans, which can be divided into the following 3 categories: ① Rainwater-sewage separation increased rainwater collection to approximately 2.849 million tons in 2022 ② Processed discharged water is used for cleaning and shaft seal ③ Process water recycling reduces refill and discharge with water recycling rate at 98.6% ▪ Plan low carbon energy technology transition (1. Low Temperature Thermal Power System and Waste Heat Recycling Technology Project and 2. 5% refuse derived fuel (RDF) and burning biomass to replace a portion of coal use on a trial basis) and renewable energy installation (solar power). In the mid-term and long-term, we will evaluate replacing 5% of coal consumption by coal-fired power plants with biomass fuel, evaluate investments in the recycling and reuse of waste oil and plastic, evaluate investments in hydrogen power applications industries, evaluate the adoption of CCU technology, further develop high value petrochemical products, and search for new investment and development opportunities.		

2.1.3 Climate goals and indicators

To achieve the vision of low carbon economic transition, FPCC set the long-term goal to achieve carbon neutrality by 2050, and also set short-term and mid-term indicators (short-term is 2025 and mid-term is 2030) to examine the progress of goal attainment. The timeline and target emissions are shown in the table below.

3 major aspects of the roadmap to carbon neutrality



		2007-2021 Cumulative results	2022-2030 Goals
Green factory	Reduce process energy consumption	▪ Improve AI and automated control ▪ Distillation tower recirculation gas conservation improvement ▪ Optimize production processes to reduce fuel and material input	▪ Improve unit heat exchange efficiency, distillation tower optimization, AI instrumentation, and feed concentration adjustment to reduce steam and electricity consumption ▪ Equipment replacement, pipeline optimization, and improve heat exchange efficiency to reduce steam and electricity consumption
	Enhanced equipment efficiency	▪ Provide an AI operation navigation window for the distillation tower, in order to adjust equipment to the most energy efficient state ▪ Add a booster pump for the separation tower cooler to increase cooling water flow and reduce steam use by the compressor of the heat pump	▪ Upgrade the compressor valves, replace pumps, redesign the size of blades to reduce motor load, replace the blades of air cooler with composite materials that have better performance, optimize coating material to reduce friction and wear, and thereby improve production efficiency and reduce energy consumption
	Recycling of waste heat	▪ Add heat recirculation pipelines for steam generated by waste heat recycled from the waste heat boiler system, increasing feed temperature and reducing fuel and material use ▪ Bottom product waste heat recycling	▪ Increase channels for recycling waste heat and add preheating of heat exchanger and waste heat recycling equipment to better integrate resources between different plants and reduce steam use
	Implement energy management	▪ Separate high and low pressure cooling water pumps to reduce the electricity used by pumps ▪ Replace the hub and blades of rotating equipment with carbon fiber to reduce electricity consumption	▪ Add a continuous load increase system to reduce recirculation and supplemental hydrogen compressor for electricity conservation ▪ Adjust the stirring time from when products are added until the tank is full, so as to reduce electricity consumption
Green energy	Generate green electricity	▪ The environmental impact assessment for wind turbines with an installed capacity of 25.2 MW is currently being reviewed. ▪ Plan the installation of solar power generation on rooftops of the Company's plants and land	▪ Install solar power plants on rooftops of the Company's plants and land ▪ Increase the use of RDF and biomass fuel to replace coal use ▪ R&D of energy storage system ▪ Evaluate the development of the hydrogen power industry, ammonia industry, high quality, and investment in innovative industries ▪ Application of CCS technology
	Low carbon energy development	▪ Use RDF to reduce coal use ▪ Use biomass fuel to replace a portion of coal consumption	
Green innovation		▪ Engage in industry-academia collaboration in evaluating the potential of Yunlin's land-sea coastal border for geological storage of carbon dioxide and conducting seismic tests	

Carbon reduction strategy, results, and performance in 2022

Reduce process energy consumption

- **133,409** Reduce emissions
- **99** Number of carbon projects

Scope of carbon reduction: Scope 1 | Scope 2 | Scope 3

FPCC reduces Scope 1+2 emissions through the process control optimization system

- DCU main tower recirculation low-end heat recycling
- Install APC in H-111, 113, 114 to save fuel gas
- Adding a coal control and optimization system to UPA units

Recycle thermal energy

- **17,912** tons
- **7** projects

Scope of carbon reduction: Scope 1 | Scope 2 | Scope 3

Description of strategy

- DCU main tower recirculation low-end heat recycling
- GHU1 waste heat recycling system improvement
- GHU2 waste heat recycling system improvement

Enhance equipment

- **26,095** tons
- **90** projects

Scope of carbon reduction: Scope 1 | Scope 2 | Scope 3

Description of strategy

- GHU2C-6770AI operations navigation steam and energy conservation improvements
- Utilize AI automated adjustment in PRU2B-5551 for steam conservation
- Improvement to stability of flow rate from HP5SCR outlet

Implement energy management

- **17,684** tons
- **18** projects

Scope of carbon reduction: Scope 1 | Scope 2 | Scope 3

Description of strategy

- Fuel gas delivered to the HHCR plant
- Improvement of HYD1 methane gas feed to increase production of high pressure steam
- Separate high and low pressure cooling water pumps to reduce the electricity used by pumps

2.2 GHG Management

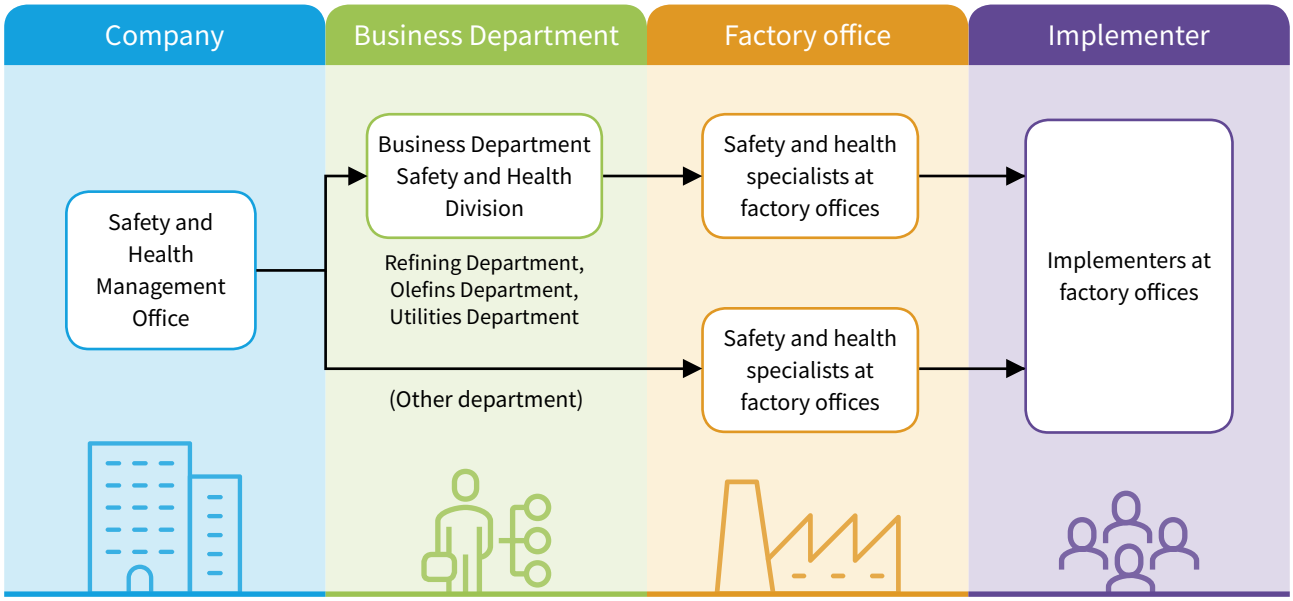
Management approach (MA) for material topic

Material topics	Material topic management policy
GHG Management	We will continue to implement low carbon measures, lower electricity consumption per unit product, and establish (invest in) renewable energy generation facilities to achieve carbon neutrality by 2050

Description of positive/ negative impact		○ Improves energy and resource efficiency and reduces carbon emissions △ Damage to the environment △ Strict regulatory supervision ○ positive △ negative	
Management actions		▪ Implement energy conservation plans	▪ Expand subsidiary GHG inventory
Results tracking		▪ Completed 214 plans in 2022, reduced carbon emissions by 195 thousand tons CO_2e/year, and reduced electricity consumption by 32.89 million kWh/year	▪ GHG inventory plan submitted to the Board of Directors in December 2022
Stakeholder engagement	Stakeholder group	▪ Government agencies	
	Communication channel and frequency	▪ In-person meetings (1 times/year)	
	Engagement results	▪ Reduced GHG emissions by 86,857 tons CO_2e in response to the GHG reduction audit by the Industrial Development Bureau, Ministry of Economic Affairs	

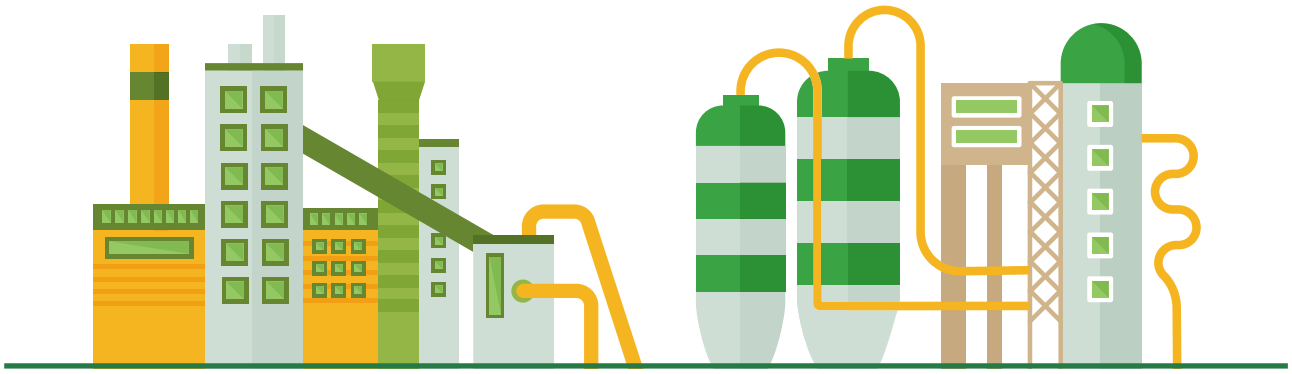
Inventory framework

FPCC compiles its GHG inventory in accordance with ISO 14064-1:2018, and commissioned BSI Taiwan to verify the GHG inventory.



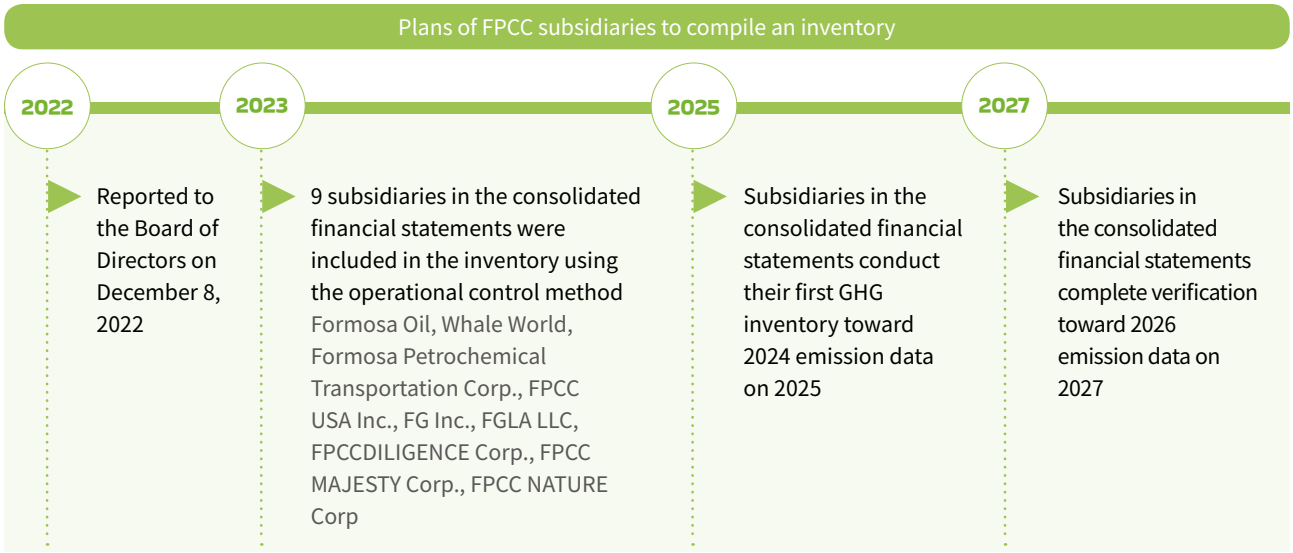
GHG Inventory Method

	Scope 1+2	Scope 3
Inventory Reference Guidelines	ISO 14064-1:2018 GHG Inventory EPA Guidelines for Compiling GHG Inventory	ISO 14064-1: 2018 GHG Inventory GHG protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard
Boundaries of the Organization	The boundaries of the organization are based on control over operations, including: Mailiao Plant 1, Mailiao Plant 2, Mailiao Plant 3, Changbin Blending Plant, Taipei Storage and Shipping Station, and Taoyuan Storage and Shipping Station	
Type of Inventory	ISO 14064-1 defines 7 types of GHGs, including CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3	According to the GHG protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard, a total of 15 categories are defined for Scope 3, including: Category 1- Purchased goods and services Category 2- Capital goods Category 3- Fuel and energy-related activities Category 4- Upstream transportation and distribution Category 5- Waste generated in operations Category 6- Business travel Category 7- Employee commuting Category 8- Upstream leased assets Category 9- Downstream transportation and distribution Category 10- Processing of sold products Category 11- Use of sold products Category 12- End-of-life treatment of sold products Category 13- Downstream leased assets Category 14- Franchises Category 15- Investments
Period of Inventory	Verification of 2022 GHG emissions was completed in August 2023, and the data will be disclosed next year	
Calculation Method	Mainly calculated using the emission factor method, the calculation method is as follows: Activity data × Emission factor × GWP = CO_2e ▪ Depending on the source of activity data for different GHG emission sources, the unit is converted to metric ton or kL for weight and volume, and the source is recorded ▪ GWP before 2016 is based on the second assessment report of the IPCC in 1995. Global warming potential (GWP) after 2016 (inclusive) is based on the fourth assessment report of the IPCC in 2007. The emission factors for electricity and steam are in-house factors that have been validated by verification institutions	



Plans of subsidiaries to compile an inventory

According to the "Sustainable Development Roadmap of TWSE/TPEx-listed Companies" announced by the FSC in March 2022, subsidiaries listed on FPCC's consolidated financial statements must complete their GHG inventory in 2025 and complete verification in 2027. The Company's schedule was reported to the Board of Directors on December 8, 2022, and the implementation method planned is as follows:



Greenhouse gas emission status

GHG emissions in 2021

Unit: tons CO_2e

Boundaries of Calculation \ Scope of GHG Inventory	Scope 1	Scope 2	Scope 3
Company-Wide	26,482,767	119,051	60,285,232
Oil & Gas Industry	7,769,428	3,546,593	--

GHG emission per unit revenue

	Company-Wide	Oil & Gas Industry
Greenhouse Gas Emissions (Thousand tons CO_2e)	26,602	11,316
Business Revenue (NT$1 million)	620,062	575,779
GHG Emission Per Unit Revenue (Thousand tons CO_2e/NT$1 million)	0.043	0.020

Further analysis of GHG emission per unit revenue shows that GHG emissions in 2021 increased 4.1% compared to the previous year while revenue also increased 49.3%. Hence, GHG emission per unit revenue increased to 0.043 thousand metric tons CO_2e/NT$1 million. For detailed data over the years, please refer to: Appendix ESG performance data – Environment

The Company's scope of business mainly covers that oil-gas industry and power generation industry. Due to the significant differences between the two industries, we separated the oil-gas and olefin (refining) industries, and further analyzed GHG emission per unit revenue. We found that GHG emissions in 2021 increased 3.8% compared to the previous year while revenue increased 52.3% as the economy recovered. Hence, GHG emission per unit revenue decreased to 0.0197 thousand metric tons CO_2e/NT$1 million.

Breakdown of GHG emissions in 2021

Greenhouse Gas / Boundaries of Calculation	CO_2	CH_4	N_2O	HFCs	PFCs	SFs	NFs
Company-Wide (%)	99.5691	0.0586	0.3480	0.0034	0	0.0209	0
Oil & Gas Industry (%)	99.6997	0.0999	0.1916	0.0047	0	0.0041	0

Note: The boundaries of calculation are Scope 1+2

Breakdown of GHG emissions by source in 2021

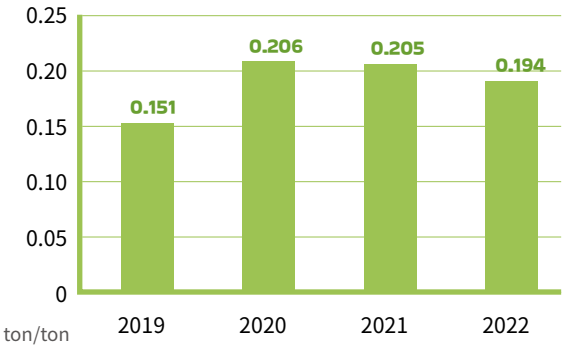
Emission Source / Boundaries of Calculation	Fixed	Process	Movement	Fugitive
Company-Wide (%)	99.892	0.055	0.003	0.050
Oil & Gas Industry (%)	99.899	0	0.003	0.098

Note: The boundaries of calculation are Scope 1.

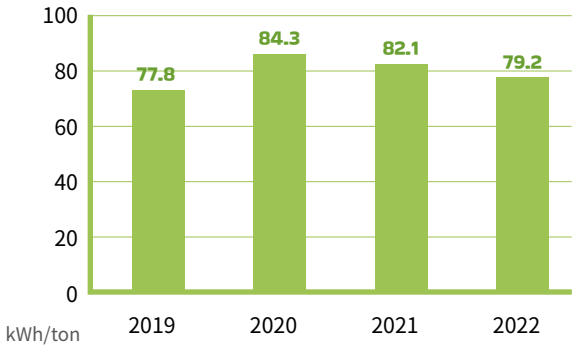
Energy management

We appointed dedicated personnel at business departments and factory offices to implement numerous process improvement and energy management projects, so as to continue reducing emissions.

Energy use and consumption



Unit Product Summary of Steam Consumption



Unit Product Summary of Electricity Consumption

Note: Source: Formosa Plastics Group Business Intelligence system database

In 2022, FPCC's total production capacity was 31,192.7 thousand tons, used 6,053.6 thousand tons of steam, and used an average of 691.1 tons of steam per hour, which is the equivalent of 0.194 ton/ton per unit. Total electricity consumption for the entire year was 2,472 million kWh, and hourly average electricity consumption was 282,155 kWh, which is a unit electricity consumption of 79.2 kWh/ton. Steam consumption and electricity consumption per unit product in 2022 were both lower than the previous year.

Implementation status of main energy conservation projects

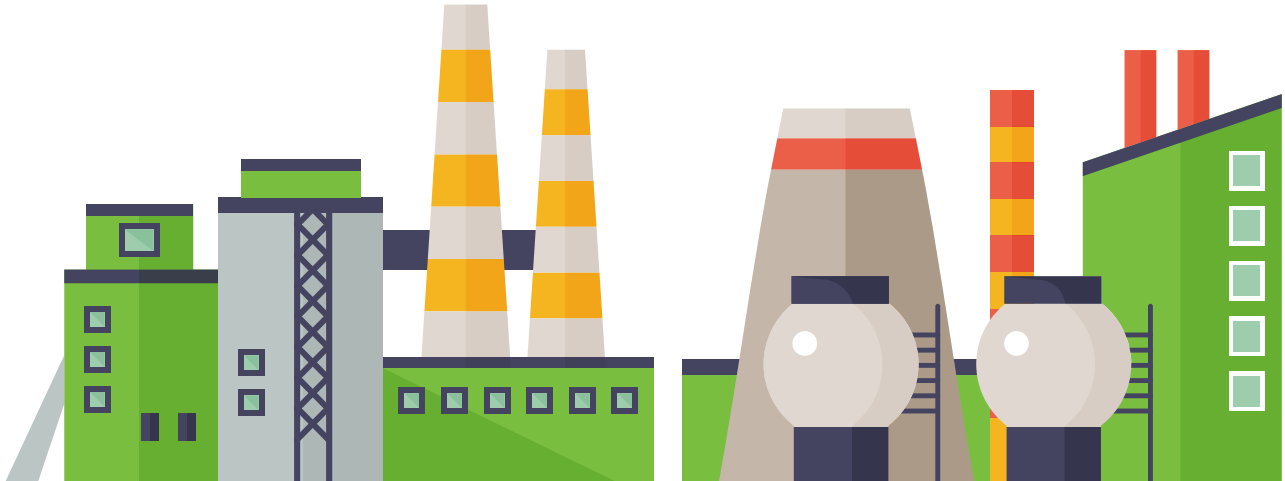
Energy conservation action plans

Project Name	Year/Schedule	Expected Benefits	Actual Outcomes in 2022
Adding a coal control and optimization system to UPA units	20201126~20220826	Expected fuel savings 1.173 tons/hours	Actual fuel saved 1.4 tons/hours
Install APC in H-111, 113, 114 to save fuel gas	20220727~20221017	Expected fuel savings 0.83 tons/hours	Actual fuel saved 0.83 tons/hours
DCU main tower recirculation low-end heat recycling	20220530~20221017	Expected gas savings 6.5 tons/hours	Actual gas saved 6.5 tons/hours
GHU2C-6770AI operations navigation steam and energy conservation improvements	20220727~20221017	Expected gas savings 2.69 tons/hours	Actual gas saved 4.3 tons/hours
Quench tower viscosity prediction combined with APC optimization	20220428~20220524	Expected gas savings 3.73 tons/hours	Actual gas saved 3.73 tons/hours

Summary of historical energy-saving performance

	Accumulated Volume (1999 to 2021 years)	2022	Accumulated Volume (1999 to 2022 years)	Ongoing	Total
Number of Cases Improved	1,772	214	1,986	519	2,505
Steam Saved (ton/hour)	975	39	1,014	88	1,103
Electricity Saved (Thousand kWh/hour)	150	4	154	39	193
Fuels Saved (ton/hour)	96	4	101	14	115
CO_2e Reduction (10 thousand tons)	550	20	570	63	633
Investment Amount (NTD 100 million)	98	12	110	34	144

Note: 1. Source: The Formosa Plastics Group computer-based database for environmental protection improvements
2. Type of fuel: Coal, fuel gas, etc. are all converted to standard coal.



2.3 Air pollution management and prevention

Management approach (MA) for material topic

Material topics	Material topic management policy
Air Pollution Prevention	We will continue to reduce pollution and prevent odor, and will also execute pollution emission inspections (monitoring) to achieve environmental and corporate sustainability goals

Description of positive/ negative impact		We adopted the best available control technology (BACT), as well as the world's most advanced processes and improvement and pollution prevention technologies ○ Air quality improvement in plant areas △ Increase in environmental costs ○ positive △ negative	
Management actions		Air pollution emissions monitoring and management, and installation of air pollution reduction equipment [MGGH, WESP]	
Results tracking		▪ Completed the installation of 14 MGGH and 2 WESP in 2022 ▪ Added the most suitable amount of ammonia to improve the concentration of NOx emissions from 2 discharge channels in 2022	
Stakeholder engagement	Stakeholder group	▪ Experts and scholars/Government agencies	▪ Residents at the operation site
	Communication channel and frequency	▪ Meeting/Telephone (Whenever they occur)	▪ Complaint form/Telephone (Whenever they occur)
	Engagement results	▪ Reduced SOx and NOx emissions and improved air quality	▪ There were no complaints of odor

Air Quality Impacts Evaluation and Consultation Committee

Due to public concern of air pollutant emission from Mailiao Industrial Park affecting the air quality in Yunlin, Chiayi, and Tainan, we established the "Evaluation and Consultation Committee for Impacts on Air Quality by Mailiao Industrial Park," and actively communicate with stakeholders through industry-academia collaboration and community communication.

Air pollution and waste gas management:

To understand the impacts of emissions on the environment and people's health, we comprehensively adopted the best available control technology (BACT), as well as the world's most advanced process improvement and pollution prevention technologies.

Best Available Control Technology (BACT)

- Low-contamination gases and fuels are used. Oil-gas recycling systems are established. Static dust collectors and bagged dust collectors are set up. Low nitrogen oxide burners and denitrification exhaust facilities as well as desulfurization exhaust facilities (FGD) are created. There is also other advanced equipment available to prevent air pollution, such as high-temperature oxidizers, active carbon absorption systems, and closed-end coal pocket and transmission systems. Along with precise prevention and care and training and operation, individual pieces of equipment can perform optimally in terms of the treatment efficacy to effectively prevent contamination

Monitoring (Inspection) Operations Management

- Continuous Emission Monitoring System (CEMS), factory-wide chimney monitoring and filming, Fourier Transform InfraRed (FTIR) surrounding surveillance, (GasFindIR) gas detection infrared camera, external air quality monitoring, weekly joint (roving) testing for foreign odors, periodic testing of equipment elements, periodic testing of discharge channels, waste gas burning tower monitoring facilities

Volume Reduction Measures Management

- The wastewater site is covered and waste gases are collected and treated. Tail gases that contain sulfur from the manufacturing process are recycled, treated, and reused. Residual fuels from the manufacturing process are supplied to other plants to be reused. The amount of required equipment is reduced. Waste gases from the cleaning of storage tanks are collected and treated. Tail gases from storage tank nitrogen sealing and waste gas burning towers are all recycled and reused

Pollution Emission Control

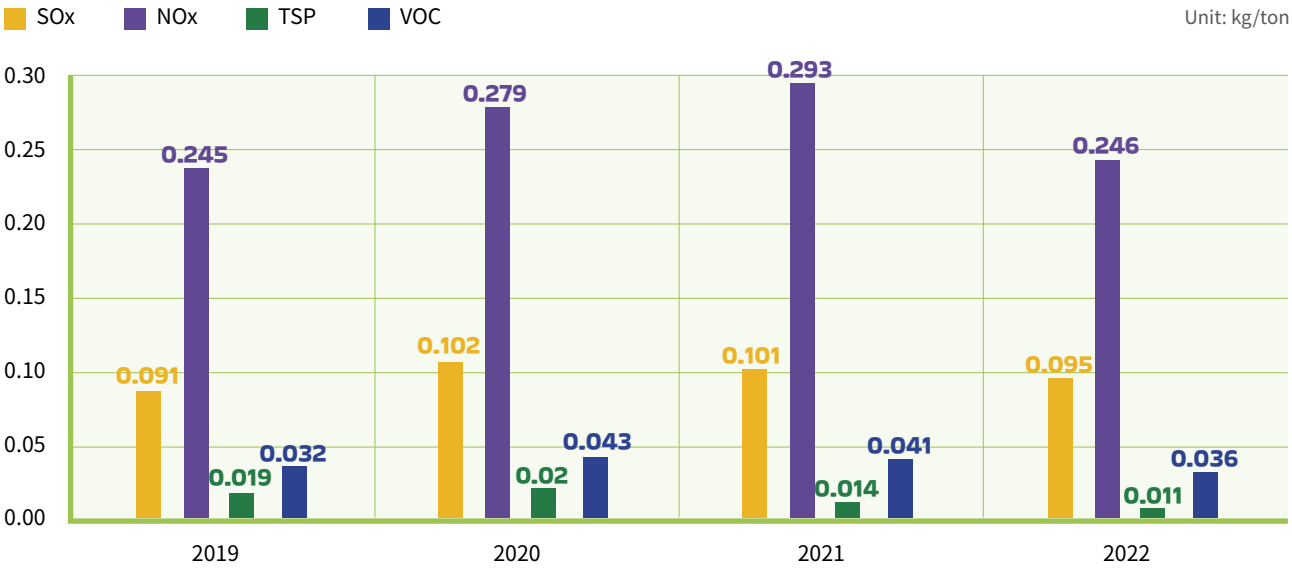
- Air pollutant emissions cap, fixed air pollutant operation certificate control, environmental evaluation-based commitment to emission control

FPCC began complying with international standards and follows the government's policy to ban the use of halons, CFC-11, and CFC-12 since it was established in 1992. Now, R-134a, R-401a, and R-410a are the main coolants used, and sulfur and benzene contents in gasoline and diesel products strictly follow regulations of the European Union.

Category	Ingredient	Domestic Market		International Market	
		Guidelines	Actual Value	Guidelines	Actual Value
Gasoline	Benzene	1.0 vol%,max	0.49	1.5 vol%,max	0.72
	Lead	0.013 g/l,max	<0.003	0.01 g/l,max	<0.003
	Sulfur	10ppm,max	5.57	50ppm,max	40
Diesel	Sulfur	10ppm,max	7.30	10ppm,max	424
				500ppm,max	0.72

The best available pollution prevention equipment is used for air pollution prevention. In 2022, FPCC's total production capacity was 31,192.7 thousand tons, sulfur oxides (SOx) emission per unit of product was 0.095 kg/tons and nitrogen oxides (NOx) was 0.246 kg/tons.

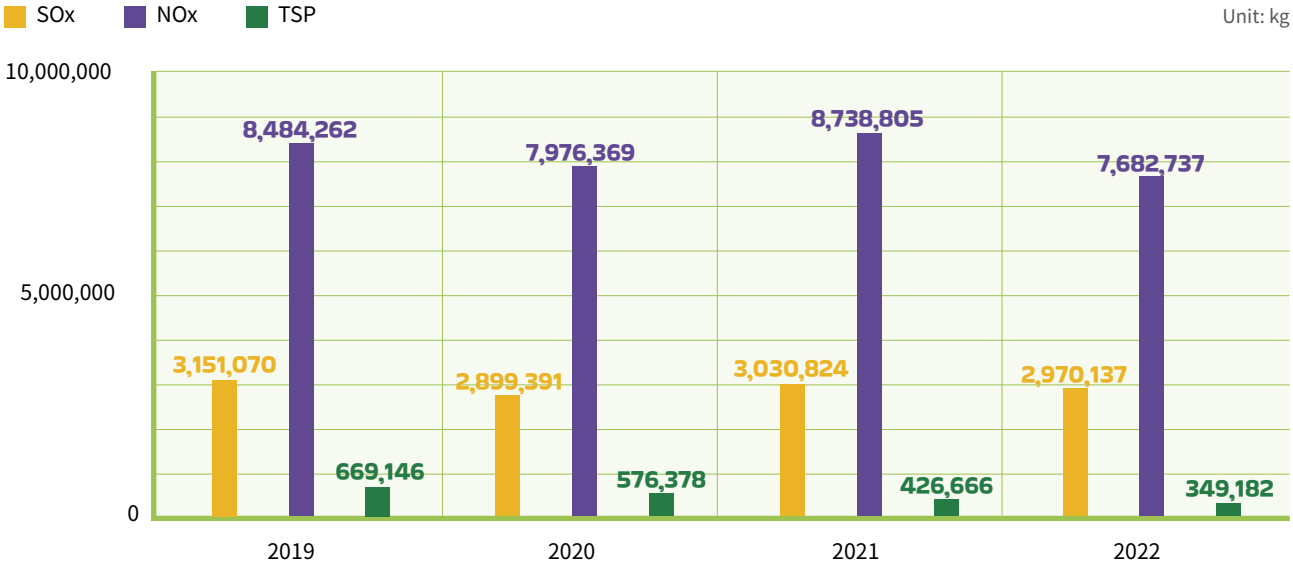
Historical SOx, NOx, and TSP Emissions Per Unit of Product



Note: Source: Summary of total volume of air pollutants discharged by FPCC

SOx emissions was 2,970,137 kg, NOx emissions was 7,682,737 kg, and TSP emissions was 349,182 kg in 2022.

Historical SOx, NOx, and TSP Emissions of FPCC



Note: Source: Summary of total volume of air pollutants discharged by FPCC

Our SOx and NOx emissions in 2022 were lower than 2021. In the future, we will continue to reduce emissions of SOx, NOx, and TSP per unit product, continue to add air pollution reduction equipment, add the most suitable amount of ammonia, and plan the use of low sulfur fuels in processes.

Park_Air Quality Assessment:

The sixth naphtha cracker has an eight-layer intensive environmental monitoring grid for rapidly tracing emissions to the source and ensuring the quality of the local environment.

Illustration of the geographical location of the eight-layer environmental monitoring grid of the sixth naphtha cracker

Air quality monitoring stations of the sixth naphtha cracker and EPA air quality monitoring stations

Locations of monitoring equipment inside the premises

① There are 8 fixed FTIRs set up on the borders of the premises. Along with six mobile FTIRs within the premises, they can effectively monitor fugitive VOC inside and outside the premises

② There are 8109 gas detectors on the premises. Once abnormalities are found, related staff will immediately be notified to handle the situation and control the leakage from the source

③ There are 34 large emission pipelines installed with CEMS on the premises and connected to the Environmental Protection Bureau, providing real-time monitoring data for effective control

VOCs Reduction and Foreign Odor Control

Mailiao Industrial Park is the first of its kind throughout Taiwan that implements cap control. Apart from the pollutants that have already fulfilled environmental assessment requirements, FPCC continues to actively make improvements to reduce the quantity of volatile organic compounds (VOCs). FPCC invested a total of approximately NT$3.63 billion in 51 improvement projects as of 2022.

51 projects
Total improvement cases

NT$ **36.3** billion
Total investment value

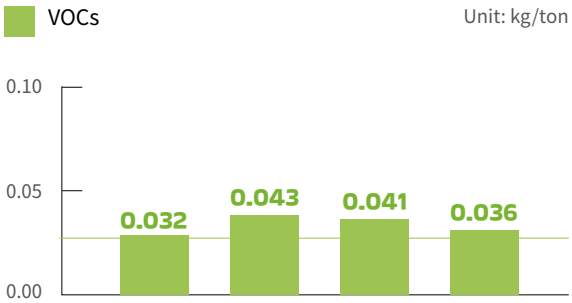
VOCs discharge reduction and improvement over the years

Item \ Year	2019	2020	2021	2022	Accumulated Volume 1999-2022
Number of Cases Improved	1	3	1	1	51
Discharge Channels (Tons)	0.14	145.42	0	0	174.46
Equipment Elements (Tons)	0	0	0	0	5.25
Storage Tanks (Tons)	0	0	130.2	36.42	261.16
Loading Facilities (Tons)	0	0	0	0	0.31
Total (Tons)	0.14	145.42	130.2	36.42	441.18
Investment Amount (NT$1,000)	309,700	200,240	361,123	219,656	3,630,898

Note: Source: The Formosa Plastics Group computer-based database for environmental protection improvements

Discharge Management of VOCs

VOCs mainly come from processes (discharge channels), storage tanks, loading operations, wastewater treatment area, and grease-water separation pond, waste gas burning tower, and equipment elements. In 2022, total production capacity was 31,192.7 thousand tons, and VOCs discharge per unit product decreased 4.65% compared with the previous year. In the future, we will increase air pollution reduction equipment (collection from storage tank to CFB or waste heat boiler), and continue to reduce VOCs discharge per unit product.



Note: Source: Summary of total volume of air pollutants discharged by FPCC

Complaints of odor by nearby residents

After odor source improvements at Mailiao Industrial Park, the number of odor complaints by nearby residents has gradually decreased each year. There were 0 odor complaints by nearby residents in 2022, and no odor complaints by nearby residents for three consecutive years, showing that overall control has obtained excellent results.

Number of Odor Complaints by Nearby Residents over the Years

Unit: Event

year	2019	2020	2021	2022
Numbers	3	0	0	0

Monitoring of moving pollution sources

To maintain the air quality in Yunlin County, we require diesel vehicles that enter Mailiao Industrial Park to submit exhaust inspection qualification documents when applying for an entry permit. If a diesel vehicle is reported by the competent authority due to its exhaust, the vendor must be re-inspected to obtain a qualification document, otherwise the vehicle will be prohibited from entering the premises. According to diesel vehicle exhaust inspection statistics of the Environmental Protection Bureau of Yunlin County, of the 163 diesel vehicles stopped on roads (the exhaust inspection was performed if the vehicle has not yet been inspected for the year) near Mailiao Industrial Park in 2022, only 0 did not conform to standards; the non-conforming rate of inspections was 0.0%, and the non-conforming rate of stopped vehicles was 0.0%. Results of stopping diesel vehicles in recent years are as follows:

Year	Traffic Flow (A)	Number of Diesel Vehicles Stopped (B)	Number of Inspections (C)	Number of Non-Conforming Vehicles (D)	Non-Conforming Rate of Inspections (D/C)	Non-Conforming Rate of Stopped Vehicles (D/B)	Non-Conforming Rate of Traffic Flow (D/A)
2019	1,245	438	80	0	0.0%	0.0%	0.0%
2020	1,511	597	82	0	0.0%	0.0%	0.0%
2021	1,502	167	85	1	1.18%	0.60%	0.07%
2022	1,341	163	82	0	0.0%	0.0%	0.0%

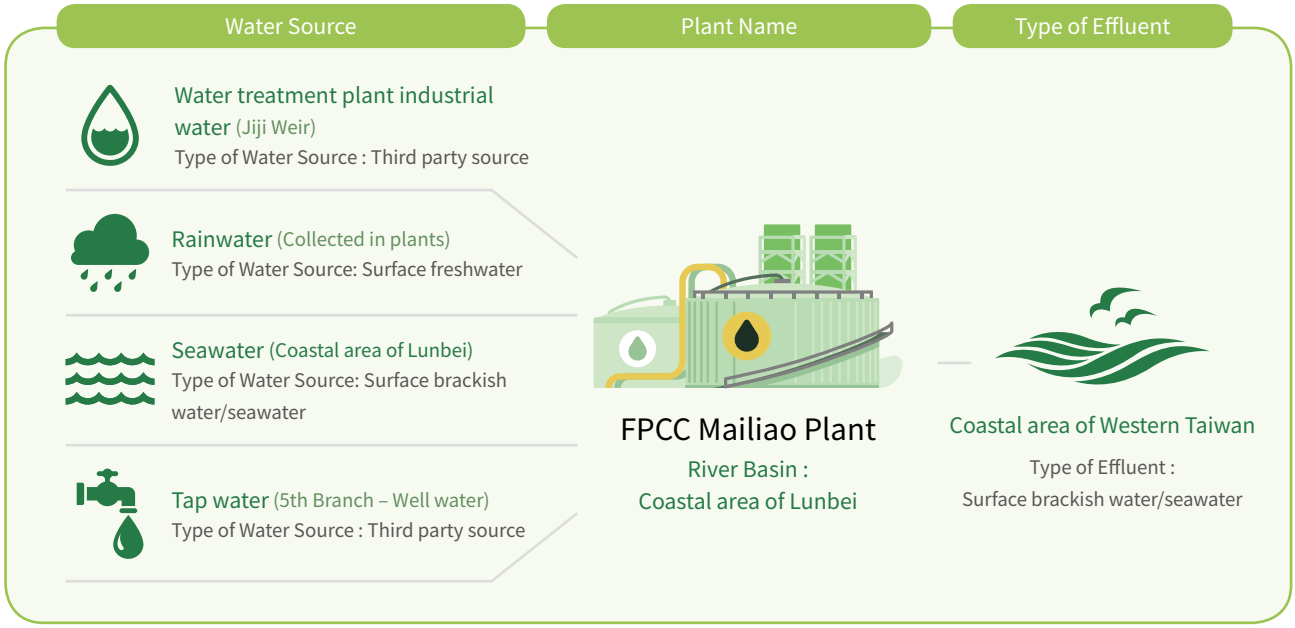
2.4 Water Resources and Waste Management

2.4.1 Water Resource Management

Source of water resources and water consumption

Our plants have three types of water sources, specifically third party sources, surface freshwater, and seawater. The wastewater (sludge) discharged after treatment along Taiwan's west coast includes third party terminals and seawater.

FPCC water withdrawal and discharge scenario



Water resource risk and impact assessment

The AWARE method is used for assessing water resource risk and impact assessment. The method assumes decreasing water supply in each area to assess the potential effect of water shortage on human beings or the ecosystem (Boulay et al. 2016). The method divides Taiwan into 23 areas, which are shown in the figure below, in which Yunlin County is not an area with high risk of water shortage (water consumption is lower than the global average 75% of the time). Based on the method proposed by Boulay et al. (2016), we divided Mailiao Plant into the following areas:

Plants Included	River Basin	WULCA (Water Use Life Cycle Assessment) Coefficient	
		Basin Code	Monthly Average
Formosa Petrochemical Corporation Mailiao Plant 1	Coastal area of Lunbei	7375	0.70
Formosa Petrochemical Corporation Mailiao Plant 2			
Formosa Petrochemical Corporation Mailiao Plant 3			

Water situation response measures

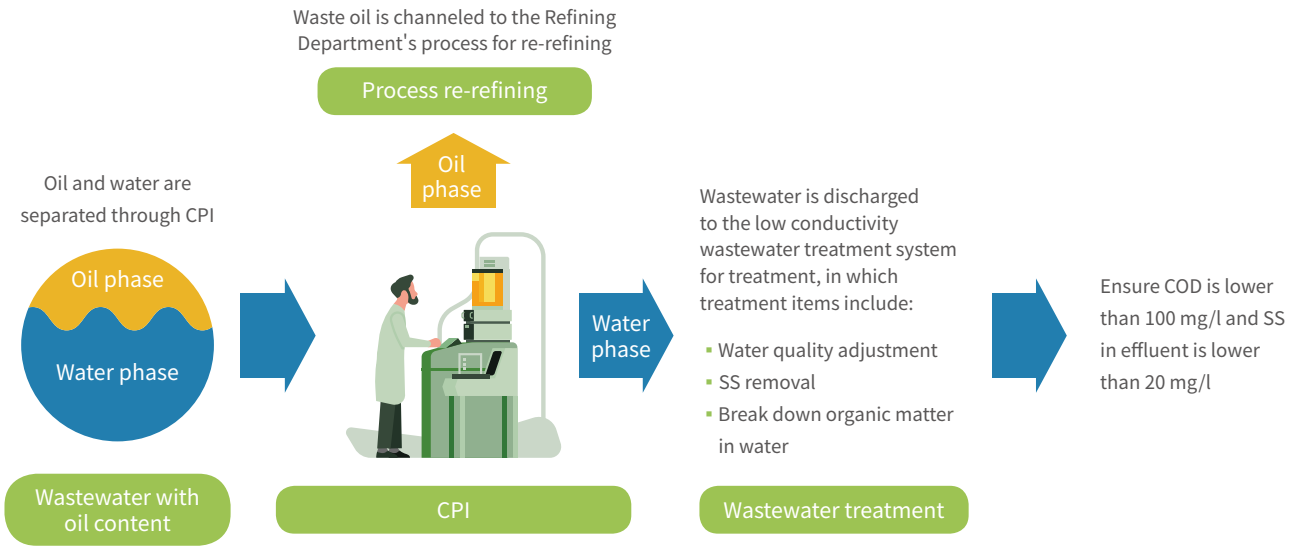
Water Situation Light	FPCC's Water Situation Response Measures	Situations in 2022
Normal water supply	▪ Water rationing not necessary	365
Slight water shortage	▪ Water conservation management measures ▪ Reduction of process water usage ▪ Reduce evaporation loss ▪ Recycling and reuse of wastewater	0
Reduced pressure water supply	▪ Suspend industrial water consumption unrelated to production	0
Reduced water supply	▪ Increase the concentration times of cooling water tower ▪ Gradually suspend the operations of some processes	0
Water supply by area or at fixed location	▪ Suspend the operations of at least half of all processes and only provide necessary water for process safety and fire safety	0

Source: Website of the Water Resources Agency (https://www.wra.gov.tw/EarlyWarning.aspx?n=18804&sms=0)

Water Improvements Over the Years

Item	Accumulated Volume (1999 to 2021 years)	2022	Accumulated Volume (1999 to 2022 years)	Ongoing	Total
Number of Cases Improved	586	36	622	90	712
Volume of Water Conserved (Million liters/Day)	96.3	0.9	97.2	7.1	104.2
Investment Amount (NTD 100 million)	18.37	0.51	18.88	3.7	22.5
Improvement Results (NTD 100 million)	4.2	0.04	4.25	0.3	4.54

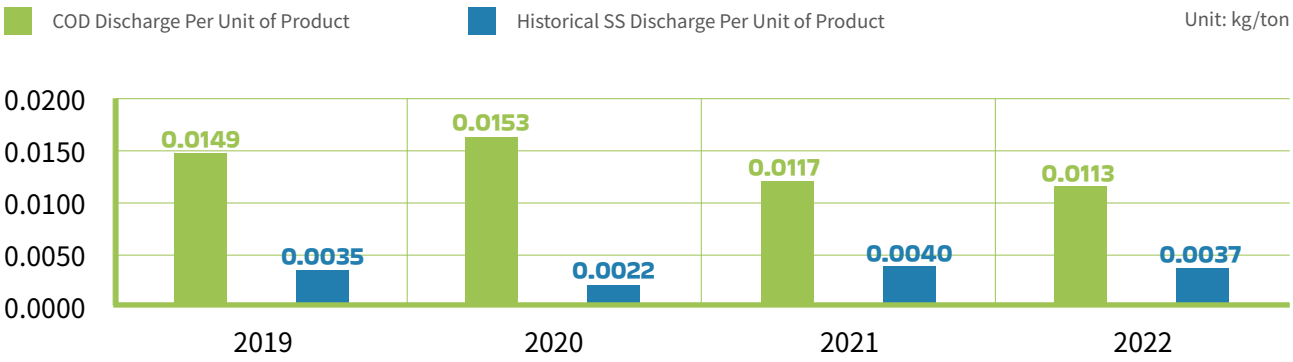
Water Pollution Prevention and Treatment Guidelines and Wastewater Management



Water resources used in product manufacturing include industrial ultra pure water and steam, which are mainly used for equipment heating, heat exchange, heat recovery, equipment cooling, and power generation facilities, allowing raw materials to be made into high quality products through the manufacturing process.

FPCC's wastewater is treated by its wastewater treatment plant.
FPCC's COD discharge per unit of product was 0.0117 kg/ton and SS discharge per unit of product was 0.0040 kg/ton, stably fluctuating compared with the past few years. This shows that biological treatment of wastewater has been mostly stable, but we will continue to improve the performance of wastewater treatment to ensure compliance with regulatory standards.

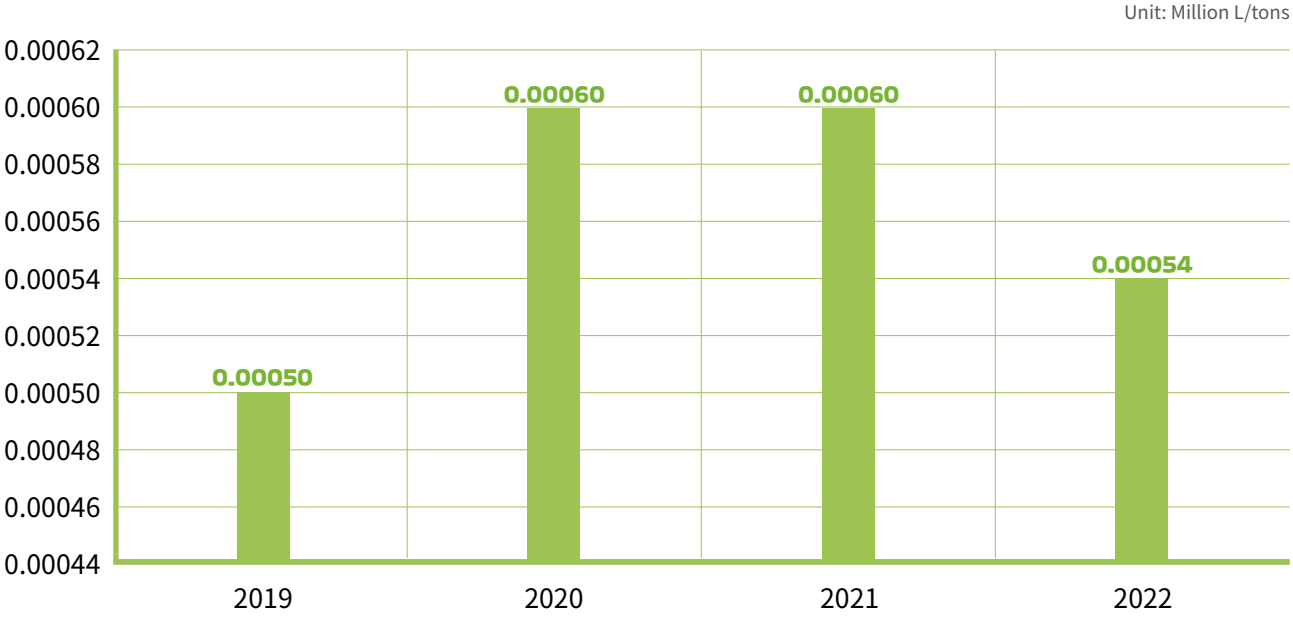
Historical Wastewater Discharge Monitoring Indicator



Note: Source: The Formosa Plastics Group water pollution prevention and treatment management computer-based database

The effluent volume generated by FPCC throughout 2022 was 46.2 thousand tons per day. The quality of water eventually discharged into the Taiwan Strait met effluent standards after wastewater treatment. The volume of wastewater discharged per unit of product in 2022 decreased 2.2% compared to the previous year to 0.00054 million L/ton. In the future, we will continue to evaluate and develop wastewater recycling and reuse (e.g. collecting process sour water to the FGD system) and wastewater treatment facility modification to increase the volume recycled, in order to continue reducing the wastewater discharge per unit product.

Historical wastewater discharge per unit of product

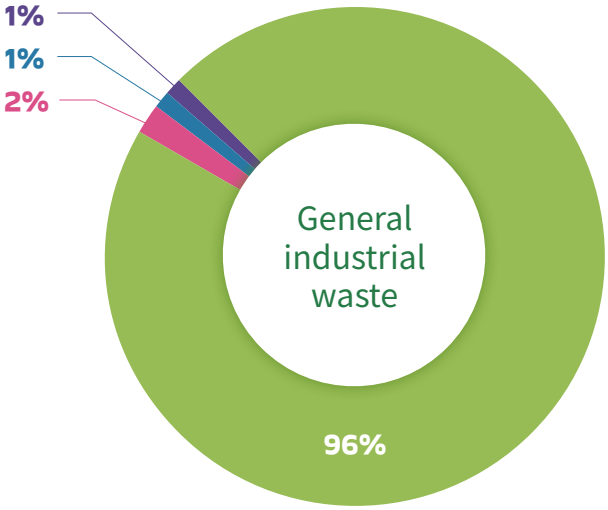


Note: Source: The Formosa Plastics Group water pollution prevention and treatment management computer-based database

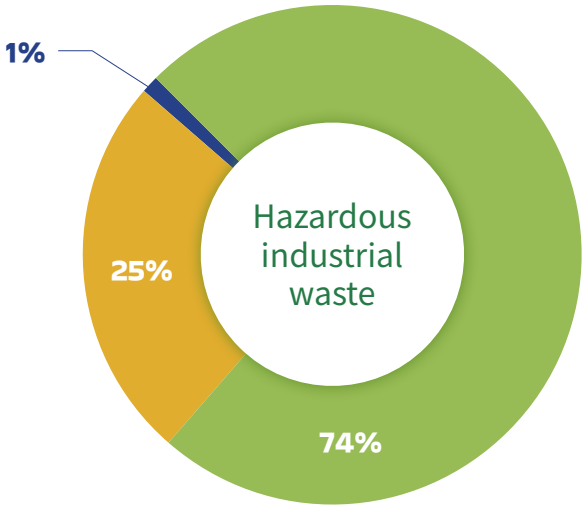
2.4.2 Waste Management

We hope to achieve the vision of zero waste through source classification, process waste reduction, recycling and reuse, and incineration and landfill. Industrial waste cleared in 2022 totaled 1,343,556 tons, in which general industrial waste accounted for 1,342,943 tons and hazardous waste accounted for 613 tons. There were no severe leakages of waste in 2022.

Overview of waste management over the years



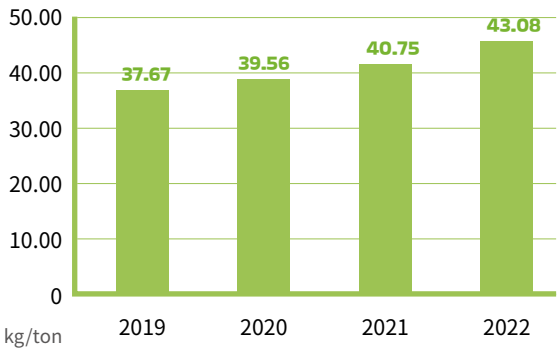
- Reuse
- Incineration
- Landfill
- Other disposal methods (such as physical treatment and thermal treatment)



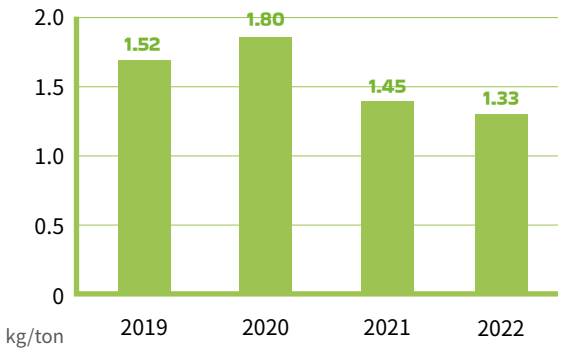
- Incineration
- Thermal treatment
- Other disposal methods (such as soildification treatment and chemical treatment)

Of the general industrial waste, 96% (1,289,482 tons) was reused, including reusing sandblasting waste in cement products and reusing waste wood as fuel, 2% (27,983 tons) was incinerated, 1% (13,146 tons) was landfilled, and 1% (12,332 tons) was treated using other methods (e.g., physical treatment and thermal treatment). Of the hazardous waste, 74% (452 tons) was incinerated, 17% (10 tons) was treated overseas, and 25% (151 tons) was treated using other methods (e.g., solidification and chemical treatment).

Historical Waste Discharge Monitoring Indicator



Historical Volume of Waste Cleared Per Unit of Product



The Volume of Waste Incinerated or Landfilled Per Unit of Product over the Years

The volume of waste cleared per unit of product was 43.08 kg/ton in 2022, an increase of 2.33 kg/ton compared with last year. The volume of waste generated due to periodic and annual maintenance increased 126,000 compared with 2021, resulting in the increase in volume of waste cleared per unit of product. The volume of waste incinerated and buried per unit of product was 1.33 kg/ton, down 0.12 kg/ton compared with last year. Efforts are directed in recycling for waste reduction, in order to reduce the volume of waste incinerated and buried.

2.5 Environmental Expenditures and Benefits:

The environmental accounting system ensures specific documentation of financial information concerning environmental activities such as the investment, maintenance of environmental equipment, research and development, and processing fees so that FPCC can make decisions and perform analyses from the perspective of environmental protection; it helps increase FPCC's competitive advantages. For detailed data, please refer to: Appendix ESG performance data – Environment

20,445 million

2022 Total expenses

2.4%

As a percentage of revenue

Environmental violations

We received 8 environmental protection fines in 2022, in which 4 were major environmental protection violations (major events involving NT$1 million or more disclosed on the Market Observation Post System). Our violations were mainly due to abnormal emissions from equipment components, and we have thus strengthened management mechanisms for equipment components. We further analyzed our fines, and found that it was mainly due to disputes over the determination of products and waste. We have filed administrative appeals in accordance with the law. For detailed data, please refer to: Appendix ESG performance data – Environment

CH3

Deepening the New Culture of Labor Safety

Chapter Summary

Ever since the Company was founded, we have upheld the spirit to get to the bottom of things and seek constant improvement, and established a safety and health management system on this basis. We are also implementing hazard prevention and risk control to achieve the goal of "zero accidents." We also implement the responsible care system and strive to create a safe and healthy work environment to lower the rate of occupational accidents.

Strategic actions

Commitment in operations

Lead the development of safety and health in the industry through the implementation of safety and health management at all levels, and by creating a safety and health culture in the Company

Development strategy

- Creating a labor safety culture : Manage processes, equipment, and personnel based on their risk level, and more quickly eliminate current risks
- Labor safety risk management : Carry out hazard and risk identification and analysis, and evaluate action plans for major risks
- Public safety emergency response : Strengthen disaster drills, raise employee awareness, and strengthen disaster prevention resilience

Scope of impact of material topic

Value chain		Upstream		Operations			Downstream	
Material topics	Financial impact	Crude oil drilling/ mining	Crude oil purchasing	Oil products transportation	Refining	Fundamental materials	Sales	Community services
Industrial and Public Safety	High	-			●			▲
Oil Products Transportation and Storage Safety	Low	-			●			●
Occupational Health and Safety	Low	-			●			-

● Cause : An organization's activities cause an impact

▲ Contribute to : The activities of an organization causes, contributes to, or induces another entity to cause an impact

■ Directly linked to : Despite an organization not causing or contributing to an impact, its operations, products, or services may still cause an impact through business relationships

Stakeholders

employees | customers | local residents | government agencies | Investors/shareholders | suppliers and contractors

Targets in 2022	▪ Formulate and implement countermeasures for causes of accidents in the previous year.	Δ
	▪ Contractor management: ① Prepare a checklist for spot inspections by supervisors required by law to improve the implementation of spot inspections. ② Compiled JSA checklists to improve the implementation of JSA.	Δ
	▪ Implement procedural HazOp.	Δ
	▪ Promoted false alarm case study.	Δ
Targets in 2023	▪ Formulate and implement countermeasures for causes of accidents in the previous year, and prevent accidents from occurring again. ▪ Personnel at each level carry out tasks according to regulations before, during, and after operations. ▪ Continue to implement contractor self-management: ① Improve the implementation of JSA spot inspections. ② Improve the implementation of spot inspections by supervisors. ③ Reduce the accident and abnormality rate of elevated and lifting operations. ▪ Implement procedural HazOp.	
Mid-term and Long-term Goals	▪ Aim to achieve zero accidents. ▪ Promote self- management by contractors and lower their accident rate. ▪ Continue to improve the completeness of PHA.	

✓ Achieved Δ Ongoing

3.1 Creating a Labor Safety Culture

● Management approach (MA) for material topic

Material topics	Material topic management policy
Industrial and Public Safety	We are committed to achieving zero accidents, and will actively comply with international standards, technologies, and provide personnel with professional training to improve the industry's work environment.

Description of positive/ negative impact		Minimize the negative impact of operating activities on nearby communities to prevent accidents caused by improper operation management ○ Better reputation △ Risk of business suspension △ Equipment damage ○ positive △ negative	
Management actions		▪ Created management files for PSM	▪ Contractor audit
Results tracking		▪ Percentage of personnel with PSM certification increases compared with the previous year	▪ 598 Supplier educational training sessions
Stakeholder engagement	Stakeholder group	▪ Government agencies	▪ Suppliers and Contractors
	Communication channel and frequency	▪ Meeting (at least 4 times/year) ▪ Email/official letter (As needed)	▪ Meeting (As needed)
	Engagement results	▪ Frequency-severity indicator lower than the industry	▪ Contractors have higher self-management awareness and lower public safety risks

3.1.1 Labor safety culture promotion

FPCC understands that stable production performance must be maintained to achieve sustainable development, and a good safety culture is indispensable to maintaining stable production. We have created a labor safety culture based on our safety and health policy. The meaning of this culture is not only about the Company's occupational safety and health performance, but also the safety performance and atmosphere among employees, how they think and act, and the Company's environment.

Excellent Risk Management	We achieve "disaster mitigation" and "disaster prediction" through hazard identification and risk analysis
Understanding Hazards and Risks	Safe transportation; Occupational health and safety; Contractor management; Chemical safety of products; Environmental management; Emergency response
Learning from Experiences	Disaster Reduction ▪ Collect and promote cases (EHS reporting and professional technology management platform) ▪ Periodically conduct statistical analysis of incidents (false alarms) and findings in internal/ external audits, and formulate improvement and action plans Disaster Prediction

3.1.2 Occupational Accident and Violation Statistics: Prevention, Methods, and Follow-up

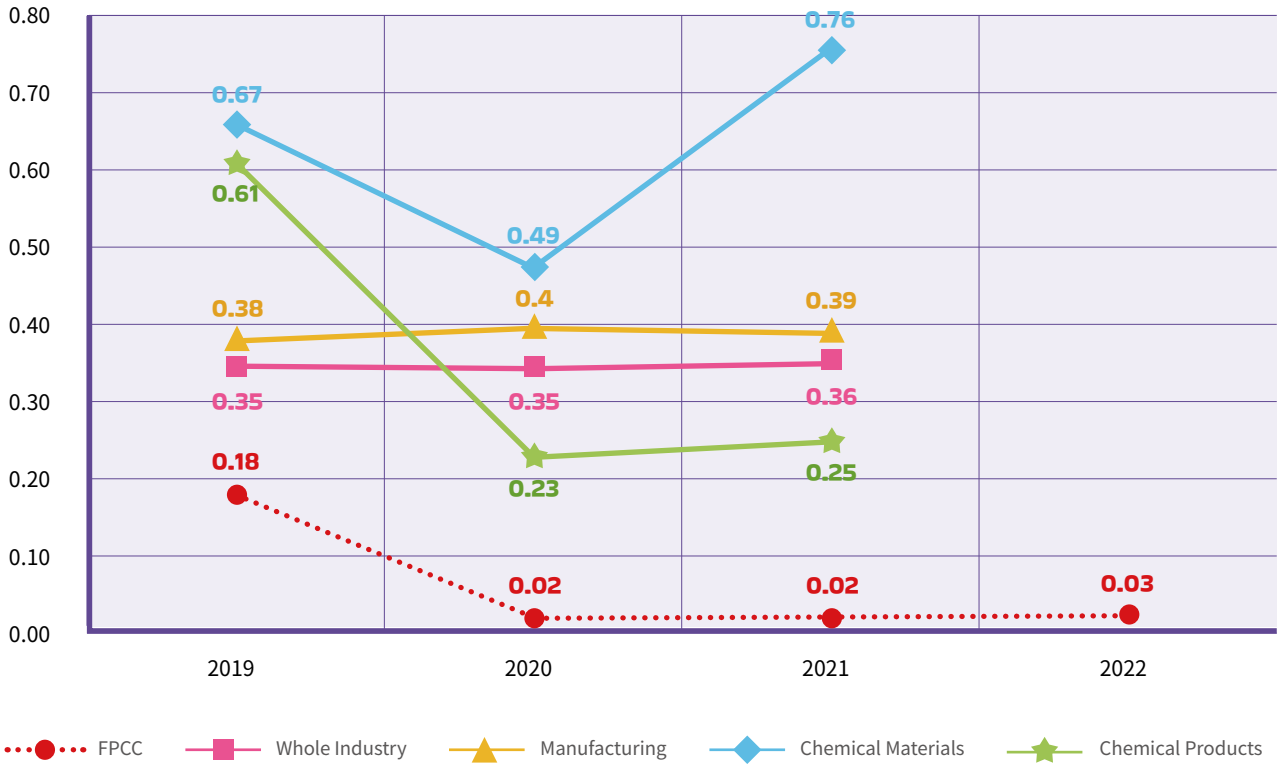
In 2022, our death rate due to occupational accidents was 0, frequency of disabling injuries was 0.11, severity of disabling injuries was 13, and comprehensive injury index was 0.03. The number of cases was lower than in 2021, but the number of days lost was higher than in 2021 due to an employee being hospitalized with a third-degree burn.

There was 1 occupational accident involving employees and 5 occupational accidents involving contractors in 2022, resulting in 6 disabling injuries, specifically:

- 1 occupational accidents involving employees: 1 person was burned.
- The 5 occupational accidents involving contractors included 2 cut accidents (2 people), 2 falling accidents (2 people), and 1 entanglement accident (1 person).

For details of employee occupational injuries and percentage of contractors in the past four years, please refer to: Appendix ESG performance data – Social

Comparison of FPCC and the Industry's Comprehensive Injury Index in 2019-2022



Note: Industry data for 2022 was not provided because it has not been announced by the Ministry of Labor yet

Continue to strengthen contractor self-management and lower risk through monthly EHS reports, designated training, and formulating countermeasures. There were no major violations (NT$1 million and above) in 2022, and the competent authority imposed 4 fines for violations of regulations.

Details of violations of the Occupational Safety and Health Act in 2022

	Reason for Fine Due to Violation of Regulations	Amount of Fine	Improvement Status
01	Some openings at edges of the inspection platform on 2F and 3F of chimneys (height difference over 50 m), do not have railings with proper strength or cover.	NT$60,000	▪ Conducted on-site inspections, recorded abnormalities in detail, and immediately made improvements.
02	Manual valve not tightly closed and the plug at the outlet of the valve was not fastened and fell off, resulting in HVGO leakage that caused a fire accident. (January 21, 2022)	NT$300,000	▪ A new positioning line was added for the manual valve, and a thermal imager is used every quarter to verify if any high temperature surfaces are exposed.
03	The employee involved in the accident was taking photos of the suspected leak, so that subsequent repair could be carried out. A leak suddenly occurred and the employee was burned due to insufficient facial protection.	NT$300,000	▪ The Company reexamined work rules and specified that inspecting or photographing equipment with leakage is considered working on equipment with leakage, and employees need to wear PPE to protect them from the leaking substance. ▪ All tasks related to handling leakage, including inspection, photograph, removing insulation, and construction are included in high risk operations for enhanced management.
04	The use of non-conforming scaffolds was not prohibited and inspection was not properly conducted.	NT$100,000	▪ The supervisor of scaffold assembly and labor safety personnel of contractors are required to conduct self-inspections every day. ▪ The construction supervisor and managers at each level irregularly conduct on-site inspections and supervision, and deficiencies found are recorded in the ERP system. ▪ If the same contractor is found with 4 deficiencies in six months, the scaffold assembly supervisor is replaced and may not hold the position again within six months.

Occupational Accident Prevention

We analyzed the cause of incidents and formulated prevention plans based on investigation results for parallel implementation. We assess and control risks through JSA and PHA to discover potential hazards and implement controls in advance, thereby ensuring employee safety and health.

Findings from analyzing the 2 accidents involving employees are as follows: The main cause of employee accidents was insufficient safety awareness and deficiencies in standard operating procedures. Based on annual analysis results, our primary goal in 2023 is to "Reexamine standard operating procedures – Standards for wearing PPE when handling abnormalities."

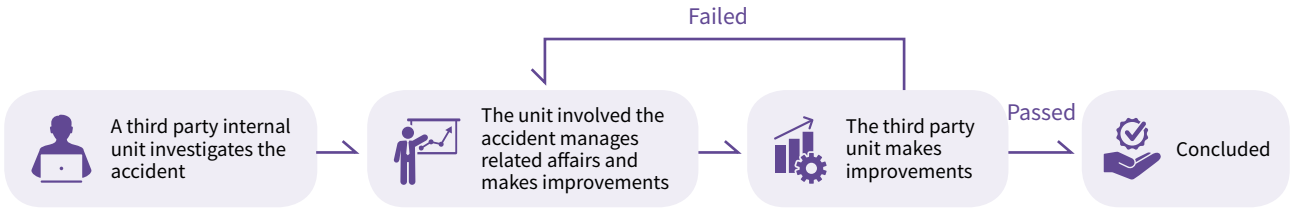
As for the prevention of occupational accidents involving contractors, our primary goal is for "labor safety personnel and supervisors of contractors to conduct self-inspections, and related management personnel (supervisor, construction safety personnel, safety supervisors, and construction supervisors) to maintain safety standards before, during, and after operations."

Handling and Follow-up of Occupational Accidents

Besides following regulatory procedures when handling occupational accidents, we utilize objective, professional investigation procedures to find the true cause of accidents and blind spots in management, so as to make thorough improvements.

The Company's health manager, department heads, dedicated personnel for providing employee guidance, and cooperating psychologists and physicians provide healthcare, consultation, and reinstatement evaluation based on the physical and psychological condition of personnel.

Occupational accident handling and follow-up process



Traffic Accident Prevention

The majority of employee work hours lost was due to "traffic accidents during commute." Employees were involved in a total of 27 traffic accidents in 2022, and the number of days lost was 418 days. After analysis, the other party was responsible in the majority of traffic accidents. Hence, we periodically announce traffic accident hotspots in Mailiao Township in the previous year, edit promotional clips each quarter, provide defensive driving training, and use video to raise employees' safety awareness. We encourage employees to actively report roads with insufficient lighting or poor road conditions in plant areas, in order to improve traffic safety in plant areas. For employees who regularly clock in five minutes before work, their department head will talk with them and advise them to leave home early, in order to avoid rushing to work. We reward departments with excellent traffic accident prevention performance, in hopes that the collective efforts of all employees will continue to lower the rate of traffic accidents. For statistics of the number of employee traffic accidents while commuting and days lost in the past four years, please refer to: Appendix ESG performance data – Social

Raise awareness of traffic accident hotspots

Implement new approaches to traffic safety management

Promotion of traffic safety videos on a professional technology management platform

Provide traffic information

3.2 Labor Safety Risk Management

3.2.1 Process Safety Management (PSM)

Besides complying with government regulations, we manage production processes, equipment, and personnel based on PSM, and also refer to the PSM laws of the U.S. OSHA and technical document specifications issued by the CCPS of the AIChE.

The number of process safety incidents that occurred in 2019-2022 was 2 incidents, 1 incident, 1 incident, and 2 incidents, respectively. Once a process safety incident occurs in a plant, we assemble an investigation team with experts in each field to verify the facts and cause. Measures are simultaneously implemented in all factory offices and tracked until all improvements are completed. We supervise improvements through an impartial third party, subject to guidance and supervision of the Industrial Development Bureau, Ministry of Economic Affairs and Occupational Safety and Health Administration to verify our implementation progress.

Date of Abnormality	Number of Days Affected	Reason for Abnormality	Improvement Measure
2022.01.21	39 days	▪ The connection between rock wool and aerogel insulation layers with different thickness is damaged. ▪ Pumps do not have a discharge tube and creates an airlock. ▪ Drain valves/Plug not closed tightly.	▪ The same segment uses the same insulation material. ▪ Add discharge tube. ▪ Add a positioning line to the drain valve, and comprehensively inspect if drain valves, plugs, and caps at the ends of pipes are fastened.
2022.09.01	15 days	▪ Did not identify all corrosion mechanisms. ▪ The Work Rules do not specify PPE that needs to be worn when inspecting abnormalities.	▪ Check pipe connectors under similar operating conditions and include them in the inspection plan for monitoring. ▪ Comprehensively review Work Rules and specify PPE that needs to be worn when handling abnormalities.

With regard to PSM training, the EHS Center continues to commission the Technical Training Center to assist in personnel training, hoping that the training mission will establish more accurate knowledge and management of process safety by employees. For statistics of PSM certifications in the past 4 years, please refer to: Appendix ESG performance data – Social

● Implementation of Procedural HazOp

The 3-year Procedural HazOp Project was formulated to prevent potential process hazards or accidents from occurring during process equipment repair/maintenance, period with relatively unstable process conditions, such as when operations commence/cease or early stages after commencing operations, when switching between processes, or during non-routine operations, such as modifying process conditions and tank cleaning. A total of 129 operations were completed this year with an implementation rate of 87.2%, and operations that were not completed will be tracked in 2023 Q1.

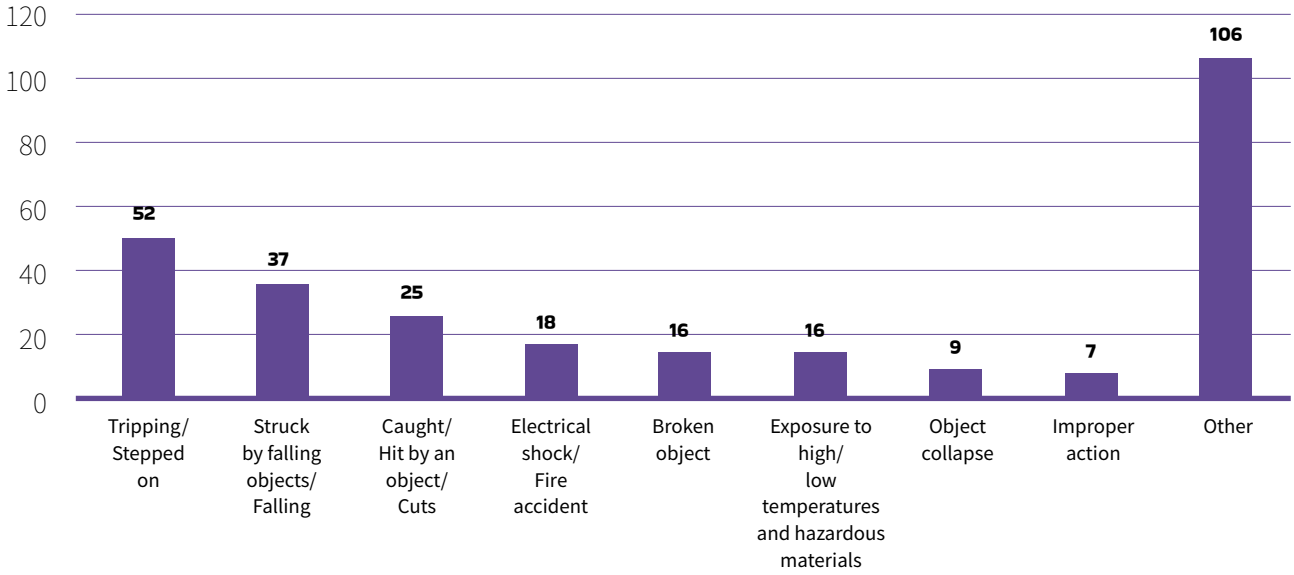
2022	Terminal unit	Refining	Olefins	Oil products	Public utilities	Total
To be implemented	4	99	20	4	21	148
Already implemented	4	80	20	4	21	129
Implementation rate (%)	100.0	80.8	100.0	100.0	100.0	87.2

Accident statistics

A total of 286 false alarms[Note 1] were reported in 2022 (general occupational safety incidents: 205/Process safety incidents: 81). According to statistics, the main types of accidents were falling, getting trampled, falling objects, and pinch/collision/cut with 52, 37, and 25 cases, respectively. We convened meetings to review, investigate, and formulate improvement measures, in hopes of continuing to discover potential hazards, and further prevent occupational accidents and fire accidents from occurring.

2022 FPCC False Alarm Incident Statistics

286 Total



Note: 1. False alarm: Refers to unexpected situations where no hazard occurred, but would result in casualties or asset loss if the situation was slightly different.

2. Other: Occurrence of unexpected or accidental equipment abnormality (29 cases), operational parameters exceeding the normal scope of operation (8 cases), loose flange screw in equipment (7 cases), failure or abnormal results in safety facility inspections and tests (5 cases), abnormal operation or unexpected loss of control (2 cases), and equipment failure (3 cases).

3.2.2 Contractor Operational Safety Management

The Company convenes daily toolbox meetings and monthly coordination organization meetings to communicate, promote, and discuss safety, health, and epidemic prevention with contractors. Requirements that must be immediately met are communicated through the messaging group between the Company's engineering department and contractors. Contractors can use the group to ask questions at any time, and the Company's personnel will immediately respond and provide assistance.

Implement contractor self-management and inspections

① Inspections before, during, and after construction by labor safety personnel of contractors:
The Company's safety supervisor verifies and signs inspection items on the work safety permit together with labor safety personnel of contractors before commencing construction, and also conducts designated safety inspections during and after construction.

② JSA inspection by labor safety personnel of contractors:
Labor safety personnel of contractors write down protective equipment required for JSA operations that day before construction commences, and verify if all equipment is prepared and effective. They check the corresponding JSA procedure during construction, and verify if personnel are properly using protective equipment.

③ Inspection by operations supervisor of contractor:

The supervisor of operations by contractors prepares a checklist according to required inspection items specified in the Occupational Health and Safety Act. Supervisors perform inspections using the checklist before construction commences each day and supervises operations on site.

	Before construction	During construction	After construction
Conduct inspection according to the work safety permit form – inspection items	Verify safety inspection items before construction each day	Verify safety inspection items during construction	Verify the work environment
Construction site daily safety and health inspection form – Labor safety personnel JSA inspection	Verify PPE required by the JSA for operations that day	Verify protective measures of the JSA for operations that day	-
Inspection by supervisor of operations	Verify inspection items according to regulations	Provide instructions and supervise the construction site	-

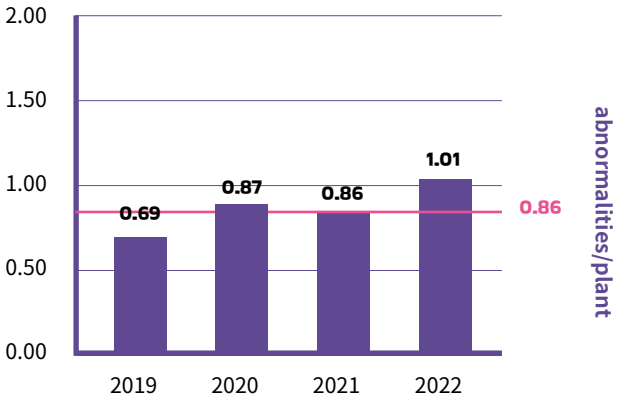
Example of checklist for supervisors

Example of JSA inspection

Example of inspection before, during, and after construction

Compliance audit

We verify the implementation results of safety and health management systems and compliance of units through monthly compliance audits and project audits. With regard to safety management by each plant and division, there was an average of 1.01 abnormalities/plant in 2022, which was higher than the average of 0.86 abnormalities/plant in the past four years. "Contractor self-management and inspection implementation" was listed as a key audit item, but the number of abnormalities slightly increased (from 13% to 18% of abnormalities). The number of abnormalities in elevated operations (including scaffold management) increased (accounted for 26% of abnormalities) and was listed as a key audit item in 2023. For details on the average number of abnormalities in the past 4 years, please refer to: Appendix ESG performance data – Social



Employee and Contractor Professional Training and Certification

We improve the specialized knowledge and skills of employees and contractors through solid training, and further improve operational safety and quality, lower abnormality rate, and achieve process safety, stability, and continuous operation.

Trainees	Training and Certification Category	Training Item	Training Direction and Purpose	2022 Training Results
Employees	Safety and Health Training Required by Law	Employee Safety and Health Training Required by Law	To strengthen employees' safety and health knowledge, and ensure that employees (from Occupational Health and Safety supervisors to basic level operators) have the necessary professional knowledge and skills. To enable employees to actively discover potential hazards during operations, and take precautions to lower operating risks	A total of 223 batches of training were held; 21 types of training were organized with 1,682 participants
	EHS Promotion and Training	EHS Promotion and Training	For employees to understand company regulations and systems, occupational safety and health related laws, general knowledge on hazards, personal protective equipment/first aid equipment, traffic safety, accident examples, emergency response drills, and health seminars	A total of 898 training sessions were held with 57,614 participants
	Position-Specific Certification	Employee Position-Specific certification	To improve employees' work ability and quality and ensure their professional competency	59 types of operational certifications. Number of employees that obtained certifications in 2022 reached 1,763
Contractors	On-Site Education and Training	On-Site Education and Training	Contractors must complete "safety and health education and training" and pass tests organized by each business department (second line of access control) to obtain formal construction qualifications	Access control safety and health training: 598 sessions with 30,985 participants from 2,406 contractors
	Contractor Certification	Safety and Health Management Personnel Certification	Strengthen the basic management skills of contractors' safety and health management personnel	A total of 64 labor safety personnel of new contractors obtained the certification
		Professional Technology Certification	Improve the professional skills of construction workers and quality of scaffolds, general machinery installation and dismantling, bolt installation and removal, control valve repair, switchgear repair, general meter calibration, wiring repair, painting, electric welding, temperature control, steel bars, and piping	318 people obtained professional technology certifications

3.2.3 Finished Goods Transportation and Traffic Safety

Management approach (MA) for material topic

Material topics	Material topic management policy
Oil Products Transportation and Storage Safety	We use long-distance pipelines to replace oil tankers for domestic oil product transportation, in order to achieve energy conservation and carbon reduction and reduce traffic accidents

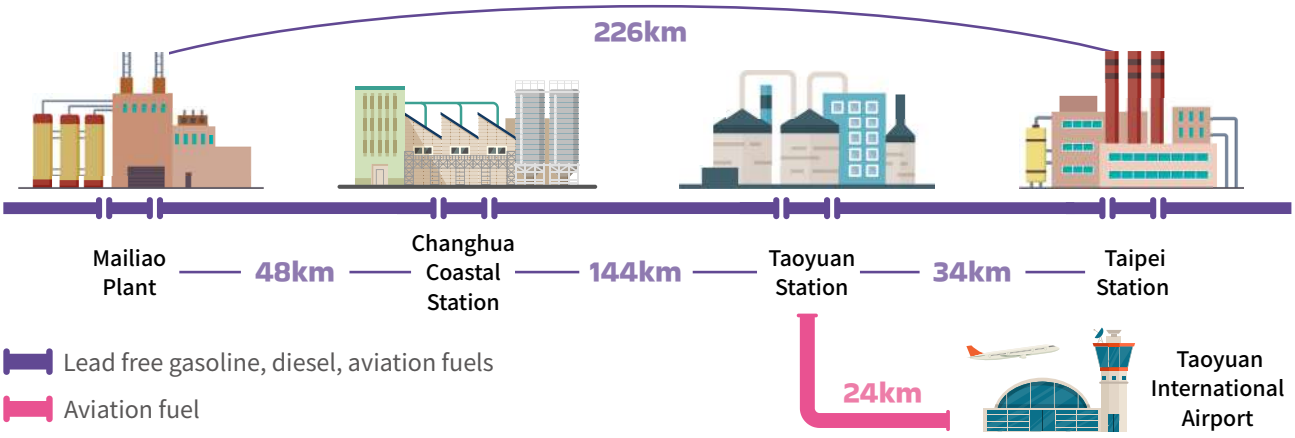
Description of positive/negative impact		Ensure maritime and land transportation safety and prevent environmental pollution caused by leakage ○ Improve safety for road users △ Increase in environmental costs △ Reputation damage ○ positive △ negative	
Management actions		▪ Long-distance pipeline safety management and install smart positioning system	▪ Implementation of driving safety improvement measures, including personnel training and communication meetings
Results tracking		▪ Zero long-distance pipeline leakage incidents	▪ Carried out on a monthly basis, 12 times a year
Stakeholder engagement	Stakeholder group	▪ Government agencies	▪ Residents at the operation site
	Communication channel and frequency	▪ Meeting (once/quarter)	▪ Email/phone number (Whenever they occur)
	Engagement results	▪ Audit oil pipelines and oil storage facilities, jointly find segments with high risk of leakage, and propose protection strategies to effectively avoid pipeline leakage	▪ Safety inspections are conducted every time transport vehicles enter storage and shipping stations for loading, in order to prevent non-conforming vehicles/drivers from going on the road and lower the risk of hazards to other road users

Oil products transportation safety

The Company transports oil products via land and sea transport, in which land transport includesunderground long-distance pipelines and oil tankers. There were no leakage incidents due to transport in 2022.

Underground long-distance pipeline transportation

The Company's four 12" underground pipelines for long-distance transportation stretch 226 km along the west coast highway from the Mailiao Plant to the storage and shipping station at Taipei Harbor in Bali, New Taipei City, transporting unleaded gasoline, aviation fuel, and diesel.



Long-distance Pipeline Safety Management

To ensure that transportation through long-distance pipelines outside the premises is safe, we inspect the pipelines on a daily basis. In addition, we perform cathodic protection potential tests on a quarterly basis. To effectively protect the pipelines from corrosion-resultant leaks, we periodically commission professional service providers to do pipeline current mapping (PCM) or close interval potential survey (CIPS) for the testing of the integrity of the enveloping layer of underground pipelines, and use a smart pipeline inspection gauge (PIG) to inspect the thickness of pipelines. Meanwhile, we have set up surveillance systems at important facilities in addition to transportation and storage monitoring systems to ensure the safety of transportation operations.

10 consecutive years

There were **no** long-distance pipeline leakage incidents

Oil tanker transportation on land

There was 1 traffic accident in 2022. The land transportation company (Sixth Naphtha Cracker Forwarding) we have worked with for years has been involved in fewer traffic accidents compared with the average in Taiwan at 0.12 accidents per million kilometers. For statistical analysis of the average number of accidents in the past 4 years, please refer to: Appendix ESG performance data – Social

2022

There were **no** leakage incidents involving finished product transportation

Implementation of Driving Safety Improvement Measures

To ensure traffic safety and lower the number of traffic accidents, we required our subordinate transportation company (Sixth Naphtha Cracker Forwarding) to make improvements in personnel training, equipment upgrade, in hopes of maintaining zero accidents and reducing the hazards and risks of drivers.

Carrying out tank truck accident emergency response drills

Safety training: We periodically organized transportation company safety meetings, including descriptions of the implementation of the Management Regulations for External Vehicles Assisting with Transportation, vehicle safety device explanation, implementation of joint defense organization for emergency response to hazardous objects, and review of abnormalities in driving and loading/unloading operations, in hopes of jointly improving traffic safety capabilities.

Transportation safety meetings for transportation companies

Maritime transportation

The Company commissioned Formosa Plastics Marine Corporation to transport oil products, and requires the company to have a complete system from prevention to disaster mitigation and be able to utilize administrative support and disaster prevention, so as to ensure shipping safety and prevent pollution caused by leakage.

13 consecutive years
There were **no** ocean pollution incidents

Ship emergency response drills

Emergency response drills: Two coastal drills are held each year, the drills are recorded on video, and then reviewed during meetings on emergency response drills, so that every crew member performs his/her duties to minimize damages and complete recovery work as soon as possible.

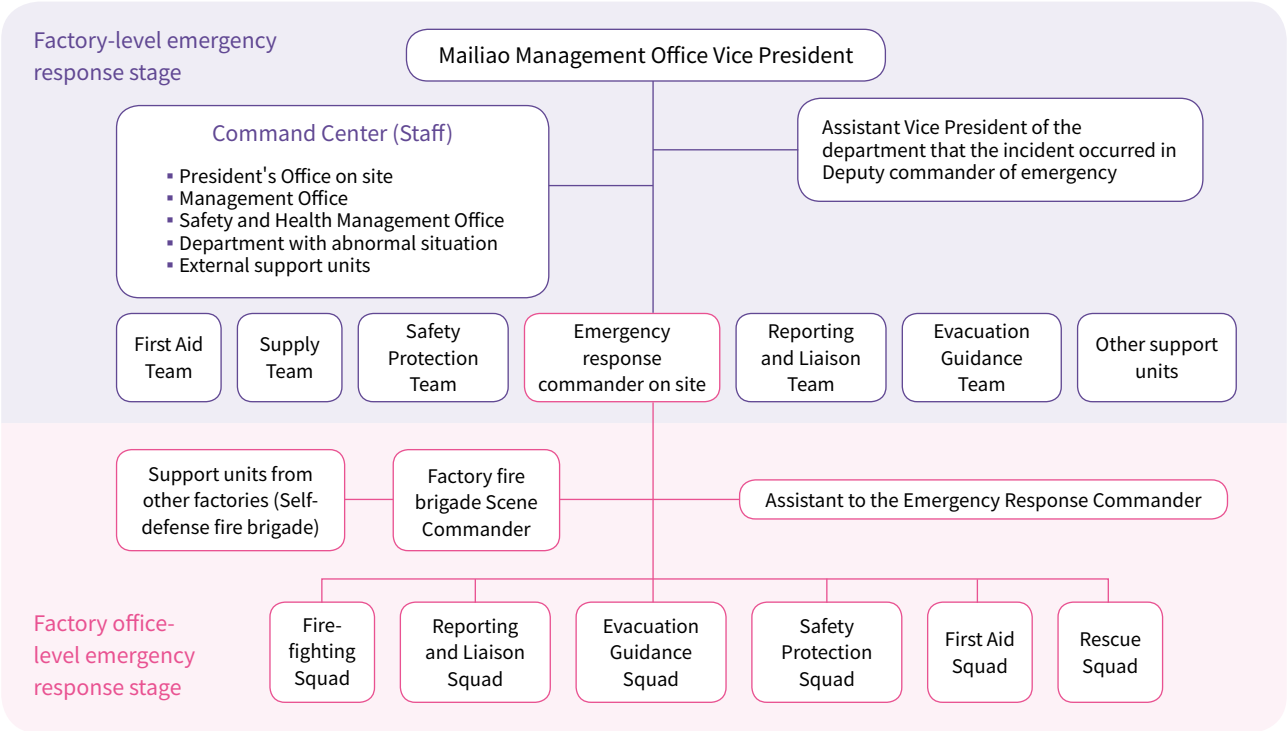
3.3 Public Safety Emergency Response

Emergency Response Management System

We established a complete emergency response organizational structure (invert color part in Figure 1), and implement emergency response management operations in two parts, "readiness" and "drills."

- Readiness: All of our plants have prepared high risk topics for drills, organized emergency response personnel, and prepared disaster relief equipment, instruments, and maps (e.g. H-CARD) required to immediately handle abnormal events when they occur.
- Drills: Drills are conducted for the topics above to improve disaster relief when an emergency occurs. Personnel are educated through live drills, and the President's Office, Business Department and other plants form a team to jointly conduct evaluations, learning from each other's strengthens and internalizing them to gain better disaster relief capabilities for emergency events.

Organizational chart of the emergency response organization



Emergency response groups shift handover system

For on-site operators to carry out emergency response operations within the shortest time when an emergency incident occurs, the supervisor on duty assigns operators to emergency response groups during shift handover based on emergency response personnel requirements. The equipment required for response are entered in the work items during shift handover to determine the functions and manpower of emergency response groups.

Personnel training

If an abnormality is properly controlled when it first occurs, it will effectively prevent a disaster from spreading and reduce losses, in which the key is personnel training. FPCC has a complete classified training system with different training items for new employees to senior supervisors. Contents range from basic concepts to commander training, and effectively improve emergency response and disaster relief abilities.

Training Level		Training Item	Trainees	Training Frequency
Level 1	Level of general knowledge	Basic fire safety concepts and reporting measures	New recruits	Carried out after reporting for duty
Level 2	Level of operation	Handheld fire extinguisher and smoke room training	Direct labor	Once every two years
			Indirect labor	Once every four years
Level 3	Technical	Self-defense fire brigade training (including hose and mobile nozzle operations, and other firefighting equipment)	Self-defense fire brigade reserve personnel	Once every six months
		Self-defense fire brigade periodic training (operation of various fire safety and disaster relief equipment and large flow fire hose nozzle)	Current personnel of the self-defense fire brigade	Once every quarter
Level 4	Professional	Specialized training for various firefighting equipment and vehicle operation	Full-time fire brigade	Once a month
		Texas A&M University industrial firefighting training		As needed
Level 5	Emergency response commander	Emergency response commander training	Cadre members of the full-time fire brigade and all level supervisors on site	As needed

Execution of Emergency Response Drills

Besides organizing emergency response drills every six months, the industrial park conducts joint drills with the county government every year, expanded joint drills with Mailiao Association for Safety & Health, annual ocean pollution drills, public area pipe carrier drills, irregular national toxic chemical substance disaster response drills, and national key infrastructure protection drills. The cross-departmental joint drills allow departments to work better together in disaster relief, while strengthening the mutual assistance and joint defense mechanisms of joint defense organizations.

Starting in the second half of 2022, FPCC plans drills for high risk topics every six months to strengthen the disaster relief capabilities of front-line response personnel. High risks, such as fire accidents in plants, or processes that have been involved in fire accidents in the past are given priority for drills, which train personnel in using response instruments and reporting. We also conduct nighttime drills, when there are fewer personnel on duty and lighting is poor, to strengthen the emergency response and disaster relief abilities of personnel who are on duty.

Type of Drill	Number of Drills Required by the Law (Annually)	Number of Drills Executed (Annually)	Remarks
National key infrastructure protection drills	0	1	The drill is jointly conducted by the central competent authority, local government, and departments of companies, strengthening the industrial park's anti-terrorism ability
Marine pollution prevention drills	3	3	Led by the Environmental Protection Bureau of the county government, and jointly carried out by the Coast Guard Administration, Fire Bureau, and FPCC
Joint emergency response drills with the county government	0	4	Drills are jointly conducted with the county government's Fire Bureau and Environmental Protection Bureau to build chemistry during disaster relief operations
Expanded joint drills with Mailiao Association for Safety & Health	0	2	Co-organized with the Industrial Development Bureau Service Center and joint defense plants (divisions) to enhance regional joint defense and disaster relief capabilities
Public area pipe carrier drills	0	5	Drills are jointly conducted with the Main Management Office and nearby pipe carrier plants (divisions) for faster disaster relief when an incident first occurs
Toxic chemical incident response drills	15	15	Includes 1 formal and 2 unscheduled drills
Factory office emergency response drills	46	172	Except for personnel on duty, shifts that are not included in drills also conduct drills on their own
Total		202	

Annual marine pollution prevention and response drills

Expand drills for public pipes

Toxic chemical leakage response drill

Nighttime emergency response drills

3.4 Employee occupational health management

● Management approach (MA) for material topic

Material topics	Material topic management policy
Occupational Health and Safety	The Company's employees and non-employees all comply with requirements of the Occupational Safety and Health Act and comprehensively implement ISO 45001:2018 to ensure the safety and health of all workers and stakeholders

Description of positive/ negative impact		Provide a safe and healthy work environment to prevent workers from being exposed to hazard factors in the workplace ○ Increases productivity △ Personnel casualties ○ positive △ negative		
Management actions		▪ Used the electronic evaluation system and health examination data to manage and track cases	▪ Contracts specify that an additional 10-15% is provided as a safety and health management fee for contractors to implement occupational safety and health management	▪ Combined the group's resources to promote the concept of preventive medicine
Results tracking		▪ 671 employees Subjected to classified management and follow-up	▪ Periodically audit contractors	▪ On average each person lost 3.87 kg of weight
Stakeholder engagement	Stakeholder group	▪ Employees		
	Communication channel and frequency	▪ Employee-employer coordination meetings (Once/2 months) ▪ Opinion box/email (Whenever they occur) ▪ Release letter (As needed)		
	Engagement results	▪ 95% completion of proposals at employer-employee meetings ▪ Hazard control and related management measures are taken for personnel under level 4 management		

3.4.1 Occupational Illness Prevention and Management

Special Operations that are Hazardous to Health

There are 13 statutory special operation sites at FPCC (dust, noise, high temperature, n-hexane, vinyl chloride, benzene, ionizing radiation, butadiene, dimethyl formamide, carbon disulfide, chromic acid, cadmium, and mercurate). Doctors will visit our sites according to the frequency required by the law, and will evaluate the health of employees performing special operations and the association with their work. The evaluations are jointly conducted together with supervisors, employees, nurses, safety and health personnel, and personnel representatives on site. We continue to prevent occupational illnesses through health examination follow-up, individual healthcare for employees, and operating environment and individual exposure monitoring. Overall results in 2022:

146 employees

Job adjustment for preventive management or competency evaluations

814 employees

General injury and illness consultation and educational training

671 employees

Subjected to classified management and follow-up

Abnormal results in special health examinations in 2022 Increased **0.41%**

Comprehensive improvement of hearing protection.

Personnel under level 4 management all engage in noise operations. The Company purchases low noise equipment and provides new personal protective equipment (3M Peltor integrated with Motorola connector) to prevent exposure during operations when personnel need to remove their ear plugs for communication.

100%

Special health examination rate
There were no occupational disease cases
As of 2022

Employee health management and occupational disease prevention results

Item		2022
Physician provides on-site services	Number of people subjected to job adjustment for preventive management or competency evaluations	146
	Number of people who received general injury and illness consultation and educational training	814
Nurses carry out graded management based on examination results and number of people tracked (employees with abnormal results in special health examinations)		671
Number of employees that received annual special health examinations		1,435
Number of employees under level 1 management		764
Number of employees under level 2 management		661
Number of employees under level 4 management		10
Abnormality rate in special health examinations (number of employees under level 4 management/total number of employees)		0.69%

Preventive management of cerebral and cardio vascular diseases caused by work

Flowchart for the prevention and management of diseases caused by abnormal workload

Process	Authority and Responsibility	Related Documents
Review of abnormal workload operations and findings ↓ Risk assessment of abnormal workload operations	▪ Safety and Health Management Office ▪ Departments	▪ Framingham Risk Score ▪ Questionnaire on abnormal workload ▪ Cerebral and cardio vascular disease risk assessment form ▪ WHO cardiovascular disease risk prediction and degree of cardiovascular disease risk ▪ Cerebral and cardio vascular disease risk and risk grading of workload-triggered cerebral and cardio vascular diseases ▪ Hazard classification and interview recommendation form ▪ Abnormal workload operating procedure ▪ New employee physical examination and active employee medical check-up form
↓ Health workers provide consultation to employees with abnormal workload ↓ Health examination, analysis, and management of employees with abnormal workload	▪ Safety and Health Management Office ▪ Physician (occupational illness specialist) ▪ Departments	▪ Labor health protection rules ▪ Special physical examination ▪ General medical check-up ▪ Assessment of the questionnaire on abnormal workload ▪ Physician determines whether or not the employee should receive abnormal workload consulting ▪ On-site health service record
↓ Record preservation		

Assessment results of diseases caused by abnormal workload in 2022

Unit: Number of people (abnormality rate)

Cerebral and Cardiovascular Diseases Caused by Work Risk Class		Workload		
		Low Workload	Medium Workload	High Workload
Occurrence Cerebral and Cardiovascular Diseases in the Past 10 Years	＜ 10%	1,036(57%)	376(20.7%)	72(3.9%)
	10~20%	215(11.8%)	81(4.4%)	14(0.7%)
	≧ 20%	16(0.9%)	5(0.2%)	1(0.1%)

Low risk
Medium risk
High risk

① We continued to use the electronic evaluation system to continue tracking high risk personnel in 2022, occupational medicine specialists provided one-to-one consultation and health education, and adjustments to work patterns were made based on the situation. We will continue reduce the risk of cerebral and cardiovascular disease among employees through case management and health promotion events.
② Employee medical check-ups began in September 2022 and are still ongoing; high risk personnel are also being tracked.
③ Invited the chief of the Division of Cardiology, Kaohsiung Chang Gung Memorial Hospital to speak on the "Prevention of Cardiovascular Disease" for employees to better understand the prevention and hazards of cardiovascular diseases, and also pay attention to their daily habits and balanced diet.

Highlight case

Workplace Maternal Health Protection Measures

In response to the Ministry of Labor enacting the Regulations of the Maternity Health Protection at the Workplace, the Company continues to implement maternity health protection measures in the workplace. Necessary protection measures, including talking with a physician, hazard prevention management, suitable work arrangements, and work environment improvement, are taken when engaging in work with potential hazards to maternity health. A total of 18 female employees have accepted maternity health protection measures so far.

Case

Medical Staff: Hello, thank you for participating in Formosa Plastics' maternal health protection measures. Please briefly describe your current physical condition and working environment.

Female Employee: I am ** years old, currently working in the ** plant, doing *** job. This is my second pregnancy; the previous one was a natural birth, and the expected due date is * month * day.

Medical Staff: Referring to the "Implementation Measures for Maternal Health Protection in the Workplace" and "Technical Guidelines for Maternal Health Protection in the Workplace," we believe that your current working environment does not pose any physical, chemical, or biological hazards that could endanger the health of the mother and the fetus. Additionally, do you have any other discomforts?

Female Employee: Recently, I have experienced frequent urination and edema, and my legs tend to cramp at night.

Medical Staff: We suggest that you take more vitamin B complex and calcium supplements. Also, considering your medical history, you had *** surgery, so it's advisable to regularly take *** supplementary medication, adjusting the dosage according to your pregnancy status. We will also monitor and observe the urinary protein and edema issues further.

Female Employee: I understand. Thank you.

Medical Staff: You can refer to Formosa Plastics' maternity protection policy for further information. If you have any other questions or needs, please feel free to inform us. If you require maternity leave in the future, you can apply accordingly.

Employee feedback

A. I am grateful to the Company for providing physicians to provide on-site services, conduct evaluations, and provide recommendations for the work environment for pregnant employees.

B. I am grateful to my supervisor and colleagues for helping out when I was pregnant. The Company takes really good care of pregnant employees.

C. I am grateful to the Company for providing maternity-related leave, so that we will not have any worries.

D. The Company also provides paternity leave and allow me to take part in prenatal exams

Periodic re-training of first aid personnel

- Appointment of first aid personnel in accordance with the law: We appoint one first aid personnel for every 50 employees in accordance with the Occupational Safety and Health Act, and maintain the effectiveness of their professional certification and their first aid skills to protect the lives of employees and contractors.
- We improved first aid equipment and employees' first aid knowledge by completing Cardiopulmonary Resuscitation (CPR)+AED training.

01 Mailiao Industrial Park has 524 entry-level first aid technicians (EMT-1), and 8 hours of first aid re-training is scheduled every year (suspended due to the pandemic in 2022).

02 We installed a total of 34 AEDs for first aid.

03 Organized CPR+AED training for all employees in 2022, and a total of 3,763 people completed the training (once every 3 years).

04 Prepared 312 inhalers and 26 injections of antidotes for hydrogen sulfide poisoning on site and at a chemical incident responsibility hospital nearby.

Organized first aid training seminar

Number of participants: All employees

Number of participants: All employees

3.4.2 Employee Health Management and Promotion

We will continue to integrate enterprise resources and promote preventive medicine concepts by combining the medical center-level treatment provided by Chang Gung Memorial Hospital with the professional healthcare services provided by Formosa Biomedical Technology Corporation. We will dedicate our efforts towards creating a healthy workplace and atmosphere, in hopes of raising the awareness of employees so that they will manage their own health, which will indirectly improve their work performance.

● Health Promotion Activities that Encourage Healthy Lifestyles

- Held the sixth employee healthy lifestyle challenge in 2022: Considering that the domestic outbreak of COVID-19 is still not fully under control, we encourage employees to exercise at home and continue to accumulate steps walking, avoiding large gatherings.
- Results of exercise: Rewards for accumulating points for walking: A total of 201 people received awards, on average each person lost 3.87 kg of weight.
- Weight loss results in the past 3 years are as follows: (Suspended in 2021 due to the pandemic)

	Number of People Who Completed Measurement	Weight Loss (kg)	Weight Loss Per Person (kg)
Fourth (2019)	1,651	3,665	2.2
Fifth (2020)	1,155	1,846	1.6
Sixth (2022)	993	1,887.5	1.9

COVID-19 prevention in 2022

- Employees: Employees' temperature is taken when they enter plants, wear masks, temperature is taken in the morning and afternoon, avoid meetings, conference rooms have transparent boards, the control room has a plastic curtain, and epidemic prevention measures when control room personnel and shift workers change shifts (e.g. maintain distance, reduce contact time, etc.).
- Vendors: Provide a list a personnel and negative rapid test results (or PCR), and are required to have their temperature taken when they enter a plant; avoid gatherings such as meetings for commencement of construction or toolbox meetings, prohibited from entering plants/offices, unless to collect materials or perform repair, business communication is mainly via phone and e-mail, a smoking room and portable toilets for vendors were added, small toolbox meetings are convened on site, and separately communicate and handle the approval process at the construction site.
- Migrant workers: Must provide negative rapid test results (or PCR), migrant worker epidemic prevention plan, emergency response measures, and required to have their temperature taken when they enter the plant; Managed in areas divided by two lines of access control, so that the same migrant workers are in fixed plants with control over entry and exit.

description: COVID-19 prevention propaganda is periodically prepared for EHS reports

Number of participants: All employees

Distribute COVID-19 prevention posters

Number of participants: All employees

CH4

New Concepts for Talent Cultivation

Chapter Summary

FPCC spares no effort in caring for employees. Besides providing employees with good salaries, benefits, education and training, communication channels, and friendly measures, we also care for employees' mental and physical health and provide assistance. We continue develop the employee care and protection net and created a healthy and happy culture of care. Facing the COVID-19 pandemic, we established the "COVID-19 Prevention Employee Manual" after referencing the US OSHA and Ministry of Health and Welfare, helping employees take effective health protection measures during the pandemic to protect the health and safety of employees and their family members. We rapidly implemented epidemic prevention measures after taking into consideration government regulations and response management measures worldwide.

Strategic actions

Commitment in operations

Improve the workplace environment and maintain employee health

Development strategy

FPCC provides employees with good salaries, benefits, education and training, communication channels, continues to develop the employee care and protection net, and created a healthy and happy culture of care

Scope of impact of material topic

Value chain		Upstream		Operations			Downstream	
Material topics	Financial impact	Crude oil drilling/ mining	Crude oil purchasing	Oil products transportation	Refining	Fundamental materials	Sales	Community services
Employee Profile and Benefits	Yes	-		●			-	

● Cause : An organization's activities cause an impact

▲ Contribute to : The activities of an organization causes, contributes to, or induces another entity to cause an impact

■ Directly linked to : Despite an organization not causing or contributing to an impact, its operations, products, or services may still cause an impact through business relationships

Stakeholders

employees | government agencies | environmental protection groups | suppliers and contractors | experts and scholars

Targets in 2022

- Construction of employee dormitories and the indoor activity center is expected to be completed in August 2022 ✓
- Employee turnover rate of 3% and under ✓
- Promote assistance programs for employees that require high level of care, so that more employees will receive assistance from the Company ✓
- We offered "supervisor counseling courses" to care for supervisors by strengthening their stress resistance and emotion management ability, and also organized supervisor commendation meetings ✓
- Promote the electric scooter subsidy project ✓

Targets in 2023

- Online training courses were offered to reduce contact between personnel during the pandemic
- Employee turnover rate of 3% and under
- Continue to provide incentives to encourage employee childbirth
- Continue to provide employees with one day of annual health examination leave (paid) for employees to manage their own health

Mid-term and Long-term Goals

- Meals: Continue to improve the environment and quality of food served in the employee cafeteria
- Clothing: Continue to improve the form and materials of employee uniforms
- Accommodations: Continued improvement of employee dormitories and the indoor activity center
- Transportation: Continue to improve transportation planning and shuttle bus arrangements for commuting to work at Mailiao Industrial Park
- Create an excellent work environment to attract and retain outstanding talent
- Maintain employee turnover rate at 3% and under

✓ Achieved Δ Ongoing

4.1 Employee Structure

FPCC views employees as its most important asset and provides good work and environment

FPCC supports and complies with the Universal Declaration of Human Rights, UN Global Compact, and International Labour Organization Declaration on Fundamental Principles and Rights at Work, and established the Human Rights Policy to protect employees' rights (see the website for details on the Human Rights Policy and Human Rights Concerns and Methods). All FPCC employees are protected by the Human Rights Policy and Human Rights Concerns and Methods. The Company did not violate the Labor Standards Act in 2022.

Human Resource Structure

In 2022, the total number of full-time employees at FPCC was 5,218 with an average age of 43.8. Due to industry characteristics, the men-women ratio was around 9.8: 1. The ratio of employees with a bachelor degree or above was around 67.2%. 74.8% of employees hold an entry-level supervisor or a lower-level position, 82.2% are working in Central Taiwan, and the mean number of years employees have worked for FPCC was 15.8 years.

Formal employees accounted for 96.9% of all employees in 2022 and the 163 informal employees (e.g. consultants, fixed-term contract-based personnel, work-study students, directors) accounted for 3.1%. Except for directors, 100% of employees are Taiwanese and hold full-time positions.

Human Resource Structure in 2022

Category	Gender			Work Location	
	Female	Male	Total	Northern Taiwan	Central Taiwan
Number of Permanent Employees (Note 1)	431	4,624	5,055	899	4,156
Number of Temporary Employees (Note 2)	52	111	163	29	134
Number of Non-Guaranteed Hours Employees (Note 3)	0	0	0	0	0
Number of Full-Time Employees (Note 4)	483	4,735	5,218	928	4,290
Number of Part-Time Employees (Note 5)	0	0	0	0	0
Number of Employees	483	4,735	5,218	928	4,290

Note 1: Permanent employees: Full-time or part-time employees who signed a perpetual contract

Note 2: Temporary employees: Employees who signed a fixed-term contract. The contract expires at a fixed time or has a specific task with an assessed time
Or is terminated when an event is completed (e.g. when a work project is concluded or the employee that originally held the position returns).

Note 3: Non-guaranteed hours employees: Employees who are not guaranteed a minimum or fixed number of hours of work every day, week, or month, but may be in a state where they can work as needed, such as temporary employees, zero-hour contract employees, and on-call employees.

Note 4: Full-time employees: Employees who work a certain number of hours each week, month, or year according to legal and practical definitions of work hours.

Note 5: Part-time employees: Employees who work fewer hours each week, month, or year compared with full-time employees.

We continue to implement innovative organization management and streamline the organizational structure. In 2022, a total of 128 formal FPCC employees were separated (including 40 retirees), which is an employee turnover rate of 2.5%, better than the petrochemical industry and fully demonstrates what we have accomplished in taking care of our employees and their trust in and identification with the Company. For statistics of age distribution of separated formal employees in the past 4 years, please refer to: Appendix ESG performance data – Social

Better than peers in the petrochemical industry

The turnover rate of formal employees was maintained in the past 4 years Below **3%**

Age Distribution of Separated Formal Employees in 2022					Average Separation Rate in Taiwan's Industries
Age Group	Male		Female		Petroleum and Coal Product Manufacturing Sector
	Head Count	As A Percentage of Total	Head Count	As A Percentage of Total	
Age 30 and below	33	0.65%	8	0.16%	8.08%
Ages 31-50	41	0.81%	7	0.14%	
Age 51 and above	38	0.75%	1	0.02%	
Total	112	2.22%	16	0.32%	

Note: Source of industry information: Directorate-General of Budget, Accounting and Statistics (time series data inquiry - exit rate)
Formula: Number of male (female) employees separated/Number of formal employees

FPCC has been fair, impartial, and open with its recruiting operation and has never hired child labor to do any work. We maximize our recruitment sources through multiple channels and hire according to the performance of each examinee. The number of new formal employees totaled 78 in 2022, accounting for 1.5% of all employees. Most new employees were under the age of 30, and accounted for 87.2% of all employees. We will continue to recruit new employees as the source of organizational innovation.

New Formal Employees of FPCC in 2022					
Category	Age Group	Male		Female	
		Head Count	As A Percentage of Total	Head Count	As A Percentage of Total
Age	Age 30 and below	53	1.05%	15	0.30%
	Ages 31-50	7	0.14%	3	0.06%
	Age 51 and above	0	0.00%	0	0.00%
	Subtotal	60	1.19%	18	0.36%

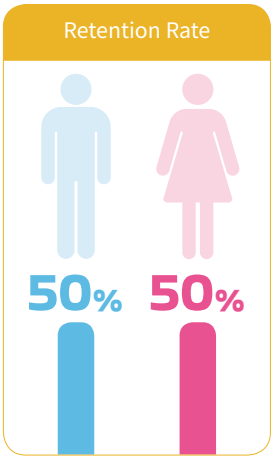
There are specific regulations in place for the promotion, evaluating, training, and reward or punishment systems for all employees, so that everyone is treated fairly. As such, no discrimination, violation of human rights, or forced labor incidents occurred in 2022. The ratio of people with physical or mental disorders hired over the most recent four years meets the requirement set forth in the People with Disabilities Rights Protection Act of no less than 1% of the total number of employees.

FPCC takes gender equality very seriously. Even though the ratio of female employees is relatively low due to industry characteristics, female supervisors account for 9.45% level 2 supervisors in 2022, promotion channels are transparent and standardized. The number of second level female supervisors has increased over the past 4 years, and shows our efforts in creating a workplace environment with gender equality. Percentage of senior management hired locally in Taiwan was 100%. For the number of female level 2 supervisors or higher at FPCC in the past 4 years, please refer to: Appendix ESG performance data – Social

Unpaid parental leave

In order to realize the idea of a happy workplace, we set up the nursery room on the premises and created friendly offices to meet the needs of colleagues who need to breastfeed or collect their breast milk during business hours and offers child care leave; colleagues who meet the criteria may adjust their work hours to reflect their needs. For statistics of unpaid parental leave at FPCC in the past 4 years, please refer to: Appendix ESG performance data – Social

Status	Male	Female	Total
Number of Employees Eligible for Parental Leave	284	8	292
The Actual Number of Employees Who Applied for Parental Leave	9	4	13
Number of Employees Expected to Reinstate Their Employment Status for the Year (A)	5	1	6
Number of Employees Who Applied for Reinstatement of Their Employment Status for the Year (B)	5	1	6
Reinstatement Rate % (B/A)	100	100	100
Number of Employees Retained	1	3	4

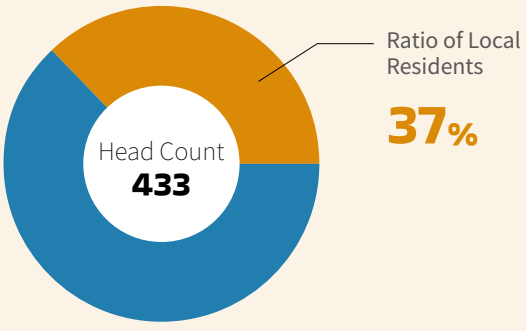


Note: 1. Retention rate refers to the ratio of employees who were reinstated after parental leave and stayed for at least one year.
2. Retention rate formula: Number of employees still active 12 months after being reinstated from parental leave/Number of employees reinstated from parental leave in the previous reporting period

Hiring local workers

FPCC's principle is to prioritize local residents when recruiting entry-level employees in order to give back to local communities. We also proactively develop local residents to become outstanding management staff. The ratio of local residents in second level or higher managerial positions was maintained above 35% in the most recent four years. For the ratio of high-level managerial positions held by local residents in the past 4 years, please refer to: Appendix ESG performance data – Social

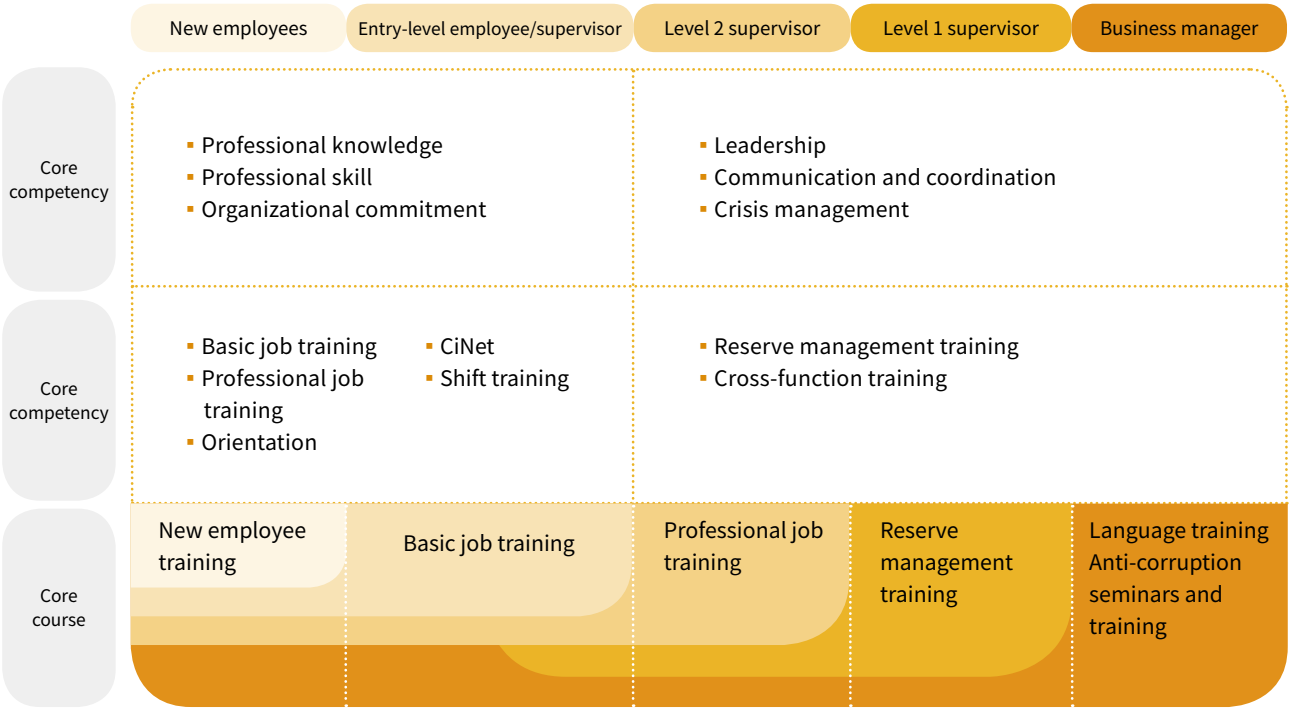
Ratio of High-Level Managerial Positions Held by Local Residents



Note: "Local residents" refers to senior managers whose permanent residence is registered in Yunlin, Chiayi, and Changhua Count

4.2 Employee career development

Career Learning Map



Employee Learning Framework

Employee Category	Required Core Competency	Type of Education and Training	Training Hours
Level 2 supervisors and above (inclusive)	▪ Leadership ▪ Communication and coordination ▪ Crisis management	▪ Reserve management training ▪ Cross-function training	**36,281** hours in total, on average 30.2 hours per person
Entry-level supervisors and under (inclusive)	▪ Professional knowledge ▪ Professional skill ▪ Organizational commitment	▪ Basic job training ▪ Professional job training ▪ Orientation ▪ CiNet ▪ Shift training	**309,694** hours in total, on average 81.8 hours per person

Overall Performance:

Total amount invested in education and training: NT$ **23,807,481**

Average hours of training received by each employee: **69.4** hours

Total training participation: **107,883** participants

Major education and training results in 2022

Type of Education and Training	2022 Results	
Position-specific certification programs	We implemented a system with dedicated personnel for each position to improve the quality of operations. Employees are required to obtain certifications for certain positions before being appointed. Our technical training center began providing 51 position-specific certifications in 2022	Provided **51** position-specific certifications and **1,763** participants completed certification
Information security training	To raise employees' information security awareness and instill every employee with information security concepts, the Company provides online information security courses and conducts social engineering exercises every six months, which simulates phishing mail from hackers, to test employees' information security awareness. Information security promotion and training is also provided to raise employees' awareness and alertness for information security	All employees received **11,668** hours of training

Average education and training at each level

The number of training hours received by each male employee in 2022 was around 74.3 and it was around 16 for each female employee. This is mainly due to our emphasis on professional training for on-site operations. Female employees required relatively little professional training because most of them held office positions. Management focuses on leadership and management ability training, so the number of training hours is lower than entry-level supervisors and under. For the average education and training at each level in the past 4 years, please refer to: Appendix ESG performance data – Social

Year \ Job Level	Management Level			Entry-Level Supervisors and Under			Company-Wide Mean Number of Hours		
	Male	Female	Subtotal	Male	Female	Subtotal	Male	Female	Subtotal
2022	32.4	9.5	30.2	87.3	18.5	81.8	74.3	16.0	69.4

4.3 Employee Benefits and Care

Management approach (MA) for material topic

Material topics	Material topic management policy
Employee Profile and Benefits	FPCC views employees as the foundation stone of sustainable development. We protect labor rights through our salary and benefits system and diverse communication channels, and achieve gender equality. Furthermore, we strive to create a high quality work environment to attract and retain outstanding talent and develop a happy enterprise

Description of positive/ negative impact	Good benefits and communication channels and continued monitoring of employees' physical and mental condition effectively improves employee engagement and avoids talent loss ○ Improves employee engagement ○ Improves the stability of company operations △ Increases employee turnover rate ○ positive △ negative	
Management actions	▪ Benefits	▪ Diverse communication channels
Results tracking	▪ Subsidies for electric scooter purchase (trade-in) were provided to 124 people in 2022 and amount to NT$1.59 million ▪ Childbirth subsidies were provided for 745 newborns and young children in 2022 and amounted to NT$9.36 million	▪ The Company's counselors provided guidance to new employees and care for employees who were sick a total of 370 person-times in 2022 ▪ The Teacher Chang Foundation hotline provided counseling services to 182 cases and psychological consultation services 109 person-times
Stakeholder engagement – Stakeholder group	▪ Employees	
Stakeholder engagement – Communication channel and frequency	▪ Employee Welfare Committee, Labor-Management Meeting	
Stakeholder engagement – Engagement results	▪ A total of 57 proposals were made in 2022, except for the new dormitory slightly delayed due to labor shortage, parking lot for scooters, and drainage still requiring improvement, all of the proposals were properly handled and concluded	

4.3.1 Remuneration and Benefits

Our remuneration policy does not discriminate against gender, religion, race, or political party. To attract and retain outstanding talent, we established a complete reward system, and offer salaries far higher than the minimum wage and at a medium-to-high salary level in the industry.

In the case of junior college graduates, their starting salary as basic-level employees is about 153% the minimum wage, and starting salary as a specialist is about 133% the minimum wage. Compensation criteria are established to reflect the required education and experience for the specific talent. They are not different between men and women. We established a Compensation Committee and the policy to periodically review whether if the compensation of management and individuals is reasonable.

Job Level	Female	Male
Level 2 Supervisors and Above (Inclusive)	1	1.30
Entry-Level Supervisors and Under (Inclusive)	1	1.29

Note: Male employees had higher salaries than female employees in 2022 because of the difference in seniority for second level supervisors and above and of the fact that men rotated for field work and received increased allowances for the rotation for entry-level supervisors and under

"Information on Salaries of Full-time Employees in Non-Managerial Positions" was audited by an accountant and disclosed to improve the quality of corporate governance information disclosures and better fulfill our social responsibility. For statistics of salaries of full time employees in non-managerial positions in the past 4 years, please refer to: Appendix ESG performance data – Social

Number of Full-Time Employees (Unit: persons)	Average Salary of Full-Time Employees (Unit: NTD)	Median Annual Salary (Unit: NTD)
5,144	1,467,126	1,352,730

Ratio of Highest Salary to Median Salary of Employees (Note 1)	Percentage of Changes in Salary (Note 2)
15.46	-61.16%

Note: 1.Ratio to annual salary = Annual salary of the highest paid employee/Median annual salary of other employees
2.Changes in ratio to annual salary = Changes in annual salary of highest paid employee/Changes in median annual salary of all employees (excluding the highest paid employee)

Welfare System

In order to serve and care for the needs of all employees, there is a Management Office on the premises to take charge of related tasks such as logistic support and welfare services. In addition, a service satisfaction survey is conducted each year to improve quality of services. The Employee Welfare Committee is formed in accordance with the law and handles employee welfare related affairs. For details on the benefits system, please visit our website (https://fpcc-esg.com/content_detail.php?id=71&page=content).

Highlight case

Added incentives to encourage employee childbirth

FPCC began offering a series of incentives in July 2022 to care for pregnant employees or spouses of employees, and support and encourage employee childbirth:

01

During pregnancy
Good luck during pregnancy

- Gave "Pregnancy Lucky Bags" that contain Formosa Biomedical Technology Corporation probiotics, iron tablets, vitamin B and vitamin C to provide pregnant women with complete nutrition and energy

02

After childbirth
Good fortunes for the baby

- Gave "Baby Lucky Bags" that contain Formosa Biomedical Technology Corporation anti-bacterial spray, vegetable and fruit container cleaning solution, infant shampoo, moisturizer, and soothing gel
- A childbirth subsidy of NT$20,000 is provided for each child

03

Pre-school
Lift the burden of childcare

- A monthly childcare subsidy of NT$2,000 is provided for each child until employees' children reach 6 years old. Each child will receive a total of NT$164,000 in subsidies from birth until the age of 6 years old.

04

After starting school
Learning opportunities (resources)

- The Company's Employee Welfare Committee encourages employees' children to focus on their studies by providing a scholarship of NT$200-NT$4,000 every semester from elementary school until they are studying in a doctoral program, giving the next generation a good learning attitude and make them go-getters.

4.3.2 Communication Channels

FPCC ensures that employees are informed in advance of any major changes to its operation in accordance with the Labor Standards Act and other laws and regulations. Employees can provide FPCC with suggestions through the Employee Welfare Committee, labor-management meetings, labor unions, and Occupational Safety and Health Committee; they may also reflect issues through the complaint system. There were no violations of the human rights of local residents by FPCC in 2022. There were no human rights cases filed through the internal complaints mechanism. All employees are 100% protected by any agreement reached in labor-management meetings or with labor unions on salary increase or year-end bonus, for example. Details are provided below:

Committee	Welfare Committee		Labor-Management Meeting		Labor Union	Occupational Safety and Health Committee	
Tenets	To promote employee benefits		To strengthen labor relations		To protect rights of employees	As per the Occupational Health and Safety Management guideline requirements	
Member	Management	Employee	Management	Employee	Member	Management	Employee
Head Count	5	12	9	9	3,565	26	13
Ratio	30%	70%	50%	50%	83%	67%	33%
Target of Communication	All employees		All employees		All union members	All employees	

Communication Channels	Purpose of Employee Engagement	Frequency of Communication	Target of Communication	2022 Communication Results
Welfare Committee	Statutory use of the employee welfare fund	Once every two months	All employees	A total of 17 proposals were made, except for the new dormitory slightly delayed due to labor shortage, all of the proposals were properly handled and concluded
Labor-Management Meeting	Coordination of labor relations	Once every two months	All employees	A total of 40 proposals were made, except for the parking lot for scooters and drainage still requiring improvement, all of the proposals were concluded
Occupational Safety and Health Committee	As per the Occupational Health and Safety Management guideline requirements	Once every three months	All employees	A total of 1 proposal was made, added (included) an emergency response mechanism for rescuing employees working at heights. The Safety and Health Management Office has called together related departments to review and formulate feasible methods
Dedicated Personnel for Providing Employee Guidance	Providing employee consultation channels	Any time	All employees	A total of 228 interviews with new employees were conducted, and care was provided to sick employees 142 person-times
Teacher Chang Foundation Taichung Branch	Providing employee consultation channels	Any time	All employees	Provided counseling services to 182 cases and psychological consultation services 109 person-times (111.5 hours)
Labor Union	Communication of labor conditions, labor benefits	Once every three months	All union members	A total of 29 proposals were made during board meetings, except for the 3 cases that involved evaluation by the Administration Division, all other cases were concluded

CH5

New Value of Connecting with Society

Chapter Summary

FPCC upholds the core value of "giving back to society what is taken from society," while engaging in charity events to care for the disadvantaged under the four themes: "care for the disadvantaged," "health protection," "education and growth," and "mutual prosperity with ecology," the Company also provides residents of surrounding areas with guidance and subsidies in health, education, local industries, and environment. We hope to make society and our living environment better through action.

Strategic actions

Commitment in operations

FPCC pays close attention to social trends, and shares the fruits of its efforts with society and the environment. Besides working with different institutions to improve the lives of the underprivileged and the quality of education for children, we also provide subsidies and industry guidance to give back to local residents and environment, continuing to work towards mutual prosperity of factories and townships.

Development strategy

- Care for the disadvantaged: Continue to make donations and organize events to help improve the lives of the disadvantaged, and attract public attention to related issues
- Health protection: Provide local residents with free health examinations, lectures, and communication to raise their health awareness, and assist families or individuals that need emergency aid by paying for their medical expenses
- Education and growth: Provide scholarships to encourage students to learn, and provide students with diverse learning opportunities and environment through industry-academia collaboration
- Mutual prosperity with ecology: Engage in local ecological conservation, and provide the general public with a suitable environmental education platform through industry-academia collaboration

Targets in 2022	▪ Continue to engage in charity events according to the four charity themes ▪ Cooperate with the remediation of Zhuoshui River by the Water Resources Agency, and participate in the establishment of environmental education facilities (measures)	✓ Δ
Targets in 2023	▪ We set out from four themes "care for the disadvantaged," "health protection," "education and growth," and "mutual prosperity with ecology" according to the Company's sustainable development goals, and continue to engage in charity and ecological conservation events	
Mid-term and Long-term Goals	▪ Be like family to local residents so that the Company can co-exist and mutually prosper with local communities ▪ Continue to monitor urban and rural development, education, underprivileged groups, and environmental and ecological issues, provide timely assistance to people in need, and expand the scope of participation in charity	

✓ Achieved Δ Ongoing

5.1 Social development and communication

Social care - FPCC gas stations cheer for you

For years FPCC has cared for the underprivileged, and began combining its core business with the goal of creating harmony in society. We built a long-term partnership with the Taiwan Fund for Children and Families in charity, and combined gas station resources in different counties/cities to join the Child Protection Good Neighbor Project and Project to End Poverty.

Project Purpose	To create a good and safe living environment for the underprivileged	
Partnering/ Execution Unit	Child Protection Good Neighbor	Project to End Poverty
Subjects	Abused children	Underprivileged children/families
Target of Communication	General public and cardholders of Formosa Oil	
Content	FPG Chinese New Year event: In response to the Kids First Project of the Taiwan Fund for Children and Families, during the 9-day Chinese New Year holiday in 2022, Formosa co-branded credit card holders enjoy a 9.9% OPENPOINT rebate for single transactions of 25 L and above (inclusive) at any one of the 500 Formosa Oil, Formosa Taffeta, Sure, and Smile gas stations, and we donate NT$1 to the Taiwan Fund for Children and Families for each liter of gasoline.	In response to the Project to End Poverty of the Taiwan Fund for Children and Families, we help disadvantaged families and children grow in a healthy and warm environment. Even through some events could not be held due to the pandemic in 2022, we still participated in press conferences to draw attention to the Project to End Poverty, and also participated in fundraising events.
Presentation of Results	While giving back to consumers during Chinese New Year, we also drew attention to care for children who were abused, and donated the NT$2.3 million raised by the event to the Taiwan Fund for Children and Families on Children Protection Day on April 28.	To raise awareness of disadvantaged families and children, after learning about their difficulties and needs, we took action by providing nutrition care, education subsidies, and emergency aid.
Event Photos	 	 

Local Efforts in Mailiao - Giving Back to Communities

FPCC has worked with local communities for years. Besides continuing to engage environmental and ecological protection, we are also assisting the development of surrounding areas, including subsidies for the disadvantaged, educational resources, giving back to residents, and medical assistance.

Subsidies for breakfast of underprivileged families

Target of Communication
Residents of townships near Mailiao Township

FPCC provides (NT$40/breakfast) on school days for the children of middle and low income households and families in crisis. The school finds a vendor and the Company pays for the breakfasts

- Content

Inputs	**NT$3.51 million** in total in 2022
Outputs	Provided subsidies to **1,182** students in 29 elementary and junior high schools in 7 townships in 2022
Impact	Having balanced and nutritious breakfast growing up will benefit normal physical development, and the Company accompanying children as they grow will instill them with the value of giving back to society, creating a positive cycle in society

Scholarships for employees' children

Target of Communication
Residents of townships near Mailiao Township

Divided into first and second semester; distributed by employees with village heads to each eligible household
Subsidy standards:
NT$5,000 for high school students and NT$10,000 for college students from low income households
NT$3,000 for high school students and NT$5,000 for college students from medium income households
NT$1,500 for high school students and NT$2,500 for college students from regular income households

- Content

Inputs	Provided a total of **NT$7.01 million** in subsidies to medium and low income households in Taixi and Mailiao Townships in 2022
Outputs	Number of recipients reached **2,550** in 2022
Impact	Different amounts of scholarships are provided based on family situation. Besides encouraging students to focus on their studies, it will lift the burden of tuition on families and give children of underprivileged families the attitude that others will help them if they help themselves

Gifts for low income household during the three holidays

Target of Communication
Residents of townships near Mailiao Township

On the night before Mid-Autumn Festival, Dragon Boat Festival, and Chinese New Year, the Company's products are given as gifts and NT$3,000 of consolation money is distributed along with village heads

- Content

Inputs: Consolation money for low income households in 7 townships during the three holidays amounted to **NT$13.51 million** in 2022

Outputs: **3,961** people received subsidies in 2022

Impact: Organized before holidays, employees personally deliver gifts to underprivileged families so that the recipients experience warm charity events

Emergency aid

Target of Communication
Residents of townships near Mailiao Township

Divided into medical expenses and funeral expenses. The amount of emergency aid is determined by the Company's employees after examining the actual situation, in which funeral subsidies is limited to NT$55,000, medical subsidies is limited to NT$100,000, and living subsidies is limited to 3 months

- Content

Inputs: Provided a total of **NT$4.311 million** in subsidies for emergency aid applications from seven townships in 2022

Outputs: Total of **77** cases up to 2022

Impact: The Company sends employees to look into and provide timely assistance for families or individuals that are in crisis, fully showing how much we care about the underprivileged

Friendly neighbor funds distributed each year

Target of Communication
Residents of townships near Mailiao and Taixi Townships

The Company subsidizes National Health Insurance premiums, electricity fees, and administrative fees of residents based on permanent household registration data of township offices

- Content

Inputs: Provided **NT$210 million** in subsidies in 2022

Outputs: Benefited **68,357** residents in 2022

Impact: The number of people that register their permanent address has increased each year, and the population has rapidly grown, increasing local business activity and making the region growingly prosperous

Caring for the health of local residents

Target of Communication
Residents of townships near Mailiao Township

Residents can receive a health examination at Yunlin Chang Gung Memorial Hospital or the Yunlin Branch of National Taiwan University Hospital every March to December. Residents can collect their results at the hospital after listening to an explanation or have the hospital directly mail the results to them

- Content

Inputs	Provided **NT$200 million** in subsidies in 2022
Outputs	A total of **13,421** people received health examinations in 2022
Impact	Helped nearby residents understand their physical condition and provided the right health concepts to reduce the hazards of tobacco, alcohol, and betel nut; residents are notified to return for follow-up if an abnormal result is found, so that they can immediately receive treatment

Industry-academia collaboration - Collaboration with National Changhua University of Education

FPCC has paid attention to local education for years in hopes of providing teachers and students with better support. Hence, we have worked with National Changhua University of Education numerous times in organizing science education events. FPCC signed a MOU with National Changhua University of Education on November 17, 2022 to step up promotion of science education and popular science education, working even closer together for local education! Besides improving the quality of teaching materials, we also combined the resources of both sides and shared experience to improve the quality of popular science education, in hopes that elementary schools and junior high schools will attach importance to science education.

The MOU signed with National Changhua University of Education mainly focuses on the development of local science education, and aims to provide underprivileged children and students in rural areas with a diverse learning environment, in order to improve the science thinking ability of local students. We jointly organized 30 different events, including a science summer camp, teacher workshop, parent-child science fair, and science competition, in 2022.

Yuan T. Lee Science Camp

FPCC co-organized the Yuan T. Lee Science Camp with National Changhua University of Education, Yuan T. Lee Foundation Science Education for All, and National Formosa University. The camp was held in National Formosa University and allows students to systematically learn and gain inspiration through a wide range of fun science activities

Inputs Input a total of **41–46** personnel each time, including: Lecturers, team counselors, and administrative personnel

Outputs A total of 2 three-day Yuan T. Lee Science Camps were held and **430** students participated in 2022

Impact Provided local students with an excellent learning and practice environment, gave students the right attitude towards learning and the spirit of science, and gave them the ability to explore the essence of issues through scientific methods

Yuan T. Lee Science Camp opening ceremony

Yuan T. Lee Science Camp class activities

Yunlin County HomeRun Creative Science Competition

The event was co-organized by Yunlin County Government, National Changhua University of Education, and FPCC under the guidance of the National Science and Technology Council. The themes of the event were "Seize Weapon Production" and "No Power Shortage with Eco-friendly Wind Power," and invited teachers and students in Yunlin County to enter the competition in team, in order to make students more interested in science and improve their creative thinking ability

Inputs Input a total of **32** personnel, including: teachers, students, and administrative personnel

Outputs A total of 1 session was held and **145** teachers and students participated in 2022

Impact Inspired the creativity of students and developed the spirit and methods for working together to solve problems through a hands-on experience. It also combined concepts of technology and environmental protection to effectively solve problems in life and learning

Opening ceremony of Yunlin Creative Science Competition

Activities of Yunlin County Creative Science Competition

"Popular Science Train" Science Fair

In coordination with the "Popular Science Train" Science Fair held by the National Science and Technology Council at Dounan Train Station, which includes science challenges and a visit to Mailiao Industrial Park. The science challenges were co-organized by FPCC, National Formosa University, Yunlin County Mailiao High School Science Club, and National Hu-Wei Senior High School, and there are 20 levels in total. Besides science principles that participants can come in contact with in daily life, the challenges also include issues such as environmental sustainability and green energy. For example, there are levels on water purification and wind power electricity generation. Students will win prizes for completing levels within the time limit. The event leads elementary school teachers and students to jointly learn by doing and have fun with science, learning science knowledge in daily life through a hands-on experience

Inputs	Input a total of **125** personnel, including: teachers, students, and administrative personnel
Outputs	A total of 1 event was held and approximately **1,000** students and citizens participated in 2022
Impact	The event aims to let students easily challenge science practices through interesting activities and increase their knowledge. It also broadens their thinking ability and allows students to gain a more in-depth understanding of extracurricular knowledge by seeing and listening to the explanations of professionals as they visit the factory equipment and environmental protection facilities in Mailiao Industrial Park

Taiwan Popular Science Train Yunlin Dounan Station Opening Ceremony

Taiwan Popular Science Train Yunlin Dounan Station Activities

Workshop

We organized scientific knowledge workshops for teachers and students of elementary schools in Yunlin County, providing students with the latest knowledge and exchanged creative teaching methods with teachers during the workshop, in hopes of inspiring new ideas

Inputs	Input a total of **52** personnel, including: Lecturer and teaching assistant
Outputs	A total of 26 workshops were held and **801** teachers and students participated in 2022
Impact	Created a positive cycle for science education in Yunlin

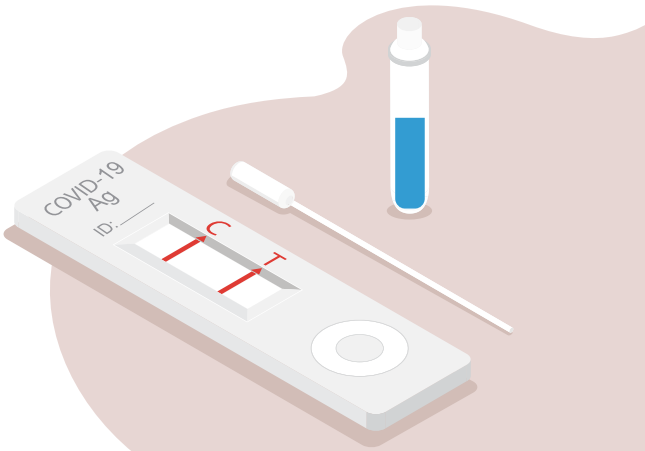
Student activities during camp courses

Teacher activities during camp courses

Highlight case

Donated rapid test kits to Yunlin County Government

The outbreak of COVID-19 mid-2022 and congested international logistics led to a severe shortage of rapid test kits in Taiwan. People complained about the high prices of rapid test kits in the market. FPCC thus utilized its resources and donated 100,000 rapid test kits to Yunlin County Government for use by underprivileged families, social welfare institutions, institutions for the disabled, and institutions for children, so that epidemic prevention efforts would not stall due to supply shortage, exerting every effort to help the general public get through the difficult situation



雲林縣政府
YUNLIN COUNTY GOVERNMENT

及時雨！台塑企業捐贈雲林10萬劑快篩劑

發布單位：社會處

雲林縣政府新聞參考資料　111.05.19

5.2 Local ecological conservation

EcoPorts – Mailiao Port

Mailiao Port continues to maintain the port environment and ecology, and implements green port control measures.

Mailiao Port began implementing a plan to apply for the EcoPorts Certification of the European Sea Ports Organization in October 2016, in hopes changing the trend of port facilities and activities causing the environment to deteriorate. After years of efforts, Mailiao Port passed the EcoPorts Certification and obtained the certificate on September 7, 2018. It is the first industrial port in Asia to receive this recognition, and obtained the certificate for the third time in 2022.


CERTIFICATE OF VERIFICATION

ECOPORTS

Mailiao Industrial Harbor / Mailiao Harbor Administration Corp., Taiwan

Port Environmental Review System (PERS) version 5

Activities, products and services of the port authority

ECO SLC

LRQA

01

Promotion of Green Transportation and Harbor Safety

- Shore power facilities
- Ships use low sulfur fuel
- Control of wastewater discharge by ships
- Strengthen control of port trash
- Harbor service boat revetment protection road elevation project resolves the issue of seawater flooding the port during high tide every month

02

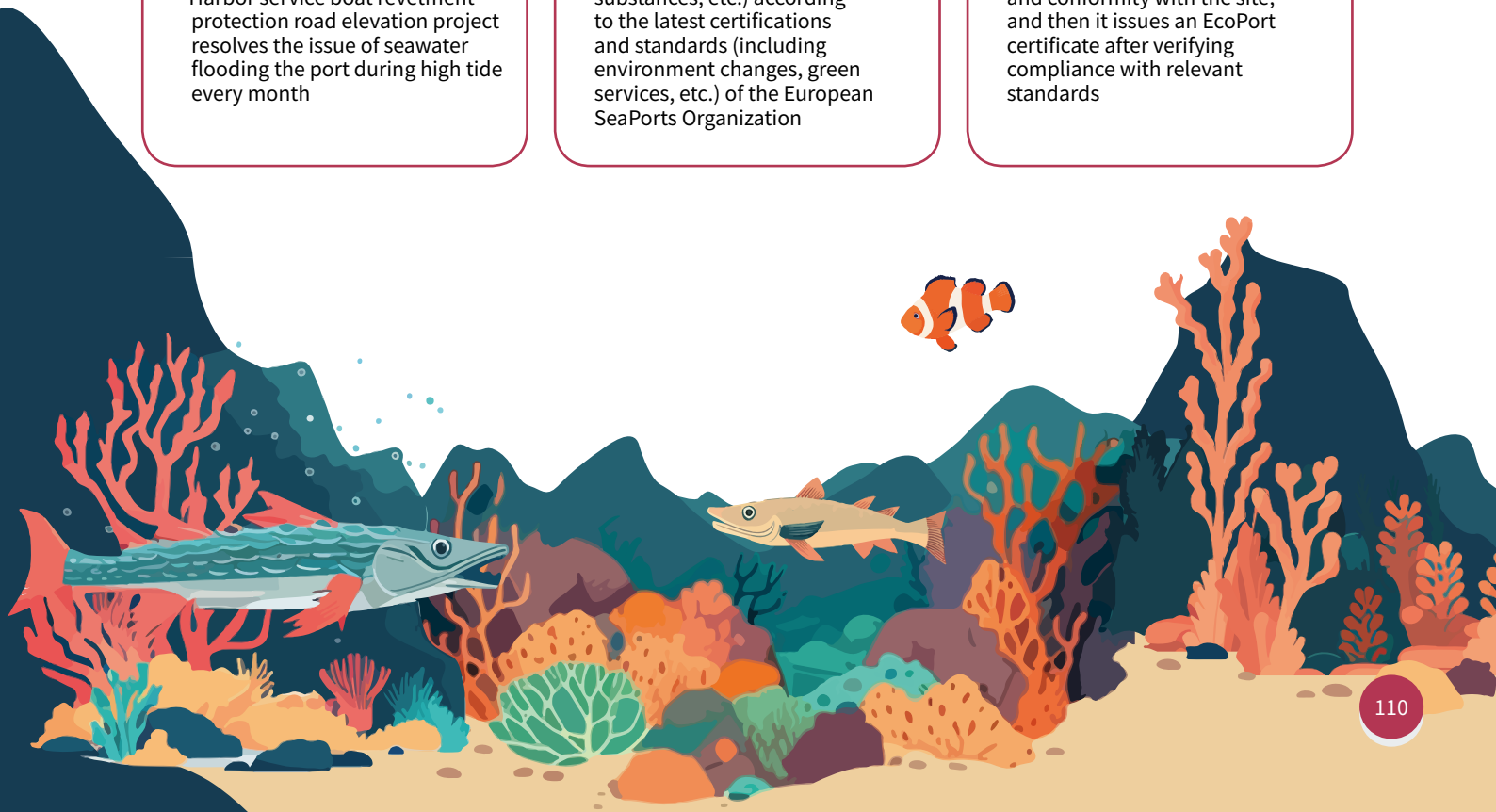
Preparation of the Environmental Report

We implemented management measures for 10 major environmental concerns (air quality improvement, operations and management of hazardous substances, etc.) according to the latest certifications and standards (including environment changes, green services, etc.) of the European SeaPorts Organization

03

On-site Review and Certification

Lloyd's Register Quality Assurance sends personnel to conduct an on-site inspection and examine the completeness of application documents and conformity with the site, and then it issues an EcoPort certificate after verifying compliance with relevant standards



Mailiao Port – Marine Ecology

Mailiao Port has abundant underwater ecology, and the identification of 63 underwater species have been identified, including 22 fish species (lionfish, grouper, puffer fish, tropical fish, etc.), 10 conch species, 13 species of other benthonic animals (e.g. crabs, shrimp, lobster, seahorse, and sea urchin), and 18 species of marine plants (e.g. coral, sea trees).

Dendrochirus zebra

Common name: Lionfish

Distributed in the Indo-Pacific and mainly found on coral, pebble, and rock bottoms on reef flats; it is also found in outer reefs and lagoons and also in caves. Its habitat is usually in shallow waters and it is a dangerous species in the ocean with venom glands under its dorsal spines

Tubastraea coccinea Lesson

Common name: Orange cup coral

Widely distributed in coral reefs in the Indian Ocean to Pacific Ocean, has a flat body and disc shaped coral stone, the coral polyp has many tentacles that are always extended like blooming flowers and very pretty. Usually lives in groups at depths of 20 m and above

Intertidal zone and land ecology around Mailiao Industrial Park

- Birds: Photography of migrant birds in areas around Mailiao Port is listed in the Mailiao Port Marine Ecology and Environment Photography Project. Based on records of bird distribution over the years, there is approximately 69 birds species
- Beef wood windbreak forest: Mailiao Port has the largest beef wood forestation land in Taiwan
- Intertidal zone: Mailiao Township is by the sea and has an intertidal zone that covers about 47 km2. The continental shelf is flat and has an abundance of marine organisms, such as fiddler crabs and soldier crabs are everywhere to be seen. There are also many resident birds and migrant birds, which represent the good condition of the marine ecological environment around Mailiao Port

Paradoxornis webbianus

Common name: Vinous-throated Parrotbill

Endemic subspecies of Taiwan. Energetic and likes to be on branches or bushes close to the ground. Likes to live in groups. Usually found in large groups of dozens of birds during the non-breeding season. Has a wide range of dietary items, mainly grass seeds, nectar, fruits, and insects

Junonia almanac

Common name: Peacock pansy

Multi-voltine butterfly species. The habitat of adults is in the plains and low mountains and usually flies near the ground with clear flower-visiting habits. Its habitat is on riverbanks, fields, grasslands, and swamps

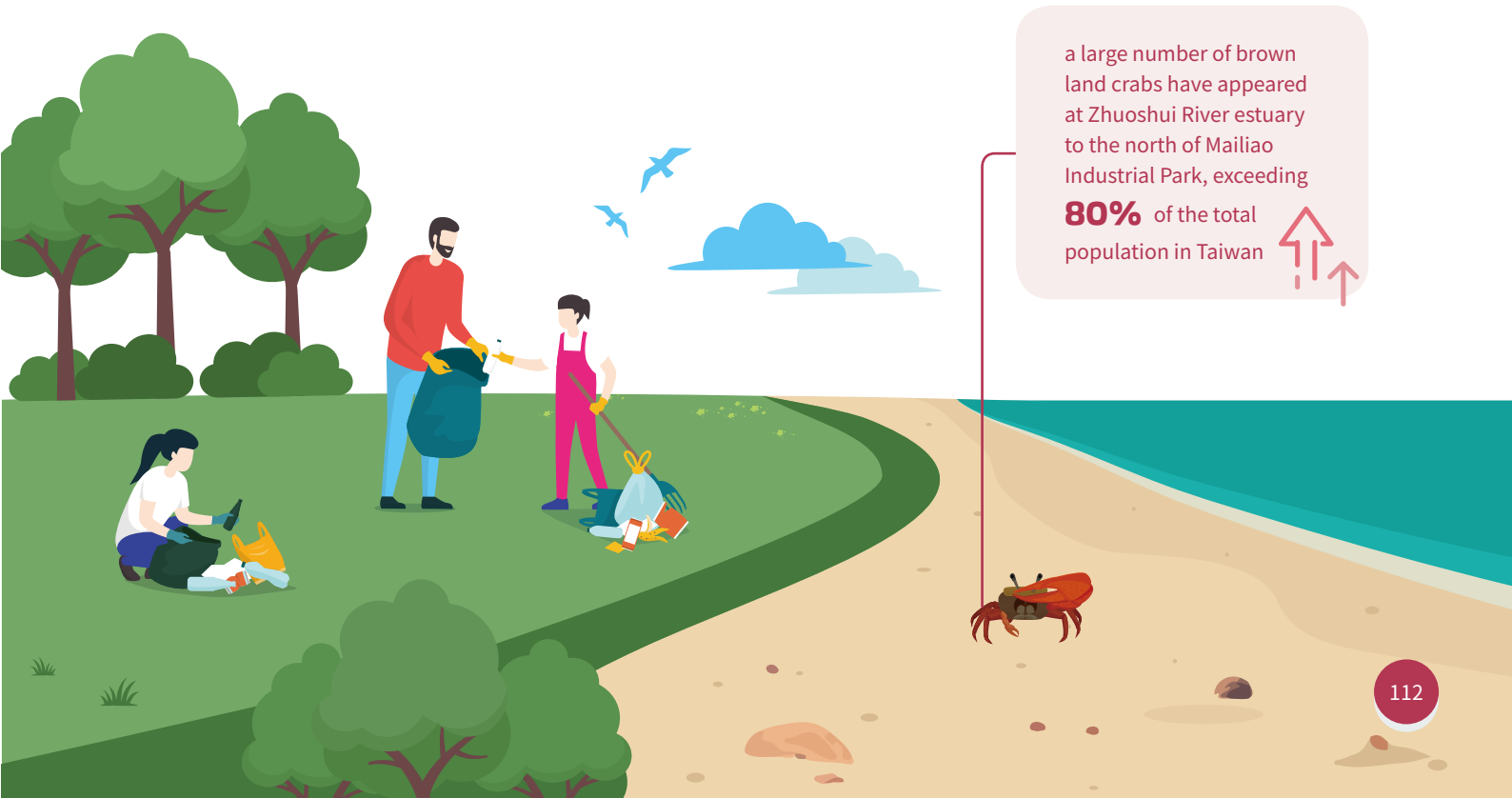
Highlight case

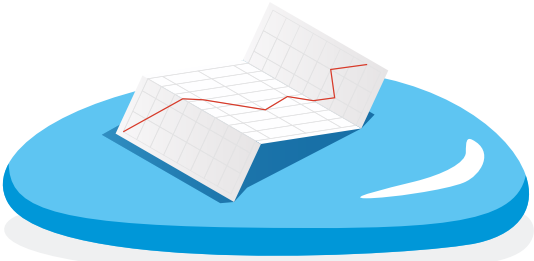
Ecological Conservation at Zhuoshui River Estuary

The brown land crab (Xeruca formosensis) is an endemic species of Taiwan, but its population has decreased and even disappeared in many places in recent years. FPCC and the Research Center for Global Change Biology, National Chung Hsing University, signed a MOU on October 18, 2022 to protect this rare endemic species of Taiwan, and jointly carry out conservation and environmental protection work for brown land crab at Zhuoshui River estuary.

We look forward to making ecological foldings, manuals, and environmental education teaching plans after analyzing and summarizing research data through this cooperation. We will also jointly promote environmental education and protect Zhuoshui River with the 4th River Management Office, Yunlin County Government, and schools. Furthermore, we will also organize a series of workshops as a platform for integrating the opinions of society, and create an ecological base at Zhuoshui River estuary for placemaking.

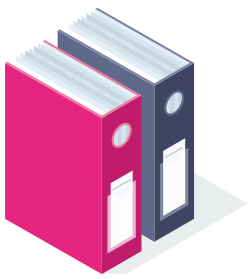
According to a survey of National Chung Hsing University, a large number of brown land crabs have appeared at Zhuoshui River estuary to the north of Mailiao Industrial Park, exceeding 80% of the total population in Taiwan. This is exciting news and we will continue to engage in ecological conservation and environmental education.





Appendix

Content



Appendix 1 Corresponding appendices for international frameworks

Corresponding GRI Indicators

Usage Statement	FPCC reports matters between January 1 and December 31, 2022 according to the GRI Standards.
Use of GRI 1	GRI 1: Foundation 2021
Applicable to GRI 11	GRI Oil and Gas Sector Disclosures: GRI 11 2021

GRI Universal Standards 2021

Disclosure Indicator	Corresponding Chapter in the Report	Note
2-1 Organization Details	1.1Corporate Governance - Company Overview	
2-2 Entities Included in the Organization's Sustainability Report	About this Report - Report Boundaries and Scope	
2-3 Time and Frequency of Reporting and Contact Person	About this Report - Overview of Issuance About this Report - Contact Information	
2-4 Restatements of Information	—	There was no restatement of information
2-5 External Assurance	About this Report - Report Verification and Assurance About this Report - Sustainability Report Management Method	
2-6 Activity, Value Chain, and Other Business Relationships	New Path to Sustainability - Business Strategy 1.2 Operational Performance - Economic Performance	
2-7 Employees	4.1 Employee Structure	
2-8 Workers that are not Employees	4.1 Employee Structure	
2-9 Governance Structure and Composition	1.1 Corporate Governance - Governance Structure and Sustainable Governance Organization	
2-10 Nominating and Selecting the Highest Governance Body	1.1 Corporate Governance - Governance Structure and Sustainable Governance Organization	
2-11 Chair of the Highest Governance Body	1.1 Corporate Governance - Governance Structure and Sustainable Governance Organization	
2-12 Highest Governance Body's Role in the Supervision of Impact Management	1.1 Corporate Governance - Governance Structure and Sustainable Governance Organization	
2-13 Responsibility to Appoint/Assign Impact Management	New Path to Sustainability - Sustainability Issue Management 1.1 Corporate Governance - Governance Structure and Sustainable Governance Organization	
2-14 Highest Governance Body's Role in Sustainability Reporting	1.1 Corporate Governance - Governance Structure and Sustainable Governance Organization	

Disclosure Indicator	Corresponding Chapter in the Report	Note
2-15 Conflicts of Interest	1.1 Corporate Governance - Code of Conduct, Anti-corruption Policy, Internal Audit System	
2-16 Procedures for Communicating Critical Concerns	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization 1.1 Corporate Governance- Operating Status of the Sustainable Development Committee	
2-17 Collective Knowledge of Highest Governance Body	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization	
2-18 Performance Evaluation of the Highest Governance Body	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization	
2-19 Remuneration Policy	1.1 Corporate Governance- Overview of Operation of the Compensation Committee	
2-20 Process for Determining Remuneration	1.1 Corporate Governance- Overview of Operation of the Compensation Committee	
2-21 Annual Salary Ratios	4.3.1 Remuneration and Benefits	
2-22 Sustainable Development Strategy Declaration	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization	
2-23 Policy and Commitment	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization 4.1 Employee Structure	
2-24 Included in Policy and Commitment	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization	
2-25 Remedial Procedures for Negative Impacts	1.1 Corporate Governance 4.3 Employee Benefits and Care	
2-26 Mechanisms for Seeking Recommendations and Concerns	New Path to Sustainability- Sustainability Issue Management	
2-27 Compliance with Laws and Regulations	1.1 Corporate Governance- Governance Structure and Sustainable Governance Organization	There were no severe violations An amount of NT$1 million and above is a severe violation
2-28 Membership of Associations	1.4 Partnership Maintenance- Participation in Non-Profit Organizations	
2-29 Stakeholder Engagement Path	New Path to Sustainability- Sustainability Issue Management	
2-30 Collective Bargaining Agreement	4.3 Employee Benefits and Care	

GRI Oil and Gas Sector Disclosures: GRI 11(2021)

GRI No.	Issue	Sector Standard No.	Corresponding GRI Topic	Corresponding Chapter in the Report
GRI3-1	Management Approach	—	—	New Path to Sustainability-Sustainability Issue Management
GRI3-2		—	—	
Sustainability Issue: Corporate Governance				
GRI 3-3	Management Approach	—	—	1.1 Corporate Governance
Sustainability Issue: Green Investment and Innovative Transformation				
GRI 3-3	Management Approach	—	—	1.3 Creating a Green Future
Sustainability Issue: Risk and Crisis Management				
GRI 3-3	Management Approach	—	—	1.2 Operational Performance
Sustainability Issue: Stability of Imported Materials				
GRI 3-3	Management Approach	—	—	1.4 Partnership Maintenance
Sustainability Issue: GHG Management				
GRI3-3	Management Approach	11.1.1	GRI 3: Material Topics in 2021	2.2 GHG Management
11.1	Greenhouse Gas Emissions	11.1.2	GRI 302: Energy 2016	
		11.1.3		
		11.1.4		
		11.1.5	GRI 305: Emissions 2016	
		11.1.6		
		11.1.7		
		11.1.8		
	*11.1.3 Information Unavailable/Incomplete and Boundaries of Statistics for External Energy Consumption are being Summarized			
Sustainability Issue: Climate Change Strategy				
GRI3-3	Management Approach	11.2.1	GRI 3: Material Topics in 2021	2.1 Climate Change Mitigation and Adaptation
11.2	Climate Adaptation, Recovery, and Transition	11.2.2	GRI 201: Economic Performance 2016	
		11.2.3	GRI 305: Emissions 2016	2.2 GHG Management
Sustainability Issue: Air Pollution Prevention				
GRI3-3	Management Approach	11.3.1	GRI 3: Material Topics in 2021	2.3 Air Pollution Management and Prevention

GRI No.	Issue	Sector Standard No.	Corresponding GRI Topic	Corresponding Chapter in the Report
11.3	Gas Emissions	11.3.2	GRI 305: Emissions 2016	2.3 Air Pollution Management and Prevention
		11.3.3	GRI 416: Customer Health and Safety 2016	1.2 Operational Performance
11.4	Biodiversity	11.4.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.4.2	GRI 304: Biodiversity 2016	
		11.4.3		
		11.4.4		
		11.4.5		
11.5	Waste	11.5.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.5.2	GRI 306: Waste 2020	
		11.5.3		
		11.5.4		
		11.5.5		
		11.5.6		
11.6	Water and Effluents	11.6.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.6.2	GRI 303: Water and Effluents 2018	
		11.6.3		
		11.6.4		
		11.6.5		
		11.6.6		
11.7	Close and Restore	11.7.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.7.2	GRI 402: Labor/ Management Relations 2016	
		11.7.3	GRI 404: Training and Education 2016	
Sustainability Issue: Oil Products Transportation and Storage Safety				
GRI3-3	Management Approach	11.8.1	GRI 3: Material Topics in 2021	3.2.3 Finished Goods Transportation and Traffic Safety
11.8	Asset Completeness and Material Event Management	11.8.2	GRI 306: Effluents and Waste 2016	

GRI No.	Issue	Sector Standard No.	Corresponding GRI Topic	Corresponding Chapter in the Report
Sustainability Issue: Industrial and Public Safety, Occupational Health and Safety				
GRI3-3	Management Approach	11.9.1	GRI 3: Material Topics in 2021	3.1 Creating a Labor Safety Culture
11.9	Occupational Health and Safety	11.9.2	GRI 403: Occupational Health and Safety 2018	3.4 Employee Occupational Health Management
		11.9.3		3.2 Labor Safety Risk Management
		11.9.4		3.4 Employee Occupational Health Management 4.3.2 Communication Channels
		11.9.5		
		11.9.6		3.3 Public Safety Emergency Response
		11.9.7		3.4 Employee Occupational Health Management
		11.9.8		3.4 Employee Occupational Health Management
		11.9.9		3.1 Creating a Labor Safety Culture
		11.9.10		3.1 Creating a Labor Safety Culture
		11.9.11		3.4 Employee Occupational Health Management
Sustainability Issue: Employee Profile and Benefits				
GRI3-3	Management Approach	11.10.1	GRI 3: Material Topics in 2021	4.1 Employee Structure
11.10	Labor Employment Practices	11.10.2	GRI 401: Employment 2016	
		11.10.3		
		11.10.4		
		11.10.5	GRI 402: Labor/ Management Relations 2016	4.3.1 Remuneration and Benefits
		11.10.6	GRI 404: Training and Education 2016	4.2 Employee Career Development
		11.10.7		
		11.10.8	GRI 414: Supplier Social Assessment 2016	1.4 Partnership Maintenance
		11.10.9		
11.11	Discrimination and Equal Opportunity	11.11.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.11.2	GRI 202: Market Presence 2016	
		11.11.3	GRI 401: Employment 2016	

GRI No.	Issue	Sector Standard No.	Corresponding GRI Topic	Corresponding Chapter in the Report
Sustainability Issue: Employee Profile and Benefits				
11.11	Discrimination and Equal Opportunity	11.11.4	GRI 404: Training and Education 2016	N/A Immaterial topics
		11.11.5	GRI 405: Diversity and Equal Opportunity 2016	
		11.11.6		
		11.11.7	GRI 406: Non-Discrimination 2016	
11.12	Forced Labor and Modern Slavery	11.12.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.12.2	GRI 409: Forced or Compulsory Labor 2016	
		11.12.3	GRI 414: Supplier Social Assessment 2016	
11.13	Freedom of Association and Collective Bargaining	11.13.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.13.2	GRI 407: Freedom of Association and Collective Bargaining 2016	
Sustainability Issue: Economic Performance				
GRI3-3	Management Approach	11.14.1	GRI 3: Material Topics in 2021	1.2 Operational Performance
11.14	Economic Impact	11.14.2	GRI 201: Economic Performance 2016	1.2 Operational Performance
		11.14.3	GRI 202: Market Presence 2016	4.1 Employee Structure
		11.14.4	GRI 203: Indirect Economic Impact 2016	N/A Not included within the boundaries of the Sustainability Report
		11.14.5		
		11.14.6	GRI 204: Procurement Practices 2016	1.4 Partnership Maintenance
11.15	Local Communities	11.15.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.15.2	GRI 413: Local Communities 2016	
		11.15.3		
11.16	Land and Resource Rights	11.16.1	GRI 3: Material Topics in 2021	N/A Immaterial topics

GRI No.	Issue	Sector Standard No.	Corresponding GRI Topic	Corresponding Chapter in the Report
Sustainability Issue: Economic Performance				
11.17	Rights of Indigenous People	11.17.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.17.2	GRI 411: Rights of Indigenous Peoples 2016	
11.18	Conflict and Safety	11.18.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.18.2	GRI 410: Security Practices 2016	
11.19	Anti-Competitive Behavior	11.19.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.19.2	GRI 206: Anti-Competitive Behavior 2016	
11.20	Anti-Corruption	11.20.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.20.2	GRI 205: Anti-Corruption 2016	
		11.20.3		
		11.20.4		
11.21	Payment of Government Funds	11.20.1	GRI 3: Material Topics in 2021	
		11.20.2	GRI 201: Economic Performance 2016 GRI 207: Tax 2019	N/A Immaterial topics
		11.20.3		
		11.20.4		
		11.20.5		
		11.20.6		
		11.20.7		
11.22	Public Policy	11.20.1	GRI 3: Material Topics in 2021	N/A Immaterial topics
		11.20.2	GRI 415: Public Policy 2016	

Corresponding SASB Indicators

FPCC adopted the SASB and uses contents of the Refining & Marketing Industry under Oil & Gas that correspond to sustainability issues in 2022.

☒ : Full disclosure ◎ : Partial disclosure

Indicator Code	Disclosure Indicator	Corresponding Disclosure in 2022				Chapter
Topic of Disclosure: Greenhouse Gas Emissions						
	Year	2019	2020	2021	2022	2.2 GHG Management
EM-RM-110a.1	Total Scope 1 emissions (Unit: Metric tons CO_2e)	27,256,866	25,329,780	26,482,767	Related data is disclosed in the 2023 Sustainability Report	
	Emissions as a percentage of regulatory restrictions/internal regulations (Unit: %)	100%	100%	100%		
EM-RM-110a.2	Long- and short-term carbon reduction management strategies or plans for Scope 1 GHG emissions, carbon reduction goals, and performance analysis with respect to the goals	Carbon Disclosure Project (CDP)				
Topic of Disclosure: Air Quality						
	Year / Air pollutant emissions: (Unit: Metric ton)	2019	2020	2021	2022	2.3 Air Pollution Management and Prevention
EM-RM-120a.1	1.NOx (excluding N_2O)	0.245	0.279	0.293	0.246	
	2.SOx	0.091	0.102	0.101	0.095	
	3.Particulate matter (PM10)	0.019	0.02	0.014	0.011	
	4.H_2S	Not disclosed				
	5.Volatile organic compounds (VOCs) (Unit product: kg/ton)	0.032	0.043	0.041	0.036	
EM-RM-120a.2	Number of refineries in densely populated areas or nearby areas	Total population of Mailiao Township in 2022 was 49,354				—

Indicator Code	Disclosure Indicator	Corresponding Disclosure in 2022				Chapter
Topic of Disclosure: Water Management						
	Year	2019	2020	2021	2022	
EM-RM-140a.1	1. Total freshwater extraction (Unit: cubic meters)	50,142	47,119	47,118	43,933	
	2. Percentage recycled (Unit: %) : R1=Recycling rate of plant (reuse rate) = (Total recycling water + Total reuse water) ÷ Gross water × 100%)	98.66	98.74	98.9	98.6	2.4.1 Water Resource Management
	3. Percentage of area with high or very high baseline water stress (Unit: %)	0%	0%	0%	0%	
EM-RM-140a.2	Number of violations relating to water quality permit, standards, and regulations	No violations				2.4.1 Water Resource Management
Topic of Disclosure: Hazardous Materials Management						
	Year	2019	2020	2021	2022	
EM-RM-150a.1	Total amount of hazardous waste generated (Unit: Metric ton)	902	403	423	613	2.4.2 Waste Management
	Percentage of hazardous waste recycled (Unit: %)	N/A				
EM-RM-150a.2	1. Total number of USTs	N/A				
	2. Number of cases requiring cleaning due to UST oil leakage					
	3. Percentage of states with a UST guarantee fund (Unit: %)					
Topic of Disclosure: Workforce Health & Safety						
	Year	2019	2020	2021	2022	
EM-RM-150a.1	1. Total recordable incident rate (TRIR) (Unit: %) *Remarks: Occupational injury statistics are used to calculate the disabling injury frequency rate. The formula is as follows: Frequency of disabling injuries (FR) = (Number of disabling injuries × 10^6)/Total work hours elapsed	0.56	0.19	0.19	0.10	3.1.2 Occupational Accident Statistics, Prevention, Methods, and Follow-up
	2. Fatality rate (Unit: %)	0	0	0	0	
	3. Near Miss Frequency Rate (NMFR) (NMFR) (Unit: %)	Disclosure began in 2021		442	286	

<table>
<tr><th>Indicator Code</th><th>Disclosure Indicator</th><th colspan="4">Corresponding Disclosure in 2022</th><th>Chapter</th></tr>
<tr><td colspan="7">Topic of Disclosure: Workforce Health & Safety</td></tr>
<tr><td></td><td>Year</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td rowspan="2">3.2 Labor Safety Risk Management
3.2.1 Process Safety Management (PSM)
3.2.2 Contractor Operational Safety Management
3.2.3 Finished Goods Transportation and Traffic Safety</td></tr>
<tr><td>EM-RM-320a.2</td><td>Description of the management system used to create a safety culture</td><td colspan="4">Disclosed in the report</td></tr>
<tr><td colspan="7">Topic of Disclosure: Product Specifications & Clean Fuel Blends</td></tr>
<tr><td rowspan="3"></td><td>Year
Percentage of renewable volume obligation (RVO) achieved: (Unit: %)</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td rowspan="3">–</td></tr>
<tr><td rowspan="2">EM-RM-150a.1</td><td>1. Manufacturing of renewable fuel</td><td colspan="4" rowspan="2">Related internal data is currently being summarized</td></tr>
<tr><td>2. Purchase of renewable identification number (RIN)</td></tr>
<tr><td>EM-RM-410a.2</td><td>Total addressable market and share of market for advanced biofuels and associated infrastructure</td><td colspan="4">Related internal data is currently being summarized</td></tr>
<tr><td colspan="7">Topic of Disclosure: Pricing Integrity & Transparency</td></tr>
<tr><td>EM-RM-520a.1</td><td>Total amount of monetary losses as a result of legal proceeding associated with price fixing or price manipulation</td><td colspan="4">Related internal data is currently being summarized</td><td>–</td></tr>
</table>

<table>
<tr><th>Indicator Code</th><th colspan="2">Disclosure Indicator</th><th colspan="4">Corresponding Disclosure in 2022</th><th>Chapter</th></tr>
<tr><td colspan="8">Topic of Disclosure: Management of the Legal & Regulatory Environment</td></tr>
<tr><td>EM-RM-530a.1</td><td colspan="2">Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry</td><td colspan="3">FPCC reflects its advice regarding the energy industry mainly through the annual advice white paper of the Chinese National Federation of Industries and expresses its opinions and viewpoints on applicable industrial regulations when consulted by government authorities to keep smooth communications with government authorities going. The white paper of the Chinese National Federation of Industries provides recommendations for the allocation of centrally-funded tax revenues, energy policy, and labor issues to the government.</td><td>1.4 Partnership Maintenance</td><td></td></tr>
<tr><td colspan="8">Operation Indicators</td></tr>
<tr><td></td><td rowspan="4" colspan="2">The total volume of crude oil and other feedstocks processed in the refinery system</td><td>Year</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td rowspan="4">1.2 Operational Performance</td></tr>
<tr><td>EM-RM-140a.1</td><td>Daily volume refined of crude oil (barrels/day)</td><td>540,000</td><td>540,000</td><td>540,000</td><td>540,000</td></tr>
<tr><td></td><td>Ethylene (thousand tons/year)</td><td>2,935</td><td>2,935</td><td>2,935</td><td>2,935</td></tr>
<tr><td></td><td>Power generated (GW)</td><td>2.75</td><td>2.75</td><td>2.75</td><td>2.75</td></tr>
<tr><td>EM-RM-001.B</td><td colspan="2">Refining capacity</td><td colspan="4">See the annual report to the shareholders' meeting</td><td></td></tr>
</table>

Appendix 2 ESG performance data

Economic aspect

Operation of the Audit Committee

Disclosed on the company website (http://www.fpcc.com.tw/tw/corporate/board-of-directors)

Title	Name	2019		2020		2021		2022	
		Actual Attendance	Attendance Rate	Actual Attendance	Attendance Rate	Actual Attendance	Attendance Rate	Actual Attendance	Attendance Rate
Convener	C.P. Chang	5	100%	5	100%	4	100%	5	100%
Committee Members	Sush-der Lee	5	100%	5	100%	4	100%	5	100%
Committee Members	Yu Cheng	5	100%	5	100%	4	100%	5	100%
Total		15	100%	15	100%	12	100%	15	100%

Overview of Operation of the Compensation Committee

Disclosed on the company website in the Corporate Governance Section (http://www.fpcc.com.tw/tw/corporate/committee/)

Title	Name	2019		2020		2021		2022	
		Actual Attendance	Attendance Rate	Actual Attendance	Attendance Rate	Actual Attendance	Attendance Rate	Actual Attendance	Attendance Rate
Convener	C.P. Chang	3	100%	2	100%	2	100%	2	100%
Committee Members	Sush-der Lee	3	100%	2	100%	2	100%	2	100%
Committee Members	Yu Cheng	3	100%	2	100%	2	100%	2	100%
Total		9	100%	6	100%	6	100%	6	100%

The total value of compensation and its ratio in after-tax net income for directors and managers at FPCC

Unit: Thousand NTD

	2019	2020	2021	2022
Compensation for directors and managers	113,611	104,129	113,099	133,246
Ratio in after-tax net income	0.31%	1.40%	0.23%	0.92%

Internal Audit

Year	2019	2020	2021	2022
audit projects	52 items	52 items	52 items	52 items
Number of deficiencies found	11 projects	13 projects	11 projects	11 projects
Number of improvements completed	11 projects	13 projects	11 projects	11 projects
Improvement rate	100%	100%	100%	100%

R&D expenses

Unit: Thousand NTD

Year	2019	2020	2021	2022
R&D expenses	483,118	536,140	640,753	764,406

Operational performance:

Unit: Thousand NTD

Item \ Year	2019	2020	2021	2022
Operating income	646,022,809	415,281,764	620,062,326	848,048,496
Operating cost	598,303,798	402,313,818	554,282,477	831,832,945
Net operating margin (loss)	47,719,011	12,967,946	65,779,849	16,215,551
Total operating expenses	10,933,355	10,199,178	10,602,464	10,795,414
Operating profit (loss)	36,785,656	2,768,768	55,177,385	5,420,137
Total non-operating income and expenses	8,112,695	5,896,281	5,307,590	11,548,259
Pre-tax profit	44,898,351	8,665,049	60,484,975	16,968,396
Income tax costs (profit)	8,150,178	1,292,594	11,121,093	2,568,734
Current after-tax net profit	36,748,173	7,372,455	49,363,882	14,399,662

Financial ratios

Item \ Year	2019	2020	2021	2022
Return on assets (%)	9.26	1.98	11.83	3.37
Return on equity (%)	10.89	2.28	14.64	4.21
Profit margin (%)	5.69	1.78	7.96	1.70
After-tax earnings per share	3.86	0.78	5.19	1.51

Dividend distribution

Item \ Year	2019	2020	2021	2022
Dividend per share	2.90	0.59	3.78	1.05
Average closing price	105.92	86.5	99.81	88.78
Dividend yield	2.74%	0.68%	3.79%	1.18%
Interest rate of one-year	1.04%	0.89%	0.78%	1.11%

Ratio of electronic invoices over the years

2019	2020	2021	2022
88.16%	91.33%	91.48%	89.40%

Results of customer satisfaction questionnaire surveys over the years

Year	Product Characteristics	Product Quality	Product Lead Time	Product Price	Service Attitude	Technical Service	Brand Image	Overall Satisfaction	Average
2019	4.6	4.6	4.6	4.4	4.7	4.6	4.6	4.6	4.6
2020	4.6	4.7	4.6	4.6	4.6	4.6	4.3	4.6	4.6
2021	4.6	4.7	4.6	4.6	4.6	4.6	4.4	4.6	4.6
2022	4.6	4.6	4.6	4.3	4.7	4.6	4.6	4.6	4.6

Note: 5 represents "very satisfied"; 4 indicates "satisfied"; 3 is "no comments"; 2 means "dissatisfied"; and 1 is "very dissatisfied."

Environmental aspect

Breakdown of environmental cost in past years

Unit: NT$ million

Item	2019	2020	2021	2022
Business overhead	15,411	12,703	13,845	18,553
Related costs from the downstream and upstream of suppliers and customers	23	23	21	21
Activity management cost	465	398	380	397
R&D cost	2	3	4	5
Social events cost	128	136	131	72
Losses and compensation	6	9	6	3
Other expenses such as processing fees, taxes, and energy tax	1,358	1,401	1,391	1,394
Total	17,393	14,673	15,778	20,445

Note: Business overhead in the table includes costs derived from green purchases, recycling and reproduction of manufactured or sold products, and product services as part of the environmental protection effort.

Environmental violations over the years

Item	2020	2021	2022
Air pollution	3/ NT$5.2 million in total	3/ NT$615 thousand in total	4/ NT$1.175 million in total
Water pollution	0	1/ NT$231 thousand in total	0
Waste pollution	3/ NT$9 million in total	7/ NT$12.018 million in total	4/ NT$12 million in total
Other	0	1/ NT$600 thousand in total	0

GHG emissions over the years

Unit: tons CO_2e

Item	2007 (Baseline year)	2018	2019	2020	2021
Scope 1	31,680,876	28,070,653	27,256,866	25,329,780	26,482,767
Scope 2	143,113	108,520	136,173	221,111	119,051
Gross emissions (Scope 1 + Scope 2)	31,823,989	28,179,173	27,393,038	25,550,891	26,601,818
Scope 3	Began compiling the inventory in 2019	—	29,333,461	55,545,097	60,285,232

Note 1: Scope 1 refers to direct emissions from energy, i.e., GHG emissions from burning fuel.

Note 2: Scope 2 refers to indirect emissions from energy, i.e., GHG emissions from steam and electricity.

Note 3: Global warming potential (GWP) before 2016 is based on the second assessment report (SAR) of IPCC in 1995. GWP after 2016 (inclusive) is based on the fourth assessment report of the IPCC in 2007. The emission factors for electricity and steam are in-house factors that have been validated by verification institutions.

Note 4: GHG emissions data for 2022 had not been verified by the verification institution when this year's report was published, so the data will be disclosed next year.

Note 5: Scope 1 and 2 GHG inventory are based on right of control. GHG included in the inventory includes carbon dioxide, methane, nitrous oxide, HFCs, PFCs, sulfur hexafluoride, and nitrogen trifluoride.

Note 6: Scope 3 refers to other indirect emissions, e.g. Products and services purchased, fuel and energy related activities, and upstream (downstream) transportation and delivery

Note 7: The following items were added to Scope 3 GHG emissions in 2020: capital goods, processing of products sold, use of products sold, and ultimate disposal of products sold. The increase in Scope 3 emissions in 2021 was due to the increase in downstream transportation and distribution.

Analysis of GHG emissions over the years (company-wide)

Item	2007 (Baseline year)	2018	2019	2020	2021
Greenhouse gas emissions (Thousand tons CO_2e)	31,824	28,179	27,393	25,551	26,602
Business revenue (NT$1 million)	701,195	767,550	646,023	415,282	620,062
GHG emission per unit revenue (Thousand tons CO_2e/NT$1 million)	0.045	0.037	0.042	0.062	0.043

Analysis of GHG emissions over the years (oil-gas industry)

Item	2007 (Baseline year)	2018	2019	2020	2021
Greenhouse gas emissions (CO_2e thousand tons)	10,500	11,999	12,116	10,902	11,316
Business revenue (NT$1 million)	667,799	722,848	604,348	378,125	575,779
GHG emission per unit revenue (Thousand tons CO_2e/NT$1 million)	0.016	0.017	0.020	0.029	0.020

Note: Only GHG emissions and revenues for refining and olefin related processes are presented.

Total energy consumption over the years

Energy Category	2019	2020	2021	2022
Non-renewable energy	83.7%	82.4%	83.1%	86.3%
Renewable energy	0%	0%	0%	0%
Natural gas	16.3%	17.6%	16.9%	13.6%
Diesel	0%	0%	0%	0%

Energy category ($x10^6$ MJ)	2019	2020	2021	2022
Non-renewable energy	242,343	222,279	251,553	247,038
Renewable energy	0	0	0	0
Natural gas	71,670	74,596	77,840	58,406
Diesel	0	0	0	0

Water withdrawal from source

Unit: Million L

Water Source	2019	2020	2021	2022
Surface water (Industrial water)	46,361.055	43,436.974	43,367.215	40,994.573
Rainwater	3,669.710	3,576.758	3,661.420	2,848.643
Tap water	110.869	95.229	89.471	175.802
Total freshwater withdrawal	50,141.63	47,108.96	47,118.11	44,019.018
Seawater	2,113,824.000	1,846,872.000	2,166,124.800	1,940,577.600

Note: Seawater is only used as uncontacted cooling water and for desulfurization in co-generation boilers. Seawater does not take part in process reaction.

Water consumption over the years

Unit: Million L

	2019	2020	2021	2022
Water consumption	50,141.63	47,108.96	47,118.11	44,019.018
Wastewater treatment volume	16,705.002	16,792.261	16,787.033	16,846,500

Note: FPCC's wastewater treatment volume is the same as its water discharge.

Effluent water quality control statistics

Year	Water Volume (CMD)			pH value			COD (mg/L)			SS (mg/L)	
	Permitted volume	Discharge	Regulation (environmental impact assessment)	Internal control value	Average	Regulation (environmental impact assessment)	Internal control value	Average	Regulation (environmental impact assessment)	Internal control value	Average
2019	119,395	45,767	6-9	6.5-8.5	7.2	100	80	21.82	20	16	5.99
2020	119,395	46,006	6-9	6.5-8.5	7.6	100	80	19.26	20	16	4.31
2021	123,828	45,991	6-9	6.5-8.5	7.6	100	80	18.09	20	16	7.25
2022	123,828	46,155	6-9	6.5-8.5	7.5	100	80	16.39	20	16	7.56

Overview of waste management over the years

	2019	2020	2021	2022
General industrial waste (Tons)	1,294,358	1,129,260	1,216,709	1,342,943
Hazardous industrial waste (Tons)	902	403	423	613
Waste clearance quantity (Tons)	1,295,260	1,129,663	1,217,132	1,343,556
Product (Tons)	34,381,905	28,555,947	29,864,862	31,192,728.24
The volume of waste cleared per unit of product (Kg/Ton)	37.67	39.56	40.75	43.08
Incineration and landfill (Kg)	52,108,767	51,427,602	43,342,889	41,486,329
The volume of waste incinerated or land filled per unit of product (Kg/Ton)	1.52	1.80	1.45	1.33

Note: Source: The Formosa Plastics Group waste management computer-based database.

Social aspect

Ratio of injuries at work in the most recent four years

Year	Mean Number of Employees throughout the Year			Total Work Hours and Days Elapsed		No. of Injuries	Total Days Lost	Frequency of Disabling Injuries	Severity of Disabling Injuries	Frequency-Severity Indicator
	Male	Female	Total	Total Work Days	Total Work Hours Elapsed					
2019	4,710	428	5,138	1,279,332	10,684,475	6	621	0.56	58	0.18
2020	4,697	425	5,122	1,280,297	10,597,447	2	13	0.19	1	0.02
2021	4,693	425	5,118	1,287,022	10,311,445	2	12	0.19	1	0.02
2022	4,644	429	5,073	1,255,441	10,043,528	1	112	0.10	11	0.03

Note1: Severity of disabling injuries (SR) = (Total number of days lost × 10^6)/Total work hours elapsed.

Note2: Frequency of disabling injuries (FR) = (Number of disabling injuries × 10^6)/Total work hours elapsed.

Note3: Comprehensive injury index = ((FR*SR)/1,000)^(1/2).

Note4: For the past four years, accidents at work have only happened to men and all of them happened in our Mailiao Plant in Yunlin County; the number of employees injured at work in 2022 was 1.

Note5: Statistics are only for formal employees of FPCC.

Ratio of occupational injuries of contractors in the most recent four years

Year	Total Work Hours and Days Elapsed		No. of Injuries	Total Days Lost	Frequency of Disabling Injuries	Severity of Disabling Injuries	Frequency-Severity Indicator
	Total Work Days	Total Work Hours Elapsed					
2019	1,362,547	10,900,376	9	6,078	0.83	557.6	0.68
2020	1,222,083	9,776,660	5	3	0.51	0.31	0.01
2021	1,130,317	9,042,533	4	31	0.44	3.43	0.04
2022	1,089,360	8,714,879	5	6,021	0.57	690.89	0.63

Note1: Severity of disabling injuries (SR) = (Total number of days lost × 10^6)/Total work hours elapsed.

Note2: Frequency of disabling injuries (FR) = (Number of disabling injuries × 10^6)/Total work hours elapsed.

Note3: Comprehensive injury index = ((FR*SR)/1,000)^(1/2).

Note4: The entanglement accident of a contractor caused 1 death, and a loss of 6,000 hours was reported according to regulations of the Occupational Safety and Health Administration.

Number of employee traffic accidents while commuting and days lost in the most recent four year

Year	Number of Cases		Days Lost
	Going to Work	Leaving Work	
2019	10 (44%)	13 (56%)	946
2020	6 (50%)	6 (50%)	6,787
2021	6 (50%)	6 (50%)	6,553
2022	14 (54%)	12 (46%)	418

Security awareness and management over the years

Item / Year	MOC	PHA	PSM			
			5 Certifications	6 Certifications	MI Certification	3 Certifications
2018	3	8	21	33	—	—
2019	2	3	17	22	1	21
2020	—	—	21	19	—	36
2021	—	—	16	21	—	36
2022	—	—	28	24	—	28
Total	5	11	103	119	1	121

Description: PSM personnel certificates are divided into three categories: 1. "Six certifications including employee participation," 2. "Five certifications including incident investigation," 3. "MI certification," and 4. "Five certifications include PHA"; factory offices not involved in processes are not required to obtain MI certification.

Average number of abnormalities in the most recent 4 years

Year	2019	2020	2021	2022	Total
Number of abnormalities	58	81	76	74	289
Number of times at the plant	84	93	88	73	338
Number of abnormalities/plant	0.69	0.87	0.86	1.01	0.86

Statistical Analysis of Accidents in the Past 4 Years

	Number of Traffic Accidents	Number of Traffic Accidents per Million Kilometers[Note]	
		Transportation Company	Taiwan
2019	3	0.37	3.25
2020	0	0	3.17
2021	0	0	3.38
2022	1	0.12	4.71

Note: Using the data announced by the Department of Statistics, Ministry of Transportation and Communications for calculation, we multiplied the number of traffic accidents by the ratio of trucks to all registered vehicles, and divided it by a million kilometers to obtain the number of traffic accidents per million kilometers.

Historical Human Resource Structure – Gender

Year	2019			2020			2021			2022		
Gender	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Number of permanent employees (Note 1)	430	4,726	5,156	428	4,718	5146	428	4,683	5,111	431	4,624	5,055
Number of temporary employees (Note 2)	42	140	182	42	141	183	48	115	163	52	111	163
Number of non-guaranteed hours employees (Note 3)	0	0	0	0	0	0	0	0	0	0	0	0
Number of full-time employees (Note 4)	472	4,866	5,338	470	4,859	5,329	476	4,798	5,274	483	4,735	5,218
Number of part-time employees (Note 5)	0	0	0	0	0	0	0	0	0	0	0	0
Number of employees	472	4,866	5,338	470	4,859	5,329	476	4,798	5,274	483	4,735	5,218

Note 1: Permanent employees: Full-time or part-time employees who signed a perpetual contract.

Note 2: Temporary employees: Employees who signed a fixed-term contract. The contract expires at a fixed time or has a specific task with an assessed time. Or is terminated when an event is completed (e.g. when a work project is concluded or the employee that originally held the position returns).

Note 3: Non-guaranteed hours employees: Employees who are not guaranteed a minimum or fixed number of hours of work every day, week, or month, but may be in a state where they can work as needed, such as temporary employees, zero-hour contract employees, and on-call employees.

Note 4: Full-time employees: Employees who work a certain number of hours each week, month, or year according to legal and practical definitions of work hours.

Note 5: Part-time employees: Employees who work fewer hours each week, month, or year compared with full-time employees.

Historical Human Resource Structure – Region

Year	2019		2020		2021		2022	
Gender	Northern Taiwan	Central Taiwan	Northern Taiwan	Central Taiwan	Northern Taiwan	Central Taiwan	Northern Taiwan	Central Taiwan
Number of permanent employees (Note 1)	986	4,170	969	4,177	915	4,196	899	4,156
Number of temporary employees (Note 2)	19	163	23	160	20	143	29	134
Number of non-guaranteed hours employees (Note 3)	0	0	0	0	0	0	0	0
Number of full-time employees (Note 4))	1,005	4,333	992	4,337	934	4,340	928	4,290
Number of part-time employees (Note 5)	0	0	0	0	0	0	0	0
Number of employees	1,005	4,333	992	4,337	934	4,340	928	4,290

Note 1: Permanent employees: Full-time or part-time employees who signed a perpetual contract.

Note 2: Temporary employees: Employees who signed a fixed-term contract. The contract expires at a fixed time or has a specific task with an assessed time. Or is terminated when an event is completed (e.g. when a work project is concluded or the employee that originally held the position returns).

Note 3: Non-guaranteed hours employees: Employees who are not guaranteed a minimum or fixed number of hours of work every day, week, or month, but may be in a state where they can work as needed, such as temporary employees, zero-hour contract employees, and on-call employees.

Note 4: Full-time employees: Employees who work a certain number of hours each week, month, or year according to legal and practical definitions of work hours.

Note 5: Part-time employees: Employees who work fewer hours each week, month, or year compared with full-time employees.

Age distribution of separated formal employees

Year	Age Group	Male		Female		Average Separation Rate in Taiwan's Industries Petroleum and Coal Product Manufacturing Sector
		Head Count	As a Percentage of Total	Head Count	As A Percentage of Total	
2019	Age 30 and below	33	0.64%	2	0.04%	11.55%
	Ages 31-50	38	0.74%	7	0.14%	
	Age 51 and above	13	0.25%	0	0%	
	Subtotal	84	1.63%	9	0.18%	
2020	Age 30 and below	32	0.62%	3	0.06%	10.31%
	Ages 31-50	27	0.52%	7	0.14%	
	Age 51 and above	36	0.70%	0	0%	
	Subtotal	95	1.84%	10	0.20%	
2021	Age 30 and below	29	0.57%	6	0.12%	9.78%
	Ages 31-50	36	0.70%	1	0.02%	
	Age 51 and above	45	0.88%	2	0.04%	
	Subtotal	110	2.15%	9	0.18%	
2022	Age 30 and below	33	0.65%	8	0.16%	8.08%
	Ages 31-50	41	0.81%	7	0.14%	
	Age 51 and above	38	0.75%	1	0.02%	
	Subtotal	112	2.22%	16	0.32%	

Note: Source of industry information: Directorate-General of Budget, Accounting and Statistics (time series data inquiry - exit rate)
Formula: Number of male (female) employees separated/Number of formal employees.

Number of female second level supervisors or higher over the years

Year	2019	2020	2021	2022
Number of female second level supervisors or higher	87	94	95	115
Percentage (%)	8.06%	8.01%	8.02%	9.45%

Statistics of unpaid parental leave over the years

Status	2019			2020			2021			2022		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Number of employees eligible for parental leave	266	24	290	192	6	198	165	7	172	284	8	292
The actual number of employees who applied for parental leave	4	1	5	2	2	4	3	8	11	9	4	13
Number of employees expected to reinstate their employment status for the year (A)	4	1	5	2	4	6	2	6	8	5	1	6
Number of employees who applied for reinstatement of their employment status for the year (B)	4	1	5	2	4	6	2	6	8	5	1	6
Reinstatement rate % (B/A)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of employees retained	1	0	1	4	1	5	2	4	6	1	3	4
Retention rate	100%	-	100%	100%	100%	100%	100%	100%	100%	50%	60%	50%

Note: 1. Retention rate refers to the ratio of employees who were reinstated after parental leave and stayed for at least one year.
2. Retention rate formula: Number of employees still active 12 months after being reinstated from parental leave/Number of employees reinstated from parental leave in the previous reporting period.

Ratio of high-level managerial positions held by local residents in the most recent four years

Unit: persons

Year	2019	2020	2021	2022
Head count	418	426	429	433
Local ratio (%)	37.4%	37.4%	37.2%	37.0%

Note: "Local residents" refers to senior managers whose permanent residence is registered in Yunlin, Chiayi, and Changhua Count.

Average education and training at each level in the past 4 years

Job Level / Year	Management Level			Entry-Level Supervisors and under			Company-Wide Mean Number of Hours		
	Male	Female	Subtotal	Male	Female	Subtotal	Male	Female	Subtotal
2019	18.3	8.5	17.6	49.4	13.3	46.1	42.8	12.4	40.1
2020	17.3	9.4	16.7	59.1	13.1	55.3	49.9	12.3	46.7
2021	20.7	6.4	19.6	63.1	7.7	58.5	53.2	7.4	49.5
2022	32.4	9.5	30.2	87.3	18.5	81.8	74.3	16.0	69.4

Information on salaries of full time employees in non-managerial positions in the past 4 years

Item / Year	Information on Salaries of Full Time Employees in Non-Managerial Positions		
	Number of Full-Time Employees	Average Salary of Full-Time Employees	Median Annual Salary
2019	5,327	NT$ 1,392,088	NT$ 1,290,645
2020	5,215	NT$ 1,307,167	NT$ 1,204,604
2021	5,178	NT$ 1,545,594	NT$ 1,451,975
2022	5,144	NT$ 1,467,126	NT$ 1,352,730

Employee health management and occupational disease prevention results in the past 4 years

Item		2019	2020	2021	2022
Physician provides on-site services	Number of people subjected to job adjustment for preventive management or competency evaluations	210	182	147	146
	Number of people who received general injury and illness consultation and educational training	392	551	679	814
Nurses carry out graded management based on examination results and number of people tracked (employees with abnormal results in special health examinations)		564	746	660	671
Number of employees that received annual special health examinations		1,435	1,458	1,434	1435
Number of employees under level 1 management		856	787	959	764
Number of employees under level 2 management		574	666	471	661
Number of employees under level 4 management		5	5	4	10
Abnormality rate in special health examinations (number of employees under level 4 management/total number of employees)		0.35%	0.34%	0.28%	0.69%

Appendix 3 Disclosure of Indicators in the Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies

Sustainability disclosure indicator - Oil and gas industry

No.	Indicator	Indicator Type	2022 Disclosure Status	Unit	Note
I	Number of refineries in densely populated areas（Note 1）	Quantified	54	10,000 barrels/day	—
II	Total water withdrawal	Quantified	44,019.018	1,000 m^3	—
	Total Water Consumption	Quantified	44,019.018	1,000 m^3	—
III	Weight of hazardous waste generated	Quantified	613	Metric ton (t)	—
	Percentage of hazardous waste generated	Quantified	0	Percentage (%)	—
IV	Describe the number of people involved in occupational accidents	Quantified	1	persons	—
	Describe the ratio of occupational accidents	Quantified	0.10	Percentage (%)	Frequency of disabling injuries (FR)
V	Risk management policy for material events	Qualitative description	1.2 Business Performance_ Risk and Crisis Management 3.3 Public Safety Emergency Response	N/A	—
VI	Quantity of Main Products by Category	Quantified	See the annual report to the shareholders' meeting	Varies with product category	—

Note 1: Densely populated area is based on Taiwan's definition of urbanization:

An area that meets any one of the following standards is an urban area:

a. A place with a population of 20,000 and above and population density reaching 300 people/km^2 and above.

b. Two or more adjacent cities or townships with a total population of 20,000 and above and population density reaching 300 people/km^2 and above.

Appendix 4 Company ESG disclosures

Topics	Indicator	Results in 2022	Unit	Remarks
Environmental Issues				
Greenhouse Gas Emissions	Direct (Scope 1) GHG emissions	26,482,767	Tons CO_2e	We expect to obtain an assurance statement in August 2023 for data verified in 2022. This report discloses 2021 data.
	Energy indirect (Scope 2) GHG emissions	119,051	Tons CO_2e	
	Indirect (Scope 3) GHG emissions	60,285,232	Tons CO_2e	
	GHG emissions intensity	43	Tons CO_2e/ Million NTD in revenue	
	Strategies, methods, and goals of GHG management	2.2 GHG Management	—	—
Energy Management	Renewable energy usage rate (Renewable energy/Total energy)	0	%	The Company did not use any renewable energy in 2022
	Energy usage efficiency	2.2 GHG Management	—	—
	Policy to use recycled materials		—	
Water Resources	Water consumption	44,019,018	Metric ton	—
	Water consumption intensity (Water consumption/Revenue)	52	tons/million NTD	
	Water Resource Management or reduction goals	2.4.1 Water Resource Management	—	
Waste	Amount of hazardous waste	613	Metric ton	Includes toxic hazardous industrial waste (Category B) and waste determined to have hazardous characteristics (Category C)
	Amount of non-hazardous waste	1,342,943	Metric ton	Includes general industrial waste (Category D) and recyclable or reusable waste (Category R)
	Total weight (hazardous + non-hazardous)	1,343,556	Metric ton	—
	Waste intensity (Waste volume/revenue)	1.58	tons/million NTD	
	Waste Management or reduction goals	2.4.2 Waste Management	—	

Topics	Indicator	Results in 2022	Unit	Remarks
Social Issues				
Manpower Development	Average employee benefits	1,627	NT$1,000/ person	According to the 2022 standalone financial statements
	Average salary of employees	1,435	NT$1,000/ person	
	Average salary of non-managerial full-time employees	1,467	NT$1,000/ person	—
	Median salary of non-managerial full-time employees	1,353	NT$1,000/ person	
	Percentage of female managers	9.45	%	Calculated based on level 2 supervisors and above
	Number of people involved in occupational accidents	1	Persons	—
	Ratio of occupational accidents	0.10	%	Frequency of disabling injuries (FR)
Governance Issues				
Board of Directors	Number of director seats	15	Persons	—
	Number of independent director seats	3	Persons	
	Ratio of female directors	6.7	%	
	Attendance in Board meetings by directors Attendance rate	94	%	Including attendance by proxy
	Ratio of directors and supervisors that completed the required number of continuing education hours	100	%	—
Communication with Investors	Number of investor conferences convened by the Company	4	No. of sessions	—

Independent Assurance Statement

FORMOSA PETROCHEMICAL CORPORATION's 2022 SUSTAINABILITY REPORT

AFNOR GROUP was established in 1926. We are the National Standardization Body of France, a permanent council member in ISO and one of the leading certification bodies in the world. This verification work was carried out by AFNOR ASIA LTD., a subsidiary of AFNOR GROUP. All the members of the verification team have professional backgrounds and have accepted AA1000 AS, AFAQ 26000, ISO 9001, ISO 14001, ISO 14064, ISO 45001, ISO 50001, and other sustainability-related international standard trainings. All assigned verifiers have been approved as the lead auditors or verifiers. AFNOR Group hereby provides a summary of FORMOSA PETROCHEMICAL CORPORATION's Sustainability Report of 2022 (hereinafter referred to as "the Report") but was not involved in any way in its preparation.

AFNOR Group and FORMOSA PETROCHEMICAL CORPORATION (hereinafter referred to as "FPCC") are independent entities. AFNOR ASIA LTD., was commissioned by FPCC to conduct the assessment and assure the Sustainability Report of 2022 was in accordance with AA1000 Assurance Standard (v3) and the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards).

SCOPE

The Sustainability Report announced by FPCC covers the activities and operating performance related to the economic, environmental, and social aspects of FPCC in Taiwan.

AFNOR Asia is responsible for:

1. Evaluating the accordance of the Report with the Type 1 of AA1000 Assurance Standard (v3) based on the AA1000 Accountability Principles (2018). The reliability verification of the revealed sustainability performance information and data was not included. The verification scopes include sustainability issues, response mechanism, performance information, management systems of information, and the processes of materiality evaluation and stakeholder participation.
2. In accordance with the GRI Standards, we verified the statement options and material topics disclosed in the report compiled by FPCC.

REFERENCES

The scope of the assurance includes an assessment of the source adequacy of specific performance information and an assessment of adherence to the following reporting criteria：

- AA1000 Accountability Principles (2018)
- GRI Standards

METHODOLOGY

- The inclusivity, materiality, responsiveness, and impact in the Report were assessed according to the principles of management process against AA1000 Assurance Standard (v3).
- The report is reported in accordance with the GRI Standards, and the content of the report is reviewed for general disclosures, sector standard indicators, and specific topic disclosures that comply with the GRI Standards.
- The mechanism of communication and response to the interest of stakeholders was verified through discussion and interview with the management team, however, the assessment team did not make any direct contact with external stakeholders.
- The qualitative and quantitative information produced, collected, and disclosed by the Report was reviewed through a validated sampling plan.
- By interviewing FPCC's core ESG members of the general manager's office responsible for writing the report, and reviewing the documents, data and information related to the report.
- Interviews with members of the organization related to sustainable development management and report writing, including representatives of all levels and departments.
- Check the sufficiency and completeness of supporting materials and evidence for the content of the report.

CONCLUSION

◆ **AA1000 Accountability Principles**

Inclusivity

FPCC continues to implement an extensive stakeholder engagement program aimed at identifying and understanding stakeholders' interests and informational needs, which broadly includes issues from all parties. The report disclosed impartially the economic, social, and environmental message adequately to support planning and achieving targets. In the future, the organization can continue to strengthen the stakeholder identification process to cope with continuous internal and external environmental changes, and stakeholders related to sustainable development can be regularly identified and evaluated.

Materiality

FPCC has published relevant information on sustainable management so that stakeholders can judge the company's management and performance, and has developed and implemented a decision-making mechanism for material issues to accommodate issues from all parties. In the future, the organization can continue to strengthen the decision-making process of material themes and incorporate them into the company's management and operations, so that material issues can be updated in a timely manner and corresponding strategies developed.

Responsiveness

FPCC has developed and implemented a stakeholder response mechanism, clearly declared relevant policies and communicated with stakeholders, and implemented responses to expectations and opinions from stakeholders. In the future, the organization will continue to meet the demands and expectations of stakeholders to disclose the depth, breadth and context of sustainable development-related information.

Impact

FPCC has developed and implemented a process for understanding, measuring, assessing and managing the impact of the organization, and provided the necessary capabilities and resources, and is committed to the measurement and assessment of the organization's impact on stakeholders and itself, to make a comprehensive and balanced disclosure. In the future, the organization can continue to invest resources, participate in and introduce international environmental initiatives and standards, to meet the international environmental management trends, and fully demonstrate the organization's monitoring, analysis and management of its operational impact.

◆ **Global Reporting Initiative Sustainability Reporting Standards**

Based on the results of the review, we confirm that the report complies with GRI reporting requirements in terms of general disclosures, sector standard indicators, and specific topic disclosures, including materiality topic management and disclosure items. Organizations can continue to introduce and combine other international disclosure requirements to highlight the organization's positive performance on sustainable development.

ASSURANCE OPINION

In our opinion, the information and data presented in the Report by FPCC provides a fair and balanced representation. We believe the focuses on economic, environmental, and social aspects of FPCC in 2022 are well represented.

Afnor Group has developed a set of process for the Assurance of Sustainability Reports based on current practice guidance provided in the AA1000 Assurance Standard (v3) and GRI Standards. We believe that the evidence collected by onsite assessment has exhibited that FPCC did follow the guidance of AA1000 Assurance Standard (v3) and GRI Standards, and their self-declaration in response to the Global Reporting Initiative.

ASSURANCE LEVEL

In accordance with the AA1000 Assurance Standard (v3), we verified this assurance statement corresponding to a moderate level. The scope and methods are as described in this statement.

LIABILITY

This assurance statement is intended for the use of FPCC only. AFNOR is not responsible for any other uses. Our responsibility is only based on the scope and methodology described, and to provide stakeholders an independent assurance statement.

For and on behalf of AFNOR：

AA1000
Licensed Report
000-84/V3-F8VRJ

Trevor Wilmer
The Director for Certification and Assessment
APR.28.2023

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