

CH1 ADVANCED CIRCULARITY

We are dedicated to driving the circular economy and forging a complete sustainable value chain, from supply chain management and quality control to customer service.

In partnership with trade associations and value chain stakeholders, we collectively generate far-reaching positive impacts on the environment and society.



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Journey to Net Zero



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A New Circular Economy
Model



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1.1 Journey to Net Zero

I | Net Zero Policy Commitment

SAI is acutely aware of its critical position within the global aluminium value chain. Faced with the profound challenges of climate change, we are not merely respondents but drivers of transformation.

To mitigate the potential impact of extreme climate events on SAI's operations and to actively respond to the net-zero emissions expectations of international automotive brands, SAI, as a global leader in forging solutions, has established a long-term target of achieving net-zero emissions by 2050. Using 2022 as the baseline year, SAI has set a short-term target of a 4% reduction in carbon emissions relative to the baseline by 2026, and a medium-term target of a 7% reduction by 2030, continuously monitoring decarbonization progress and advancing steadily toward the long-term vision of achieving net zero emissions by 2050. SAI will continue to drive low-carbon transformation, innovation and research and development, and supply chain collaboration, with the commitment to leading the forging industry toward sustainable development and creating a more resilient and sustainable future.

SAI conducts an annual inventory of energy use and greenhouse gas emissions. Through SWOT analysis, it assesses the external environment and internal resources from four perspectives: strengths, weaknesses, opportunities, and threats. Based on the results, SAI plans four strategic directions and detailed programs to gradually move toward net-zero emissions.

Strategic Directions	Implementation Details	2024 Implementation Results	2025 Implementation Results
Deployment of Renewable Energy	Each plant plans to install solar power generation equipment for use in production processes, in compliance with government regulations on renewable energy contract capacity.	In 2024, 1.8895 million kWh of green electricity was generated and 1,896 renewable energy certificates were obtained	In 2025, 1.8495 million kWh of green electricity was generated and 1,850 renewable energy certificates were obtained
	Proof of progress on power purchase agreements or contracts for green electricity	Currently, the solar power generated at the Pingtung Plant is used for self-consumption, and no purchases of green electricity have been made	
Fostering a Sustainable Culture	- Developed an annual energy education and training plan to enhance employees' awareness of energy conservation. - Incorporated energy policies and related information into the training courses for new employees. - Participated in energy conservation courses and observational events organized by relevant units of the Ministry of Economic Affairs.	- In 2024, dispatched personnel to participate in 13 sessions for a total of 145.5 hours of courses and forums regarding climate change, carbon fee regulations, and carbon reduction technologies - Actively participated in forums and briefing sessions organized by government agencies, such as the Yunlin County Forum on Climate Change Adaptation Implementation	- In 2025, dispatched personnel to participate in 20 sessions for a total of 155 hours of courses and forums regarding climate change, net-zero emissions, carbon fee regulations, and carbon reduction technologies - Actively participated in forums and briefing sessions organized by government agencies, such as the Draft of Yunlin County Self-Governing Ordinance for Promoting Net-Zero Sustainability and energy-saving and carbon reduction case studies and on-site observations organized by the Bureau of Industrial Parks, Ministry of Economic Affairs
Optimizing Process Energy Efficiency	- Installed power quality analyzers to measure equipment energy consumption, providing a basis for subsequent improvement and monitoring. - Replaced hot air circulation systems with direct fire heating systems, such as the Pingtung intermediate furnace and direct fire furnace, to reduce energy consumption. - Gradually revise equipment operation and maintenance schedules to include shutdown procedures for idle periods. - Replaced induction motors in forging machines with servo motors to reduce no-load energy consumption. - Adjusted shifts in each production unit to operate during off-peak hours. - Refer to the "Major Energy-Using Equipment Registration Form" to evaluate the replacement of high-energy-consuming equipment. New equipment is selected based on the Energy, Environment, and Health Safety Design and Procurement Evaluation Form to ensure high energy efficiency.	Implemented improvements on three major energy-using pieces of equipment, achieving total energy savings of 5,298.9 thousand kWh/year.	In 2025, submitted 3 energy-saving improvement proposals with an estimated annual electricity savings of 1,164,500 kWh/year.
Increase the recycled aluminium usage rate	Within SAI's Scope 3 emissions, primary aluminium production accounts for the highest proportion. Gradually increase the proportion of recycled aluminium used from 35% to 70%	In 2024, the proportion of recycled aluminium used was 35.3%	In 2025, the proportion of recycled aluminium used was 36.93%

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II | Deepening Commitment: Alignment with International Standards

Continuing SAI's long-standing commitment to environmental sustainability, we continue to align with the global temperature control targets established under the Paris Agreement. We are committed to limiting the increase in global average temperatures to well below 2.0°C above pre-industrial levels, and to actively pursuing efforts to limit the increase to 1.5°C, in order to reduce the catastrophic impacts of climate change.

To realize this vision, SAI has taken on the responsibility of achieving net-zero emissions by 2050, fully aligning with the Aluminium Stewardship Initiative (ASI) Performance Standard V3. We are committed not only to establishing a transparent, traceable, and scientifically grounded decarbonization roadmap, but also to placing low-carbon materials and green manufacturing at the core of our operations, ensuring that every product made by SAI represents a concrete step toward net-zero transformation.

III | Professional Competencies: Building the Capacity Foundation for Net-Zero Transition

To ensure that every step of this net-zero journey meets the requirements of scientific evidence and regulatory compliance, SAI has continued to strengthen the green professional capabilities of its internal talent. In 2025, SAI's sustainability team accumulated 155 hours of continuing education and successfully obtained the following nationally recognized professional certifications:

Ministry of Environment Net-Zero Green-Collar Talent Certification

A certification issued by the Ministry of Environment (MOENV), designed to verify that qualified professionals have a grasp of national net-zero policy trends and possess advanced practical knowledge of carbon reduction, enhancing enterprises' ability to respond accurately to emissions regulations and implement carbon reduction policies.

iPAS Net-Zero Carbon Emission Planning Administrator

A certification issued by the Ministry of Economic Affairs (MOEA), designed to verify that qualified professionals possess the practical capabilities to guide enterprises through upgrading and transitioning, and to execute net-zero emission planning, thereby bridging the gap between academic learning and practical application and strengthening the net-zero competitiveness of enterprises.



Basic Test on Sustainable Development

A certification jointly administered and issued by the Taiwan Insurance Institute, the Securities and Futures Institute, and the Taiwan Academy of Banking and Finance, designed to verify that qualified professionals possess sustainable development expertise common to both the financial and industrial sectors, enabling them to strengthen the quality of information disclosure, exert market influence, and assist enterprises in sustainable transformation.

Through a comprehensive elevation of professional competencies, SAI's sustainability team serves as a professional translator among internal units, accurately converting the collective carbon reduction achievements of all colleagues into sustainable value with international competitiveness.

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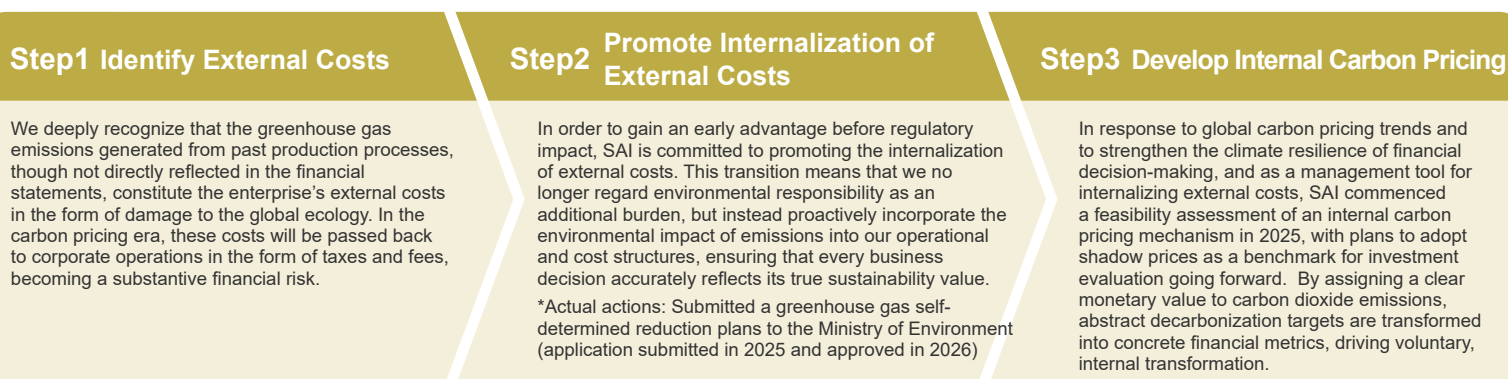
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IV | Climate Governance Transformation: Entering an Era of Carbon Pricing

In 2025, the world formally entered the era of carbon pricing, as the climate game shifted from environmental advocacy to trade and economic competition, with countries around the world establishing carbon pricing mechanisms to advance carbon reduction justice. The European Union's Carbon Border Adjustment Mechanism (CBAM) concluded its transitional phase in 2025 and will formally enter the substantive reporting and levy stage in 2026, while the United Kingdom, the United States, and other nations have also been formulating related trade carbon border tax legislation. This marks a fundamental shift in which carbon emissions have evolved from an invisible environmental impact into a tangible financial cost with direct implications for international trade competitiveness. Domestically, Taiwan officially launched its carbon fee collection mechanism in 2025, giving effect to the principle of environmental justice under which those who emit carbon bear the cost. Under the dual impetus of domestic and international policy developments, the cost of carbon emissions has become an indispensable factor in financial reporting that can no longer be overlooked.

Faced with this global shift in the rules of business, SAI not only monitors regulatory developments closely, but proactively transforms this challenge into an opportunity for governance advancement. We are progressively building SAI's competitiveness for the carbon pricing era:



What Is Internal Carbon Pricing?

This is an internal management tool that converts an enterprise's carbon-emitting behaviors into finance costs. By assigning a concrete monetary value to carbon emissions, companies can quantify their environmental impact, thereby guiding each department to voluntarily reduce emissions and make economic decisions that are more aligned with sustainability targets.

What Is Shadow Pricing?

A shadow price is a simulated unit cost of carbon emissions. When conducting evaluations of major investments, equipment replacement, or process development feasibility studies, a virtual carbon cost is pre-calculated on paper. This enables SAI to simulate, in advance of the actual imposition of regulatory carbon fees, the future impact of carbon fees on project profitability and investment payback periods, ensuring that SAI's capital expenditures possess a high degree of climate resilience.

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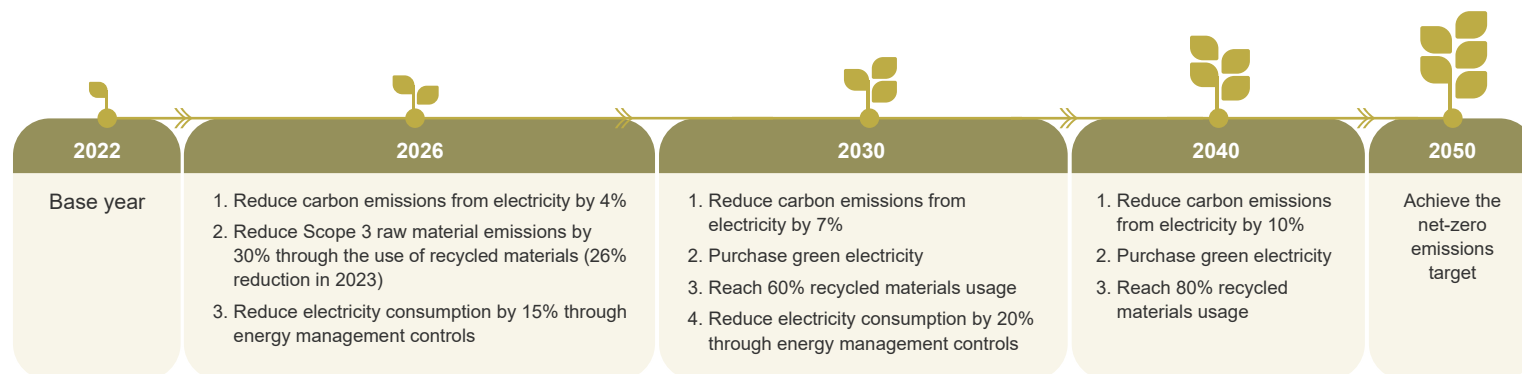
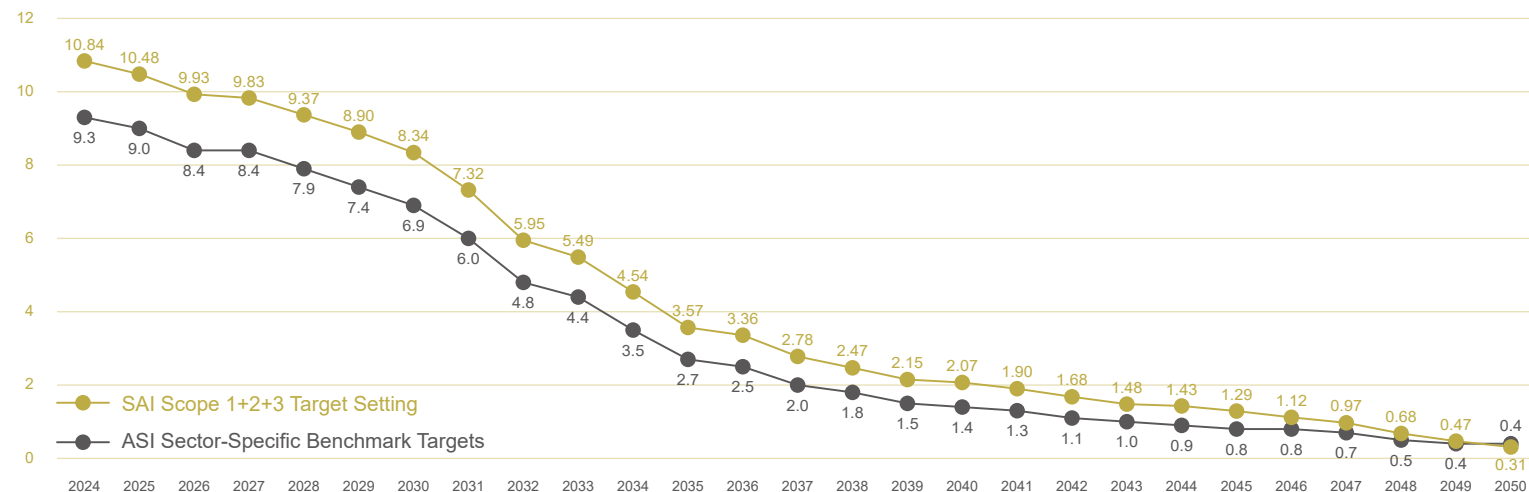
V | SAI's Decarbonization Path

The following metrics were established according to the reduction target trajectory established under the ASI Standards (Scope 1 + 2 + 3):

Short-term target: Steadily reduce annual carbon emission intensity by increasing the usage rate of recycled aluminium and improving process energy efficiency, ensuring a balance between SAI's operational development and environmental carrying capacity.

Long-term target: By 2050, progressively reduce emission intensity from the current level to 0.31 and achieve net-zero emissions.

Comparison Chart of ASI Standards and SAI Reduction Target Trends



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VI | Specific Carbon Reduction Measures and Action Plans for SAI

1. Energy Transition and Electrification (for Scope 1)

As the metal processing industry is an energy-intensive industry, Scope 1 focuses on natural gas sources used for heating.

Improved Reduction Plan	Improvement Contents	Implementation Phase	Estimated Annual Benefits (tCO ₂ e reduction)
Heating and Heat Treatment Furnaces	The heating furnace and heat treatment furnace are energy-intensive stages in the manufacturing process for aluminium alloy wheels. We are therefore considering the introduction of high-efficiency, energy-saving furnaces to optimize furnace insulation and reduce heat loss	2028 to 2030	600

2. Increased Efficiency of Processing Equipment (for Scope 2)

Upgrade energy efficiency for high energy-consuming equipment and peripheral equipment.

Improved Reduction Plan	Improvement Contents	Implementation Phase	Estimated Annual Benefits (tCO ₂ e reduction)
High-efficiency power equipment	Gradually phase out old air compressors, pumps, motors, etc., and introduce Grade 1 energy-efficient or variable-frequency equipment to reduce energy loss	January 2026–December 2026	1,400
Lighting system	Comprehensive switch to LED lighting, paired with motion-sensing switches	September 2025–October 2025	19
Air-conditioning system	Optimize the operating efficiency of the central air-conditioning chiller unit and implement heat recovery, such as using waste heat to preheat aluminium ingots or for plant heating	January 2026–December 2026	500
Purchased or self-built green energy	Prioritize signing green power purchase agreements (PPAs) with electric utilities or renewable energy providers, and increase the proportion of green power procurement annually in order to achieve the expected Scope 2 carbon reduction	2025–2028	5,000

3. Material Efficiency and Circular Economy (for Scope 3)

As primary aluminium accounts for the highest proportion of the overall total, customer material changes must be secured through sales efforts and procurement management.

Improved Reduction Plan	Improvement Contents	Implementation Phase	Estimated Annual Benefits (tCO ₂ e reduction)
Increase the recycled aluminium usage rate	Within SAI's Scope 3 emissions, primary aluminium production accounts for the highest proportion. Gradually increase the proportion of recycled aluminium used from 35% to 70%	2025–2035	110,000

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VII | Outcome of the 2025 Self-Determined Reduction Plans

	Electrical Equipment	Horsepower/Efficiency/RT Value	Quantity	Estimated Carbon Reduction (tCO ₂ e/year)
Yunlin Plant 2	 IE3 variable-frequency motor	7.5 HP × 2 units + 3 HP × 2 units		
		Efficiency: 89.5% + 86.5%	2+2	34.522
		Efficiency: 0.6 kW/RT, 17.95 kW (peripheral water pump)		
	 Office panel lights	25W panel lights x 511 units	511	6.840
	Total			41.362

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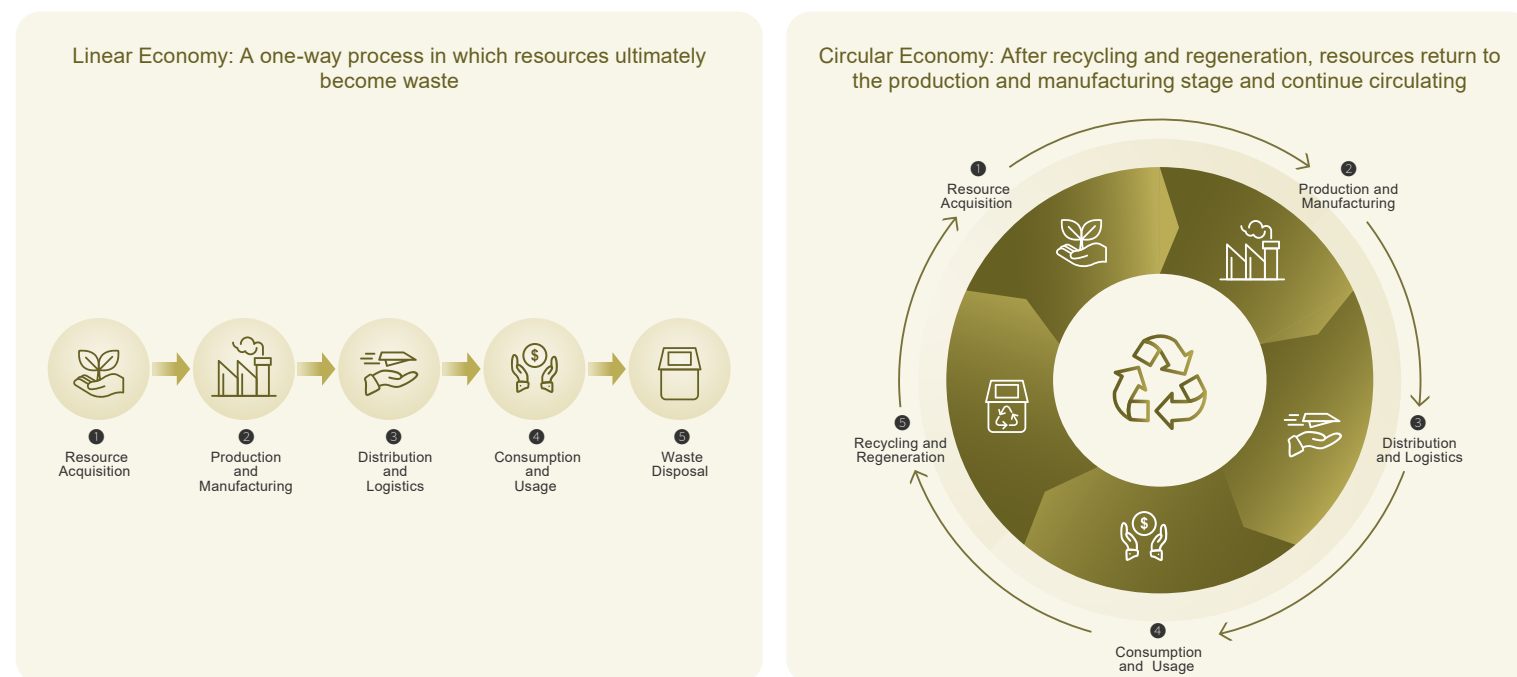
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Since the Industrial Revolution in the 18th century, the linear economy model of “resource acquisition → production → distribution → consumption → disposal” has dominated human economic and technological development for nearly 300 years. In this one-way “cradle to grave” path, natural resources are regarded as an inexhaustible supply. However, this has led to resource depletion and environmental burden globally.

Amidst the severe challenges of climate change and resource scarcity, SAI is committed to breaking this linear endpoint. We thoroughly understand that true sustainability should not end with the conclusion of a resource’s life cycle, but should begin with how we define the rebirth of materials. We are comprehensively advancing the shift from a linear economy model to a “cradle to cradle” circular economy model, so that the product life cycle is no longer a one-way road to the grave, but an endless circle. Disposal is thus no longer the final end, but the starting point of another life cycle.

Comparison Between Linear Economy and Circular Economy



Aluminium is a core raw material for SAI’s products. SAI deeply recognizes its responsibility to protect natural resources and is actively transforming resource recycling into a core competitive advantage. In response to global resource scarcity and to reduce dependence on virgin minerals, we are committed to building a circular resource system that gives waste aluminium a second life.

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I | Aluminium Waste Recycling: Transforming Waste into a Strategic Resource

Through process research and development, we transform scrap, cuttings, and offcuts generated during production into high-quality recycled aluminium materials. In 2025, SAI achieved a 100% aluminium scrap recovery rate at its facilities, effectively reducing raw material consumption and waste generation. In pursuit of low-carbon manufacturing and the circular economy, SAI continues to produce high-quality aluminium materials meeting international standards through highly efficient, automated HERTWICH smelting equipment, utilizing low energy-consumption processes and technologies. As the utilization rate of the Pingtung Plant grows steadily, SAI leverages recycled aluminium to realize circular economy benefits and assist customers in achieving their supply chain carbon reduction targets.



Caption for Figures 1 and 2: Recovery and reuse of high-temperature exhaust heat from the main furnace body

Through the furnace design, high-temperature exhaust heat is recovered and reused to dry aluminium scraps, enabling a 100% reduction of natural gas consumption during the pre-treatment process

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I | Aluminium Waste Recycling: Transforming Waste into a Strategic Resource



From scrap aluminium to high-grade recycled materials, we establish a complete resource recycling ecosystem. Through innovative technology and efficient processes, we curb raw material intake and waste output while advancing low-carbon manufacturing—driving the circular economy to create sustainable value.

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II Application of Circular Materials: Environmental Benefits of Using 100% Recycled Aluminium to Produce SAI RESAICAL® 100% Recycled Aluminium

Amid the global wave of net-zero emissions and green transformation, reducing the environmental footprint of raw materials and manufacturing processes has become a shared objective across industries. SAI has not only long been committed to the research and development of high-quality materials, but has also transformed its outstanding circular economy technology into a core competency. Its RESAICAL® recycled aluminium has become the preferred strategic partner for global collaborators in their pursuit of carbon neutrality targets.

According to 2019 Life Cycle Inventory data published by the International Aluminium Institute (IAI), the production of primary aluminium ingot is a resource-intensive process: on a global average, the production of 1 metric ton of primary aluminium requires approximately 1.91 metric tons of alumina, while the refining of 1 metric ton of alumina requires the mining of approximately 2.69 metric tons of bauxite. In other words, the creation of every ton of primary aluminium carries with it a substantial consumption of natural resources.

In comparison, SAI RESAICAL® Recycled Aluminium delivers significant benefits in resource conservation and environmental contribution.



Minimal Energy Dependency

The energy required to recover and smelt recycled aluminium is only 5% of that needed to smelt primary aluminium from bauxite.



Outstanding Carbon Reduction Performance

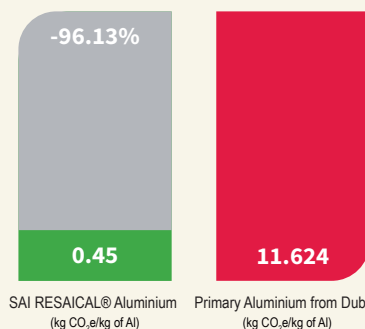
Based on 2023 data, the carbon footprint of SAI RESAICAL® Aluminium was 0.45 kg CO₂e/kg, compared with 11.624 kg CO₂e/kg for Dubai primary aluminium, representing a carbon reduction of 96.13%.



Natural Resource Conservation

Based on resource conversion ratios provided by the IAI, the production of every 1 metric ton of recycled aluminium reduces bauxite mining by approximately 5.14 metric tons. Extrapolating from SAI's annual remelting volume of 40,000 metric tons, this is equivalent to a reduction of over 200,000 metric tons of bauxite mining per year, effectively mitigating the impact of mining activities on ecosystems and biodiversity.

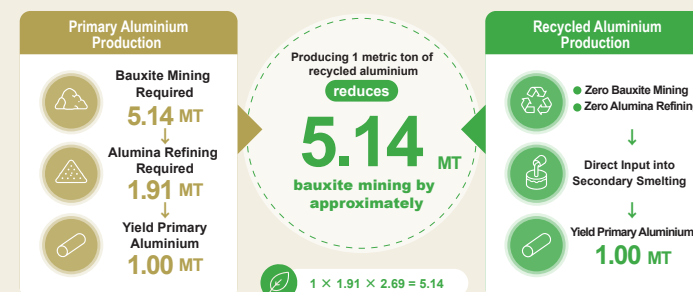
Carbon Reduction Performance



$$(0.45 - 11.624) / 11.624 \times 100\% = -96.13\%$$

Resource Efficiency of Recycled Aluminium

Producing 1 metric ton of recycled Aluminium reduces bauxite mining by approximately 5.14 metric tons.



Conversion Basis: Producing 1 metric ton of primary aluminium consumes 1.91 metric tons of alumina; refining 1 metric ton of alumina requires 2.69 metric tons of mined bauxite.

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III | 2025 Circular Performance of Raw Materials

In 2025, SAI actively incorporated recycled aluminium into its product manufacturing processes and continued to increase the proportion used in its products. Among these, 100% recycled aluminium is used for automotive wheels, with an input amount of 10,755.28 metric tons; aluminium materials used in chassis products were produced using a smelting blend technology comprising 60% recycled aluminium and 40% primary aluminium (please refer to the Other Recycled Aluminium Materials category in the table below). The recycled aluminium input was 527.55 metric tons. In 2025, the total actual input volume of recycled aluminium was 11,282.83 metric tons, accounting for 36.93% of total material usage for the year.

Raw Material Consumption Statistics (Unit: metric tons)

Raw Materials	2023	2024	2025	2025 Proportion
SAI's 100% recycled aluminium	11,323.45	12,103.87	10,755.28	35.21%
Other recycled aluminium materials – Recycled aluminium	368.73	257.35	527.55	1.73%
Total recycled aluminium	11,692.18	12,361.22	11,282.83	36.93%
Primary aluminium from Dubai	24,954.62	22,257.65	18,924.94	61.95%
Other recycled aluminium materials – Primary aluminium	245.82	171.56	340.76	1.12%
Total primary aluminium	25,200.44	22,429.21	19,265.70	63.07%

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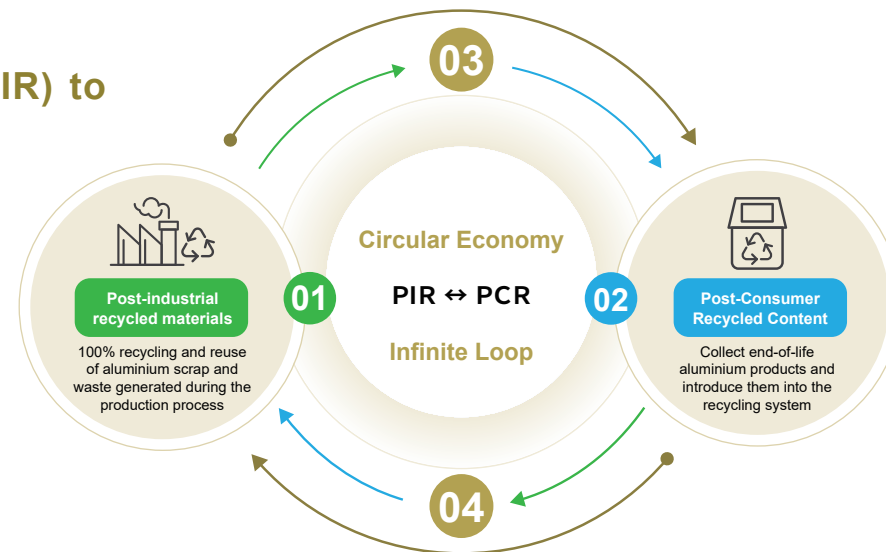
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IV | From Post-Industrial Recycled (PIR) to Post-Consumer Recycled (PCR)

SAI has already established mature post-industrial recycling (PIR) technology in its practice of the circular economy, enabling the 100% recovery and reuse of aluminium scrap and waste generated during in-plant manufacturing processes. However, in order to further expand its environmental impact and respond to the requirements of global brands for "full product lifecycle management," SAI commenced planning for the collaborative development of post-consumer recycling (PCR) in 2025.



What Are Post-Industrial Recycled (PIR) and Post-Consumer Recycled (PCR) Materials?

- Post-Industrial Recycled (PIR): The centralized collection and recycling of waste generated during manufacturing processes, including scrap, cuttings, and offcuts, ensuring that aluminium material losses during production are minimized and achieving a high degree of raw material self-sufficiency.
- Post-Consumer Recycled (PCR): Technology that recycles and reuses products after end consumers have used them, such as scrapped aluminium wheels, solar panels, building aluminium materials, and other aluminium products. By redirecting end-of-life waste that has completed its useful service life and entered the disposal stage back into the production system, a higher level of resource circularity is achieved.



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1.3 Greenhouse Gas Emissions and Energy Management

I | Greenhouse Gas Management

In response to the global net-zero emissions trend, SAI has planned ahead by introducing the ISO 14064-1 greenhouse gas inventory system and establishing a systematic mechanism for monitoring, managing, and disclosing greenhouse gas emissions, ensuring the transparency and credibility of carbon inventory data generated by operating activities.

In 2025, SAI's total Scope 1 and Scope 2 greenhouse gas emissions amounted to 71,924.6831 metric tons CO₂e, representing a decrease of 12.2% compared to the baseline year (2022). Carbon emission intensity stood at 0.0103 (metric tons CO₂e / NT\$ thousand), a reduction of 19.5% compared to the baseline year.

1. Greenhouse Gas Emissions

(1) Scope 1 and 2 Greenhouse Gas Emissions Statistics (Unit: tCO₂e)

	2023	2024	2025
Scope 1	22,597.5517	21,299.9178	21,180.8729
Scope 2	60,647.9001	53,781.5701	50,743.8103
Total	83,245.4518	75,081.4879	71,924.6831
Operating Revenue (NT\$ Thousands)	7,779,316	7,473,579	6,977,352
Greenhouse Gas Emission Intensity (tCO ₂ e / NT\$ thousand)	0.0107	0.0100	0.0103

Note: GHG emissions intensity was calculated as total Scope 1 and Scope 2 GHG emissions divided by SAI's operating revenue (NT\$ thousands).

(2) Scope 3 Greenhouse Gas Emissions Statistics (Unit: tCO₂e)

Indirect Emissions	Category	2023	2024	2025
Category 3	Emissions from upstream transport and distribution	7,275.4845	4,283.1203	3,759.6736
	Emissions from downstream transportation and distribution	5,656.5668	5,537.6599	3,169.8226
	Emissions from employee commuting	565.2224	538.1380	520.6343
	Emissions from waste transportation	84.8378	306.8709	327.9528
	Subtotal	13,582.1115	10,665.7891	7,778.0833
Category 4	Emissions from purchased goods and services	261,346.9590	284,333.9840	250,854.9285
	Emissions from waste generated in operations	318.8943	424.7197	350.0695
	Subtotal	261,665.8533	284,758.7037	251,204.9979
Total		275,247.9648	295,424.4928	258,983.0812

Note 1: SAI uses 2022 as the base year. Scope 1 and Scope 2 carbon emissions in the base year were 81,942.2245 tCO₂e, and carbon emission intensity was 0.0128 tCO₂e per NT\$1,000.

Note 2: Greenhouse gas emissions data for Scope 1, Scope 2, and Scope 3 cover SAI Plant 1, Plant 2, Zhuwei Plant, and Pingtung Plant.

Note 3: The operational control approach was used for the calculation of Scope 1 inventory data.

Note 4: The global warming potential (GWP) values were based on the IPCC Sixth Assessment Report.

Note 5: The greenhouse gas emissions coefficient was based on the latest data announced by the Ministry of Environment. For 2024 and 2025, the electricity emission factor adopted is 0.474 kgCO₂e/kWh as announced by the Ministry of Economic Affairs for 2024.

Note 6: SAI conducted a greenhouse gas inventory in accordance with the ISO 14064-1:2018 standard.

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1.3 Greenhouse Gas Emissions and Energy Management

(3) Statistics of Seven Greenhouse Gas Emissions (Unit: tCO₂e)

	2023	2024	2025
Carbon Dioxide (CO ₂)	357,764.6860	369,912.2836	330,220.5333
Methane (CH ₄)	273.2173	133.0191	107.0999
Nitrous oxide (N ₂ O)	23.0703	21.1949	19.7300
Hydrofluorocarbons (HFCs)	432.3942	439.4343	560.3542
Perfluorocarbons (PFCs)	0	0	0
Sulfur hexafluoride (SF ₆)	0.0489	0.0489	0.0472
Nitrogen trifluoride (NF ₃)	0	0	0
Total GHG emissions	358,493.416	370,505.981	330,907.7654

Note: Scope 1, 2, and 3 GHG emissions are included

2. Carbon Reduction Actions and Outcomes

In response to climate change and the net-zero transition trend, SAI drives its decarbonization efforts through a systematic approach, focusing on three key strategic pillars: energy conservation and carbon reduction, management of Scope 3 indirect emissions, and renewable energy use. Through comprehensive improvements in energy use efficiency, optimization of carbon management across raw materials and the supply chain, and the continued expansion of renewable energy adoption, SAI not only effectively reduces greenhouse gas emissions from its operations, but also progressively drives the value chain toward low-carbon transition, laying a solid foundation for SAI's sustainable development.

(1) 2025 Energy Conservation and Carbon Reduction Plan

SAI comprehensively promotes energy conservation and carbon reduction initiatives. In addition to actively investing in renewable energy infrastructure to reduce greenhouse gas emissions, we regularly review the effectiveness of each project to ensure that energy conservation and carbon reduction targets are achieved. SAI rigorously manages electricity consumption across its facilities relating to power, lighting, and motors, striving to maximize overall energy use efficiency and reduce unnecessary energy consumption. In 2025, through a range of energy conservation and carbon reduction measures, SAI achieved cumulative electricity savings of approximately 1,164,458.92 kWh, equivalent to a reduction of 576.41 tCO₂e in greenhouse gas emissions.

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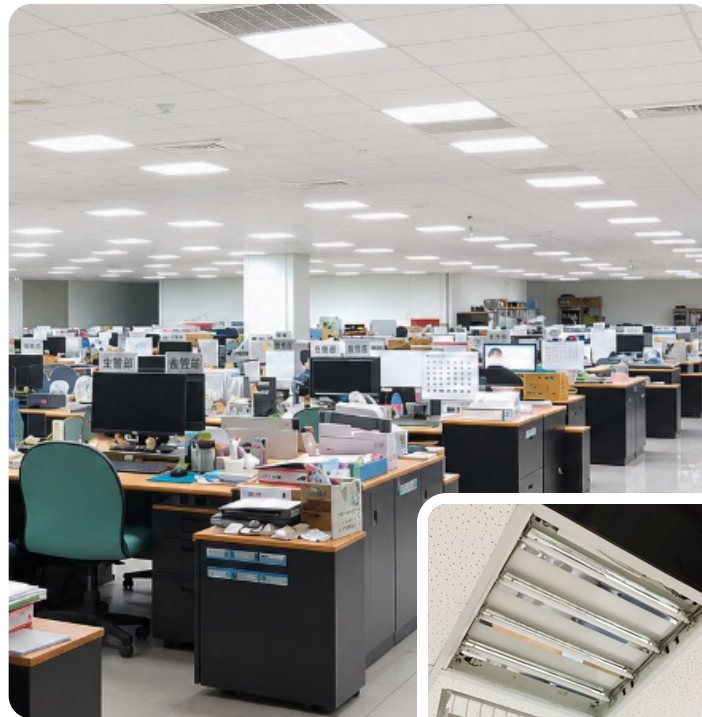
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1.3 Greenhouse Gas Emissions and Energy Management

2025 Greenhouse Gas Reduction Plan

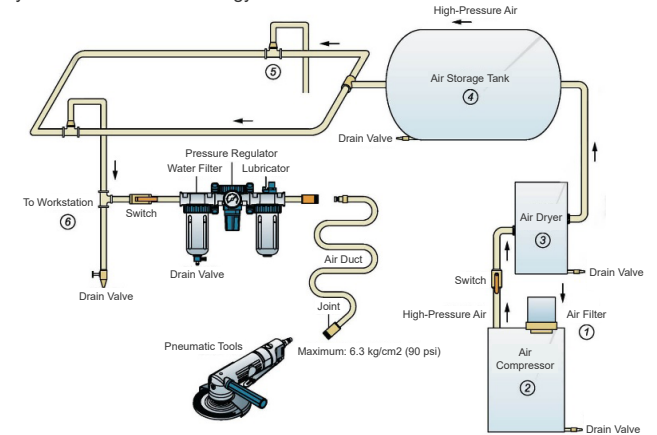
Major Carbon Reduction Measures	Program Implementation Date	Energy Savings (kWh)	Effectiveness of Energy Conservation (NT\$10,000)	CO ₂ Reduction (metric tons/year)
Upgraded IE3 cooling inverter motors at Plant 2	Implemented in 2025	69,741.41	30.20	34.52
Replaced panel lights in the Plant 2 office	Implemented on September 1, 2025	13,817.51	5.96	6.84
Repair air compressor piping leak at Plant 2	Implemented on July 20, 2025	1,080,900.00	468.04	535.05
Total		1,164,458.92	504.20	576.41

Replaced panel lights in the Plant 2 office



Plant 2 Air Compressor Pipeline Leakage Repair

In compressed air equipment, all connected switches and joints may leak due to aging and fatigue, resulting in waste. Therefore, an acoustic detector was used to identify leaks and conserve energy.



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1.3 Greenhouse Gas Emissions and Energy Management

(2) Scope 3 Indirect Emissions Management

The largest proportion of SAI's greenhouse gas emissions comes from Category 4, Purchased Goods and Services, mainly because procurement of primary aluminium results in higher carbon emissions. SAI continues to reduce overall carbon emissions from purchased goods and increase the use of SAI RESAICAL® recycled aluminium to enhance overall carbon reduction benefits.

Furthermore, SAI undertakes responsibility to reduce Scope 3 indirect emissions by collecting carbon emission data from major aluminium ingot suppliers. It also conducts greenhouse gas inventories with these suppliers and progressively requires them to implement greenhouse gas inventories and assist in smart energy management systems, leading the industry towards net-zero carbon emissions. SAI conducts an annual investigation into the greenhouse gas emissions data of its Dubai primary aluminium suppliers for the previous year. The survey results are as follows:

Carbon Emission Information for Raw Materials	Unit	2022	2023	2024	2025
Carbon emissions intensity of Dubai primary aluminium	tCO ₂ e / Total metric tons of aluminium materials	13.15	13.432	N/A (not yet disclosed by EGA)	N/A (not yet disclosed by EGA)
Total supplier emissions	tCO ₂ e	39,816,207	15,363,994	N/A (not yet disclosed by EGA)	N/A (not yet disclosed by EGA)

Note 1: The primary aluminium suppliers have offset Scope 2 emissions through renewable energy certificates.

Note 2: The data includes Scope 1 and Scope 3 emissions, verified by a third-party verification company, DNV.

(3) Renewable Energy Use

Purchased electricity is the most significant source of GHG emissions among SAI's use of energy resources. In addition to actively promoting energy conservation initiatives, SAI continues to introduce clean energy sources to reduce carbon emissions, in line with the government's sustainability transformation goals for expanding renewable energy development. SAI has invested NT\$66.8 million in establishing a 1,492.4 kW solar power generation facility at its Pingtung Plant to supply the facility's internal energy needs, with an average annual generation capacity of approximately 1.85 million kWh.

The solar power generation facility at the Pingtung Plant was officially completed in March 2023. In 2025, it generated a total of 1,849,450 kWh of green electricity, accounting for approximately 4.4% of the Pingtung Plant's total electricity consumption and approximately 45.6% of electricity consumption at the smelting plant. SAI also obtained 1,896 Taiwan Renewable Energy Certificates. Going forward, SAI will continue to expand its use of renewable energy, while actively planning to achieve 100% renewable energy usage in its recycled aluminium smelting process, leading the industry toward a new milestone in low-carbon sustainability.

	2023	2024	2025
Green Electricity Usage (kWh)	1,348,639	1,889,465	1,849,450
Total electricity consumption at the Pingtung Plant (kWh)	36,952,194	39,805,504	41,908,448
Proportion of Green Electricity	3.6%	4.7%	4.4%

Note 1: Total electricity consumption = purchased electricity + green electricity used

Note 2: Proportion of green electricity = green electricity used/(purchased electricity + green electricity used)

Note 3: All green electricity was self-generated and self-consumed

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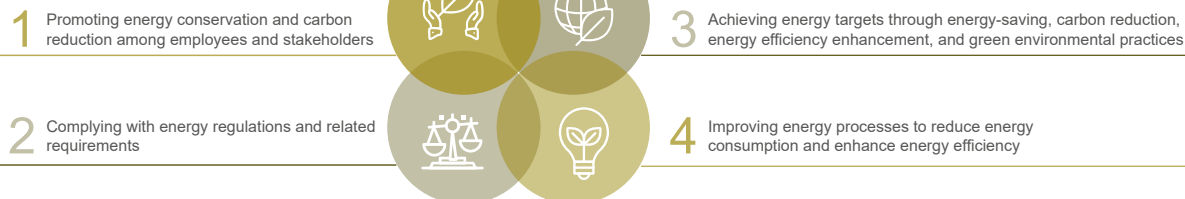
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1.3 Greenhouse Gas Emissions and Energy Management

II | Energy Management

1. Energy Management Policy

SAI upholds the principles of sustainable business practices, encouraging all employees to participate in and promote energy conservation and carbon reduction activities. We maintain a reduction plan for the continuous improvement of energy conservation, enhancing energy efficiency and optimizing energy-saving production process designs by purchasing energy-efficient and high-performance equipment. We commit to:



To realize the above commitments, SAI plans to actively undertake a diverse range of energy conservation and carbon reduction initiatives over the next five years. This will begin with increasing the proportion of recycled materials used (e.g., recycled aluminium from scrap refining) and strengthening resource resilience (e.g., wastewater recycling and reuse), while simultaneously promoting green products, developing low-pollution products and low-energy-consumption processes (e.g., mold release agent reduction testing and automated control systems). Through this comprehensive green transformation strategy, the intelligence of resource circulation imbues materials with a renewed essence, driving SAI's transformation from the inside out. Facing the defining challenge of net-zero emissions by 2050, SAI is not only reshaping its production logic, but is also pioneering a new vision of sustainable aesthetics at the intersection of industrial evolution and ecological balance.

In addition, in response to the urgent global supply chain demand for renewable energy, SAI has adopted a dual strategy combining the "internal deepening of self-generation and self-consumption" with "external expansion through strategic investment."

Strategic Investment and Timeline	2025 Progress Tracking	Proactively Strengthening Energy Security and Establishing Long-Term Green Power Supply Support
To secure a long-term, stable source of green electricity, SAI formally signed a contract in April 2024 to invest in the Kai-Hong Energy green energy investment platform. This strategic action represents SAI's transition from being merely an energy consumer to becoming a participant with the capacity to manage energy resilience.	Entering 2025, SAI has continued to track the development progress of the project sites under Kai-Hong Energy. The platform is currently focused on developing a diverse range of renewable energy facilities across western Taiwan, including: ◆ Solar power — advancing agrivoltaic project sites to achieve multiple objectives such as multi-purpose land use and energy generation; ◆ wind power — establishing project sites in regions with favorable wind resources; ◆ and energy storage — given that renewable energy generation is subject to natural factors such as the day-night cycle (solar) and wind intensity (wind), resulting in intermittent and unstable power supply, energy storage systems serve as a power regulation reservoir, ensuring smooth and stable power supply and grid resilience.	Through this investment, SAI has secured priority procurement rights for green electricity within the scope of its investment amount. This not only represents a green asset allocation from a financial perspective, but also serves as important support for SAI's future green electricity procurement plans. By securing a stable source of supply, we can effectively mitigate the risks arising from supply-demand imbalances in the green electricity market and address future energy gaps resulting from increasingly ambitious carbon reduction targets, thereby transforming potential procurement challenges into a competitive advantage for SAI.

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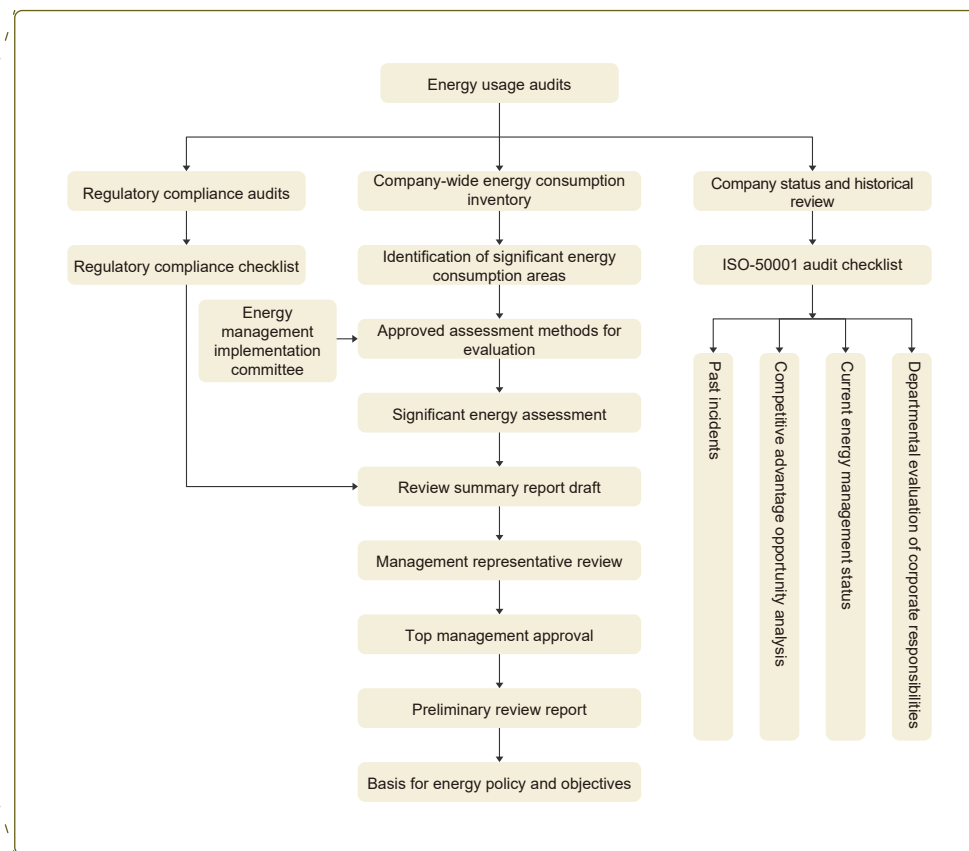
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1.3 Greenhouse Gas Emissions and Energy Management

2. Implementation of the Energy Management System (EMS)

In alignment with the national energy transition objectives, SAI has planned and implemented actions centered on carbon reduction and expanding renewable energy deployment. Through the Energy Management System (EMS), SAI effectively monitors and controls energy usage, formulates energy efficiency improvement plans, and advances green electricity development initiatives. The scope of application of the EMS covers SAI's manufacturing sites, including Yunlin Plant 1, Yunlin Plant 2, Yunlin Zhuwei Plant, and Pingtung Plant.



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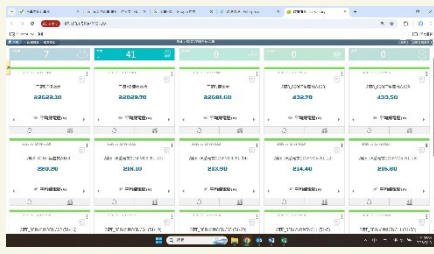
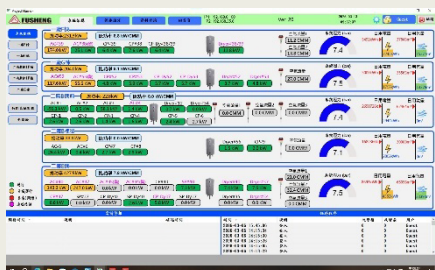
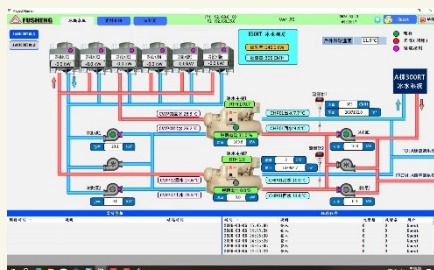
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1.3 Greenhouse Gas Emissions and Energy Management

EMS Energy Management Platform Implementation Results			
 Scope of implementation	Compressed Air System: Yunlin Plant 1 and Plant 2 Power System: Yunlin Plant 1, Yunlin Plant 2, Zhuwei Plant, and Pingtung Plant Air Conditioning System: Yunlin Plant 2 Dust Collection System: Yunlin Plant 1 and Plant 2		
	Power system & dust collection system	Compressed air system	Air conditioning system
			

3. Energy Management Measures

ISO 50001 Energy Management System	Energy Monitoring System	High- and Low-Voltage Electrical Equipment Management
Energy Inventory - Equipment Load Measurement, Power Demand Management, and Power Quality Maintenance		
◆ Conduct electricity consumption monitoring and inventory for major energy-consuming equipment. ◆ Develop and implement energy-saving improvement plans based on data analysis. ◆ Implement monitoring and measurement to verify data and outcomes before and after improvements. ◆ Report performance results and pursue continuous improvement to achieve energy conservation and carbon reduction benefits. ◆ Enhance energy use efficiency, such as through water resource and waste heat recycling, to strengthen climate change response capabilities.	◆ Digitize water, electricity, and natural gas consumption data for visualized management, identifying actual instances of waste and implementing improvements to achieve significant energy-saving benefits. ◆ Adjust optimal contracted capacity based on continuous monitoring data, reducing basic electricity charges and minimizing penalties for exceeding contracted capacity. ◆ Use instruments to measure and analyze aging or abnormally energy-consuming equipment, establishing standards for replacement and renewal.	◆ Routine inspections of high- and low-voltage power equipment are conducted, and external units are commissioned to perform equipment safety inspections. ◆ Routine thermal imaging inspection of low-voltage equipment (in-plant equipment inspection). ◆ Replacement and renewal program for high-voltage electrical equipment to maintain electrical safety (Yunlin Plant). ◆ Implementation of improvements for identified deficiencies to reduce the rate of electrical anomalies (unrelated to Taipower incidents).

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1.3 Greenhouse Gas Emissions and Energy Management

4. 2025 Major Energy Management Improvement Program - Improvement of Compressed Air Pipeline Leakage at Yunlin Plant 2



Current Status

Multiple leaks were identified in the compressed air piping system across the plant. Due to the relatively noisy plant environment, minor leaks are difficult to detect. During the power outage at Yunlin Plant 2 on July 20, 2025, when equipment was not operating, system air consumption from 6:00 a.m. to 8:00 a.m. was detected and used as the plant's air leakage volume.



Improvement Methods

An ultrasonic leak detector was used to detect and repair leakage points. A total of 271 leakage points were addressed.



Project Objective

Reduce compressed air leakage across the plant site by 30%



Improvement Results

Air leakage decreased by 21%, with continuous improvement underway to achieve the 30% target.

Average gas leakage volume three hours before outage on July 20, 2025			Average gas leakage volume three hours before outage on October 12, 2025		
Average hourly leakage volume	Average hourly electricity consumption from leakage	Hourly electricity cost from leakage	Average hourly leakage volume	Average hourly electricity consumption from leakage	Hourly electricity cost from leakage
3,557	400	1,761	2,616	318	1,399
Average daily leakage volume	Average daily electricity consumption from leakage	Daily electricity cost from leakage	Average daily leakage volume	Average daily electricity consumption from leakage	Daily electricity cost from leakage
85,360	9,606	42,268	62,784	7,630	33,572
Improvement Benefits					
◆ Daily electricity consumption due to leakage prior to improvement: 9,606 kWh; after improvement: 7,630 kWh. Daily electricity savings: 9,606 – 7,630 = 1,976 kWh. Annual electricity savings: 1,976 × 360 days = 711,360 kWh ◆ Annual electricity cost savings: 711,360 × NT\$4.4 = NT\$3,129,984 ◆ Payback period: 0 years ◆ Reduction in greenhouse gas emissions: 711,360 × 0.474/1,000 = 337.185 tCO₂e					
Leakage reduced	Daily reduction in leakage volume	Daily reduction in electricity consumption	Daily reduction in electricity cost	Annual cost savings	Annual carbon reduction
21%	22,576m ³	1,976 kWh	NT\$ 8,694	NT\$ 3,129,984	337 tCO ₂ e

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1.3 Greenhouse Gas Emissions and Energy Management

5. Energy Usage Statistics over the Past Three Years

The total organizational energy consumption at SAI was 789,203.06 gigajoules (GJ), representing a 0.2% increase from 2024. At the same time, energy intensity in 2025 was 0.1131GJ/NT\$ thousand, an increase of 7.3% from the previous year. Looking ahead, SAI will continue to promote energy efficiency management and energy-saving measures.

Overall Energy Consumption of Operations at SAI				
Energy consumption (GJ)	Heat consumption (GJ)	Cooling consumption (GJ)	Transportation consumption (GJ)	Overall energy consumption (GJ)
382,108.59	388,087.0612	3,287.44	9,061.9531	789,203.0614

Note 1: Power consumption was calculated by deducting cooling consumption from total electricity usage as determined from electricity bills; natural gas bills were used to calculate heating consumption; fuel bills were used to calculate transportation consumption; and cooling consumption was calculated based on the electricity usage of refrigeration and cold storage equipment.

Note 2: The totals of the following energy consumption items are expressed in gigajoules (GJ) and kilowatt-hours (kWh).

Quantitative Indicator	Unit	2023	2024	2025
Natural Gas Consumption (heating)	m ³ /year	10,126,977.84	9,603,827.00	9,418,053.76
	GJ	381,596.68	361,883.37	388,087.0612
Gasoline Consumption	L/year	22,638.15	17,686.50	15,581.78
	GJ	739.29	563.45	494.8939
Diesel Consumption	L/year	309,134.20	267,772.4	236,939.2
	GJ	11,389.69	9,688.63	8,567.0592
Electricity Consumption (excluding refrigeration)	kWh/year	121,636,251.45	112,595,785.91	106,141,275
	GJ	437,890.51	405,417.8	382,108.59
Electricity Consumption (refrigeration)	kWh/year	690,164.55	867,442.09	913,177
	GJ	2,484.59	3,123.35	3,287.44
Solar Power Generation	kWh/year	1,348,638.99	1,889,465	1,849,450
	GJ	4,855.10	6,803.3	6,658.0199
Energy Consumption	GJ	838,955.86	787,483.9	789,203.0614
Operating Revenue	NT\$ thousand	7,779,316	7,473,579	6,977,352
Production Volume	PCS	792,542	714,730	626,648
Energy Intensity	GJ/NT\$ thousand	0.1078	0.1054	0.1131
	GJ/PCS	1.06	1.10	1.26

Note: The denominator of energy intensity is each plant's production volume; energy consumption only covers internal organizational use, including electricity, natural gas, gasoline, and diesel

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6. Energy Performance Statistics for Each Plant over the Past Three Years

This year, production capacity at Yunlin Plant 2 and Pingtung Plant declined, resulting in an increase in energy performance. Production capacity at Yunlin Plant 1 increased, and energy performance also declined.

Plants	Pingtung Plant			Plant 2			Plant 1		
	Production Volume	Electricity Efficiency	Natural Gas Efficiency	Production Volume	Electricity Efficiency	Natural Gas Efficiency	Production Volume	Electricity Efficiency	Natural Gas Efficiency
2023	141,256	260.22	36.77	584,696	109.57	7.8	66,590	115.2	5.49
2024	190,339	209.13	28.38	477,619	112.48	8.34	46,772	155.45	4.68
2025	187,247	223.81	29.88	372,678	126.40	9.83	66,723	111.28	2.26
Performance for the current year		⬆️ 7% increase year over year	⬆️ 5% increase year over year		⬆️ 12% increase year over year	⬆️ 17% increase year over year		⬇️ 28% decrease year over year	⬇️ 51% decrease year over year

Note 1: The energy performance indicator is consumption or gas consumption/production volume (Unit: kWh/PCS)
 Note 2: The electric power and natural gas performance of the Pingtung Plant include the smelting facility, but the corresponding production volume was not included in the calculation

Energy Consumption Outside of the Organization				
	Unit	2023	2024	2025
Upstream Categories				
Includes purchased goods and services, capital goods, upstream transportation and distribution, emissions generated in operations, business travel, employee commuting, upstream leased assets, and other upstream categories (Note)	GJ	2,044,831.29	2,180,835.64	1,935,189.18
Downstream Categories				
Includes downstream transportation and products, processing of sold products, use of sold products, end-of-life treatment of sold products, downstream leased assets, franchises, investments, and other downstream activities (Note)	GJ	46,035.87	47,670.84	26,140.25
Overall energy consumption outside of the organization	GJ	2,090,867.16	2,228,506.49	1,961,329.43

Note: Energy was converted by back-calculating the electricity carbon emission coefficient using greenhouse gas inventory data from each year.

2025 Energy-Saving Plan and Estimated Annual Outcomes			
Plants	Energy-Saving Item	Item Description	Energy Savings (kWh/year)
Yunlin Plant 2	Replacement of high-efficiency water pump	The cooling water pumps used in Plant 2's process equipment were IE1 and non-certified pumps, which were replaced with IE3 motors and government-certified high-efficiency pumps.	69,741.41
Yunlin Plant 2	Replacement of energy-efficient lighting fixtures	The office lighting fixtures in Plant 2, originally T5 fluorescent lamps with lightweight steel frames, were replaced with LED flat panel fixtures	13,817.51
Yunlin Plant 2	Leak repair of compressed air pipeline	Analysis of EMS system data for Plant 2's compressed air system revealed that gas used for production accounted for only approximately 60% of total gas output, indicating multiple leaks in the compressed air piping. Leak points were identified and repaired	1,080,900.00
Total			1,164,458.92

Energy reduction calculation method: Calculated based on the difference in power consumption before and after equipment replacement combined with annual operating hours, or based on EMS statistical data.

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I | Environmental Safety Policy

To reduce the environmental impact of its operations, SAI has established an “Environmental Safety and Health Policy” and conducts environmental-related education and training to enhance employees’ environmental awareness, working together to minimize the environmental impact of business activities. This is undertaken with the dual objectives of responding to stakeholder expectations and strictly adhering to regulatory requirements, thereby strengthening SAI’s corporate resilience and sustainable value. Guided by the principles of an occupational safety and health management system, SAI follows a systematic management approach of “say, write, do” consistency throughout all stages — from identifying risks at the source and assessing hazard characteristics to conducting post-incident investigations.

Hazard Identification	Risk Assessment	Incident Investigation and Improvement
 Conducting on-site inspections, ensuring employee participation, and performing process change assessments	 Risk classification into levels (e.g., high, medium, low risk), with protective measures and audit frequencies established for high-risk operations (such as smelting and forging)	 Upon the occurrence of an incident, an investigation mechanism is immediately activated, not only to identify surface-level causes but also to thoroughly examine deficiencies in the management system. Improvement measures are subsequently established and their implementation effectiveness is tracked

Environmental Safety Policy	Management Actions	2024 Implementation Results	2025 Implementation Results
Promoted environmental safety awareness among employees and relevant stakeholders	Conducted related education and training for dedicated personnel and all employees.	Environmental Safety and Occupational Safety Team: A total of 203 personnel participated in external training for a total of 1,451 training hours. SAI currently holds a total of 572 occupational safety and health-related certifications, with 35 trained personnel resulting in the acquisition of 31 certifications, representing a certification acquisition rate of 80%, with a total of 857 training hours (excluding internal audit personnel certifications). All Employees: A total of 4,395 participants engaged in training sessions, with topics covering environmental safety and occupational safety and health. The total training hours were 2,198 hours.	Environmental Safety Team: A total of 8 personnel participated in external training for a total of 201 training hours. All Employees: A total of 16,719 participants engaged in training sessions, with topics covering environmental safety and occupational safety and health. The total training hours were 8,360 hours.
Comply with environmental safety regulations and related requirements.	Monitor regulatory changes and enhance improvements and prevention measures for any violations.	No major violations occurred; all incidents of non-compliance were properly addressed and prevented. No significant violations under the Waste Disposal Act No violations of the Air Pollution Control Act No violations under the Water Pollution Control Act	No major violations occurred; all incidents of non-compliance were properly addressed and prevented. No significant violations under the Waste Disposal Act No violations of the Air Pollution Control Act No violations under the Water Pollution Control Act
Achieved environmental safety targets by promoting energy conservation, carbon reduction, green environmental protection, and physical and mental well-being.	Aimed for net-zero carbon emissions by 2050, following the ISO 14001 and ISO 50001 management system cycles, and actively replacing high-energy-consuming equipment.	21.5% reduction in carbon intensity compared to the base year Energy-saving improvements in multiple energy installations saving approximately 5,299,000 kWh annually	19.5% reduction in carbon intensity compared to the base year

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Promoting Environmental and Safety Awareness

To achieve SAI's environmental goals, education and training are provided to dedicated personnel and all employees. Through the leadership of dedicated personnel, SAI aims for environmental sustainability. All employees are encouraged to practice sustainability in their daily work.

Training Participants	Training Focus	Training Content	2025 Training Outcomes
Dedicated Personnel	 Management System	Internal Auditors for ISO 14001 Environmental Management System	None
		Internal training for ISO 45001 and ISO 14001	None
	 Wastewater Treatment	Water pollution prevention policies and regulations Current status and future development of wastewater treatment technology Net-zero emissions foundational course	 1 person  total of 7 hours
		Class B wastewater treatment specialist training	 1 person  total of 56 hours
	 Waste Management	Policies and regulations related to waste and resource circulation Current status and future development of waste treatment technology Net-zero emissions foundational course	 4 persons  total of 28 hours
		Training for Class A Level waste management professional technicians	 1 person  total of 103 hours
	 Air Pollution Control	Air pollution prevention policies and regulations Current status and future development of air pollution prevention technology Net-zero emissions foundational course	 1 person  total of 7 hours
	 ISO 14064-1 Organizational Greenhouse Gas Inventory	ISO 14064-1 Internal Auditors for Organizational Greenhouse Gas Inventory	 9 persons
	 Environmental Knowledge	The path of oyster shell regeneration, Los Angeles wildfires and environmental climate risks, the plastic reduction journey, marine debris, PET bottle recycling technology and applications, the relationship between ISO 14001 and procurement, zero food waste	 A total of 9,652 participants  A total of 4,826 hours
All Colleagues			

Note: Number of individuals holding ISO 14064-1 and ISO 14001 certifications (including those currently on leave)

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1.4 Environmental Management Performance

II | Air Pollution and Waste Management

1. Air Pollution Emissions Management

SAI's primary controlled pollutants for emissions prevention include volatile organic compounds (VOCs), total suspended particulates (TSP), nitrogen oxides (NOx), and sulfur oxides (SOx). In accordance with the permits issued by the relevant environmental protection authorities, SAI conducts regular stack emission testing, with all test results falling within statutory limits.

2. 2025 Air Pollution Emissions Statistics

	2023	2024	2025
Total Air Pollution Emissions/Revenue (kg/NT\$ thousand)	0.0105	0.0116	0.0119
Operating Revenue (NT\$ thousand)	7,779,316	7,473,579	6,977,352
Total Air Pollution Emissions (kg)	81,841	86,589	82,771
VOCs Emissions (kg)	53,291	56,233	55,752
TSP Emissions (kg)	8,969	7,300	2,462
SOx Emissions (kg)	2,172	3,951	5,049
NOx Emissions (kg)	17,409	19,106	19,509

3. Strengthening Air Pollution Control Equipment

Facing increasingly stringent environmental regulations and stakeholders' expectations for air quality management, SAI will continue to reduce air pollutant emissions from its manufacturing processes, mitigate the impact of its operational activities on the surrounding environment, and strengthen the effectiveness of its environmental governance with the goal of achieving compliance with and exceeding regulatory requirements. The status of air pollutant control equipment is shown in the table below:

Name of Control Equipment	Reduced Pollutants	Status
Cyclone Dust Collector	Particulate matter	Existing
Baghouse Dust Collector	Particulate matter	Existing
Scrubber	Particulate matter	Existing
Electrostatic Precipitator	Particulate matter	Existing
Tail Gas Combustor	Volatile organic compounds	Existing
Wet Flue Gas Desulfurization (FGD)	Sulfur oxides (SOx)	Planned for introduction at the Pingtung Plant
Selective Catalytic Reduction (SCR) Equipment	Nitrogen oxides (NOx)	Planned for introduction at the Pingtung Plant

4. Waste Management

SAI strictly complies with the Waste Disposal Act and its related subordinate regulations. The majority of waste generated by SAI consists of general industrial waste, primarily waste oil mixtures. Hazardous waste generated during operations totaled 80.01 metric tons (including the Yunlin and Pingtung plants), accounting for 1.16% of SAI's total waste generation in 2025. In 2025, SAI did not experience any leakage incidents involving oil, paint, waste, chemicals, or similar substances. SAI adheres to two core principles in waste management: "source reduction" and "on-site auditing."

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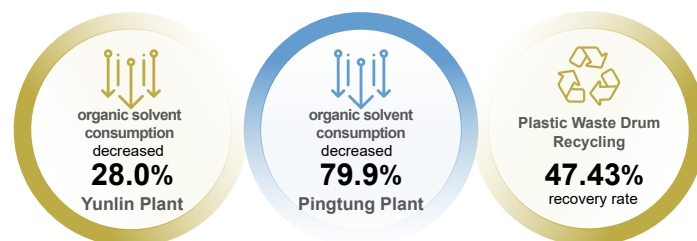
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Source Reduction

With regard to source reduction, SAI has implemented organic solvent recovery equipment. In 2025, organic solvent consumption per wheel unit decreased by 28.0% at the Yunlin Plant and by 79.9% at the Pingtung Plant compared to the previous period, effectively reducing solvent usage and waste liquid generation. In addition, to extend waste management to the value chain, SAI has implemented the “Plastic Waste Drum Recycling and Reuse Program,” whereby suppliers are commissioned to recycle and reprocess empty drums, achieving a recovery rate of 47.43%. SAI has also continued to optimize product packaging design to reduce the consumption of cardboard boxes and support boards, with the plastic separator recovery rate reaching 89.26% in 2025.

Packaging Material Recovery Percentage — Plastic Separators				
Product type	Items	2023	2024	2025
Plastic Separators	Weight of Recovered Products and Their Packaging Materials (kg)	330,256	341,684	574,713
	Consumption of Products and Their Packaging Materials (kg)	769,437	696,714	566,923
	Number of Products and Packaging Materials Recovered (pcs)	78,917	87,375	129,880
	Number of Products and Packaging Materials Used (pcs)	199,580	180,680	145,510
	Product and Packaging Material Recovery Rate (%)	39.54%	48.36%	89.26%

Note: SAI's packaging material recovery rate is calculated as: recovery quantity (pcs) / total quantity issued (pcs)



On-site Auditing

With regard to on-site auditing, in order to ensure that the waste treatment process is legal, compliant, and meets environmental standards, SAI not only commissions qualified contractors for waste removal and treatment in accordance with applicable regulations, but also periodically dispatches personnel to accompany waste transport vehicles to treatment facilities on-site, verifying the execution of each step in the process. SAI also conducts annual audits of waste treatment vendors. In 2025, on-site audits were conducted at 2 waste treatment vendors.

2025 Waste Supervision and Management Results		
	Partner Vendors	22 qualified waste removal contractors and 21 qualified treatment contractors
	Daily	◆ Issue a triple-copy waste clearance form ◆ Audit waste transport processes for regulatory compliance
	Weekly	◆ Review GPS records of waste transport vehicles ◆ Compile transport records
	Monthly	◆ Track records of waste processing flow ◆ Report waste storage and output records
	Annually	A total of 2 treatment facilities were audited in 2025

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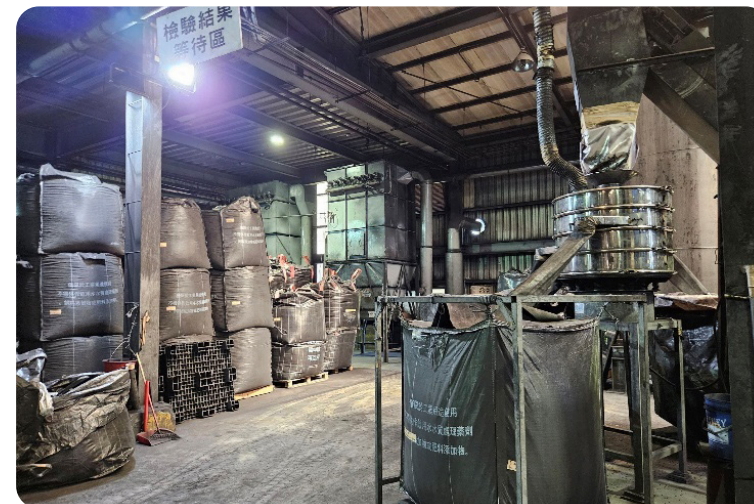
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SAI On-site Audits of 2 Waste Treatment Vendors in 2025

Inspection of a hazardous waste liquid treatment facility



Inspection of an activated carbon treatment facility



5. Statistics on Waste Generation in 2025 (Unit: metric tons)

Among the waste generated by SAI during its operations, the primary type is waste oil mixtures, totaling 5,163.32 metric tons in 2025. To effectively manage various types of general and hazardous industrial waste, SAI has established a comprehensive waste management procedure covering the classification, transportation, removal, and treatment of waste, and carries out outsourced disposal and reuse processes in accordance with applicable regulations, thereby reducing potential environmental impacts.

	 Non-Hazardous Waste		 Hazardous Waste		Total	
	Production volume (metric tons)	Proportion (%)	Production volume (metric tons)	Proportion (%)	Production volume (metric tons)	Proportion (%)
Yunlin Plant	3,359.31	48.71	73.83	1.07	3,433.14	49.78
Pingtung Plant	3,457.4	50.13	6.18	0.09	3,463.58	50.22
Total	6,816.71	98.84	80.01	1.16	6,896.72	100

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Non-Hazardous Waste (unit: metric tons)

Composition of Waste		Offsite			
		Treatment Method	2023	2024	2025
Yunlin Plant	General waste generated from business activities	Incineration	251.18	229.89	163.42
	Waste paint, paint residue		97.74	142.86	176.17
	Waste plastic mixtures		5.51	6.14	0
	Waste fibers or other cotton, cloth mixtures		251.68	151.52	140.54
	Waste oil mixtures		---	46.204	0
	Non-hazardous oil sludge	Physical treatment	105.13	71.19	86.3
	Inorganic sludge		436.57	352.31	306.13
	Waste oil mixtures		2,334.04	2,034.46	2,163.35
	Waste fibers or other cotton, cloth mixtures		4.18	0	0
	Waste lubricant oil		0	0	14.91
	Non-hazardous waste dust or mixtures	Landfilling	211.07	155.57	132.17
	Sandblasting waste		6.91	10.15	0
	Waste oil mixtures	Thermal treatment	67.86	0	0
	Waste wood	Approved reuse	199.31	128.28	142.82
	Waste ceramics		52.53	0	0
	Waste plastic		153.89	63.43	33.5
	Waste lubricant oil		---	14.85	0
	Waste activated carbon		0	0	1.69
Total			4,177.60	3,406.854	3,359.31
Approved Reuse Proportion			9.71%	6.06%	5.30%

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Composition of Waste		Offsite			
		Treatment Method	2023	2024	2025
Pingtung Plant	Organic sludge	Incineration	4.08	27.08	73.88
	General waste generated from business activities		131.67	138.73	44.99
	Waste plastic mixtures		49.28	34.67	25.12
	Waste fibers or other cotton, cloth mixtures		63.50	76.45	103.46
	Waste oil mixtures		---	179.496	0
	Waste paint, paint residue		---	14.24	0
	Inorganic sludge	Physical treatment	0	0	0
	Waste oil mixtures		1,655.70	2,758.65	2,999.97
	Waste refractory materials		44.31	20.47	39.29
	Waste lubricant oil		0	0	0
	Non-hazardous waste dust or mixtures	Landfilling	65.50	96.58	95.54
	Waste oil mixtures	Thermal treatment	100.69	0	0
	Waste wood	Approved reuse	87.65	94.32	75.15
	Waste plastic		17.694	12.97	0
Total			2,220.07	3,453.656	3,457.4
Approved Reuse Proportion			4.75%	3.11%	2.17%

Note: Heat treatment does not include incineration.

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Hazardous Waste (Unit: metric tons)

Composition of Waste		Offsite			
		Treatment Method	2023	2024	2025
Yulin Plant	Waste liquid with a flash point below 60°C (excluding alcoholic waste with an ethanol volume concentration of less than 24%)	Incineration	8.46	99.46	73.83
	Waste liquid with a flash point below 60°C (excluding alcoholic waste with an ethanol volume concentration of less than 24%)	Physical treatment	56.40	0	0
Pingtung Plant	Waste liquid with a flash point below 60°C (excluding alcoholic waste with an ethanol volume concentration of less than 24%)	Incineration	16.38	26.96	6.18
Total			81.24	126.42	80.01

Waste Generation Intensity Over the Past Three Years

(Unit: metric tons/NT\$million)

	2023	2024	2025
Waste production per unit of revenue	0.83	0.93	0.99
Non-hazardous waste production per unit of revenue	0.82	0.92	0.98
Hazardous waste production per unit of revenue	0.01	0.02	0.01
Annual operating revenue (Unit: NT\$million)	7,779.316	7,473.579	6,977.352

6. Leakage and Seepage Management Plan

In the event of a major leakage or seepage incident, we will assess the leakage/seepage of air pollutants, wastewater, and waste based on the following risk assessment table, and implement corresponding emergency response measures according to the assessment results of the leakage/seepage level:

Level 3 Leakage/Spillage



The leakage/spillage level is high and may affect the surrounding areas outside the plant. In this situation, we will promptly activate the emergency response plan and utilize both internal and external resources to handle and control the emergency. Simultaneously, we will collaborate with relevant regulatory authorities and local officials to address the situation cooperatively and minimize the environmental and community impacts of the leakage/seepage to the greatest extent possible.

Level 2 Leakage/Spillage



The leakage/spillage level is medium, and the leakage/spillage scope has expanded within the plant area. In addition to utilizing on-site resources for response, we may require the mobilization of off-site resources and specialized personnel to more effectively manage and control the leakage/seepage, preventing its spread to the surrounding environment.

Level 1 Leakage/Spillage



The leakage/spillage level is low, and the scope is limited to the unit. In this scenario, we will promptly utilize internal resources for containment and repair to prevent the leak from spreading and causing further impact.

Over the past three years, SAI has not experienced any major leakage or seepage incidents involving air pollutants, wastewater, or waste (defined as incidents resulting in fines of NT\$1 million or more), demonstrating the consistent effectiveness of its environmental management system. Going forward, SAI will continue to uphold the principle of sustainable operations, strengthening the monitoring and treatment of pollutant emissions in accordance with the relevant operating procedures of the ISO 14001 environmental management system and the permits issued by competent authorities, to ensure that all environmental risks continue to be effectively managed.

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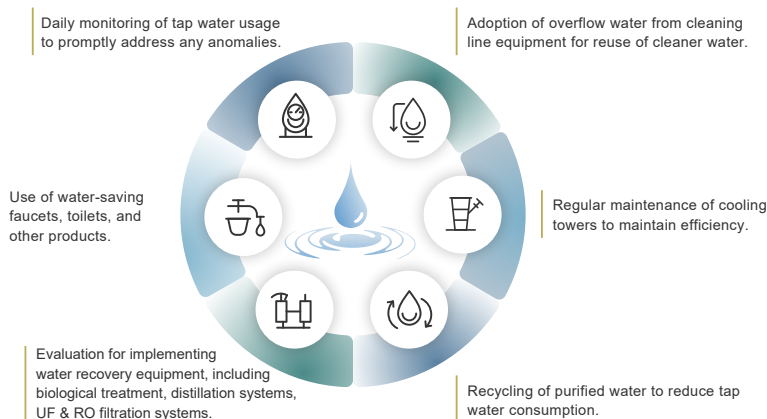
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1.4 Environmental Management Performance

III | Water Resource Management

SAI recognizes the importance of conserving water resources and continues to strengthen water use efficiency and risk management. According to analysis using water risk assessment maps, SAI's Yunlin Plant 1 (including Plant H), Yunlin Plant 2, Zhuwei Plant, and Pingtung Plant are all located in areas of relatively low water risk, with none of SAI's facilities situated in regions of high water stress. In 2025, total water withdrawal was 637.09 km³, total water discharge was 474.07 km³, and total water consumption was 163.02 km³. Compared to 2024, overall water withdrawal remained stable, while both discharge and consumption volumes declined slightly.

SAI has implemented water management measures to enhance the efficient utilization of water resources:



1. Water Resource Risk Assessment

According to the assessment results of the World Wide Fund for Nature (WWF) Water Risk Filter, all of SAI's operational sites located in Yunlin and Pingtung are situated in regions of low to moderate water stress risk. The assessment indicates that overall water supply conditions in these regions are relatively stable, with well-developed public tap water infrastructure capable of effectively accommodating seasonal demand fluctuations and reducing the risk of operational disruption.

With regard to water sourcing, SAI does not rely on groundwater extraction or direct withdrawal from surface water bodies, nor does it utilize water resources from local rivers, reservoirs, or aquifers. All process and domestic water is supplied by local water utility companies through government-managed distribution systems, ensuring that water withdrawal does not compete with or impact local community water needs or ecosystems. Accordingly, the impact of SAI's water use on local water stress is considered controllable and limited.

To continuously monitor potential water stress risks, we conduct daily readings of tap water meters at each facility for real-time consumption monitoring, with monthly cross-verification against water utility bills. The relevant records are managed under the ISO 14001 environmental management system and serve as the basis for annual reporting of water use and discharge. If any abnormal fluctuations in water consumption are detected, root cause analysis is immediately initiated to rule out potential issues such as equipment leakage, reduced process efficiency, or operational anomalies.

In addition, the Environmental Safety Team conducts an annual review of water performance and, taking into account climate change trends, assesses potential future risks relating to drought, water scarcity, or instability of public water supply. The results of this assessment are incorporated into SAI's medium- to long-term sustainability strategy, serving as an important basis for water conservation investments, equipment upgrades, and employee behavior management. In recent years, SAI has continued to implement a range of water conservation measures, including optimizing cooling system efficiency, strengthening pipeline inspections and leak prevention, and adjusting process designs to reduce water use intensity per unit of output.

Overall, SAI's total water withdrawal has remained relatively stable over the past three years, with only minor fluctuations attributable to production volume adjustments and seasonal climate factors. At present, SAI's operations do not impose significant pressure on local water resources, nor have any instances of competition with residential or agricultural water use arisen. Looking ahead, we will continue to monitor changes in water demand and, where technically and economically feasible, progressively evaluate the expanded use of recycled and reclaimed water, in order to further reduce water stress risk, ensure operational resilience, and implement responsible water resource management.

According to the results of the WWF water risk assessment, SAI's four facilities are rated as having a Baseline Water Stress (BWS) level of "Low–Medium (approximately 10–20%)," indicating that local water resources are relatively abundant and that current water withdrawal demand has not placed significant pressure on local water supply and demand dynamics.

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1.4 Environmental Management Performance

Yunlin Plant 1 (including Plant H)



Yunlin Plant 2



Zhuwei Plant



Pingtung Plant



A further review of hydrological variability risk indicators shows that both the interannual variability (IAV) and seasonal variability (SEV) for the Huwei River and Kaoping River basin fall within the low-to-medium range, indicating that while rainfall and river flow exhibit a certain degree of fluctuation, this remains within a predictable and manageable range. This suggests that, under normal climatic conditions, the risk to short-term water supply stability is relatively low.

With regard to extreme events, drought risk is rated as low to medium, while flood-related indicators (riverine flood risk and coastal flood risk) are rated as medium to medium-high, reflecting the impact of typhoons and concentrated rainfall on Taiwan's river basins, and indicating that attention to short-term drainage and flood management remains warranted. However, such risks are primarily physical and short-term event risks, with limited impact on long-term water access.

In addition, the groundwater stress and depletion risk at each of SAI's facilities is rated as low, and SAI's operations do not rely on groundwater extraction, substantially reducing potential impacts on aquifers and cumulative risk. Overall, none of SAI's operational sites are classified by the WWF Aqueduct tool as areas of high water stress or water scarcity, and water resource risk is considered both manageable and of low exposure.

In summary, SAI's operational activities have not placed significant pressure on local water resources, and there is no competition with community or agricultural water use. Future management priorities will focus on improving water use efficiency, building resilience to extreme climate events, and continuing to monitor changes in potential water risks, in order to ensure long-term operational stability and the sustainable use of water resources.

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2. Water Usage Statistics over the Past Three Years

	2023	2024	2025
Water Withdrawal (thousand cubic meters)	660.41	658.68	637.09
Water Discharge (thousand cubic meters)	473.53	493.61	474.07
Water Consumption (thousand cubic meters)	186.88	165.07	163.02
Water Withdrawal Intensity (thousand cubic meters/NT\$ million revenue)	0.085	0.088	0.091

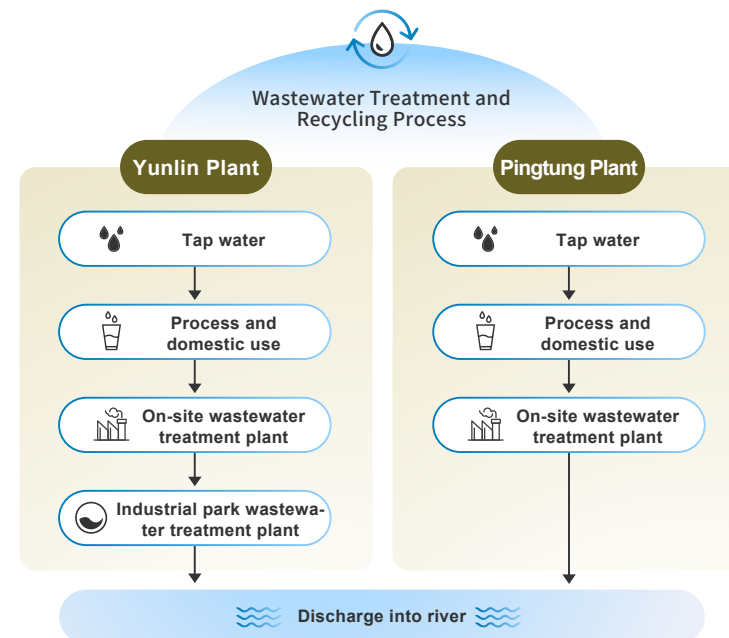
2025 Wastewater Quality Testing Status				
Plants	Measurement items	Suspended solid (SS)	Chemical oxygen demand (COD)	pH value
Yunlin Plant	Regulatory standards	320	480	6~9
	Measurement results	5.1~269	22.6~341	6.2~7.8
Pingtung Plant	Regulatory standards	30	100	6~9
	Measurement results	6.85	23.9	8.05

3. Wastewater Treatment and Recycling Process

The primary sources of wastewater at SAI's Yunlin and Pingtung plants are industrial wastewater generated from manufacturing processes and domestic sewage from employees. All wastewater is incorporated into the on-site wastewater pre-treatment system and properly treated in accordance with water pollution control regulations. Each plant is equipped with a comprehensive wastewater treatment system, including units such as fine screens, equalization tanks, pH adjustment tanks, electrocoagulation systems, sedimentation tanks, biological treatment tanks, and effluent tanks, along with real-time monitoring equipment to track changes in water quality. On-site personnel conduct inspections and record data at fixed intervals on a daily basis, with the relevant data simultaneously uploaded to the internal water resource management system to ensure that the treatment process remains stable and compliant with environmental regulations. Treated

wastewater is discharged into the industrial park's wastewater treatment plant, with final effluent from the Yunlin Plant discharged into the Huwei River and effluent from the Pingtung Plant discharged into the Kaoping River.

With regard to water recycling, recovered water is primarily applied to cooling water circuits and certain greywater recovery systems, including cooling tower makeup water, cleaning purposes, and non-critical process uses, effectively reducing reliance on tap water resources. Through daily monitoring of water quality and volume, the stability of system operation can be tracked in real time, and fluctuations arising from seasonal production capacity changes, equipment maintenance, or process adjustments can be identified. Long-term accumulated monitoring data also helps assess the effectiveness of water conservation measures and improvements in process water efficiency, serving as an important basis for future system optimization and expansion planning. Although there remains room for improvement in the current recycling ratio, SAI is continuously evaluating ways to enhance recovery and treatment capacity, improve the quality of reclaimed water, and expand its scope of application, in order to promote broader water resource recycling and reduce overall freshwater consumption.



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1.4 Environmental Management Performance

To reduce wastewater discharge, SAI leverages the benefits of water resource reuse through water recovery equipment, improved water use efficiency, and the installation of distillation and filtration systems, and conducts a review of emission reduction performance at least once per quarter.

Yunlin Plant Wastewater Recycling Rate

2024	21.84%
	⋮
2025	19.85%



Wastewater recycling system at the Yunlin Plant

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I | Climate Change Management Strategy

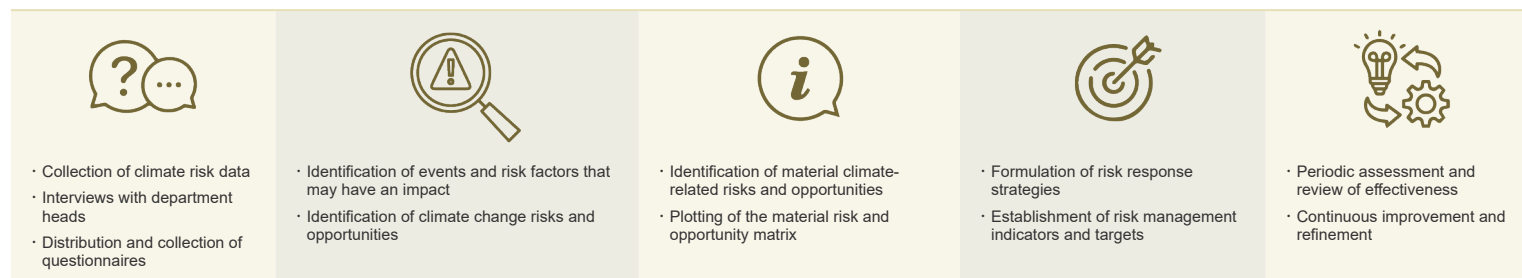
The risk management policy of SAI and its subsidiaries is defined in accordance with the overall business guidelines, establishing a risk management mechanism that enables early identification, accurate measurement, effective supervision, and stringent control of various risks. Within the acceptable risk range, this mechanism aims to prevent potential losses. It continuously adjusts and improves best risk management practices based on changes in internal and external environments to protect the interests of employees, shareholders, partners, and customers, enhance company value, and achieve the optimal allocation of company resources.

1. SAI's Climate Change Governance and Management Framework

The governance structure for climate change issues is overseen by the Board of Directors as the highest regulatory body. The control mechanisms for related issues are established under the Sustainable Development Committee, which comprises various functional groups, including the Environmental Sustainability Group, Corporate Governance Group, Social Care Group, and Value Chain Management Group. These groups address the concerns of different stakeholders and collaborate with relevant company departments to plan, promote, and implement related initiatives. The committee meets at least once a year and reports its activities to the Board of Directors at least once annually.



2. Climate Change Risk and Opportunity Identification Process



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II | Identification of Climate Risks and Opportunities

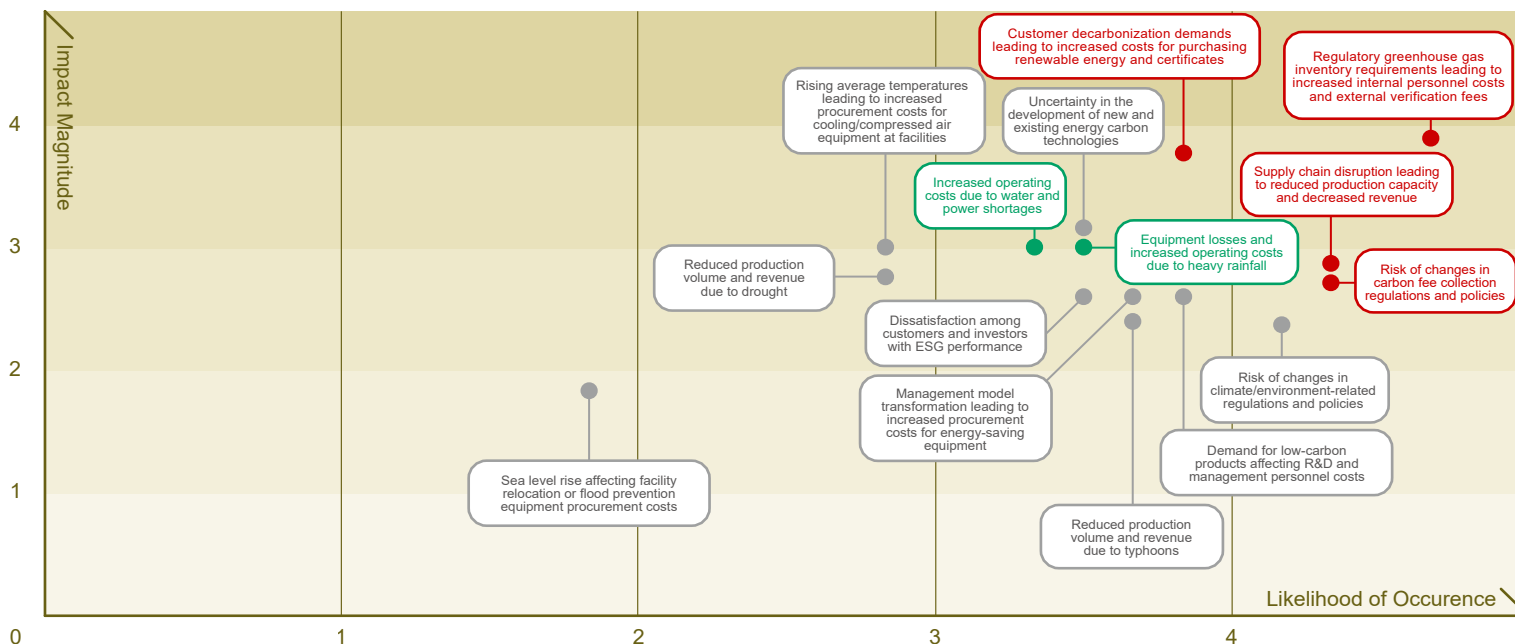
SAI brought together representatives from its sustainability unit and external experts to identify climate-related risk and opportunity issues based on the framework recommended by the TCFD. Through the collection of 32 senior management questionnaires, a total of 6 material risks and 2 opportunities were identified.

This questionnaire defines the likelihood of occurrence of climate-related risks and opportunities (X value) as follows: short term, less than one year (5 points); short to medium term, one to three years (4 points); medium term, three to seven years (3 points); medium to long term, seven to ten years (2 points); and long term, more than ten years (1 point). The degree of impact and benefit (Y value) is defined as follows: extreme, resulting in long-term operational shutdown / long-term benefits to operations (5 points); significant, material financial or operational impact/benefit (4 points); high, high financial or operational impact/benefit (3 points); moderate, moderate financial or operational impact/benefit (2 points); and minor, no obvious harm or benefit (1 point).

For the identification of material climate-related risks, topics with an X value > 4 or a Y value > 3.5 are listed as material risks. In this identification result, as the first four items are all transition risks, two physical risks with an X value > 3 and a Y value > 3 are also listed as material risks, resulting in a total of six material risks. For material climate-related opportunities, an X value > 4 or a Y value > 4 is used as the screening threshold.

Relevant risks are managed according to SAI's "Risk Management Policy." Through processes such as risk identification, risk analysis, risk assessment, risk response and monitoring, and risk reporting and disclosure, each risk-responsible unit must conduct risk assessment for identified risks. Based on the residual risk level assessed, they are required to propose risk response improvement plans to effectively manage risks.

Climate Change Risk Matrix



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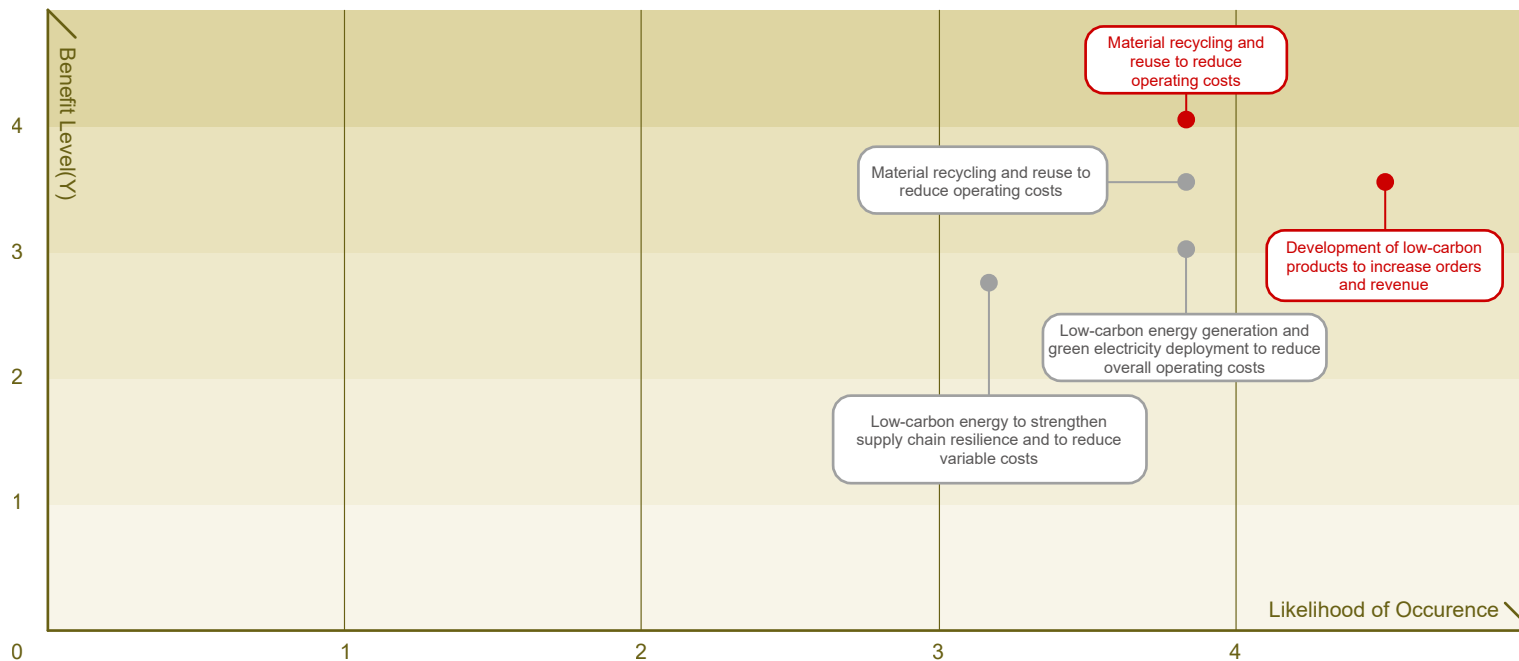
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Climate Change Opportunity Matrix



1.5 Climate Change Management: Task Force on Climate-related Financial Disclosures (TCFD)

Material Climate-Related Risks and Opportunities

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	Risks and Opportunities	Impact Timeline	Financial Impact	Key Response Strategy
Transition Risk	Regulatory greenhouse gas inventory requirements leading to increased internal personnel costs and external verification fees	Short-Term	Increased expenditure on greenhouse gas inventory execution and external verification fees	Strengthening internal training of greenhouse gas inventory professionals
	Customer decarbonization demands leading to increased costs for purchasing renewable energy and certificates	Medium-Term	- Increased costs for installing energy conservation, decarbonization, and pollution reduction equipment, approximately NT\$51.13 million - Increased costs for purchasing renewable energy	- Increase the scale of renewable energy generation to enhance the proportion of self-supplied electricity. - Set up an energy management platform to monitor electricity usage in the production process, plan energy consumption reduction initiatives, and lower overall energy use.
	Supply chain disruption leading to reduced production capacity and decreased revenue	Short- and medium-term	- Production capacity affected by 2% - Raw material supply disrupted for approximately one month	- Expanding the input and application of recycled aluminium to reduce dependence on primary aluminium from a single region, mitigating supply disruption risks arising from geopolitical factors - SAI has maintained recycled aluminium inventory sufficient for more than one year of use over the long term
	Risk of changes in carbon fee collection regulations and policies	Short- and medium-term	In 2025, Scope 1 and Scope 2 greenhouse gas emissions from Plant 2 amounted to 30,512.490 tCO ₂ e, resulting in a carbon fee of NT\$551,249	In accordance with ISO 14064-2 standards, we plan to replace high-energy-consuming machinery, increase the use of renewable energy, and reduce greenhouse gas emissions.
	Equipment losses and increased operating costs due to heavy rainfall	Medium-Term	- Increased operating costs due to operational disruption - Write-off of existing assets and early retirement of equipment	Diversifying the location of operational sites and machining partners to enable production transfer in the event of operational disruption at a given facility
Physical Risk	Increased operating costs due to water and power shortages	Medium to long-term	Increased production costs due to changes in input costs and output requirements Note: Each day of production stoppage is estimated to increase costs by NT\$12.1 million (average daily production cost plus potential increase in air freight costs)	- Sign contracts with water suppliers to provide water trucks during water shortages to maintain production. - Increase the proportion of renewable energy to supply electricity to the factory during power outages.
	Development of low-carbon products to increase orders and revenue	Short-Term	- Increase revenue through demand for low-carbon products and services - Increase revenue by meeting customers' low-carbon transition needs through new solutions - Improved competitive positioning to reflect shifting consumer preferences, increasing revenue	In response to the rising demand for sustainable and low-carbon products, SAI evaluates product life cycles and offers low-carbon products to customers. Through product design, we enhance the efficiency of usage cycles and recycle aluminium scrap from the smelting process to produce recycled aluminium as a raw material, reducing carbon footprints by over 95%.
Opportunity	Material recycling and reuse to reduce operating costs	Short- and medium-term	The shift to low-carbon technology (e.g., using recycled aluminium) increases equipment costs by approximately 3 to 4 times and reduces material costs by about 23.53%.	Evaluate the cost of equipment introduction and the environmental and financial benefits of the product, select higher energy-efficient machinery, and opt for low-pollution raw materials to reduce environmental pollution.

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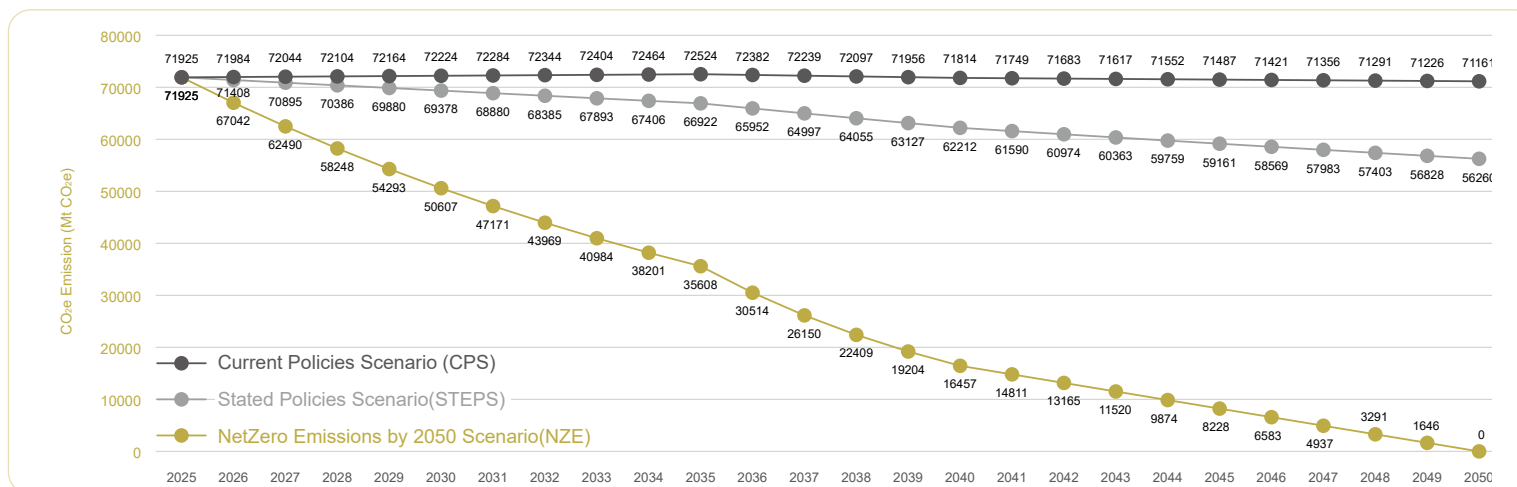
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III | Carbon Cost Scenario Analysis

SAI applies three carbon emission evolution scenarios proposed by the International Energy Agency (IEA): the Stated Policies Scenario (STEPS), the Current Policies Scenario (CPS), and the Net Zero Emissions by 2050 Scenario (NZE). SAI combines carbon fee price forecasts from the Taiwan Ministry of Environment and the EU Emissions Trading System, as well as the NGFS 2050 Net Zero decarbonization cost model, to assess SAI's carbon fee costs and risk results from 2025 to 2050 under the alternating evolution of different scenarios.

Climate Scenario	Stated Policies Scenario (STEPS)	Current Policies Scenario (CPS)	Net Zero Emissions by 2050 Scenario (NZE)
 Definition	Incorporates policies already implemented as well as policy directions announced or declared by various countries (e.g., energy transition plans, climate policies)	Incorporates only policies and measures currently in effect, reflecting a development pathway without the addition of new policies	Assumes that the world achieves net-zero emissions by 2050, consistent with the transition pathway required to meet the 1.5°C climate target
 Economic Benefits	Energy transition progresses gradually, with fossil fuel demand peaking around 2030 and low-carbon technologies (renewable energy, electric vehicles) growing rapidly	Fossil fuel demand continues to grow or remains at elevated levels, energy transition progresses slowly, and carbon emissions continue to rise	Substantially reduced reliance on fossil fuels, with renewable energy becoming the dominant source, significant improvements in energy efficiency, and large-scale investment required in low-carbon and negative-carbon technologies
 Timeframe of Impact	A clear transition emerges over the medium term (2030–2050), with emissions gradually declining but not reaching net zero	Persists over the long term through to 2100, with no significant turning point in emissions	Immediate action required (2020s), with rapid emissions reductions before 2030 and net zero achieved by 2050
 Representative Temperature Increase	Approximately 2.1°C–2.4°C	Approximately 2.5°C–2.7°C (with potentially higher risk)	Approximately 1.5°C

1. IEA Carbon Emissions Scenario Evolution



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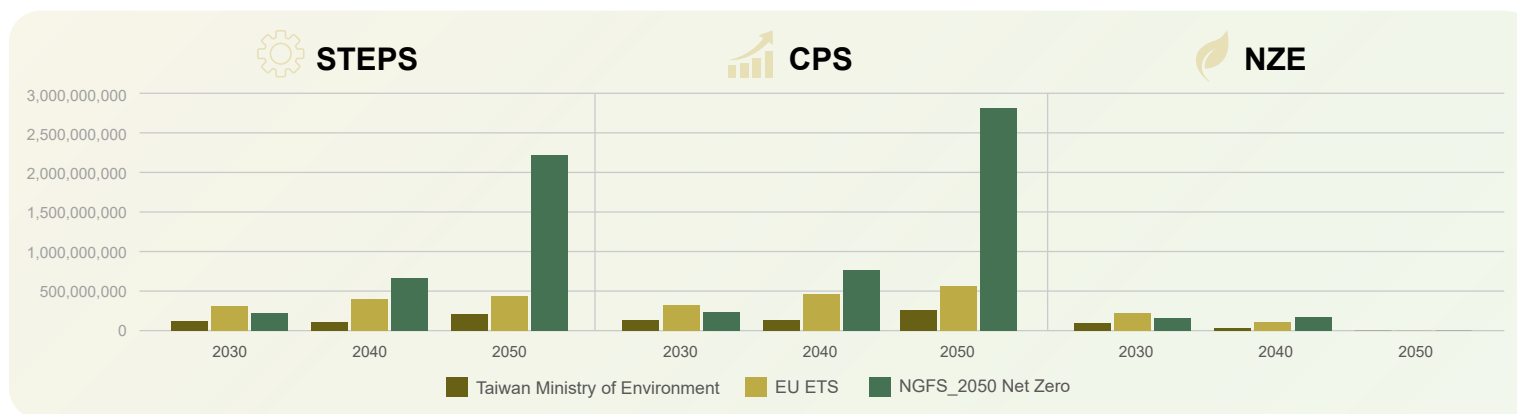
2. Estimated Carbon Costs for SAI

Based on SAI's projected 2025 greenhouse gas emissions, carbon fee costs were estimated under three policy scenarios — Stated Policies Scenario (STEPS), Current Policies Scenario (CPS), and Net Zero Emissions by 2050 Scenario (NZE) — and three carbon pricing models: Taiwan Ministry of Environment carbon fee, EU ETS, and NGFS Net Zero 2050. The results indicate that carbon fee costs vary significantly depending on policy stringency and emissions levels. Under the CPS scenario, as emissions remain relatively high, carbon fee costs rise rapidly by 2050. In particular, the NGFS estimates that the net-zero cost in 2050 will reach as high as NT\$2.8 billion.

In comparison, although the STEPS scenario already shows a slowdown in emissions, under the high carbon fee assumption, Taiwan's carbon fee would still reach NT\$200 million in 2050, while the carbon price under the EU Emissions Trading System would reach as high as NT\$440 million. This indicates that if SAI manages greenhouse gases solely in accordance with existing policies, it will be difficult to effectively control carbon fee risks. However, under the NZE scenario, as emissions decrease significantly after 2040, the decarbonization cost estimated by NGFS in 2040 can be controlled within NT\$170 million, significantly reducing long-term financial impacts compared with the other two policy scenarios.

In conclusion, aligning early with the 2050 net-zero emissions pathway not only supports meaningful emissions reduction but is also a key strategy for lowering future exposure to carbon fee risks.

Carbon Emission Scenarios	Carbon Fee Scenarios	Estimated Year		
		2030	2040	2050
Stated Policies Scenario STEPS	Taiwan Ministry of Environment	124,880,413.00	111,982,437.00	207,362,630.00
	EU ETS	304,791,461.00	400,206,566.00	441,357,422.00
	NGFS_2050 Net Zero	222,103,825.00	657,405,204.00	2,224,556,304.00
Current Policies Scenario CPS	Taiwan Ministry of Environment	130,002,928.00	129,265,455.00	262,284,239.00
	EU ETS	317,293,813.00	461,973,192.00	558,254,377.00
	NGFS_2050 Net Zero	231,214,382.00	758,867,061.00	2,813,747,389.00
Net Zero Emissions by 2050 Scenario NZE	Taiwan Ministry of Environment	91,092,620.00	29,622,352.00	-
	EU ETS	222,326,721.00	105,865,349.00	-
	NGFS_2050 Net Zero	162,011,150.00	173,901,274.00	-



1.5 Climate Change Management: Task Force on Climate-related Financial Disclosures (TCFD)

IV | Indicators and Targets

To effectively manage climate-related risks, SAI has established the following targets and management measures and defined corresponding indicators to track annual performance:

Climate Risks and Opportunities	Core Objective	Indicators	Short-Term Management Measures	Medium- to Long-Term Management Measures
Physical Risk - Equipment losses and increased operating costs due to heavy rainfall	Strengthen plant flood prevention, flood control, and extreme rainfall response capabilities to reduce the impact of heavy rainfall on equipment, plant utility systems, and operational continuity	Incidents of plant flooding, water seepage, or equipment damage	Diversifying the location of operational sites and machining partners to enable production transfer in the event of operational disruption at a given facility	-
Physical Risk - Increased operating costs due to water and power shortages	Enhance the resilience of water resources and power supply to reduce the impact of water shortages, power shortages, or unstable supply on production and operations	Operational incidents caused by abnormal water or power supply	◆ Sign contracts with water suppliers to provide water trucks during water shortages to maintain production. ◆ Increase the proportion of renewable energy and integrate energy storage systems to optimize the energy structure during normal operations and provide emergency backup during power outages, comprehensively enhancing grid resilience	-
Transition Risk - Customer decarbonization demands leading to increased costs for purchasing renewable energy and certificates	Energy Conservation	Energy audit and reporting	Reduced energy consumption by 1.5% in 2025	Achieve a further 1.5% reduction in 2026
Transition Risk - Uncertainty in the development of new and existing energy carbon technologies	Installation of Renewable Energy Generation Facilities	Obtained a total of 1,850 renewable energy certificates in 2025	Regularly upload power generation data to obtain renewable energy certificates	-
Opportunity - Material recycling and reuse to reduce operating costs	Green Growth	Recycling and reuse of smelting aluminium materials	Maintain a recycling and reuse rate of more than 50% for smelting aluminium materials	Maintain a recycling and reuse rate of more than 55% for smelting aluminium materials
	Smelting Production Yield	Achieve a smelting production yield of over 98%	Achieve a smelting production yield of over 98%	-
Transition Risk - Regulatory requirements for greenhouse gas inventories lead to increased internal personnel costs and external verification fees Transition Risk - Risk of changes in carbon fee collection regulations and policies Opportunity — Development of low-carbon products to increase orders and revenue	Greenhouse Gas Management	Greenhouse Gas Emissions	Achieve a carbon reduction target of >1% compared to the base year	Achieve a carbon reduction target of >7% compared to the base year
	Greenhouse Gas Inventory	Simultaneously conduct greenhouse gas inventories for the Pingtung Plant, Zhuwei Plant, and Plant 1	Obtain annual verification under ISO 14064-1	Align with the GHG Protocol in accordance with competent authority policies
	Greenhouse Gas Reduction	◆ Install chiller units and energy-saving monitoring systems for air compressors ◆ Develop greenhouse gas reduction plans and implement low-carbon and smart transition projects in the manufacturing sector	◆ Pass the greenhouse gas self-determined reduction plans and the Ministry of Environment's implementation progress review ◆ Reduce Scope 1 and Scope 2 greenhouse gas emissions intensity compared with the 2022 baseline year	-
	Product Carbon Footprint Verification	◆ Establish a product carbon footprint inventory ◆ Conduct ISO 14067 verification ◆ Provide CBAM-related information in accordance with EU customer requirements	Pass ISO 14067 verification each year	-

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I | Ecological and Environmental Protection Policy

In response to the global challenges of ecosystem degradation and increasing natural capital risks, companies must not only focus on the responsible use of resources but also actively identify and manage their dependencies and impacts on biodiversity and ecosystem services throughout their development process. SAI recognizes the importance of biodiversity conservation to operational resilience and long-term sustainable value creation. Accordingly, nature-related issues have been incorporated into SAI's risk assessment and operational planning processes. We are committed to minimizing our impacts on ecosystems and promoting a sustainable business model that supports coexistence and mutual prosperity with nature.

2025 Ecological and Environmental Conservation Policy of SAI

2025 Management Policy

SAI is committed to preserving the natural environment and promoting ecological sustainability, recognizing biodiversity as a fundamental pillar of SAI's long-term development. We are committed to closely monitoring international trends and continuously advancing and implementing ecological conservation initiatives.

Support for Global Biodiversity Conservation Conventions

SAI is committed to supporting international biodiversity conservation efforts and will respond to global biodiversity conventions and related initiatives in the future. We will continue to monitor issues related to natural resource management, habitat conservation, and ecosystem protection, while progressively strengthening biodiversity conservation strategies and management mechanisms within our operations.

Stakeholder Engagement

With respect to ecological and environmental conservation issues, SuperAlloy Industrial will continue to monitor environmental impacts, implement improvement measures, and plan conservation initiatives. SAI will regularly assess ecological risks arising from its operations and collaborate and communicate with both internal and external stakeholders.

Grievance and Communication Mechanism

SAI provides grievance channels through which employees, local communities, and stakeholders may raise opinions, concerns, and incidents related to ecological conservation and environmental management.

2025 Achievements

1. Since publication of the 2024 Sustainability Report, SAI has included a dedicated TND section to address the impacts of its operations on nature and ecosystems.
2. In the 2025 Sustainability Report, SAI further utilized the ENCORE tool to assess dependencies and impacts associated with the automotive components industry and identify key industry hotspots.
3. Continued implementation of water resource management measures to reduce water withdrawal and water consumption.

Future Plans

Short-Term Targets (1–3 Years)

Environmental Performance Targets

Target Category	Expected Target
Water Conservation	◆ Reduce total water consumption: Improve water-use efficiency through equipment upgrades, process optimization, and employee awareness programs. ◆ Reduce wastewater discharge: Strengthen recycling and reuse systems, such as circulating cooling water and process recycled water, to reduce the consumption of natural water resources and lower environmental impacts. ◆ Increase water-use management transparency: Establish regular monitoring and recording mechanisms, such as monthly water consumption reports and abnormal water-use alerts, to facilitate timely tracking and continuous improvement. ◆ Introduce water-saving technologies or equipment: Plan to introduce water-saving equipment such as automatic sensor faucets and water-saving valves to gradually reduce both process and general water consumption.
Noise Impact Mitigation	◆ Continue to monitor changes in operational noise levels: Conduct regular on-site and off-site noise measurements (e.g., quarterly monitoring) and establish long-term noise records to assess the extent of operational impacts on the surrounding environment. ◆ Ensure compliance with noise regulations: Ensure that all measured noise values comply with applicable noise regulations and environmental impact assessment standards issued by central and local authorities. Corrective actions will be implemented immediately if any exceedances occur. ◆ Improve noise-generating equipment: Apply soundproofing, install vibration-dampening materials, or replace high-noise machinery to reduce noise transmission and enhance the quality of the working environment. ◆ Establish a noise incident reporting and improvement mechanism: If an abnormality is detected during noise monitoring, establish a rapid reporting and corrective process to ensure that the issue is promptly addressed.
Waste Management	◆ Source reduction: Continue to reduce solvent use and waste liquid generation. ◆ Waste recycling : Continue to optimize product packaging design and reduce the use of cartons and support boards.
Advancing Our Nature-Related Actions	◆ Deployment of Renewable Energy: SAI aims to optimize natural resource utilization and mitigate the impacts of climate change on ecosystems. The Pingtung Plant has installed a 1,492.4 kW solar PV system. In the future, based on the space and operational planning of each plant, we will increase the proportion of green electricity through multiple channels, such as self-built renewable energy generation equipment or externally purchased green electricity, to reduce the environmental impact caused by fossil fuel power generation and further deepen SAI's environmentally friendly practices. ◆ Optimizing Process Energy Efficiency: SAI evaluates the replacement of aging high-energy-consuming equipment. For new equipment, based on the Energy, ESH Design and Procurement Evaluation Form, priority is given to equipment with both high energy efficiency and low environmental impact. By improving overall energy efficiency, SAI indirectly mitigates the impact of upstream energy production processes on biological habitats and natural ecosystems. ◆ Increase the recycled aluminium usage rate: Gradually increase the proportion of recycled aluminium used from 35% to 50%.

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1.6 Natural Capital Stewardship: TNFD and Biodiversity

II | Governance of Nature-Related Risks and Opportunities

SAI has established a comprehensive sustainability governance framework to ensure the effective implementation of its sustainability strategy throughout the organization. SAI has formed a Sustainable Development Promotion Team, led by the Vice President as General Secretary and Assistant Vice President as Deputy General Secretary. The Team integrates resources across departments and is organized into four dedicated working groups: Environmental Sustainability, Social Care, Corporate Governance, and Value Chain Management. Each group is convened by the head of the relevant department and is responsible for setting annual priorities, monitoring implementation progress, and facilitating cross-functional collaboration to ensure the systematic advancement of sustainability initiatives.

Among these groups, the Environmental Sustainability Task Force serves as the primary management unit for nature-related risks and opportunities. In alignment with SAI's sustainability objectives, the task force is responsible for identifying nature-related issues, developing management policies and action plans, and driving implementation efforts covering mitigation, conservation, monitoring, and improvement. In addition, the Environmental Sustainability Task Force is responsible for stakeholder engagement and communication, ensuring that external expectations and recommendations are reflected in SAI's sustainability strategy and incorporated into a cycle of continuous optimization.

To strengthen the effectiveness and oversight of sustainability governance, the General Secretary and Deputy General Secretary serve as the central coordinators of the overall program. Their responsibilities include coordinating progress across working groups, tracking cross-departmental implementation outcomes, and reviewing changes in nature-related risks and the effectiveness of related improvement measures. The results of related work and the assessment results of material topics will be regularly compiled and reported to the Sustainable Development Committee as a basis for its decision-making. Through submission of decisions to the Board of Directors, the Board can fully understand the implementation status of sustainability strategies and provide necessary resources and guidance.

Through this governance structure, SAI ensures that nature-related risks and opportunities are integrated into SAI's overall sustainability management system. It also ensures that all related initiatives remain aligned with corporate strategic objectives, thereby enhancing the maturity and resilience of sustainability management.

In addition, for specific nature-related risks and opportunities, including resource-use efficiency, ecosystem conservation, and biodiversity protection, the Environmental Sustainability Task Force has designated responsible personnel to oversee and manage each corresponding area.

III | Identification of Nature-Related Dependencies, Impacts, Risks, and Opportunities

1. LEAP Assessment Method

SAI places great importance on the harmonious coexistence of human activities and the natural environment. During the preparation of its 2024 Sustainability Report, SAI incorporated a biodiversity perspective for the first time. Through a systematic assessment process, we examined the potential impacts of our business activities across multiple dimensions, including environmental impacts, species conservation, and habitat protection, while strengthening our awareness and forward-looking management of natural resources. This year's report also references the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD) and supports biodiversity conservation initiatives. Following the LEAP assessment approach proposed in TNFD v0.4, SAI has clearly defined the nature- and biodiversity-related aspects of its business activities and further evaluated SAI's dependencies and impacts on natural resources. Through cross-departmental discussions, we reviewed the adequacy of existing strategies, considered potential future adjustments, and fully disclose the results of these assessments in this section.

In accordance with the recommendations of the TNFD framework, SAI adopted a four-stage assessment process—Locate, Evaluate, Assess, and Prepare (LEAP)—to systematically identify and analyze the nature-related impacts, dependencies, risks, and opportunities arising from its operations. This framework enables SAI to gain a more comprehensive understanding of the interactions between its business activities and the natural environment and serves as an important foundation for future strategic adjustments and natural resource management initiatives.

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No.	Assessment Step	Assessment Approach
1	 Locate	The assessment considered SAI's three facilities in Taiwan — Yunlin Plant (including Plant 1 and Plant 2 due to their close proximity), Yunlin Zhuwei Plant, and Pingtung Plant. Biodiversity- and ecosystem service-related risk assessments were conducted for each facility.
2	 Evaluate	SAI's business processes and principal operating activities were analyzed. The ENCORE tool was utilized to assess dependencies and impacts associated with the automotive parts and accessories manufacturing industry, identify industry hotspots, and determine the relationships between SAI's operations and relevant business activities, assets, ecosystem services, and impact factors.
3	 Assess	Step 1 Based on the results of the previous two stages, we incorporated nature-related impact topics identified through the ENCORE tool and reviewed benchmark practices within the automotive, semiconductor, and technology industries to identify nature-related risks and opportunities relevant to SAI. A comprehensive list of risks and opportunities associated with SAI's operations was then developed. In assessing nature-related risks and opportunities, SAI considered potential impacts across the four environmental realms—land, atmosphere, oceans, and freshwater—and established an initial pool of assessment topics.
		Step 2 A nature-related risks and opportunities questionnaire was developed and distributed to department managers, plant managers, and independent directors to evaluate and identify material nature-related risks and opportunities.
		Step 3 After excluding invalid responses, we conducted further analysis and statistical evaluation of the survey results. Based on the established list of risks and opportunities, existing management measures and governance processes were reviewed. This assessment was intended to provide senior management with a clearer understanding of current management mechanisms and to offer practical recommendations to help SAI effectively avoid, reduce, or mitigate nature-related risks.
4	 Prepare	We established metrics for assessing and managing nature-related risks and opportunities, then set targets related to nature-related dependencies, impacts, risks, and opportunities, as well as performance corresponding to those targets.

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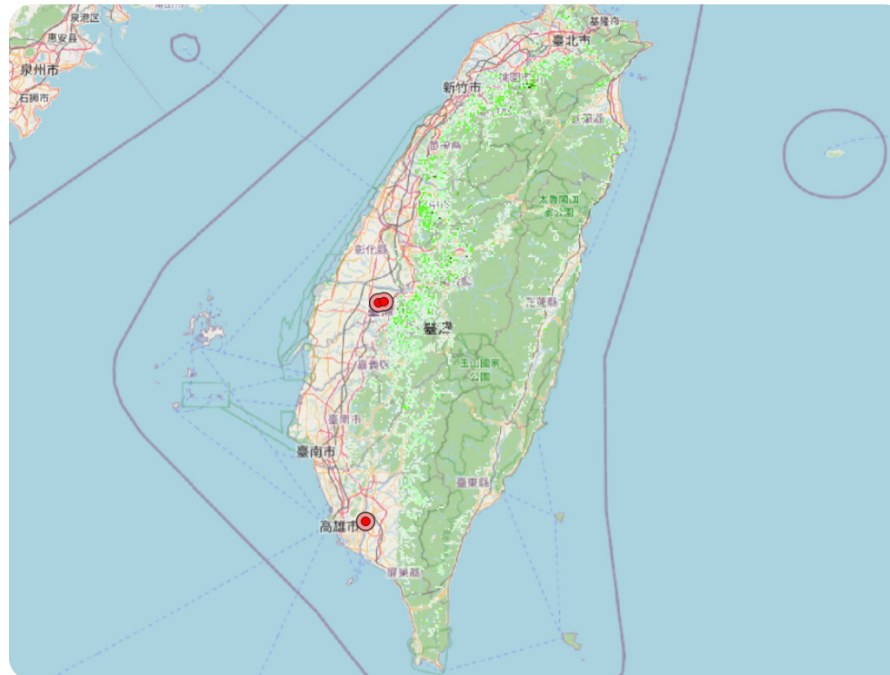
2. Locate

(1) Biodiversity Hotspots

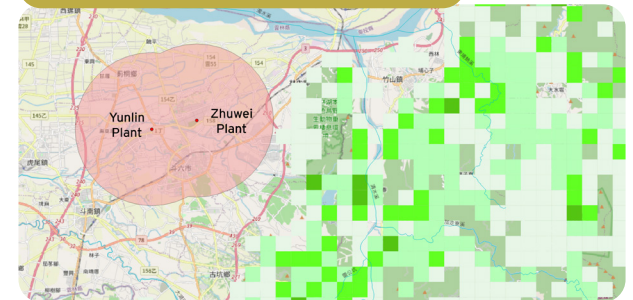
The Forestry and Nature Conservation Agency under the Ministry of Agriculture has implemented the Taiwan Ecological Network (TEN) program. By consolidating historical ecological survey data, habitat conditions, landscape information, region-specific conservation concerns, and expert input, the program has analyzed biodiversity hotspots, key socio-ecological production landscapes and seascapes (SEPLS), and waters of concern throughout Taiwan. As a result, 44 TEN Priority Areas have been identified nationwide to support ecological conservation and land-use planning.

The biodiversity hotspot analysis was based on species distribution data from the Taiwan Biodiversity Network (TBN) database maintained by the Taiwan Biodiversity Research Institute, covering the period from 2000 to 2019. Non-native species were excluded from the assessment, and analyses were conducted for mammals, birds, amphibians, reptiles, and butterflies. Grid cells ranking within the top 5% in terms of species richness were identified as biodiversity hotspots. For this assessment, SAI evaluated its three operational sites—the Yunlin Plant, Yunlin Zhuwei Plant, and Pingtung Plant—and expanded the assessment boundary to include areas within a five-kilometer radius of each facility. The results indicated that none of the three facilities, nor their surrounding areas, are located within designated biodiversity hotspots. However, SAI's biodiversity efforts are not limited to ecosystems surrounding its operational sites. SAI has broadened its focus to include endemic and protected species in regions such as Yunlin and Pingtung. Through this broader ecological perspective, SAI seeks to develop a more comprehensive understanding of Taiwan's diverse and valuable natural resources and to contribute to the conservation and promotion of local species. By doing so, SAI aims to raise awareness of the rich and unique ecological value found in Central and Southern Taiwan.

Overlay Analysis Results of Biodiversity Hotspots – Taiwan



Overlay Analysis Results of Biodiversity Hotspots – Yunlin and Zhuwei Plants



Overlay Analysis Results of Biodiversity Hotspots – Pingtung Plant



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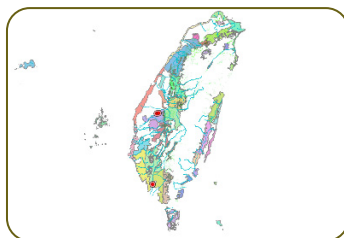
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(2) Taiwan Ecological Network Priority Rivers and Conservation Areas

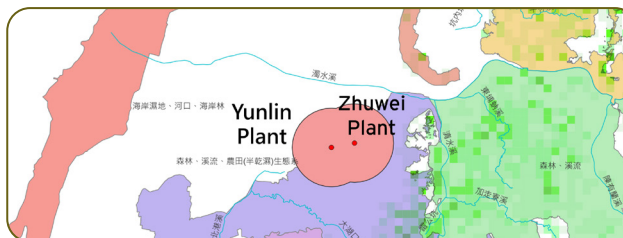
None of SAI's plants are located in ecological hotspots. However, considering the potential impacts of nature- and ecology-related risks, SAI still used map data from the Taiwan Ecological Network to identify and understand key species of concern in the counties and cities where the plants are located. The TEN Priority Areas encompass both Taiwan's main island and offshore islands. These areas are delineated based on regional ecological characteristics and provide detailed information on major habitat types, priority flora and fauna species, and conservation objectives, serving as important references for ecological conservation and land-use planning. SAI conducted an overlay analysis to assess whether its three plants are located within or adjacent to any designated priority conservation areas within a five-kilometer radius. The assessment also enabled SAI to identify key ecosystems and species of concern in the vicinity of its facilities.

Plants	TEN Priority Areas, Rivers	Priority Species of Concern in the County/City of the Plant
Yunlin Plant	Forests, streams, and agricultural (semi-wetland) ecosystems	Chinese Pangolin, Crab-eating Mongoose, Russet Sparrow, Fairy Pitta, Grey-faced Buzzard, Little Ringed Plover, Yellow-margined Box Turtle, Chinese Mountain Snake (<i>Sinonatrix percarinata</i>), Grass Snake, Farmland Green Treefrog
Yunlin Zhuwei Plant		
Pingtung Plant	Grasslands, pond wetlands, paddy fields and dry farmlands, SEPLS, forests, and the Kaoping River	Eastern Grass Owl, Ring-necked Pheasant, Black Kite, Fairy Pitta, Grey-faced Buzzard, Black-naped Oriole, Chain Snake, Golden-striped Frog, Japanese Eel

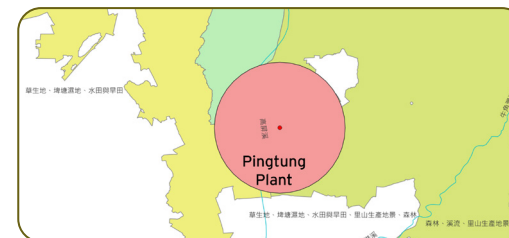
TEN Priority Areas
– Overall Map



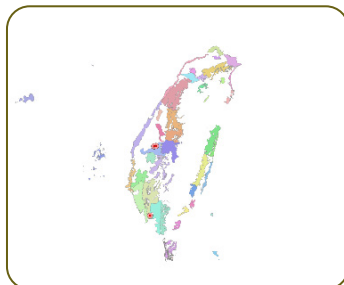
TEN Priority Areas – Overlay Results of Administrative Areas
Where the Yunlin Plant and Yunlin Zhuwei Plant Are Located



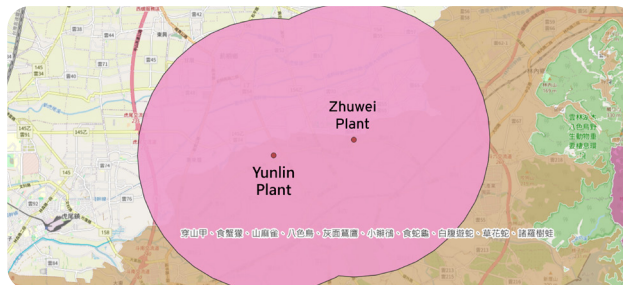
TEN Priority Areas – Overlay Results of Administrative Areas
Where the Pingtung Plant Is Located



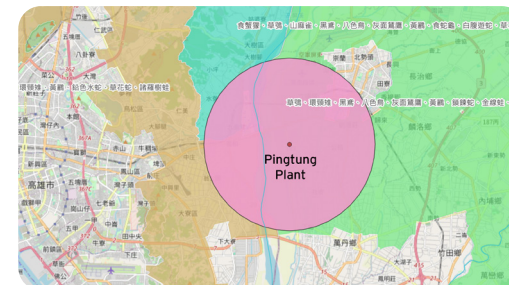
TEN Priority Areas – Species
Distribution – Overall Map



TEN Priority Areas – Species Distribution – Overlay Results of Administrative Areas
Where the Yunlin Plant and Yunlin Zhuwei Plant Are Located



TEN Priority Areas – Species Distribution – Overlay Results
of Administrative Areas Where the Pingtung Plant Is Located



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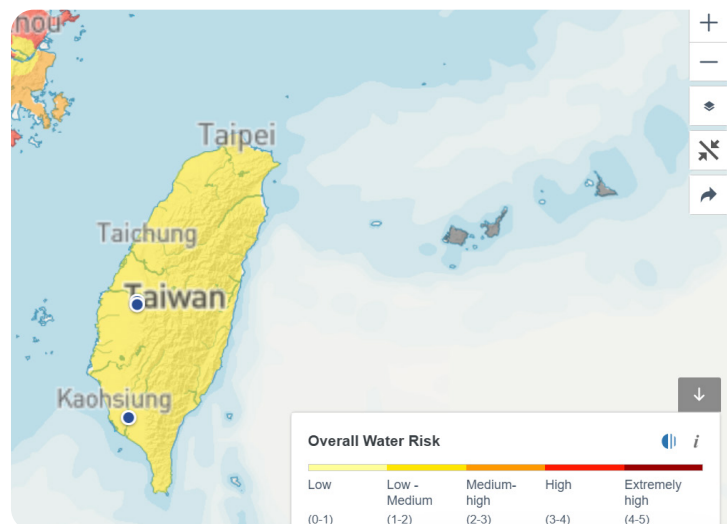
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(3) Water Stress Areas

AQUEDUCT is a global water risk assessment tool developed by the World Resources Institute (WRI). Using publicly available data and scientific modeling, it helps organizations identify water-related risks, including water scarcity, flooding, and other water security challenges. The tool is widely applied in sustainability reporting, climate risk assessments, and policy analysis, with a strong emphasis on data transparency and traceability. According to the Aqueduct Water Risk Atlas, SAI's facilities located in Yunlin and Pingtung are situated in areas classified as having relatively low water stress risk. Although none of SAI's facilities are located in high water stress regions, SAI continues to closely monitor its water resource usage and has established corresponding management policies, performance indicators, and targets related to water resource management. Further information can be found in Section 1.4, "Environmental Management Performance."

Overlay Analysis Results for Water Stress Areas



3. Evaluate – Assessment of Nature-Related Dependencies and Impacts

SAI employed the ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) tool to conduct an assessment of its nature-related dependencies and impacts. As our primary business activity is the manufacture of automotive-related components, the assessment was based on the automotive parts and accessories manufacturing sector within the ENCORE framework. The evaluation was conducted from two perspectives: "impacts on nature" and "dependencies on nature." The assessment results are summarized below:

Encore Assessment Dimension	Topic	Impact Level
Dependency	Operational disruption risks arising from extreme weather events (e.g., typhoons, heavy rainfall, flooding)	Moderate
	Water pollution and water scarcity	Pollution: Moderate Water scarcity: Low
	Solid waste generation and pollution	Low
	Environmental disturbance caused by noise or light	Very Low
	Environmental impacts and soil contamination associated with operational sites	Moderate
Impacts	Environmental disturbance caused by noise or light	Extremely High
	Air pollution from non-greenhouse gas emissions	Low
	Water pollution and water scarcity	Water pollution: Moderate Water scarcity: Low
	Solid waste generation and pollution	Low
	Environmental impacts and soil contamination associated with operational sites	Moderate

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Impacts of the Automotive Components Industry on the Environment

Operational disruption risk due to extreme climate (typhoons, heavy rainfall, flooding)

Impact Level: Moderate

Automotive component manufacturing typically involves processes such as metal processing, casting, mold production, heat treatment, surface treatment, and energy-intensive operations. These activities generate greenhouse gas emissions, including carbon dioxide and methane. As industry-wide emissions increase, they accelerate global warming.

Water pollution

Impact Level: Moderate

Water scarcity

Impact Level: Low

Automotive component manufacturing involves metal processing, cleaning, electroplating, and machining processes, which may generate wastewater containing oil contaminants, heavy metals, and chemical substances. If such wastewater is discharged without proper treatment, it may contaminate surrounding rivers and groundwater resources.

Solid waste generation and pollution

Impact Level: Low

Manufacturing processes generate waste materials such as metal scrap, oil-contaminated absorbents, and packaging materials. Although most of these wastes can be recycled or managed through licensed contractors, inadequate waste management may still result in environmental pollution.

Environmental disturbance caused by noise or light

Impact Level: Very Low

Plant equipment operations may generate noise and artificial lighting. However, manufacturing facilities are generally located within industrial zones, resulting in relatively limited impacts on the surrounding natural environment and wildlife. Such impacts can typically be effectively controlled through measures such as soundproofing and light shielding.

Environmental impacts and soil contamination associated with operational sites

Impact Level: Moderate

Leakage of oils, coolants, or chemical substances used in factory operations may infiltrate soil and groundwater, resulting in long-term environmental contamination.

Dependencies of the Automotive Components Industry on the Environment

Environmental disturbance caused by noise or light

Impact Level: Extremely High

If environmental regulations in the surroundings of plant areas become more stringent or if sensitive receptors such as residential communities or schools emerge nearby due to urban development, restrictions may be imposed on operating hours or equipment noise levels. Such limitations could directly affect production scheduling and operational efficiency.

Air pollution from non-greenhouse gas emissions

Impact Level: Low

Manufacturing processes generate emissions such as oil mist, particulate matter, and volatile organic compounds (VOCs). As a result, facilities depend on adequate surrounding ventilation, favorable climatic conditions, and sufficient environmental capacity to dilute and disperse these emissions. If local air quality deteriorates or regulatory requirements become more stringent, additional investments in pollution control equipment may be required.

Water pollution

Impact Level: Moderate

Water scarcity

Impact Level: Low

Manufacturing processes and facility operations require water resources for production activities. Issues such as water pollution or water scarcity may disrupt production line operations and affect operational continuity.

Solid waste generation and pollution

Impact Level: Low

If local waste treatment capacity is insufficient or regulatory requirements change (such as landfill restrictions or increased disposal fees), the frequency of waste collection and disposal at the plant area may be affected. This could result in waste accumulation on-site, occupying facility space and disrupting production operations.

Environmental impacts and soil contamination associated with operational sites

Impact Level: Moderate

Manufacturing facilities depend on stable, uncontaminated land and groundwater resources. If a plant is located in an area with actual or potential soil or groundwater contamination, it may be subject to remediation requirements, land-use restrictions, or construction limitations imposed by regulations, resulting in increased operating costs.

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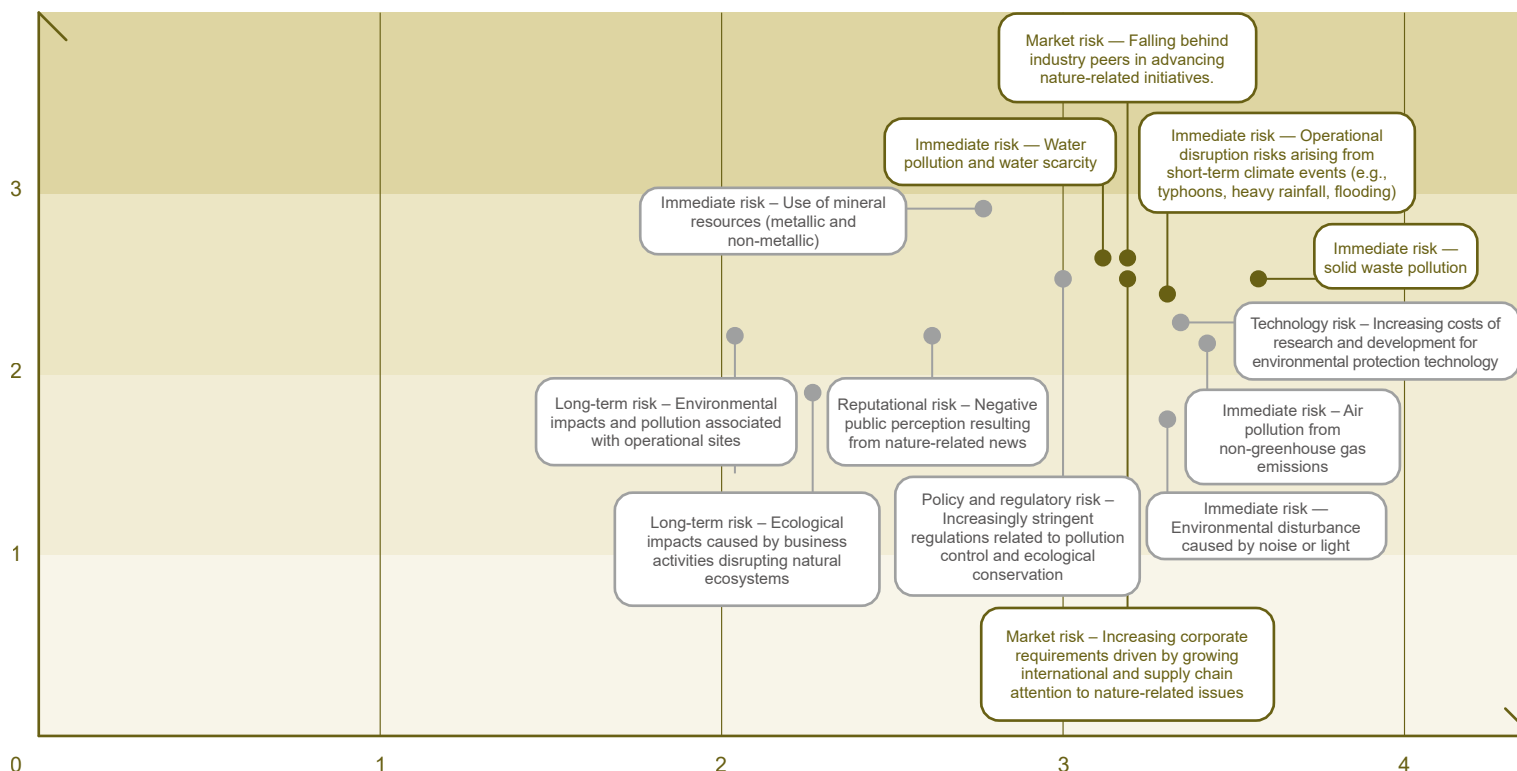
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After using the ENCORE tool to identify topics with potential environmental impacts and environmental dependencies, SAI further referenced nature-related risk and opportunity topics disclosed by benchmark companies in the automotive industry and incorporated them into its nature-related risks and opportunities topic pool. As SAI has recently expanded into the semiconductor supply chain market, risk and opportunity topics from the benchmark cases of other leading technology companies were also incorporated into the assessment. Based on this process, a materiality assessment questionnaire was developed covering 13 nature- and ecology-related risk topics and 6 nature- and ecology-related opportunity topics. The questionnaire was distributed to department heads and plant managers across SAI for evaluation and completion.

This questionnaire defines the likelihood of occurrence of nature-related risks and opportunities (X value) as follows: short term, less than one year (5 points); short to medium term, one to three years (4 points); medium term, three to seven years (3 points); medium to long term, seven to ten years (2 points); and long term, more than ten years (1 point). The degree of impact and benefit (Y value) is defined as follows: extreme, resulting in long-term operational shutdown / long-term benefits to operations (5 points); significant, material financial or operational impact/benefit (4 points); high, high financial or operational impact/benefit (3 points); moderate, moderate financial or operational impact/benefit (2 points); and minor, no obvious harm or benefit (1 point). For the identification of material nature-related risks and opportunities, threshold values are set. Topics with an X value > 3.1 and a Y value > 2.4 are listed as material risks. For material nature-related opportunities, opportunity topics with an X value > 3.3 and a Y value > 2.5 are selected as material nature-related opportunities.

Nature-Related Risk Matrix



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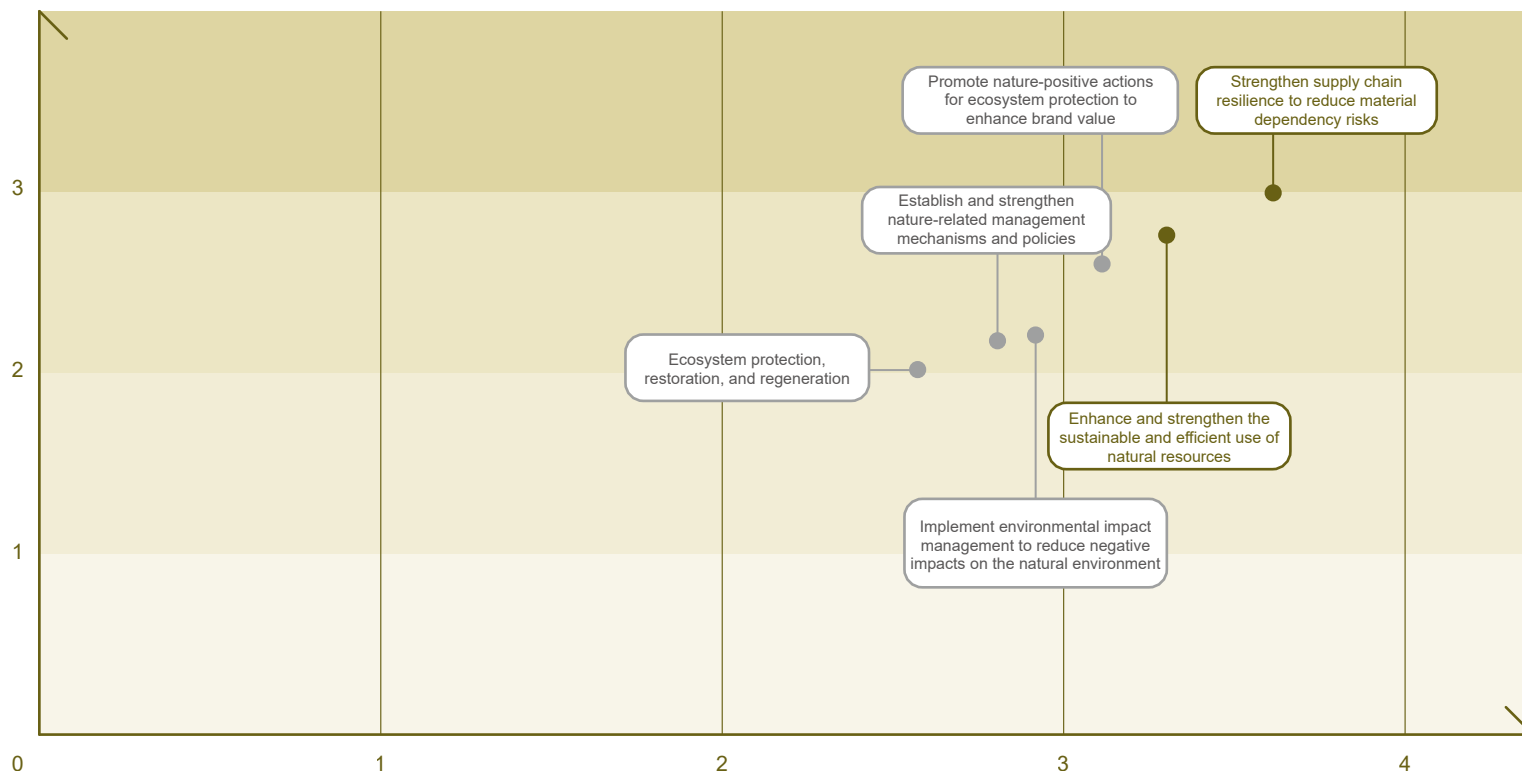
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Nature-Related Opportunity Matrix



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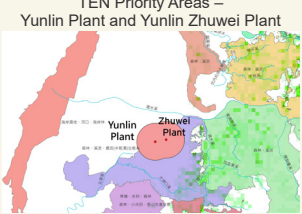
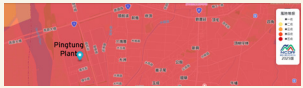
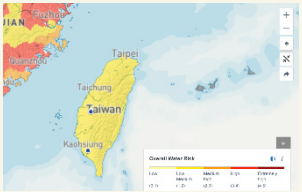
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4. Assess – Biodiversity Assessment

Environmental impacts on local ecosystems were taken into consideration during the initial planning and development of SAI's plant facilities, and we are committed to minimizing the impacts of its development and operational activities on the natural environment wherever possible. All of SAI's production sites are located within well-planned industrial parks designated by local authorities. Based on assessments conducted by the relevant government authorities, activities within these areas are considered to pose a low level of risk to local biodiversity and ecosystems. In addition, as part of its biodiversity assessment process, SAI utilized geographic overlay analysis to evaluate the distribution of natural resources and biodiversity in the areas surrounding the three plant sites. This assessment helps ensure that SAI's business activities do not place excessive pressure on the natural environment.

Impact Area	Nature and Biodiversity Issue	Overlay Data Source	Overlay Analysis Source and Results	Explanation
 Land, Freshwater	Solid waste pollution	TEN - Map Data of Priority Areas	 	Only the area within a five-kilometer radius of the Pingtung Plant is traversed by the Kaoping River. Therefore, any solid waste pollution incident could potentially affect freshwater ecosystems. Across SAI's three plants in Yunlin and Pingtung, the terrestrial ecosystems potentially affected include grasslands, agricultural lands, streams, forests, and SEPLS. However, all waste generated by SAI is managed by designated personnel in accordance with established procedures and regulatory requirements, thereby reducing the potential risks associated with solid waste pollution.
 Atmosphere, Freshwater	Operational disruption risks arising from short-term climate events (typhoons, heavy rainfall, and flooding)	National Science and Technology Center for Disaster Reduction (NCDR)	  	Under a global warming scenario of 2°C, the population exposure risk associated with flooding is projected to increase to Level 5, indicating a relatively high risk of operational disruption to SAI from short-term extreme weather events such as heavy rainfall and flooding.
 Freshwater	Water pollution and water scarcity	AQUEDUCT Water Risk Atlas — Water Stress Map		The overall water stress scores, considering both water quality and water quantity factors, are assessed as Low to Medium (scores ranging from 1 to 2). This indicates that water pollution and water scarcity are expected to have a relatively limited material impact on SAI.

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In addition, SAI identified a potential nature-related risk associated with the importation of raw materials. Wooden packaging materials, such as shipping crates and pallets, may inadvertently harbor invasive species, posing potential risks to local ecosystems. Accordingly, SAI applied its existing internal risk assessment methodology to evaluate this issue, considering factors including the likelihood of occurrence, potential severity of impact, and overall risk level. The assessment results indicate that activities associated with this risk source at SAI's three plant sites present a low level of risk to surrounding ecosystems, with no material impacts identified. SAI will continue to review related risks on a regular basis in accordance with established procedures and implement appropriate response measures to ensure that facility operations maintain a stable and positive relationship with the natural environment.

Risk Source		Scope of Impact	Risk Assessment		
			Probability of Occurrence	Severity of Impact	Risk Level
Invasive species	Wooden crates and pallets may harbor invasive biological species, impacting local ecology.	Animals, plants	Low	Low	Low

5. Prepare - Nature and Climate Action Policies

SAI has established clear action policies and targets for each identified nature-related risk issue and has allocated corresponding budgets to support risk mitigation measures. SAI will also continue to evaluate the effectiveness of these measures on a rolling annual basis to ensure the effective implementation of nature-related risk management.

SAI recognizes the potential environmental impacts of solid waste generated through its operations and regards waste management as one of its key nature-related risk issues. General and industrial waste generated from operational activities, if not properly managed, may result in environmental pollution and increase operational risks as pollution control regulations become increasingly stringent. To mitigate both immediate and long-term risks, SAI continues to promote waste reduction, waste segregation, recycling and reuse, and circular economy initiatives. Through process optimization and efficient resource allocation, SAI seeks to reduce the consumption of virgin resources and minimize the volume of waste requiring final disposal.

To address transition risks, SAI actively aligns with global market trends and the sustainability expectations of downstream customers regarding sustainable supply chains. SAI continues to develop resource-circulation technologies, with particular emphasis on the application and process enhancement of recycled aluminium materials. Ongoing investments in research and development aim to increase material circularity, reduce waste generation, and minimize environmental impacts. At the same time, SAI closely monitors industry practices related to waste management and the circular economy to avoid losing competitiveness due to lagging nature-related initiatives.

In practice, SAI promotes source reduction, resource reuse, and compliant outsourced waste treatment through its internal management systems and regular performance reviews, integrating these activities into its operational management processes. In 2025, SAI did not experience any negative incidents related to nature, ecological conservation, or waste management. Looking ahead, SAI will continue to strengthen its waste management performance, enhance facility management and emergency response capabilities, and advance its circular economy initiatives. Through these efforts, SAI aims to reduce the environmental impacts of its operations and achieve its sustainable development objectives.

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Risk Category	Action Plan - Immediate Risks	Action Plan - Long-Term Risks	Action Plan - Transition Risks
Corresponding material risk items	◆ Solid waste pollution ◆ Operational disruption caused by short-term climate risks (typhoons, heavy rainfall, flooding) ◆ Water pollution and water scarcity	◆ Falling behind industry peers in advancing nature-related initiatives ◆ Increasing corporate requirements driven by growing international and supply chain attention to nature-related issues	◆ No corresponding material nature-related risks were identified; however, the following two corresponding risks exist: ◆ Environmental impacts and pollution associated with operational sites ◆ Ecological impacts caused by business activities disrupting natural ecosystems
Actual Actions and Development Opportunities	1. Promote waste reduction, resource circulation, and reuse to enhance SAI's circular economy performance. 2. Strengthen climate-resilient operational strategies to enhance customer and supply chain confidence. 3. Continue implementing water conservation measures and promoting wastewater reuse to improve water-use efficiency. 4. Continue expanding and advancing recycled aluminium technologies. 5. Continue enhancing the effectiveness of air pollution control equipment and developing applications for low-pollution raw materials. 6. Continue conducting noise monitoring.	Continue to monitor and assess the impacts of operational activities on natural ecosystems.	Develop low-carbon manufacturing processes and products in line with global market trends and the expectations of downstream brand owners.
Invested Costs	Increased costs for installing energy conservation, decarbonization, and pollution reduction equipment, approximately NT\$51.13 million.	In 2025, SAI invested manpower in research and surveys related to nature and ecological conservation.	SAI invests 2% of operating revenue in R&D each year.
Future Goals	SAI will continue to strengthen facility management and emergency response capabilities.	Continue monitoring industry practices related to nature and ecological conservation and further enhance SAI's corresponding action policies.	Continue monitoring industry practices related to nature and ecological conservation and further enhance SAI's corresponding action policies.

SAI, in advancing its sustainable development efforts, not only identifies nature-related risks but also evaluates nature-related opportunities to enhance corporate resilience and create long-term value. As global attention to natural capital management and ecosystem conservation continues to grow, SAI actively seeks growth opportunities arising from nature-related issues. Current initiatives include improving resource circularity efficiency, strengthening supply chain resilience, and collaborating with external organizations to assess the feasibility of ecosystem conservation, restoration, and regeneration projects.

SAI continues to monitor nature-related opportunities and has established corresponding action policies. At this stage, its focus is on strengthening supply chain resilience to reduce material dependency risks; improving the sustainable use and management efficiency of natural resources; promoting nature-positive actions that support ecosystem protection and strengthen brand value; implementing environmental impact management to reduce adverse effects on the natural environment; and continuously establishing and strengthening nature-related management mechanisms and policies. Through these efforts, SAI seeks to further advance ecosystem protection, restoration, and regeneration while enhancing corporate brand value and social trust. At the same time, SAI actively implements environmental impact management by systematically reviewing the potential adverse impacts of its operations on the natural environment and progressively introducing prevention, mitigation, and improvement measures to reduce pressures on ecosystems and advance toward a development model that coexists harmoniously with nature.

From a governance perspective, SAI continues to establish and strengthen nature-related management mechanisms and internal policies by incorporating nature-related topics into risk assessment, investment decision-making, and operational management processes. SAI also places increasing emphasis on long-term development opportunities related to ecosystem protection, restoration, and regeneration. During 2025, SAI proactively engaged in consultations and exchanges

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with relevant non-governmental organizations (NGOs) on biodiversity and ecological conservation topics to gain external expertise and practical experience and to explore potential collaboration opportunities. These engagements serve as important references for future actions and project planning.

In terms of resource commitment, SAI has devoted substantial personnel and management resources to evaluating and planning nature-related management systems while simultaneously studying the feasibility of projects related to ecosystem protection, restoration, and regeneration. SAI carefully assesses the potential impacts of such initiatives on operations, cost structures, and long-term value, while also exploring collaborative approaches with external organizations to enhance the effectiveness and depth of natural resource management. Looking ahead, SAI will continue to monitor international trends and regulatory developments related to nature, the environment, and ecology. It will progressively strengthen the role of nature-related issues within its sustainability governance framework, deepen its sustainable brand value, and maintain a leading position within the industry.

In addition, SAI will leverage its influence across the value chain by actively promoting and supporting upstream suppliers in developing awareness and capabilities related to nature and sustainability management. SAI will gradually collect and integrate TNFD (Taskforce on Nature-related Financial Disclosures) information from upstream suppliers to support future strategic planning, risk management, and investment decision-making. Through these efforts, SAI aims to work collaboratively with its supply chain partners to advance toward a nature-positive and sustainable future.

Opportunity Category	Action Policy - Nature-Related Opportunities	
Corresponding Material Opportunity Item	◆ Strengthen supply chain resilience to reduce material dependency	◆ Enhance and strengthen the sustainable and efficient use of natural resources
Actual Actions and Development Opportunities	◆ Expanding the input and application of recycled aluminium to reduce dependence on primary aluminium sources from a single region, mitigating supply disruption risks arising from geopolitical factors ◆ SAI has maintained recycled aluminium inventory sufficient for more than one year of use over the long term	◆ Evaluate the cost of equipment introduction and the environmental and financial benefits of the product, select higher energy-efficient machinery, and opt for low-pollution raw materials to reduce environmental pollution.
Future Goals	◆ Expanding the input and application of recycled aluminium	◆ Continue to purchase machinery or equipment with higher energy efficiency ◆ Improve resource efficiency to reduce operating costs and strengthen the brand's sustainability value

IV | Strategic Roadmap and Progress of Actions

While pursuing industrial growth, we recognize that business operations are closely interconnected with the natural environment. In 2025, SAI officially launched its "Commitment to Nature Stewardship" initiative, incorporating biodiversity into the core framework of its sustainable development strategy. In addition to focusing on the environmental impacts of our operational sites, we have proactively extended our efforts beyond our facilities to explore conservation opportunities and resource partnerships for two endangered species native to Taiwan—the farmland green treefrog (Class II Protected Species) and the eastern grass owl (Class I Protected Species).

The year 2025 also marks SAI's inaugural year of biodiversity action. Guided by the three principles of scientific monitoring, community co-prosperity, and employee engagement, SAI has completed a preliminary assessment of potential habitats for target species and has actively engaged in discussions and collaboration with academic institutions, government agencies, and non-governmental organizations (NGOs). Looking ahead, we will continue to advance ecological compensation and habitat restoration initiatives while establishing long-term, resilient partnerships for biodiversity conservation. Through these efforts, we aim to contribute meaningfully to the preservation and enhancement of Taiwan's natural environment.

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SAI Ecological Conservation Projects

Key Initiative 1: A Sanctuary for the Emerald Spirit – Farmland Green Treefrog Habitat Development

Background

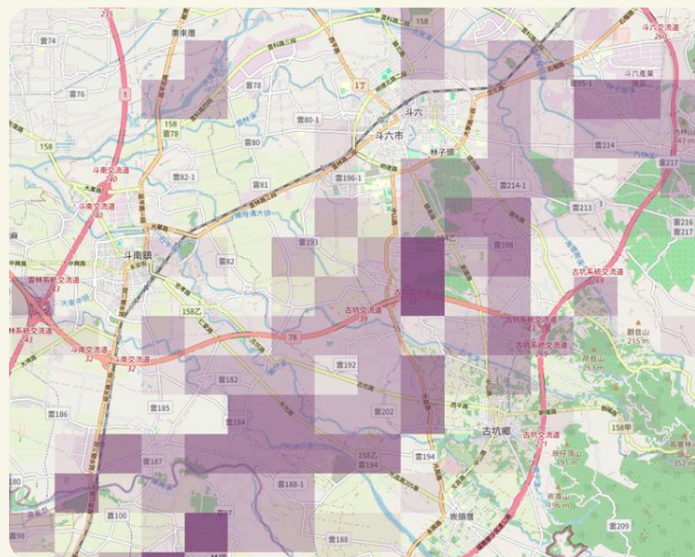
SAI's headquarters is located in Yunlin. Although SAI operates within an industrial park and is not situated in an environmentally sensitive protected area, we recognize that industrial development and urban expansion may still have indirect impacts on surrounding ecological corridors.

As a responsible corporate citizen, we have extended our conservation efforts beyond the boundaries of our facilities and conducted ecological surveys in nearby areas. The results indicated that locations surrounding the industrial park, including Mayuan Village in Gukeng Township, the Tahoukou River, and the Lunzi River watershed, serve as important habitats for the farmland green treefrog. We believe that protecting the farmland green treefrog is not only an environmental responsibility but also an important step toward safeguarding the ecological network that supports coexistence among local communities, agriculture, and biodiversity.

Current Progress

Preliminary discussions have been conducted with the Yunlin Branch of the Society of Wilderness and Watch Nature Ecological Consultant Co., Ltd. to explore the role SAI can play and the support it can provide within this biodiversity conservation project.

Distribution of the Farmland Green Treefrog in Yunlin



(Source: Catalogue of Life in Taiwan, TaiCOL)

Future Goals and Project Actions

Short-Term

Plan to sign MOUs with relevant conservation organizations

Medium-Term

1. Promote biodiversity-friendly certification programs through field visits to frog-friendly agricultural sites, enabling participants to learn about habitat-friendly management certification systems and engage with certified farmers and agricultural cooperatives.
2. Deepen environmental education efforts by organizing citizen science survey activities and corporate environmental education workshops. Professional instructors will introduce ecological survey concepts and enhance employees' understanding of the Convention on Biological Diversity and international conservation trends.

Long-Term

Habitat restoration and creation: Evaluate opportunities for habitat creation within plant facilities and assess the feasibility of reconnecting fragmented or degraded farmland green treefrog habitats to ensure sufficient living space for sustainable population growth.



Farmland Tree Frog Ecological Imagery

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Key Initiative 2: Guardians of the Grassland Hunter – Eastern Grass Owl Ecological Restoration Program

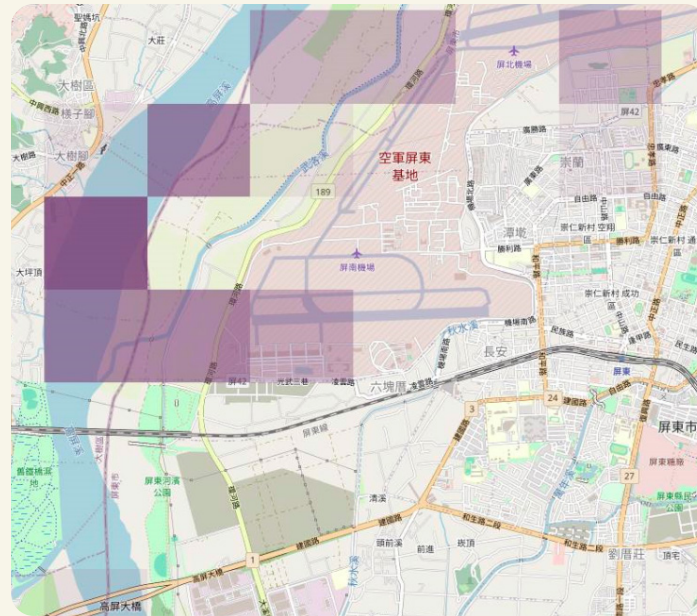
Background

Similar to the Yunlin Plant, SAI's Pingtung Plant is located within an industrial park rather than an environmentally sensitive area. However, its geographic location is close to the Kaoping River basin, one of the primary distribution areas of the eastern grass owl. We understand that the loss of lowland grassland habitats is one of the major threats facing this species. Based on this understanding, we have chosen not to limit our focus solely to the operational impacts within our facilities. Instead, we are actively evaluating opportunities to contribute to eastern grass owl conservation through habitat adoption and habitat creation initiatives aimed at supporting the species' long-term survival.

Current Progress

Technical exchanges have been conducted with the Pingtung Branch of the Forestry and Nature Conservation Agency, the NPUST Bird Ecology Lab, and the Kaohsiung Wild Bird Society.

Distribution of the Eastern Grass Owl Near the Pingtung Plant



(Source: Catalogue of Life in Taiwan, TaiCOL)

Future Goals and Project Actions

1. Habitat Adoption and Restoration: Evaluate the adoption of conservation sites in Mili Village, Ligang Township of Pingtung or the Old Railway Bridge & Wetlands in Dashu District, including the removal of invasive plant species and the planting of cogongrass.
2. Support for Scientific Monitoring: Provide funding for the installation of perches, infrared cameras, and audio recording equipment to support monitoring activities and prevent habitat degradation or disturbance.
3. Educational Experiences and Exhibitions: Organize an eastern grass owl conservation exhibition and dedicated wildlife experience programs, including guided tours led by animal caretakers for employees.
4. Conservation of Diverse Species: Provide financial support for broader conservation efforts benefiting protected species such as the eastern grass owl, black-naped oriole, and pheasant-tailed jacana, including nest monitoring, bird banding and release programs, and community-based conservation outreach initiatives.



Grass Owl Habitat Imagery

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Biodiversity Conservation Targets

Short-Term Targets (1–2 Years)

Target Category	Expected Target
System Development	Sign Memoranda of Understanding (MOUs) with at least two professional organizations. SAI is currently maintaining communication with Watch Nature Ecological Consultant Co., Ltd. and the Kaohsiung Wild Bird Society and continues to evaluate collaboration opportunities.
Quantifiable Outcomes	Complete a preliminary survey report on the farmland green treefrog and eastern grass owl populations in areas surrounding the industrial park, and evaluate the initiation of a habitat creation project covering approximately 0.5–1 hectare.
Employee Participants	Organize one to two biodiversity education programs or habitat restoration volunteer activities.
Social Impact	Support environmentally friendly agriculture and eco-label promotion initiatives to facilitate community transformation and sustainable farming practices.

Medium-Term Targets (3–5 Years)

Target Category	Expected Target
Supply Chain Engagement	Engage with upstream suppliers to better understand the potential impacts of their operations and production processes on biodiversity and natural ecosystems.

Long-Term Targets (Over 5 Years)

Target Category	Expected Target
Supply Chain Engagement	Provide education and training to upstream suppliers on nature-related financial disclosures.

V | TNFD Disclosure Framework and Implementation Status

To respond to the growing importance that international investors and stakeholders place on nature-related disclosures, SAI has referenced the framework published by the TNFD. SAI is progressively incorporating considerations related to governance, strategy, risk management, and indicators and targets to assess nature-related dependencies and risks and integrate them into its operational and decision-making processes.

SAI has initiated internal assessments and cross-functional collaboration to conduct preliminary evaluations of natural resources and ecological risks surrounding its facilities. Biodiversity and water resource management topics have been incorporated into supplier management regulations, while governance mechanisms and management participation have been strengthened to progressively establish corresponding response strategies and disclosure capabilities.

Looking ahead, SAI will continue to monitor developments in the TNFD framework and gradually expand the scope of its assessments to include global operating locations and upstream and downstream value chain activities. Through these efforts, SAI aims to further enhance its resilience to nature-related risks and strengthen its long-term sustainability competitiveness.

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Pillar	TNFD Disclosures	Content
Governance	The Board's oversight of nature-related dependencies, impacts, risks, and opportunities	- SAI has integrated climate change and natural resource-related risks, including emerging issues such as biodiversity, into its overall risk management framework, with regular oversight by senior governance bodies. Relevant information is reported to the Board of Directors at least annually as a basis for sustainability strategy and risk response decision-making. - Functional committees also participate in the governance of climate and environmental issues. For example, the Audit Committee convenes quarterly meetings, during which the head of Internal Audit reports on audit activities and key findings by the Audit Office related to the design and operating effectiveness of the internal control system addressing climate-related risks, thereby strengthening SAI's ability to manage and respond to environmental risks.
	Management's role in assessing and managing nature-related dependencies, impacts, risks, and opportunities	
	The organization's human rights policies and engagement activities in assessing and responding to nature-related dependencies, impacts, and risks, and oversight by the Board and management with respect to Indigenous Peoples, Local Communities, and affected and other stakeholders	- SAI's sustainability team analyzes and evaluates nature-related frameworks (such as TNFD) and applies relevant methodologies. SAI is gradually deepening its understanding of biodiversity-related issues and their implications for business operations while formulating implementation strategies and action plans. - Biodiversity considerations have also been incorporated into the Supplier Code of Conduct. Through collaboration with suppliers, SAI seeks to reduce dependencies on and impacts to critical natural capital.
Strategy	Identified short-, medium-, and long-term nature-related dependencies, impacts, risks, and opportunities	- Based on the results of the ENCORE assessment, we identified issues that are material to SAI in terms of environmental dependencies and impacts. Benchmark practices from the automotive, semiconductor, and high-technology industries were also referenced to identify nature-related risks and opportunities relevant to SAI. - Using a five-kilometer radius surrounding plant operating areas as the assessment boundary, overlay analyses were conducted using protected area and Key Biodiversity Area (KBA) datasets to confirm that SAI's operations are not located within protected ecological areas or KBAs. - In addition to evaluating natural resources and biodiversity surrounding our three plant sites in Yunlin and Pingtung, we also communicated with the local competent authorities to better understand nearby ecological and cultural conservation conditions. All Company facilities are located within well-planned industrial or technology parks, and local authorities have assessed related activities within these areas as posing a low level of risk to local biodiversity and ecosystems.
	The effects of nature-related dependencies, impacts, risks, and opportunities on the organization's business model, value chain, strategy, and financial planning, as well as any transition plans or analysis in place	- Through ongoing engagement with government agencies, industry, academia, and research institutions, SAI continues to monitor the ecological environment, respect ecological balance, and support the protection of endangered species. - In the future, we plan to continue developing and implementing nature- and biodiversity-related training programs to strengthen internal awareness and professional capabilities. - In the future, we will consider expanding the scope of biodiversity risk assessments to include overseas manufacturing plants, areas surrounding office locations, and upstream and downstream value chain activities. Through more comprehensive identification and analysis, we will further develop management strategies for nature-related risks and opportunities, assess their potential operational impacts, and enhance overall environmental resilience and response capabilities.
	The resilience of the organization's strategy to nature-related risks and opportunities, taking into consideration different scenarios	- To strengthen risk management, SAI has established comprehensive natural disaster response plans to address potential events such as storms, floods, and earthquakes, thereby safeguarding business continuity and employee safety. To reduce supply chain risks, we also adopt diversification strategies that reduce dependence on any single region or resource source and improve adaptability. - SAI actively pursues renewable energy adoption and environmentally friendly technological innovation. In addition to exploring renewable energy sources, we are committed to developing resource circulation technologies to address future regulatory changes and market demands while creating opportunities for new markets and business development.