2024

Nature and Climate Assessment Report

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Belief and Vision

Wiwynn embraces the vision of "Unleash the Power of Digitalization, Ignite the Innovation of Sustainability." While driving digital transformation, we leverage innovation to advance sustainable development.

Guided by the belief of "Prosperity for People and the Planet," we place ESG at the core of our business operations and sustainability strategy. We have established four strategic pillars—Eco-friendly operation, Driven people with shared beliefs, Sustainable Supply Chain, and Innovation with green technology—to embed sustainability governance from the inside out. Through clearly defined performance indicators, we continuously strengthen energy management and operational efficiency, advancing energy conservation, emissions reduction, and circular resource utilization. For our employees, we cultivate an inclusive, safe, and growth-oriented workplace culture. Across the supply chain, we work closely with partners to build a low-carbon, sustainable value chain. Through green innovation, we leverage technology to generate positive impacts on the natural environment.

Since 2019, Wiwynn has disclosed climate-related information in alignment with the TCFD framework. We continue to integrate climate considerations into business operations and investment decisions to address both climate-related risks and opportunities, thereby accelerating the realization of climate solutions, reducing greenhouse gas emissions, and fulfilling corporate social responsibility.

Since 2021, Wiwynn has launched the Ocean Hugs coastal afforestation initiative, extending our efforts from land to ocean to establish a green ecological corridor dedicated to biodiversity and ecosystem restoration. To strengthen the framework for nature governance and enhance both awareness and concrete actions on natural capital issues, we further introduced the Nature, Biodiversity, and No-Deforestation Policy in 2025. This policy underscores our commitment to protecting ecosystems and the natural environment, preventing biodiversity loss, and restoring the planet's ecological systems—paving the way toward a sustainable future.

Achievement and Highlights

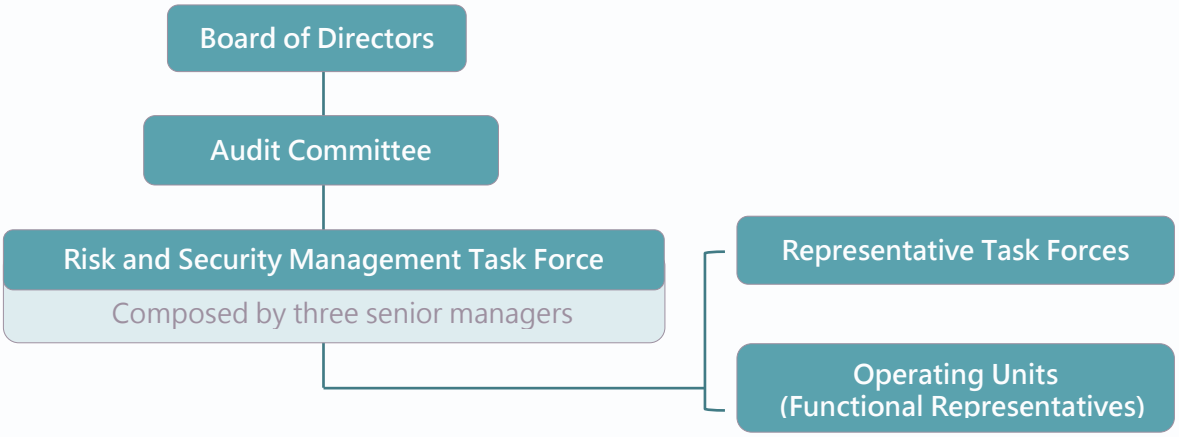
Wiwynn is dedicated to advancing climate action and conserving natural ecosystems. In line with the TCFD framework, we disclose climate-related information and have established a governance body for climate issues to progressively strengthen our governance foundations and management mechanisms. We are committed to achieving 100% renewable energy use by 2030 and are implementing a comprehensive decarbonization roadmap toward net-zero emissions. All operating sites continuously identify energy-saving opportunities, implement improvement measures, and actively explore alternative and diversified energy solutions. As of 2024, Wiwynn' s global renewable energy adoption rate has reached 66.77%.
We support suppliers in enhancing carbon management capabilities through collaboration and collective action to strengthen their climate resilience. At the same time, we advance low-carbon product design, increase the use of recycled materials, and promote circular resource utilization to achieve carbon reduction benefits throughout the product lifecycle. Furthermore, we support the Convention on Biological Diversity (CBD) and SDGs, working with academic institutions, local communities, and nonprofit organizations to promote marine conservation, habitat restoration, and environmental education—realizing our vision of a net-zero, sustainable future in harmony with nature.

Year	
2019	• **TCFD Introduction** Disclosed climate-related information following the TCFD framework
2020	• **Governance Structure** Established the Sustainability Committee as the highest governance body for ESG issues • **ISO 14064 Verification** The Headquarters introduced ISO 14064-1:2018
2021	• **Level 5 Excellence Grade** TCFD report obtained a third-party conformity assessment • **Use of Recycled Plastics** Gradually introduced recycled plastics in products Packaging materials used recycled EPE (expandable Polyethylene)

Year	
2022	• **27.73%** Renewable energy usage rate of all global sites • **Green Power Supply at Headquarters** The Headquarters achieved full-area green electricity supply (for Wiwynn-owned electricity accounts) • **Supply Chain Engagement** Launched supply chain carbon questionnaires and engagement • **Climate Initiatives** Joined the Taiwan Climate Alliance
2023	• **Use of Recycled Steel** Adopted recycled steel in chassis panels for new products • **SBTi Target Setting** The science-based emission reduction target approved by SBTi • **Carbon Data Integration and Management** Established a carbon management platform • **Green Power Supply at Tainan Factory** Green electricity supply to Tainan factory starting end of 2023 • **Solar Panels Installed at Malaysia Factory** Malaysia factory (WYMY) installed rooftop solar panels, generating green electricity equivalent to 31% of its factory electricity consumption • **Setting More Ambitious Emissions Reduction Targets** Commitment to 100% renewable energy usage by 2030 Targeting at realizing net-zero by 2040 • **57.07%** Renewable energy usage rate of all global sites
2024	• **A List** CDP Climate Change Rating • **Green Building** Malaysia factory (WYMY) obtained GBI (Green Building Index) Gold certification • **66.77%** Renewable energy usage rate of all global sites • **Supply Chain Carbon Inventory** 85% of the supply chain completed carbon inventory and passed third-party verification • **Biodiversity Policy** Board-approved policy on Nature & Biodiversity and No-Deforestation Policy

Overall Risk Management

Wiwynn has established a Risk and Security Management Task Force responsible for consolidating risk and safety issues. The task force reports these issues to the Audit Committee and the Board of Directors at least once a year. The most recent report to the Audit Committee and the Board of Directors was presented on February 27, 2025. In addition, in 2024, sustainability information management was integrated into the internal control system and included in the internal audit' s annual audit plan to ensure that sustainability information and related management procedures are implemented accurately and effectively under internal control measures.



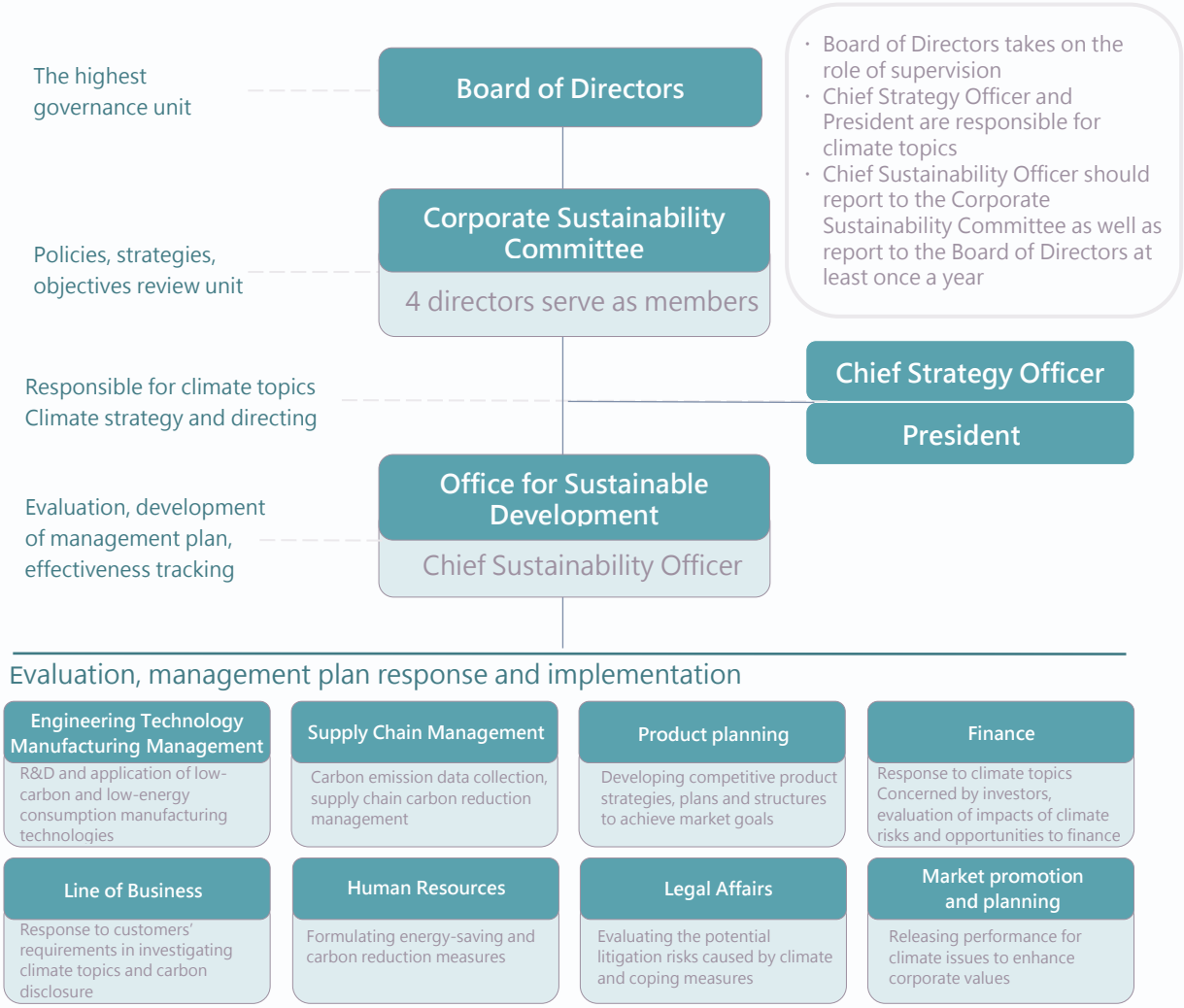
Board of Directors	It is the highest responsible unit for the Company's risks and safety management to oversee the approval of risk management policies and relevant regulations, supervision of the overall implementation of risk management, and the ensuring of the effective operation of risk management mechanism.
Audit Committee	It is to assist the Board of Directors to implement its duties in risk management, review risk management policies and procedures as well as to instruct and approve risk appetite, priority of risk control, and risk classification.
Risk and Security Management Task Force	CEO should assign members of the task force to carry out collection and overall evaluation of material risks; the task force should submit the report of implementation state of risk management to the Audit Committee and the Board of Directors regularly (at least once a year).
Representative Task Forces	In charge of identifying and analyzing each promotion, submitting information of risk management regularly to the Risk and Security Management Task Force, and ensuring risk management on each promotion and effective execution of relevant control procedures.
Operating Units (functional representatives)	The Office for Sustainable Development is responsible for identifying and analyzing climate-related risks and opportunities, compiling the findings and reporting them to the Risk and Security Management Task Force. Climate issues are incorporated into the Company' s overall risk considerations, with ongoing tracking of the effectiveness of climate strategies. The highest supervisors in each unit should act as functional representatives of risks and cooperate with Risk and Security Management Task Force and each representative Task Force to ensure operating units fully enforce the risk management system and relevant operating procedures.

Governance Structure and Mechanisms

Committee is a functional committee under the management of the Board of Directors. It assists the Board of Directors to review climate policy, strategy, and goals. It consists of four directors, and an independent director is appointed as the convenor. At least two meetings should be held every year.

The Chief Sustainability Officer submits reports of climate topics to the Corporate Sustainable Development Committee and the Board of Directors. The latest date of submission was February 27, 2025.

The Chief Strategy Officer and the President are responsible for climate issues, overseeing the formulation of climate strategies and overall strategic direction. The Chief Sustainability Officer and heads of operational units were responsible for assessing climate-related issues and developing management plans based on strategic objectives. The effectiveness of these management plans was reported during regular monthly meetings to the Chief Strategy Officer and the President to ensure progress toward achieving the set targets.



Link between Climate Strategy and Remuneration System

The remuneration policy for directors follows the Company's Articles of Incorporation and Principles of Remuneration to Directors and Functional Committees, as well as taking into consideration the norm of the industry, the Company's business and sustainability performance, the responsibility of the post, and the operating status of each functional committee.

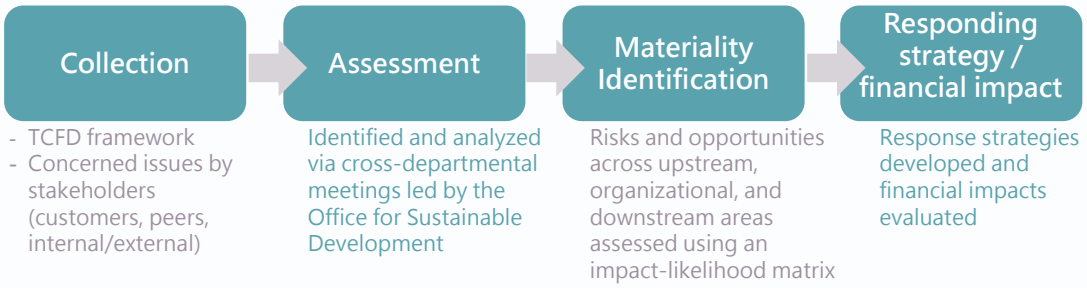
Wiwynn' s climate strategy is centered on "eco-friendly operation," "sustainable supply chains," and "innovation with green technology." Key areas include commitments to using renewable energy, reducing electricity consumption in manufacturing processes, supply chain decarbonization efforts, and optimizing energy-saving and carbon-reduction product designs. Senior executives (including the president and their direct reports) are required to set directly related key performance indicators (KPIs), which must account for at least 10% of their evaluations, effectively linking individual performance with compensation to encourage and strengthen goal execution.

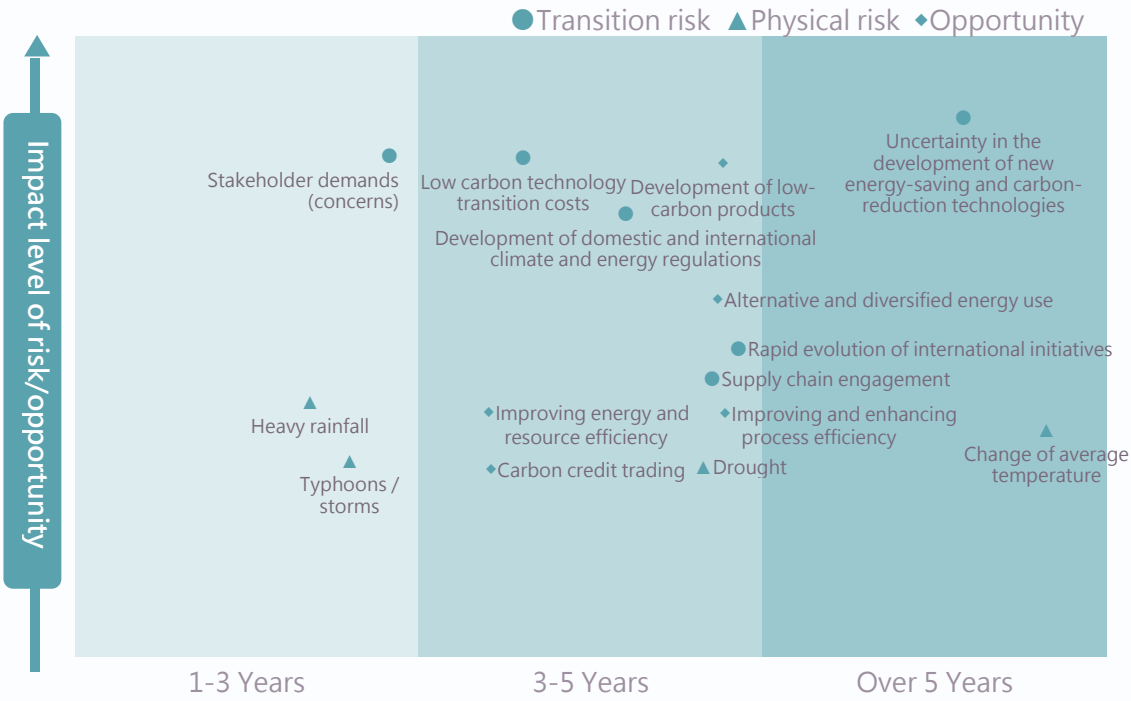
Besides the management, we established Operating Procedures for Energy-Saving and Carbon Reduction Reward for the employees. The procedures include proposal bonus for greenhouse gas reduction and energy efficiency enhancement to encourage employees to submit proposals and make them aware of sustainability so that everyone could participate in the fulfillment and progress of climate strategy.

ESG Key Performance Indicators	CEO & President	Managers of each Business Units (Including those responsible for each strategic objective)
Sustainable supply chain	15%	10%-15%
Achieve the annual target for emission reduction through using renewable energy in the supply chain		
Innovation with green technology		
Low-carbon products		
Energy saving technology		
Green materials		
Eco-friendly operation		
Commitments to using renewable energy		
30% of PCBA production lines glo9bally meet low energy consumption standards		
reduce test power consumption		

Climate-related Risks Identification, Assessment and Management

The Office for Sustainable Development and all operational units conduct at least one annual review of climate-related issues based on internal and external developments, referencing industry peers and benchmark companies. The identified risks include both transition and physical risks, such as current regulations, emerging regulations, technology, market dynamics, reputation, litigation, acute disasters, and chronic disasters. Time horizons are defined as short-term (1–3 years), mid-term (3–5 years), and long-term (more than 5 years). The analysis also considers existing and emerging climate-related regulations, such as the "Climate Change Response Act," the "Renewable Energy Development Act," and various regional "Low-Carbon City Self-Governance Ordinances." A matrix analysis is conducted based on the severity of impact and likelihood of occurrence, identifying risks and opportunities across the value chain, from upstream to internal operations and downstream.





Climate-related Risks and Opportunities

In 2024, we identified climate transition risks with significant impacts, with the degree of impact and likelihood of stakeholder demands (concerns) being the highest, followed by the costs associated with transitioning to low-carbon technologies.

As attention to climate issues increased, enterprises faced stricter carbon reduction standards and promoted decarbonization through supply chain influence, further escalating transition risks and cost pressures.

Simultaneously, the rapid advancement of AI technology accelerated the growth in computing power demand, leading to heightened challenges in energy consumption and carbon emissions. Balancing technological development with energy conservation and carbon reduction became a critical issue for corporate competitiveness and sustainable development.

Regarding physical risks, the impact and likelihood of heavy rainfall were relatively high. With the intensification of global warming, the intensity and frequency of extreme weather events continued to increase, and the affected regions became more concentrated, thereby increasing the uncertainty of operational risks and disaster losses for enterprises.

In terms of climate-related opportunities, the development of low-carbon products provided key growth opportunities for enterprises, aiding in maintaining long-term competitive advantages amid the global trend of carbon reduction.

Climate-related Transition Risks

Item	Level of risk	Risk coverage	Time	Impact/ financial influence	Response/ measures
Development of domestic and international climate and energy regulations	Medium-high	Upstream Operation Downstream	Mid-term (3-5 years)	- Carbon tax or carbon fee may increase operating costs and expenses - Capital expenditures may rise due to renewable energy infrastructure development	Continue monitoring the development of relevant laws and policies at operational sites and adjust response measures accordingly
Rapid evolution of international initiatives	Medium-low	Upstream Operation Downstream	Mid-term (3-5 years)	Renewable energy investments may lead to increased operating costs	Review current renewable energy sources, consider additionality, and proactively prepare for future changes
Low carbon technology transition costs	High	Operation	Mid-term (3-5 years)	Increased costs of green materials and advanced R&D technologies may raise direct and operating expenses	- Collaborate with the supply chain on technology development - Replace high-energy-consuming equipment and reduce idle power usage
Stakeholder demands (Concerned)	High	Upstream Operation Downstream	Short term (1-3 years)	Increase the proportion of renewable energy use and manage supply chain decarbonization may raise operational and management costs	- Plan to achieve 100% renewable energy usage by 2030; as of 2024, the usage rate has reached 66.77% - Promote greenhouse gas inventory and verification across the supply chain, and establish carbon reduction targets
Supply chain engagement outcomes	Medium-high	Upstream Operation Downstream	Mid-term (3-5 years)	Increased supply chain decarbonization management costs and operational costs	Currently, 85% of suppliers have greenhouse gas inventory capabilities and have passed third-party verification. Based on this, further efforts will be made to achieve carbon reduction goals.
Uncertainty in the development of new energy-saving and carbon-reduction technologies	High	Operation Downstream	Long term (Over 5 years)	R&D, testing, and field deployment may lead to increased operating costs and capital expenditures	Continue monitoring technology trends and broadly assess the application potential of diverse emerging technologies

Climate-related Physical risks

Item	Level of risk	Risk coverage	Time	Impact/ financial influence	Response/ measures
Change of average temperature	Medium -low	Upstream Operation Downstream	Long term (Over 5 years)	Increased energy costs and cooling equipment upgrades may result in higher operating costs and capital expenditures	- The Headquarters implemented ISO 50001 Energy Management System and set an annual energy efficiency improvement target of at least 1%. Relevant staff receive training as ISO 50001 internal auditors to strengthen organizational energy management capabilities and internal audit mechanisms, ensuring the effectiveness and continuous improvement of energy-saving initiatives. - The Malaysia plant (WYMY) obtained Gold-level certification under the Green Building Index (GBI) for its operational site, contributing to energy savings and reduced water consumption.
Heavy rainfall	Medium -low	Upstream Operation Downstream	Short term (1-3 years)	- Equipment damage may lead to increased capital expenditure - Downtime losses - Logistics disruptions and delay-related costs	- Implement business continuity plans - Increase capital expenditures to enhance operational resilience - Strengthen automation development
Drought	Medium -low	Upstream Operation Downstream	Mid-term (3-5 years)	- Water scarcity may increase operating costs and cause operational disruptions - Rising raw material costs may also elevate operational expenses	- New facilities are equipped with water-saving devices and rainwater harvesting systems to reduce reliance on tap water and improve water resource reuse. In 2024, the water resource recovery rate reached 9.29%
Typhoons / storms	Medium -low	Upstream Operation Downstream	Short term (1-3 years)	- Equipment damage may lead to increased capital expenditure - Downtime losses - Logistics disruptions and delay-related costs	- Implement business continuity plans - Strengthen automation development

Climate-related Opportunities

Item	Level of Opportunity	coverage	Time	Impact/ financial influence	Response/ measures
Improving energy and resource efficiency	Medium-low	Operation	Mid-term (3-5 years)	Energy saving, carbon-reduction measures, and green building benefits help lower operating costs	Energy-saving initiatives implemented across facilities are estimated to save 413,500 kWh annually, equivalent to a reduction of 191.21 tons of CO2e
Development of low-carbon products	High	Upstream Operation Downstream	Mid-term (3-5 years)	Aligning with decarbonization trends to create business revenue	- By collaborating with upstream and downstream partners in technology development, Wiwynn co-creates ESG solutions. - According to calculations, energy-saving technologies in eight representative product models provide a total energy-saving benefit of 47,947,184 kWh over their life cycle, equivalent to a reduction of 23,686 tons of CO2e for downstream customers. - Currently, recycled materials including plastic, steel, aluminum, and EPE have been adopted. In 2024, this effort is estimated to reduce CO2e emissions by 5,250.581 tons.
Improving and enhancing process efficiency	Medium-low	Operation	Mid-term (3-5 years)	Improving process efficiency helps reduce operating costs and expenses	- Enhance the implementation of automated manufacturing processes - Developing low-power PCBA production lines and reduction of rack-testing power consumption during idle time
Alternative and diversified energy use	Medium-high	Operation	Mid-term (3-5 years)	Strengthen operational resilience to avoid carbon risks	Current efforts include in-house solar panel installations, green electricity procurement, and renewable energy certificates, while also evaluating the adoption of wind power and other feasible energy sources
Carbon credit trading	Medium-low	Operation	Mid-term (3-5 years)	Increase carbon reduction pathways to avoid carbon risks	Continue monitoring the carbon credit trading market

Financial Impact Assessment of Climate-Related Risks and Opportunities

Wiwynn identifies potential financial impacts of climate-related risks and opportunities by referencing the IEA' s World Energy Outlook, TCCIP future scenario factors, and international industry trend reports.

For transition risks, two IEA scenarios are used for analysis:

- STEPS (Stated Policies Scenario): This scenario reflects the implementation of existing energy and climate policies by various countries, projecting a global temperature rise of approximately 2.5°C by the end of this century.
- NZE (Net Zero Emissions by 2050 Scenario): This scenario aims for net-zero emissions in the global energy sector by 2050, ultimately limiting global warming to within 1.5°C.

For physical risks, we refer to the IPCC Sixth Assessment Report (AR6) and analyze four scenarios from the Shared Socioeconomic Pathways (SSP):

- SSP1-2.6 (low emission scenario)
- SSP2-4.5 (moderate emission scenario)
- SSP3-7.0 (high emission scenario)
- SSP5-8.5 (very high emission scenario)

By comparing differences under various policy strengths and emission reduction scenarios, we can more comprehensively assess the potential impacts of climate change on operations and financial performance.

	Scenario	Project global temperature rise by the end of the 21st century
Transition Risk	STEPS (Stated Policies Scenario)	~2.5 ℃
	NZE (Net Zero Emissions by 2050 Scenario)	~1.5 ℃
Physical Risk	SSP1-2.6	~2 ℃
	SSP2-4.5	~3.0 ℃
	SSP3-7.0	~4.0 ℃
	SSP5-8.5	>4°C

Transition Risks- Regulation Impact

Wiwynn assesses the financial impacts resulted from regulations by referencing current and planned carbon pricing systems and regulations at its global operational sites. This analysis considers two climate scenarios, NZE (Net Zero Emissions Scenario) and STEPS (Stated Policies Scenario), with emissions covering Scope 1 and Scope 2, and compares two reduction strategies with different emission pathways:

- BAU strategy: Maintain existing plans (business-as-usual) without considering renewable energy use.
- RE strategy: Actively pursue emission reductions and achieve 100% renewable energy use by 2030.

The assessment covers the potential financial impacts of changes in carbon prices and electricity costs:

- Under the NZE scenario, the financial impact exceeds that of the STEPS scenario, highlighting greater risks and cost pressures from stricter policies and higher carbon prices.
- In both scenarios, the BAU strategy results in higher financial impacts than the RE strategy, reflecting that actively adopting renewable energy helps reduce long-term financial risks.

Reduction Strategy	STEPS Scenario			NZE Scenario		
	2030	2040	2050	2030	2040	2050
BAU Strategy						
RE Strategy						

Note: Proportion of potential financial impacts from carbon pricing and electricity costs relative to revenue

□ ≤ 0.15%

0.15% < x < 1%

Note 1: Analysis Assumptions and Parameters:

- Carbon Price: Calculated only for sites in Taiwan. Among all operational sites, only Taiwan has implemented a specific carbon pricing system, targeting electricity, gas supply, and manufacturing operators with annual emissions exceeding 25,000 t-CO_2e. A carbon fee of NT$300 per ton will be levied starting in 2026. This analysis assumes that the emission threshold remains unchanged throughout the analysis period and does not consider preferential rates. Future carbon price projections are based on the carbon price growth rates from the IEA 2024 Report:
  - STEPS: Based on the growth rates in the Announced Pledges Scenario (APS) for emerging market and developing economies with net-zero pledges. APS falls under the stated policies scenario, differing from STEPS in assuming countries meet their pledged climate targets on schedule.
  - NZE: Based on the growth rates in the Net Zero Emissions by 2050 Scenario for emerging market and developing economies with net-zero pledges.
- Electricity Costs (Gray and Green Electricity): Based on actual costs at each operational site. Future electricity cost projections are derived from the growth rates in the IEA 2024 report, excluding nuclear power:
  - STEPS: For the US and Mexico, the "STEPS US scenario" in "IEA WEO 2024 Electricity Costs" is used; for Taiwan and Malaysia, the "STEPS China scenario" is applied.
  - NZE: For the US and Mexico, the "NZE US scenario" in IEA WEO 2024 Electricity Costs is used; for Taiwan and Malaysia, the "NZE China scenario" is applied.

Data Source: International Energy Agency (2024), Global Energy and Climate Model Documentation 2024, IEA, Paris

Transition Risks - Other

Other transition risks such as international initiatives, low-carbon technologies, stakeholder concerns, supply chain negotiations, and uncertainty in emerging technologies are primarily associated with market risks, with potential financial impacts estimated to exceed 1% of total revenue.

To mitigate such impacts, the company will continue to advance renewable energy adoption strategies and invest in the development of innovative energy-saving technologies. In addition, through supplier advisory programs and collaboration mechanisms, we aim to support upstream and downstream partners in strengthening low-carbon capabilities, thereby enhancing overall resilience and competitiveness.

Physical Risks

To assess the potential impacts of extreme weather events related to climate change on Wiwynn' s operations, this analysis conducted simulations under scenarios of high temperature, heavy rainfall, drought, and typhoons. Multiple global climate models (GCMs/ESMs) were applied across different scenario pathways (SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5), using the baseline period (1995–2014) as a reference. Thresholds for various risk factors were established to evaluate the potential increase in electricity demand caused by rising temperatures, as well as the risks of operational disruption from heavy rainfall and drought. The possible financial impacts on revenue were then quantified.

With the continued trend of rising temperatures and more frequent extreme weather events, Wiwynn' s primary production sites in Taiwan may face risks such as increased cooling loads, short-term production stoppages, and higher operating costs. Current assessments suggest that most financial impacts are below 1% of total revenue; however, uncertainties associated with future risks remain significant. Moving forward, Wiwynn will continue to mitigate potential impacts through enhanced energy management, equipment upgrades, operational adjustments, and strengthened disaster resilience measures, thereby ensuring operational stability and financial soundness.

Note: Due to global warming, future sea surface temperatures and typhoon moisture content are expected to increase significantly, leading to a higher proportion of typhoons with stronger precipitation capacity. If changes in typhoon tracks and frequency are not considered, and only rainfall intensity is taken into account, projections suggest that by the end of the 21st century, the number of typhoons making landfall in Taiwan will decrease, while the proportion of intense typhoons and their rainfall intensity will increase. In this analysis, typhoon-related risks are therefore represented by heavy rainfall risk. (Source: Climate Change Disaster Risk Adaptation Platform – Projection of Extreme Typhoon Event, https://dra.ncdr.nat.gov.tw/Frontend/Disaster/ClimateDetail/BAL0000011)

High Temperature	2030		2040		2050	
	New Taipei City	Tainan City	New Taipei City	Tainan City	New Taipei City	Tainan City
SSP1-2.6						
SSP2-4.5						
SSP3-7.0						
SSP5-8.5						

Note:
- □ Temperature change < 1℃
- ■ Temperature change ≥ 1℃ and potential financial impact of increased electricity costs ≤ 0.1% of revenue
- ■ Temperature change ≥ 1℃ and potential financial impact of increased electricity costs = 0.1%~1% of revenue

Note 1: Simulation assumptions and parameters:
- High temperature and air-conditioning load
- For each 1℃ increase in daily maximum temperature, building cooling demand increases by an average of 6%.
- Electricity cost assessment baseline:
  - Under the SSP1-2.6 pathway, the NZE (Net Zero Emissions by 2050 Scenario) with a BAU (Business-As-Usual) strategy is used as the reference for evaluation.
  - For other pathways, the STEPS (Stated Policies Scenario) with a BAU (Business-As-Usual) strategy is used as the basis to evaluate the cost impacts of increased electricity demand driven by temperature rise.

Source: TCCIP – Key Climate Indicators (https://tccip.ncdr.nat.gov.tw/ds_05.aspx)

Heavy Rainfall	2030	2040	2050
SSP1-2.6			
SSP2-4.5			
SSP3-7.0			
SSP5-8.5			

Note:
- □ Change in days of extreme rainfall ≤ 0.2
- ■ 0.2 < Change in days of extreme rainfall ≤ 0.3; potential financial impact of operational disruption ≤ 0.1% of revenue
- ■ 0.2 < Change in days of extreme rainfall ≤ 0.3; potential financial impact of operational disruption = 0.1%~1% of revenue
- ■ 0.3 < Change in days of extreme rainfall ≤ 0.4; potential financial impact of operational disruption ≤ 0.1% of revenue
- ■ 0.3 < Change in days of extreme rainfall ≤ 0.4; potential financial impact of operational disruption = 0.1% ~1% of revenue

Note 1: Simulation assumptions and parameters:
- Definition of "extreme rainfall event": daily precipitation ≥ 200 mm.
- Change in days of extreme rainfall ≤ 0.2: indicates a significant increase in the number of days per year compared with the baseline period (1995–2014).
  - 0.2 < Change in days of extreme rainfall ≤ 0.3: indicates a significant annual increase, potentially causing at least 1 day of operational disruption.
  - 0.3 < Change in days of extreme rainfall ≤ 0.4: indicates a significant annual increase, potentially causing at least 2 days of operational disruption.
- Scope of assessment: This simulation considers only the Tainan site in Taiwan, which is Wiwynn's primary production site; the Taipei site is an office location and therefore excluded from evaluation.
- Cost boundaries: Calculations include only operating cost items such as employee benefit expenses (salaries, labor and health insurance, pensions, etc.), depreciation, and amortization expenses.

Source: TCCIP – Key Climate Indicators (https://tccip.ncdr.nat.gov.tw/ds_05.aspx)

Drought	2030	2040	2050
SSP1-2.6			
SSP2-4.5			
SSP3-7.0			
SSP5-8.5			

Note:
- □ Change in consecutive dry days ≤ 0.4
- ■ 0.4 < Change in consecutive dry days ≤ 0.5; potential financial impact of operational disruption ≤ 0.1% of revenue
- ■ 0.4 < Change in consecutive dry days ≤ 0.5; potential financial impact of operational disruption = 0.1%~1% of revenue
- ■ 0.5 < Change in consecutive dry days ≤ 0.6; potential financial impact of operational disruption ≤ 0.1% of revenue
- ■ 0.5 < Change in consecutive dry days ≤ 0.6; potential financial impact of operational disruption = 0.1%~1% of revenue

Note 1: Simulation assumptions and parameters:
- Definition of drought event: the longest consecutive number of days within a year with daily precipitation less than 1 mm.
- Change in consecutive dry days ≤ 0.4: indicates a significant increase in annual occurrence compared with the baseline period (1995–2014).
  - 0.4 < Change ≤ 0.5: indicates a significant annual increase, potentially causing at least 1 day of operational disruption.
  - 0.5 < Change ≤ 0.6: indicates a significant annual increase, potentially causing at least 2 days of operational disruption.
- Scope of assessment: This simulation considers only the Tainan site in Taiwan, which is the company's primary production site; the Taipei site is an office location and therefore excluded from evaluation.
- Cost boundaries: Calculations include only operating cost items such as employee benefit expenses (salaries, labor and health insurance, pensions, etc.), depreciation, and amortization expenses.

Source: TCCIP – Key Climate Indicators (https://tccip.ncdr.nat.gov.tw/ds_05.aspx)

In addition, Wiwynn conducts a physical risk quantification analysis based on Hazard, Exposure, and Vulnerability. The analysis applied CMIP6 model projections to evaluate the probability of extreme rainfall under different scenarios and to assess the spatial distribution of future slope disaster risk levels. In this framework, hazard is represented by the probability of extreme rainfall, vulnerability is determined by geological disaster potential and the extent of landslide-prone areas across Taiwan, and exposure is defined by the company' s operational site locations in Taiwan. By integrating these three indicators, slope disaster risks were quantified and classified into five levels, with higher risk levels indicating greater potential impacts.

Comparison of slope risk levels under different climate scenarios and time periods:

Site	SSP1-2.6			SSP2-4.5			SSP3-7.0			SSP5-8.5		
	Short-term	Mid-term	Long-term	Short-term	Mid-term	Long-term	Short-term	Mid-term	Long-term	Short-term	Mid-term	Long-term
New Taipei												
Tainan												

Note: Short-term (2021–2040), Medium-term (2041–2060), Long-term (2081–2100)
Risk level □Level 1 ■Level 2 ■Level 3 ■Level 4 ■Level 5

Based on the analysis, Wiwynn' s operational sites in the New Taipei area exposes to a Level 3 slope disaster risk under any climate scenarios, whether in the short-term, medium-term, or long-term. This indicates that the region possesses a certain degree of vulnerability and potential impact under future climate change scenarios. Therefore, proactive planning and implementation of adaptation measures are required, including short-term risk assessments and emergency response plans, as well as medium- to long-term site adjustments and sustainable development strategies, to mitigate the impacts of extreme rainfall and ensure operational safety and regional resilience.

Timeframe		Adaptation Plan
Short-term	1-3 years	- **Rolling Review:** Conduct annual assessments of slope hazard and extreme rainfall risks for operational sites, continuously updating data and methodologies to ensure the effectiveness of risk management. - **Emergency Plans:** Develop and drill emergency response procedures covering employee evacuation, asset protection, and backup measures to enable rapid response during unforeseen events.
Medium-term	3-10 years	**Site Reconstruction or Relocation:** Evaluate relocation or rebuilding options for operational sites located in high-risk areas.
Long-term	>10 years	**Sustainable Development Plans:** Implement energy-saving, carbon reduction, and circular economy measures, integrating disaster adaptation with corporate sustainability strategies to ensure long-term balance between economic performance and environmental stability.

Opportunities

To respond to the transitional challenges and market demands brought by climate change, Wiwynn actively identifies and promotes various climate-related opportunities to enhance operational resilience and generate positive financial impacts.

In terms of improving energy and resource efficiency, Wiwynn conducts annual identification of energy-saving opportunities at each site and implements corresponding energy improvement plans. By adopting the ISO 50001 Energy Management System, an annual energy-saving target of at least 1% is set to reduce energy consumption and costs. Secondly, in low-carbon product development, the company continues to introduce green design and the application of recycled materials to meet the growing demand for low-carbon products from international customers and markets.

In terms of process efficiency improvement, the company invests in high-performance equipment and smart manufacturing solutions to further enhance operational efficiency and cost-effectiveness. At the same time, the company promotes energy substitution and diversification, actively introducing renewable energy, self-generated electricity, and other alternative energy sources to reduce dependence on conventional fossil fuels, thereby effectively mitigating financial risks from carbon pricing and energy price volatility. Finally, through the assessment and application of carbon credit trading, the company can flexibly utilize carbon market mechanisms to reduce compliance costs and create additional value while meeting regulatory requirements and customer demands.

Through energy efficiency improvement, low-carbon product innovation, process optimization, energy diversification, and carbon trading strategies, the company expects to generate positive financial impacts exceeding 1% of total revenue. These measures not only help reduce operational costs and compliance risks, but also strengthen Wiwynn' s competitive advantage in the global low-carbon transition and achieve sustainable growth.

Opportunities:

Improving energy and resource efficiency	
Development of low-carbon products	
Improving and enhancing process efficiency	
Alternative and diversified energy use	
Carbon credit trading	

Note: Potential financial impact of opportunity items as a percentage of revenue

- ☐ < 1%
- ■ > 1%

Emissions Reduction Pathway Planning

Wiwynn bases its calculations and estimations of climate mitigation and adaptation indicators on the SBTi emissions reduction pathway. Using 2021 as the baseline year, Wiwynn targets an absolute annual reduction of 2.5% in Scope 1 and 2 emissions, achieving a 25% reduction in Scope 1 and 2 and a 12.3% reduction in Scope 3 emissions by 2031. Wiwynn is committed to 100% renewable electricity usage by 2030, with the long-term goal of reaching net-zero emissions by 2040.

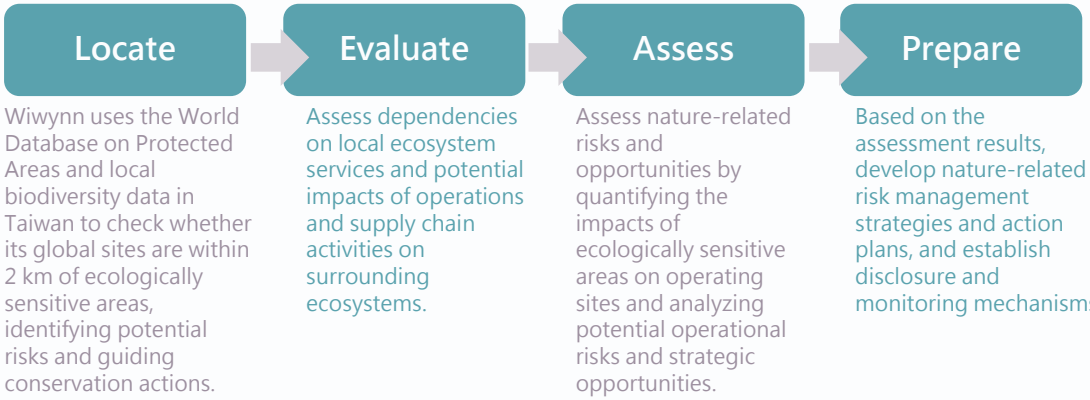
As the company' s operational scale continues to expand—including the addition of the Kaohsiung Luzhu plant, Malaysia plant, Mexico plants III, and the ongoing U.S. plant development—emissions are expected to grow. Nevertheless, to uphold its sustainability commitments, the company continues to improve energy efficiency, invest in renewable energy and low-carbon technologies, demonstrating a commitment to achieving carbon reduction alongside corporate growth.

Scope			
Scope 1 (0.02%)	- Inventory equipment using high-GWP greenhouse gases	- Replacement solutions for equipment using high-GWP greenhouse gases	- Gradually replace equipment using high-GWP greenhouse gases
Scope 2 (0.23%)	- Establish low-energy PCB production lines - Reduce idle testing power consumption by 2–10% - Procure renewable energy based on local regulations and resource planning at each operational site; achieve 66.77% renewable energy usage globally by 2024	- 100% low-energy PCB production lines - 100% global renewable energy usage	- Achieve 100% global renewable energy usage
Scope 3[Note] (99.5%)	- Require/assist suppliers to complete carbon inventories and obtain external verification - Require suppliers to set carbon reduction targets - Require suppliers to set renewable energy (RE) targets - Collaborate with suppliers to develop materials with high recyclability - Enhance steel embossing technology to reduce raw material consumption	- Continuously review supplier carbon reduction and RE targets, and adjust or revise goals as needed - Inability to coordinate with suppliers for equipment replacement - Require suppliers to use low-carbon materials	- Continuously review supplier carbon reduction and RE targets, and adjust or revise goals as needed - Inability to coordinate with suppliers for equipment replacement - Require suppliers to use low-carbon materials -
		2030	2040 2050

Note: Category 1 Purchased Goods and Services accounts for 28%, while Category 11 Use of Sold Products accounts for 70%.

Environmental and Biodiversity Impact Assessment

Wiwynn follows the Taskforce on Nature-related Financial Disclosures (TNFD) guidance and adopts the LEAP approach (Locate, Evaluate, Assess, Prepare) to systematically identify the interdependencies between its major global operating sites and ecosystems. The company analyzes nature-related dependencies and impact drivers to develop corresponding strategies and action plans.



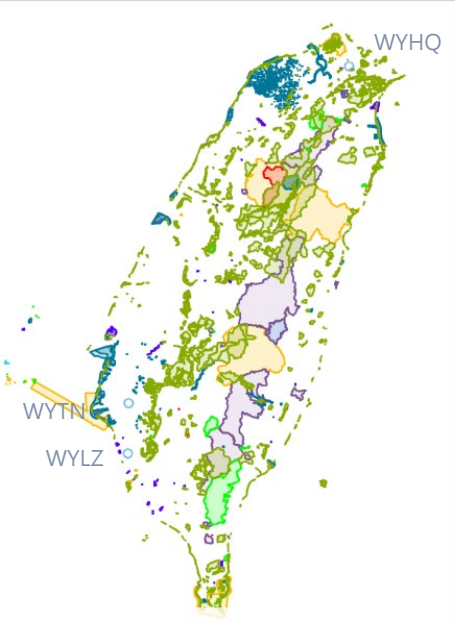
Identification of Biodiversity Sensitive Areas

Wiwynn' s major global operating sites include the Headquarters (WYHQ), Tainan Plant (WYTN) and Luzhu Plant (WYLZ), Malaysia Plant (WYMY), and Mexico Plants (WYMX I&II, III), totaling six key sites. For these sites, the company uses the World Database on Protected Areas (WDPA) for geographic overlay analysis to identify their relation to international biodiversity sensitive areas. For the Taiwan sites, this is further combined with ecological survey data from the Forestry and Nature Conservation Agency under the Ministry of Agriculture to identify biodiversity sensitive hotspots.

Considering the spatial relationship with biodiversity impacts, a distance-tiered analysis is applied, distinguishing between direct impacts (within the plant premises) and indirect impacts (within a 2km radius from the plant center).

Based on this analysis, Wiwynn' s major operating sites are currently not located within potential biodiversity sensitive areas. The company will continue to follow the TNFD framework, integrating the latest international and local ecological data, regularly reviewing biodiversity risks around its sites, and taking adaptive measures as needed to uphold its long-term commitment to the natural environment.

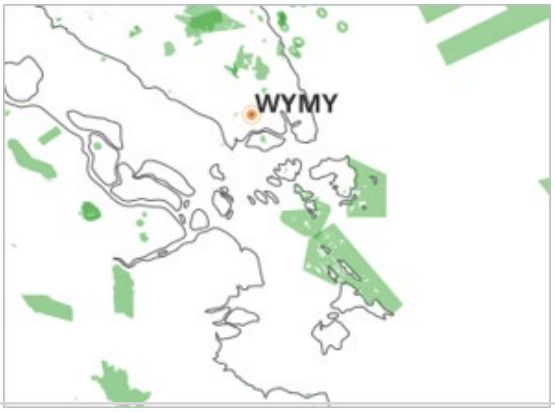
Identification of Biodiversity Sensitive Areas



- National Park Boundaries
- Wildlife Conservation Area
- Critical Habitat for Wildlife
- Local-level Important Wetland
- National Important Wetland
- Nature Reserve

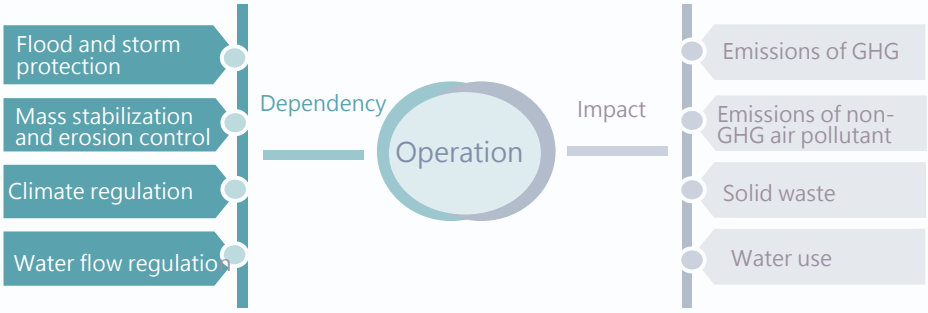
Including IUCN-listed species, CITES-listed species, Taiwan legally protected species, species listed in the Taiwan Red Data Book, species types (endemic, introduced, questionable, native), and taxonomic groups (fish, vascular plants, amphibians, birds).

IUCN-defined protected areas & Other Effective Area-based Conservation Measures (OECMs)



Dependency and Impact

ENCORE analysis shows that the industry to which Wiwynn belongs is generally highly dependent on water supply, stable aquatic environments, and climate systems to support operations and manufacturing processes, while energy consumption, wastewater treatment, and waste management in manufacturing activities constitute the main potential environmental impacts.



	Natural capital/ Ecosystem services	Operational dependence on natural capital and ecosystem services
Dependency	Flood and storm protection	Facilities in production sites may be vulnerable to extreme weather events (e.g., floods, strong winds) and rely on natural terrain and ecological barriers to maintain the safety and stability of operations.
	Mass stabilization and erosion control	If a plant is located in areas prone to heavy rainfall or on slopes, it depends on natural vegetation and terrain stability to prevent soil erosion or landslides.
	Climate regulation	There is a high dependence on global climate stability to ensure normal operation of power, logistics, and supply chains.
	Water flow regulation	Maintaining stable seasonal water supply is essential to prevent operational disruptions caused by droughts or heavy rainfall.
	Environmental Impacts	**Potential impacts of operational activities on the environment**
Impact	Emissions of GHG	Carbon emissions from electricity consumed by operations, manufacturing, logistics, and the supply chain exert direct and indirect pressures on the climate.
	Emissions of non-GHG air pollutants	Volatile organic compounds (VOCs) and particulate matter emitted from equipment operation and manufacturing processes affect local air quality.
	Solid waste	Waste generated during production—such as component scrap, packaging materials, and electronic waste—can have environmental impacts if not properly managed.
	Water use	Excessive water withdrawal or improper water management may increase local water stress, affecting other users and the sustainability of ecosystems.

Nature-related Risk and Opportunity Analysis

Based on the identification of biodiversity sensitive areas (Locate) and the screening of nature-related dependencies and impacts (Evaluate), potential risks and opportunities are analyzed (Assess) in combination with industry characteristics and operational conditions.

Nature-related risks	Nature-related opportunity	Response / Measure
Negative impacts of new plants on ecology Unaddressed ecological impacts from new plant assessments may cause project delays.	**Restoration / rehabilitation to ecosystems or habitats** Compensatory afforestation and habitat restoration balance development and conservation.	Since 2021, Wiwynn' s coastal afforestation program has created a green corridor linking biodiversity and ecosystem restoration.
Revisions to nature and ecology regulations Taiwan' s 2050 net-zero transition launches the "Zero-Waste Resource Circulation" initiative and proposes the Circular Economy Promotion Act.	**Circular reuse** Operations are transitioning to a circular reuse model, reducing dependence on and impact to natural resources.	In collaboration with customers, Wiwynn recycles reusable memory modules from servers at the end of their lifecycle. In 2024, a memory DIMM tray recycling and reuse program will also be launched to further enhance resource circularity and carbon reduction benefits.
Operational transformation for low ecological impact In response to international initiatives or stakeholder requirements, low-impact raw materials are adopted.	**Use of low-impact materials** Reducing raw material use and promoting material recycling to create products with minimal environmental impact.	Products and packaging incorporate recycled materials, and embossed metal chassis are used to reduce raw material consumption.
Water supply shortage Unstable water supply during droughts or extreme rainfall may affect operations.	**Improving water use efficiency** Implementing water-saving technologies, rainwater harvesting, and reclaimed water reuse to enhance water efficiency and operational resilience.	Currently, operations use water mainly for domestic purposes, with no process water. Water comes from tap water, reclaimed water, and groundwater. Wastewater generated is limited to typical domestic wastewater. In 2024, 9.29% of total water withdrawal was reclaimed from rainwater, AC condensate, and handwashing, and reused for air-conditioning and landscape irrigation.
Impacts of gas emissions Air pollutants generated from processes may cause environmental degradation and compliance risks if they exceed regulatory limits.	**Air quality improvement** Reducing pollution and carbon emissions to lower regulatory risks and mitigate impacts of atmospheric deposition on soil, water, and vegetation.	Current process emissions include VOCs, NOx, SOx, and PM, all below reporting thresholds. Emissions will continue to be reduced through monitoring and pollution control measures.
Stakeholder concerns on natural ecology Investors, customers, and communities increasingly expect biodiversity and ecosystem protection. Failure to actively respond may affect company reputation and collaboration opportunities.	**Natural capital disclosure mechanism** Establishing a natural capital disclosure mechanism to enhance transparency and trust.	Implementing TNFD/ESG disclosure systems and regular communication Actions and outcomes of restoration / rehabilitation – to protecting ecosystems or habitats

Ecological Conservation Action

Following the "Prepare" stage in LEAP methodology, Wiwynn adopts the AR3T framework to guide ecological actions. This approach examines and implements measures across four dimensions: Avoid, Reduce, Restore & Regenerate, and Transform, aiming to minimize the impacts of operations on ecosystems and the environment, progressively generate conservation benefits, create long-term sustainable value, and move toward becoming a globally resilient company with strong natural capital stewardship.

Avoid

Avoid negative impacts at the source

- Avoid international and national protected areas, critical habitats, and high-risk geological zones during site selection
- Avoid periods of species reproduction or migration routes during construction and operations
- Incorporate ecological risk assessments early in decision-making to reduce fundamental impacts

Reduce

Reduce impacts that cannot be fully avoided

- - Install energy-efficient equipment in new PCB production lines to reduce idle power use and improve energy efficiency.
- Strengthen monitoring and control of air pollutants (VOCs, NOx, PM, etc.).
- Use embossed metal chassis design to reduce raw steel consumption by approximately 15%-20%。

Restore& Regenerate

Restore affected natural resources and promote ecosystem recovery or regeneration

- **Habitat restoration and afforestation programs to restore forests and wetlands**

  Implement coastal afforestation in Tainan’s Taijiang National Park to enhance wetland ecological functions and protect habitats of endangered species such as the black-faced spoonbill.
  Implement high-mountain afforestation at Wuling Farm to conserve water resources and restore habitats for Formosan salmon, improving stream ecosystem stability.
- **Coral reef restoration initiatives**

  Collaborate with Penghu governments and local foundations on coastal afforestation and coral restoration to create integrated marine-terrestrial ecosystems.
  Partner with National Taiwan Ocean University in Keelung’s Peace Island to restore native Taiwanese corals, introducing diverse recycled materials as artificial substrates to promote coral growth and biodiversity.
- Promote water resource recycling (from rainwater, AC condensate, handwashing water) for reuse in air-conditioning and landscape irrigation.
- Incorporate recycled steel and plastic into products.
- Launce memory module and DIMM tray recycling and reuse programs

Transform

Transform strategies and models for systemic change

- - Integrate renewable energy and circular economy practices into the company’s long-term sustainability strategy.
- **Expand the impact of environmental education**

  Plan to integrate marine curricula into more schools, educational institutions, and corporate training, combining local marine knowledge with global sustainability goals, and using diverse teaching materials to raise awareness and engagement in marine conservation and climate change.
- **Develop long-term coral restoration bases**

  Establish a permanent coral observation and education base at Peace Island Geopark to monitor restoration outcomes, collaborate with academic institutions on research and public engagement, creating a community-based sustainable demonstration site
- **Strengthen social impact and cross-sector collaboration**

  Actively connect resources, establish long-term partnerships with educational platforms, marine research institutions, and local communities to expand conservation networks and participation.
  Continue producing marine-themed storybooks, audiovisual content, and digital materials to bring marine knowledge closer to daily life and reach broader audiences.

Biodiversity and Ecosystem Conservation

To fulfill its commitment to biodiversity and ecosystem conservation, Wiwynn has been promoting a coastal afforestation program since 2021. The initiative aims to extend conservation efforts from land to sea, creating a green ecological corridor that connects biodiversity protection with ecosystem restoration.

In 2022, we selected Taijiang National Park, located near our Tainan Plant, as the second site for coastal afforestation. Taijiang is rich in natural and cultural resources, with the Qigu Lagoon formed from sediment accumulation in the historic Taijiang Inland Sea and surrounded by offshore sandbars that create a stable marine environment. It serves as a critical habitat for more than 200 species of migratory birds, including the Black-faced Spoonbill, and over 200 species of fish, shellfish, and crustaceans—among them three critically endangered and four endangered species. However, due to climate change and the aging of sandbars, these landforms are gradually narrowing, exposing the coastline to retreat risks. In response, we partnered with the Tse-Xin Organic Agriculture Foundation to carry out afforestation on Wanzailiao Sandbar, with the goal of building a healthy coastal forest, enhancing wetland ecological functions, promoting biodiversity restoration, strengthening natural carbon sinks, and safeguarding local culture and ecological sustainability.

In 2023, we expanded our conservation efforts to support a high-mountain reforestation program at Wuling Farm, dedicated to restoring the habitat of the Formosan landlocked salmon, an endemic species of Taiwan. This species primarily inhabits alpine streams below 17°C and has long faced threats from habitat degradation due to human development and natural disasters. By planting native tree species in surrounding areas, we help reduce soil erosion, conserve water resources, and stabilize water temperatures, thereby restoring the stream ecosystem and providing a more stable environment and food sources for the Formosan landlocked salmon.

Through coastal afforestation and ecological restoration programs, Wiwynn has planted 24,800 seedlings in Taiwan and 46,800 in overseas green industrial zones. These efforts demonstrate our strong commitment to biodiversity and forest conservation. Looking ahead, Wiwynn will continue to leverage corporate influence, work closely with partners, and unite internal and external stakeholders to drive green initiatives and collectively safeguard natural ecological resources.

From planting trees to restoring corals, Wiwynn continues to take concrete actions to safeguard forests and oceans, fulfilling our vision of environmental sustainability.

In 2024, we extended our coastal forest restoration program into marine conservation, partnering with the Penghu Government and the Tse-Xin Organic Agriculture Foundation to expand our efforts from planting trees on land to coral restoration under the sea—building a complete marine ecosystem. Together with local communities, we planted 10,000 seedlings, greening 2.5 hectares of land, and collaborated with local diving operators to restore 8,000 coral colonies, expanding coral reef coverage by 120 square meters. Healthy forests not only help purify water, but their natural leaf litter and fruit are also carried by currents and tides into the ocean, providing nutrients for juvenile shrimp and crabs in bays, which in turn attract larger fish species and enrich overall marine biodiversity. In addition, through a citizen scientist program, we initiated long-term coral health monitoring, implementing an integrated land–sea conservation strategy.

In the same year, we continued our marine conservation efforts at the Heping Island Geopark in Keelung, near our corporate headquarters, launching a new phase of coral restoration. In collaboration with the Institute of Marine Environmental and Ecology at National Taiwan Ocean University, we planted 296 coral colonies—covering seven native species of Taiwan—in the park' s seawater pools, enhancing ecological education and raising public awareness of the ecological value of northern Taiwan' s marine environment.

Looking ahead to 2025, to create a complete coral reef ecosystem, we will utilize regenerated multi-structured materials developed by the Metal Industries Research & Development Centre to build stable attachment substrates that promote coral growth and attract a greater diversity of marine life. Furthermore, long-term monitoring and impact assessments will be conducted to enhance the ecological functions and biodiversity value of artificial reefs, injecting new momentum into the sustainable development of Taiwan' s marine ecosystems.

2021

Launch of Ocean Hugs

Coastal Afforestation in Wujie, Yilan

Promoting a coastal forest afforestation program, dedicated to extending efforts from land to ocean, creating a green life belt that connects biodiversity with ecosystem restoration initiatives.

2022

Taijiang National Park

Protecting Qigu Lagoon through Coastal Afforestation

Enhancing the ecological habitat functions of wetlands and coasts and strengthening biodiversity restoration capacity.

2023

Shei-Pa National Park – Wuling Area

Habitat Restoration for the National Treasure Fish – Formosan Landlocked Salmon

Restoring forest environments to reduce soil erosion, effectively conserve water resources, stabilize water temperature, and provide a secure habitat and food sources for the Formosan landlocked salmon.

2024

Penghu

Hangwan Fishery Shelterbelt and Coral Restoration – Satoyama & Satoumi Vision Project

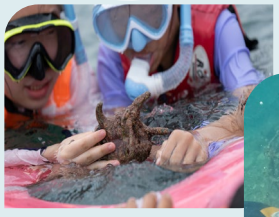
From planting trees on land to restoring corals under the sea, this initiative integrates terrestrial and marine ecosystems—enhancing land ecology while enriching marine resources, thereby realizing the harmonious vision of Satoyama and Satoumi.

2025

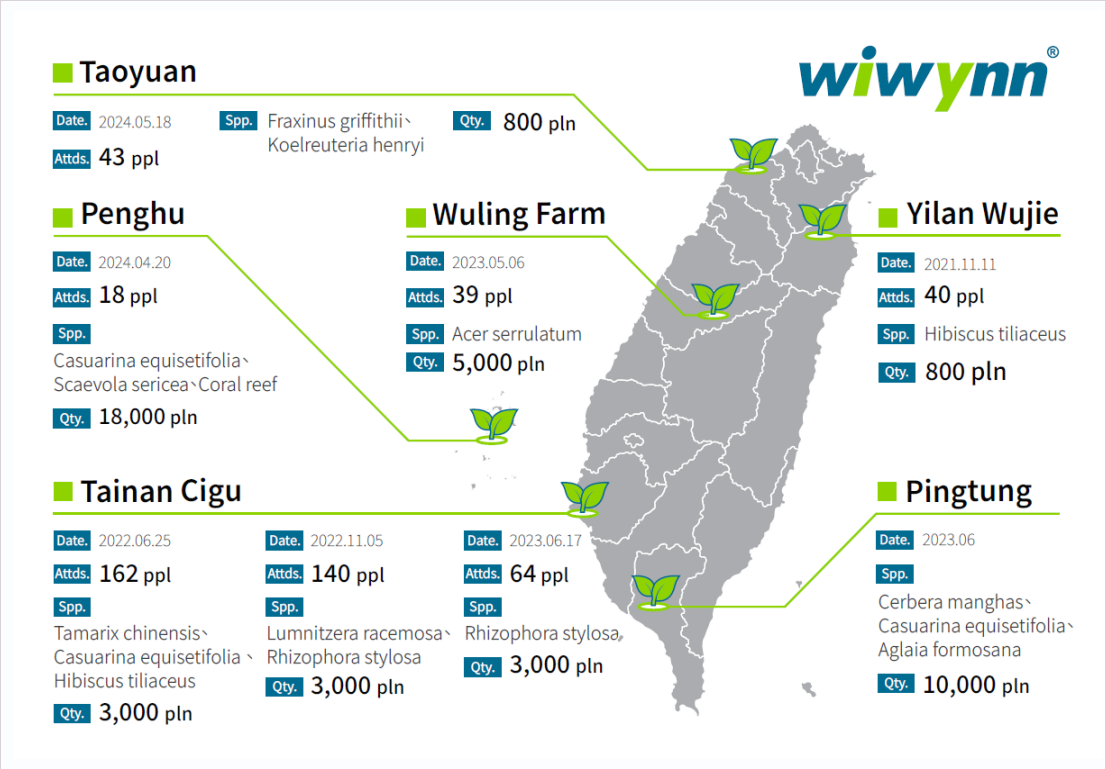
Keelung Heping Island Geopark

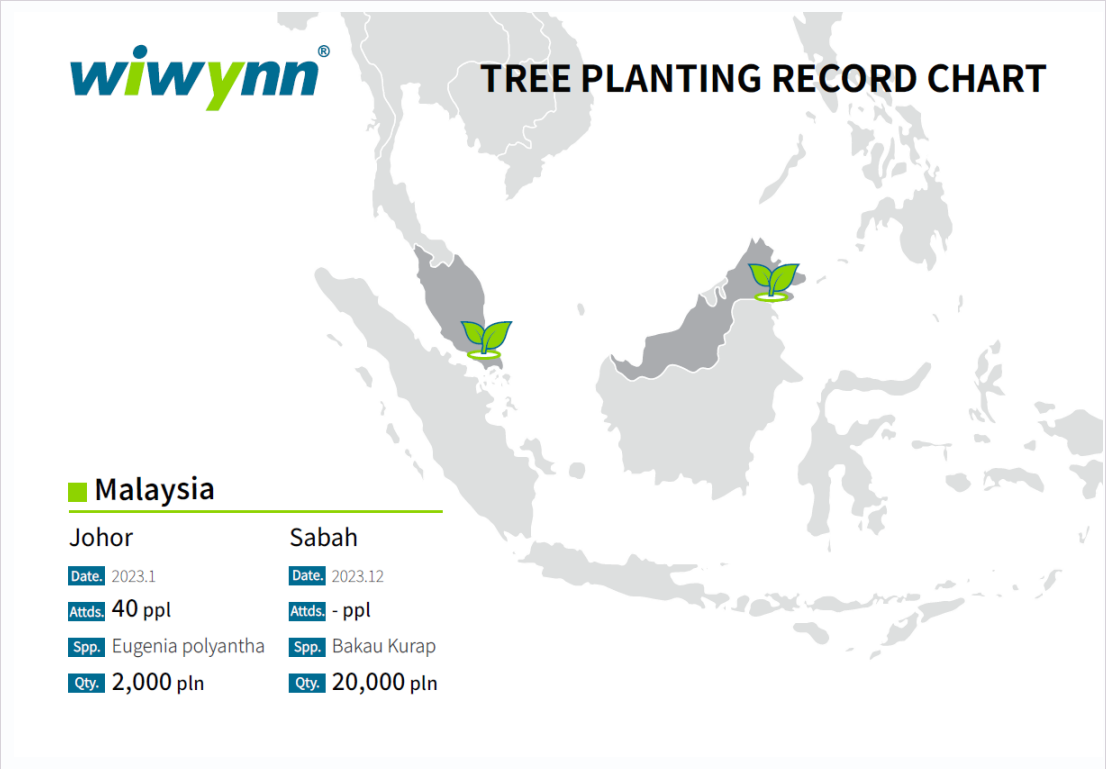
Coral Habitat Restoration

To establish a thriving coral reef ecosystem, artificial coral reef structures are planned for placement around Heping Island to create suitable marine habitats that attract diverse marine species. At the same time, the project promotes knowledge of corals and advances marine ecological sustainability education and development.



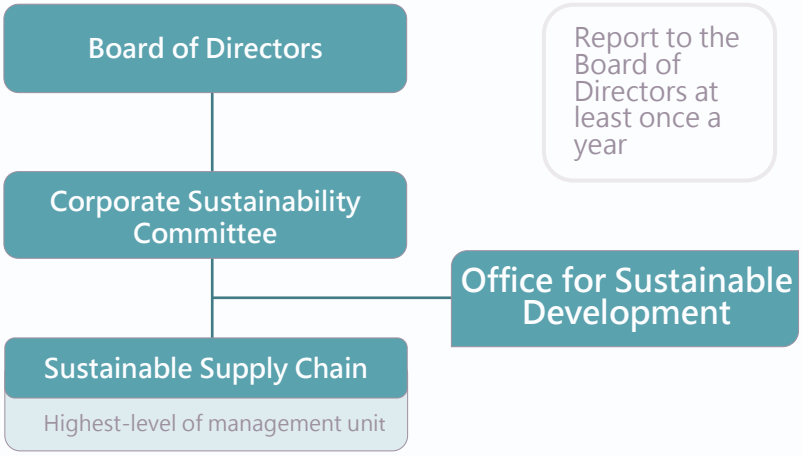
Wiwynn' s Tree Planting Achievements Over the Years





Sustainable Supply Chain Management

The global attention on climate issues allowed the idea of carbon reduction to spread from supply chains to every enterprise. To ensure the impact on operational strategies is effectively integrated into the supply chain management, and the implementation of the policies and commitments for a sustainable supply chain, the management procedures, results, and performance of the sustainable supply chain will be reported by the highest-level manager of the sustainable supply chain to the Corporate Sustainability Committee and the Board of Directors. The latest submission to the Board of Directors was February 27, 2025.



To effectively manage suppliers, we classify and grade them to inform management decisions and analyze the overall supply chain. By assessing sustainability-related risks, we aim to reduce potential supply chain disruptions and enhance the resilience of Wiwynn Technology' s supply chain. In 2024, Wiwynn has a total of 142 key suppliers, including both Tier 1 and non-Tier 1 suppliers.

Supplier	Key Supplier
Tier 1 supplier	Amount of purchase above NT$ 10 million
Supplies that the Company directly purchases from	
Non- tier 1 supplier	
Suppliers that are traded via agents or Tier 1 suppliers.	

Sustainability Risks Assessment

To gain insights into the sustainability performance of our supply chain, a sustainability risk assessment is conducted biennially. The most recent assessment was carried out in 2023. Wiwynn issued an annual Self-Assessment Questionnaire (SAQ) survey to 88 key suppliers with procurement amounts exceeding NT$10 million, receiving responses from 79 suppliers, representing a response rate of 89.77%. Based on the suppliers' responses, those with potential high risks in economic, environmental (including water-related issues), and social aspects were identified.

Note: Sections with no response were mainly from client-designated suppliers or suppliers who are RBA members.

Sustainability Risks Assessment Survey

Number of suppliers surveyed for sustainability risks		88
Percentage of key suppliers among surveyed suppliers (%)		100
Response rate (%)		88.77
Number of suppliers audited		79
Percentage of key suppliers among audited suppliers (%)		100
Audit Method (%)	Document / Remote	30
	On-site	-
	Third-party (RBA VAP audit obtained)	49

Sustainability Risks Assessment Outcome

Number of High-Risk Suppliers	1
Improvement Status	Require submission of third-party audit reports through the RBA VAP (Validated Assessment Program) verification process. Non-compliance rate: 3.7% Primarily related to the "Labor" aspect
Completion Rate (%)	100% (improvements completed within 90 days as required)

Water Risks Assessment Outcome

Number of Suppliers in Water-Intensive Industries [Note]	9
Percentage with Environmental Incident Emergency Response Plans (e.g., wastewater, air pollution, noise, etc.) (%)	100
Percentage with Wastewater Treatment and Monitoring Measures (%)	100

Note: Semiconductor and PCB (Printed Circuit Board) suppliers

In addition to material suppliers, Wiwynn also conducts SAQ surveys for suppliers in categories such as administrative services, manpower agencies, office procurement, and logistics. Through questionnaire responses and risk assessments, 20 high-risk suppliers were identified, including four in administrative services, one in manpower agencies, 14 in office procurement, and one in logistics, and were subsequently subjected to on-site audits. Audit results indicated that 5 suppliers were required to submit improvement reports, with safety and health-related issues being the most prevalent. As of Q1 2025, all identified deficiencies have been addressed and resolved.

Carbon Management Mechanism

In promoting supply chain carbon management, Wiwynn classifies suppliers based on transaction value and strategic importance and conducts an annual carbon management survey. In 2024, a total of 142 carbon management questionnaires were issued to the defined key material suppliers. Through tiered management, the company implements differentiated guidance and management measures according to suppliers' significance and carbon reduction maturity. On one hand, we guide core suppliers to accelerate progress toward net zero, and on the other hand, we gradually enhance the carbon management capabilities of other suppliers, ultimately building a resilient and low-carbon sustainable supply chain together. At the same time, ESG assessment items have been expanded in the supplier scoring system, with the weighting increased from 5% to 10%, aiming to comprehensively improve the sustainability performance of the supply chain.

	Development Type		Aggressive Type	Benchmark Type
Tier 1 supplier Amount of purchases above NT$ 10 million	Strategic	Provide guidance to conduct greenhouse gas inventories	Complete external verification of greenhouse gas emissions Use renewable energy	Reach Wiwynn's set targets Establish a RE100 plan
	Non-strategic	Replace those unwilling to implement greenhouse gas inventories or adopt renewable energy		

	Basic Type	Evolutionary Type	Potential Type
Non-Tier 1 supplier Amount of purchases above NT$ 10 million	Provide guidance to conduct greenhouse gas inventories or use renewable energy	Complete external verification of greenhouse gas emissions - Use renewable energy	Reach Wiwynn's set targets Increase procurement amounts
	Low Maturity	Medium Maturity	High Maturity

Carbon Management Survey Outcome

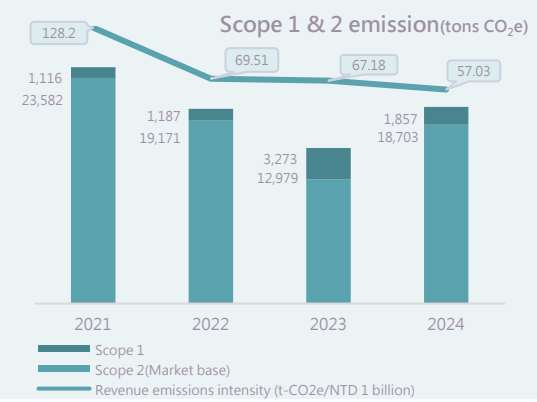
Number of key suppliers (Tier 1 and non-Tier 1 suppliers with purchase amounts exceeding NT$10 million)	142
Number of Carbon Questionnaires Issued as a Percentage of Key Suppliers (%)	100
Response Rate (%)	83.80
Percentage of Key Suppliers Setting Carbon Reduction Targets (%)	69.72
Percentage of Key Suppliers Committing to Renewable Energy Usage (%)	28.17

Note: Response status as of August 8, 2025.

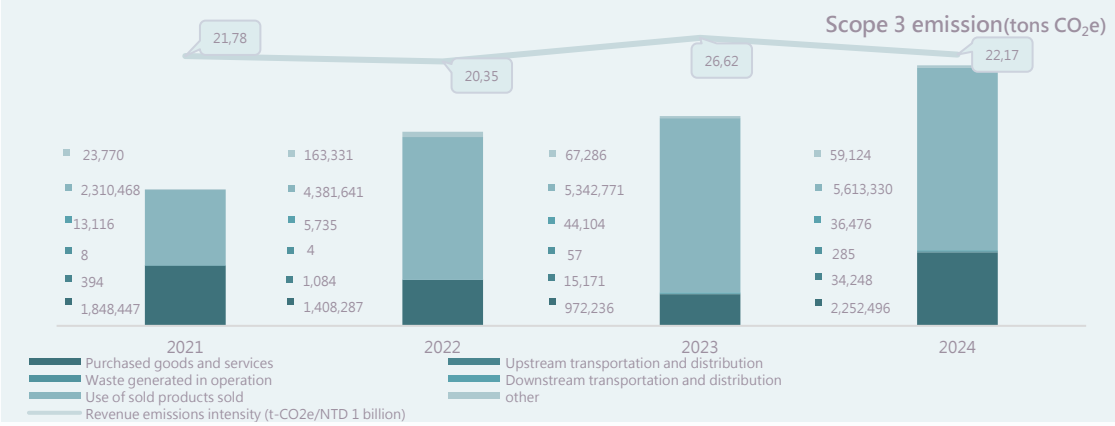
Commitment and Actions Toward Sustainability

Emissions Reduction Management

Wiwynn adopts "eco-friendly operations" as one of its sustainability strategies, striving to embed sustainability awareness into daily operations. The company has implemented IECQ QC 080000 Hazardous Substance Process Management System, ISO 14001 Environmental Management System, ISO 14064-1 GHG Inventory Management System, and ISO 50001 Energy Management System. In addition, referencing the Greenhouse Gas Protocol, Wiwynn conducts its GHG inventory in accordance with ISO 14064-1: 2018, setting organizational boundaries based on operational control, with 100% coverage of verification.



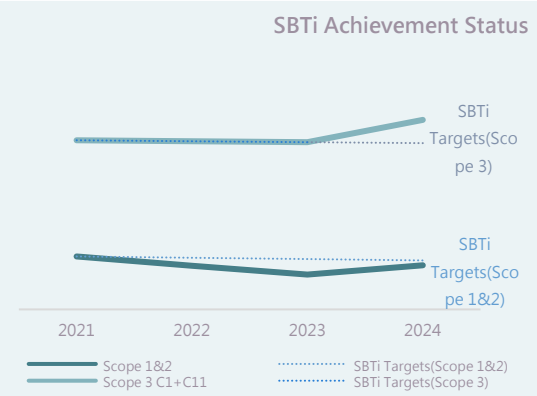
Note: The Mexico Plant (WYMX) was established on February 14, 2019. Initially, its production capacity relied on outsourcing, but in it has transformed into an operational site with manufacturing functions since the second half of 2021. To ensure the comparability of emissions data, Wiwynn adjusted the 2021 figures to represent a full year of emissions using an economic allocation approach.



Note: Others include capital goods, fuel- and energy-related activities, business travel, employee commuting, processing of sold products, end-of-life treatment of sold products, and investments.

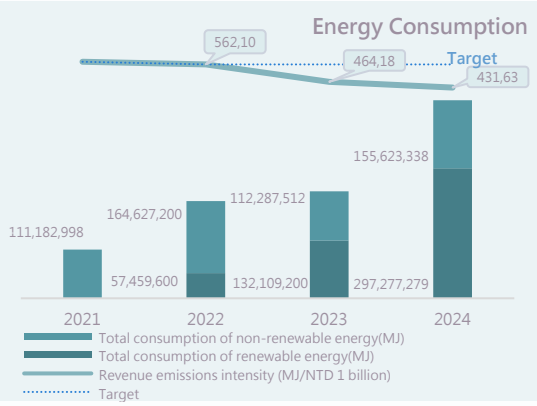
The SBTi decarbonization pathway will be followed as the basis for tracking indicators related to climate mitigation and adaptation. This pathway uses 2021 as the base year, with an annual absolute reduction of 2.5% in Scope 1+2 emissions, achieving a 25% reduction in Scope 1+2 emissions and a 12.3% reduction in Scope 3 emissions by 2031.

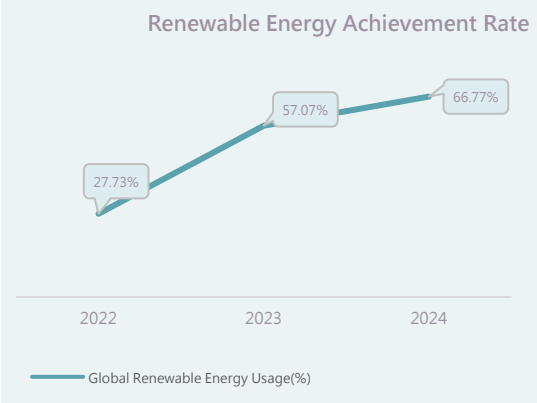
Note: Engagement with upstream and downstream partners is still ongoing. As of the publication date of this report, the achievement rate for Scope 3 emissions reduction stands at 69.61%.



Energy Management

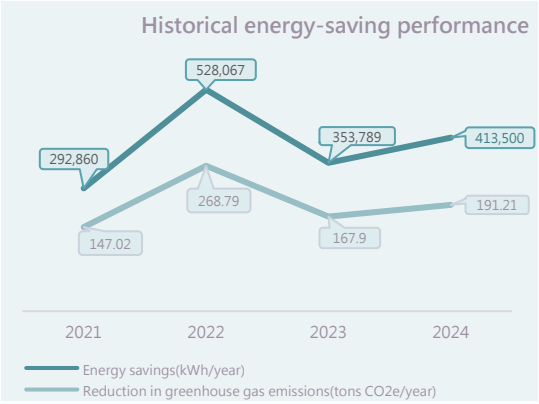
In 2024, the primary energy source was purchased renewable electricity, accounting for 62.15%, followed by purchased non-renewable electricity at 30.93%. To achieve its decarbonization targets, Wiwynn has actively promoted renewable electricity procurement worldwide and installed renewable energy facilities such as rooftop solar panels at overseas operation sites. In Malaysia, self-generated solar power already accounts for 25% of the site' s electricity consumption. In addition, the company has adopted green building design. The Malaysia plant (WYMY) obtained the Green Building Index (GBI) Gold certification in 2024, while two factory buildings at the Mexico Plant III are expected to obtain EDGE Advanced and EDGE Certificate, respectively, in 2025, demonstrating strong performance in energy savings, water conservation, and the use of low-carbon building materials. We will continue to enhance energy efficiency through optimization measures, advancing energy transition and low-carbon development.





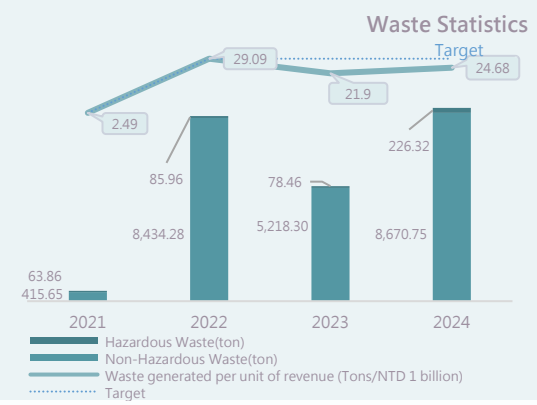
Energy-saving opportunities are identified at each facility annually, based on which energy efficiency improvement plans are implemented to enhance equipment performance and ensure effective use of energy.

2024 Energy-saving measures
Scheduled power shutdown after office hours
Optimization of air compressor outlet pressure
AHU frequency reduction for energy saving in the testing area
Energy-saving lighting equipment
Warehouse air conditioning system
SF Reflow air conditioning system

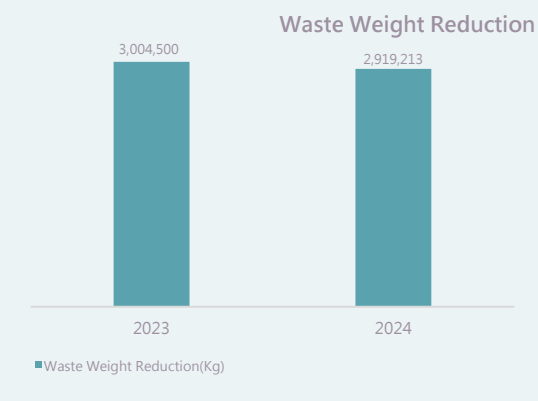


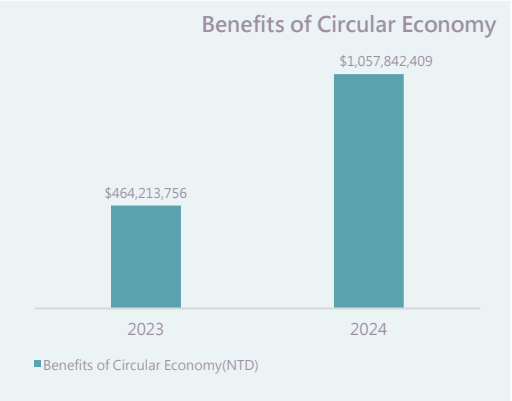
Waste Management

Wiwynn' s total amount of waste increased in 2024; however, the recycling and reuse rate improved by 4.06% compared to 2023. The company will gradually expand waste reuse channels and strengthen the recycling system to effectively increase resource recovery. It will also actively promote waste reduction measures to lower total waste generation and continuously improve environmental performance.



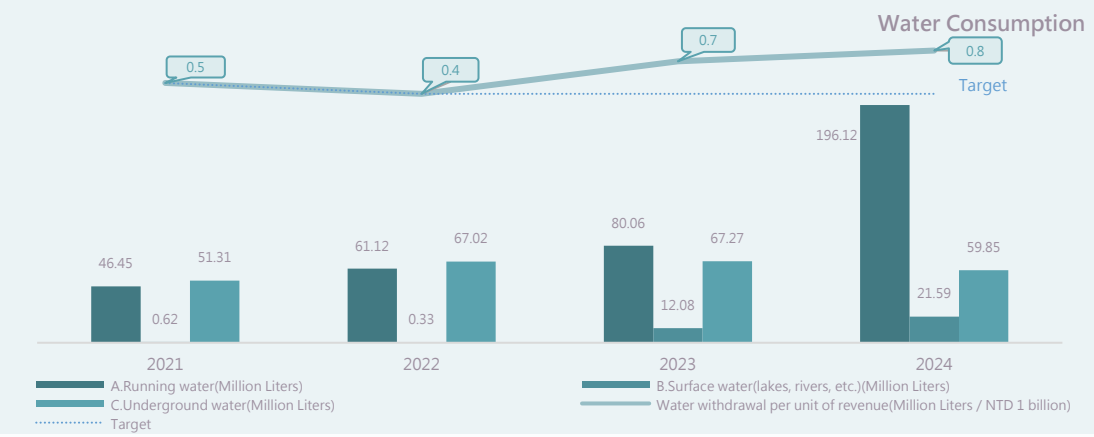
To reduce waste generation, the Mexico subsidiary recycles wooden crates and pallets used for product transportation, achieving an average of five reuse cycles. It is estimated that this will reduce waste generation by 2,919,213 kg in 2024.

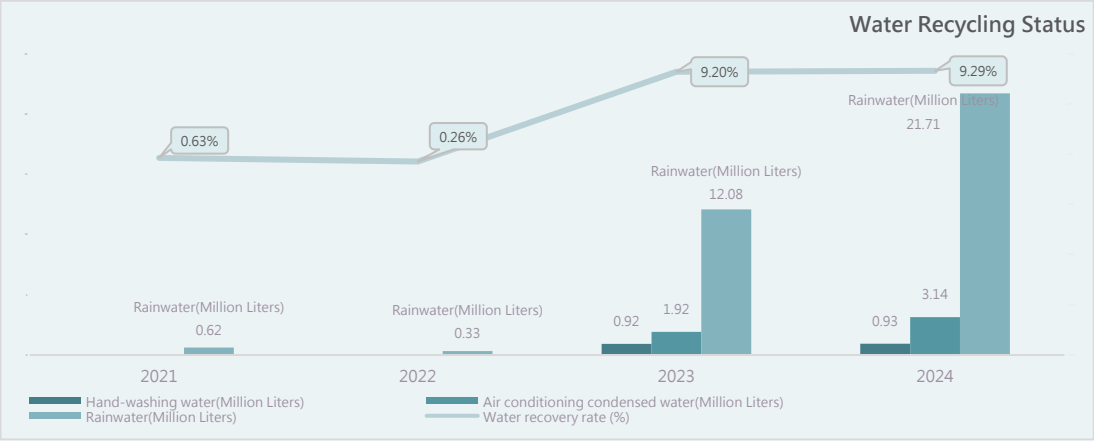




Water Resource Management

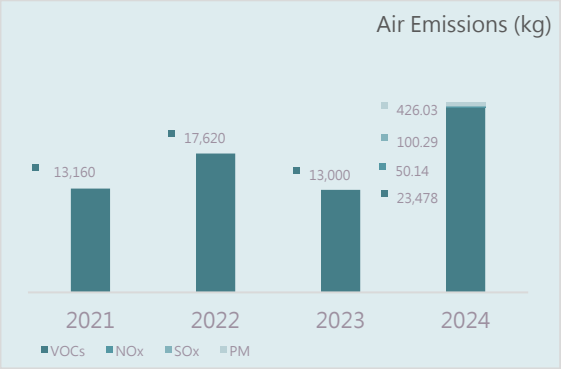
Wiwynn's current operations mainly consume domestic water, and no water is used in the manufacturing process. The sources of water are from tap water, recycled water, and underground water while the wastewater generated is completely general domestic wastewater. In 2024, the recycled water resources were 25.78 million liters, accounting for 9.29% of total volume of water intake. We recycled water resources through rainwater, air conditioning condensed water, and hand-washed water, and reused them for air-conditioning and landscape irrigation.





Air Pollutant Management

Wiwynn generates volatile organic compounds (VOCs) and other air pollutants during process wiping, reflow soldering, and soldering operations. We have established relevant management mechanisms and continuously reduce emissions through monitoring and pollution control measures to comply with legal and environmental regulations.



Note: VOCs did not exceed the local regulatory limits.

Energy-Efficient and Waste-Reduced Products

Wiwynn' s vision is to "Unleash the power of digitalization, Ignite the innovation of sustainability". With an innovative mindset, we strive to ensure that the advancement of digital development goes hand in hand with environmental sustainability. By leveraging the team' s creativity, we put sustainability into practice in product design and daily operations.

Compliance with environmental regulations

The power supply unit (PSU) efficiency level has been upgraded from Platinum to Titanium, meeting the EU' s eco-design requirements for energy-related products.

Product energy efficiency

By calculating eight representative models with optimized power conversion efficiency, the products can deliver a total electricity savings of 47,947,184 kWh over their operational life cycle to downstream customers.

Establish PCBA production lines with low energy consumption and reduce idle power usage during chassis product testing.

Renewable energy usage

The renewable energy usage globally reached 66.77%.

Design → Manufacture → Transporta-tion → Use → Disposal

Reduce use of raw material

The embossed design of the chassis reduces raw material consumption by approximately 15%–20%, and lowers the carbon emissions per chassis by about 15%

Use of recycled materials

Products use recycled steel and plastics, reducing carbon dioxide equivalent emissions by 4,719,173 kg.

Halogen-free design and sustainable material application

The usage rate of halogen-free components steadily increased from 85% in 2021 to 93% in 2024.93%

Energy-saving and low-carbon design

Liquid cooling technology

Each server can save 4,537 kWh of electricity per year, equivalent to 2,241 kg-CO_2e.

Power conversion efficiency ≥91%

Each server can save approximately 363 kWh of electricity per year, equivalent to 179 kg-CO_2e.

Sustainable packaging design

The packaging incorporates recycled EPE and plastic-free design, reducing carbon dioxide equivalent emissions by 531,408 kg-CO2e

Recycling of Wooden Crates and Pallets

Effectively reduces waste generation by 2,919,213 kg.

Waste reduction

Product design complies with the 3R requirements (reuse rate 80%, recycled rate 80%, and recovery rate 85%).

Resource circularity

At the end of the server product life cycle, reusable memory modules are recovered and reused, effectively avoiding carbon emissions from manufacturing new memory and reducing 2,811,623 kg-CO_2e. In 2024, a memory tray (DIMM Tray) recycling and reuse program was also launched to further enhance resource circularity and carbon reduction benefits.

About the Report

This report is the third climate-related assessment report published by Wiwynn Corporation (hereinafter referred to as "Wiwynn" or "the Company"). In 2025, in addition to following the disclosure recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), Wiwynn also refers to the framework of the Taskforce on Nature-related Financial Disclosures (TNFD) in preparing this report. The aim is to review and present Wiwynn's actions and achievements in managing natural environmental impacts. Through scientific methods and systematic assessment, the Company provides transparent, comprehensive, and verifiable information, laying a solid foundation for a sustainable and resilient future. For more information, please refer to the 2024 Wiwynn Sustainability Report.

The scope and boundary of this report are based on all subsidiaries included in Wiwynn's consolidated financial statements. Both Chinese and English versions are provided and made publicly available on the Company's official website under the "ESG & Sustainability" section.

We sincerely welcome any suggestions or feedback regarding this report or Wiwynn's sustainability initiatives.

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Appendix

TCFD Index Cross-Reference Table

Dimension	Indicator	Page
Governance	a) Describe the board' s oversight of climate-related risks and opportunities.	5
	b) Describe management' s role in assessing and managing climate-related risks and opportunities.	5
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	7
	b) Describe the impact of climate-related risks and opportunities on the organization' s businesses, strategy, and financial planning.	8
	c) Describe the resilience of the organization' s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	11
Risk Management	a) Describe the organization' s processes for identifying and assessing climate-related risks.	7
	b) Describe the organization' s processes for managing climate-related risks.	5
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization' s overall risk management.	4
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	29
	b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	29
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	29

TNFD LEAP Approach Coss-Reference Table

LEAP		Process	Page
Locate	L1	Span of the business model and value chain	18
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	L3	Interface with nature	18
	L4	Interface with sensitive locations	18
Evaluate	E1	Identification of environmental assets, ecosystem services and impact drivers	20
	E2	Identification of dependency and impact	20
	E3	Dependency assessment	20
	E4	Impact assessment	20
Assess	A1	Risk and opportunity identification	21
	A2	Adjustment of existing risk mitigation and risk and opportunity management	21
	A3	Risk and opportunity measurement and prioritization	21
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Prepare	P1	Strategy and resource allocation plans	22
	P2	Target setting and performance management	22
	P3	Reporting	34
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