AUO Corporation

TNFD Report 2023

TABLE OF CONTENTS

1. AUO'S TNFD JOURNEY

1.1 ABOUT AUO

Founded in 1996, AUO Corporation has approximately 38,000 employees worldwide and operates a business network that spans Taiwan, Mainland China, Japan, Korea, the U.S., and Europe. The company outstands and differentiates itself by broad experience, innovation capabilities, and corporate sustainability. AUO has succeeded in earning worldwide recognition for its total solutions with its strong R&D capacity, solid manufacturing expertise, and comprehensive product portfolio to meet the market's diverse needs.

Biodiversity provides rich resources and environmental services, serving as the cornerstone for the development of human society. AUO responds to international initiatives by incorporating biodiversity into its corporate ESG governance objectives. While pursuing the development of high-quality products through dual-axis transformation, the company also aims to shoulder its own citizen responsibility to protect the environment. Moving towards a vision of positive impact on biodiversity, AUO seeks to be recognized not only as a panel company but also as a sustainable industry leader working with value chain partners to protect the environment.

For more information about AUO's sustainability strategy and climate-related disclosure, please visit our Sustainability website and Sustainability Reports page.

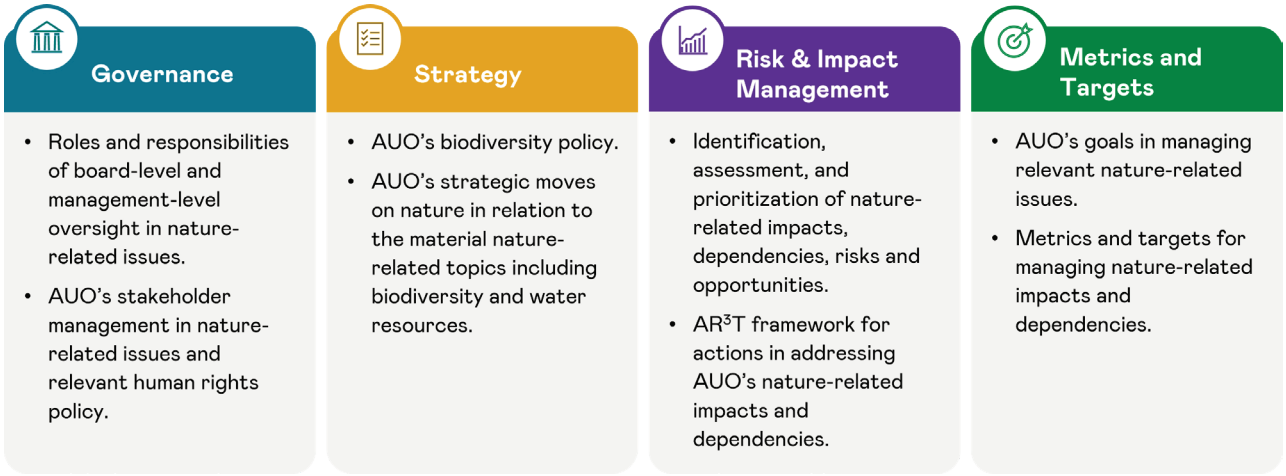
1.2 PIONEERING TNFD ADOPTER

AUO Corporation recognizes and aligns with the globally shared vision of achieving nature positive. Following the release of the TNFD v1.0 framework in September 2023, we have committed to acting as a TNFD Adopter, and start making disclosures aligned with the TNFD Recommendations in our corporate reporting by financial year 2024 (or earlier) through identifying, assessing, and disclosing nature-related dependencies, impacts, risks, and opportunities.

This report covers AUO's global production sites and key value chain components, featuring data and performance from the year 2023. The report follows the TNFD v1.0 framework. Similar to the Task Force on Climate-Related Financial Disclosures (TCFD), the TNFD recommended disclosure framework is a four-pillar reporting structure, encompassing the major components including **Governance**, **Strategy**, **Risk & Impact Management**, and **Metrics and Targets**. **Figure 1** shows the major disclosure items of this TNFD Report in relation to the four-pillar reporting structure.

Along with TNFD's published recommendations and guidance, this report also outlines the nature-related issues identified using TNFD's LEAP (Locate, Evaluate, Assess, and Prepare) approach to be further discussed in **Section 4.1**.

FIGURE 1： DISCLOSURE ITEMS UNDER TNFD RECOMMENDED FRAMEWORK



Reference: TNFD recommendations

1.3 SBTN AND WBCSD'S GUIDANCE

In addition to the TNFD Recommendations, AUO also adopts the recommendations from Science Based Targets Network (SBTN) and the World Business Council for Sustainable Development (WBCSD) as the guidance for our nature-related actions.

SBTN provides guidance on science-based target settings for nature to help halt and reverse nature loss and harness the opportunities this presents. The SBTN target-setting process is divided into five steps: Assess, Prioritize, Set targets, Act and Track. While there are common outputs from the TNFD LEAP approach and SBTN methods, SBTN provides further guidance on Act and Track. For the step Act, SBTN introduced the Action Framework AR^{3}T for company action.

WBCSD has published the *Roadmaps to Nature Positive: Foundations for All Businesses* to provide guidance to businesses to address the risks of nature loss and begin their journeys to contribute to nature positive. To help guide business action on nature, WBCSD has collaborated with SBTN, TNFD, and the World Economic Forum and Capitals Coalition to provide business with a consistent approach: the high-level business actions on nature to Assess, Commit, Transform and Disclose (ACT-D), which basically aligns with the SBTN and TNFD frameworks.

1.4 STRUTURE OF THIS REPORT

Following the recommended TNFD four-pillar reporting framework, the rest of this report presents the nature-related financial disclosures in the following structure:

Section 2: Governance
Section 3: Strategy
Section 4: Risk & Impact Management
Section 5: Metrics and Targets
Section 6: Further Nature-related Initiatives and Opportunities
Section 7: Way Forward

2. GOVERNANCE

2.1 BOARD'S OVERSIGHT ON NATURE

AUO's Board of Directors is the highest decision-making body responsible for company strategies, corporate governance systems, and oversight of management and operations. Directly under the Board of Directors, a committee has been established to oversee AUO's sustainability efforts. This year, the 'Sustainability & ERM Committee' was restructured from the previous 'ESG & Climate Committee'. This committee, which meets at least twice per year, comprises three board members: the chairman and two independent directors. It oversees AUO's governance on sustainability matters related to nature (**Figure 2**).

FIGURE 2 : DUTIES OF THE SUSTAINABILITY & ERM COMMITTEE

Sustainable Development	Risk Management
1. Establish AUO's sustainable development guidelines, oversee the review, tracking, and revision of the implementation, and provide regular reports to the board of directors.	1. Oversee AUO's risk management policies, procedures, and frameworks, and review the effectiveness of risk strategies.
2. Oversee the implementation of sustainability policies and frameworks, and determining critical decisions on sustainability, including technology applications, product value, energy development, green manufacturing, value chain management, civic responsibility (including human rights), risk management, circular economy, and carbon energy.	2. Approve qualitative and quantitative risk tolerance to effectively allocate resources.
3. Strengthen communication with stakeholders and track their key concerns.	3. Implement the board of directors' decisions on risk management, supervise AUO's risk management mechanisms, and approve the priority of risk control.
4. Ensure the timeliness and accuracy of AUO's sustainability disclosure.	4. Review the implementation of risk management, provide improvement suggestions, and report to the board of directors annually.
5. Supervise other sustainability-related tasks instructed by the board of directors.	

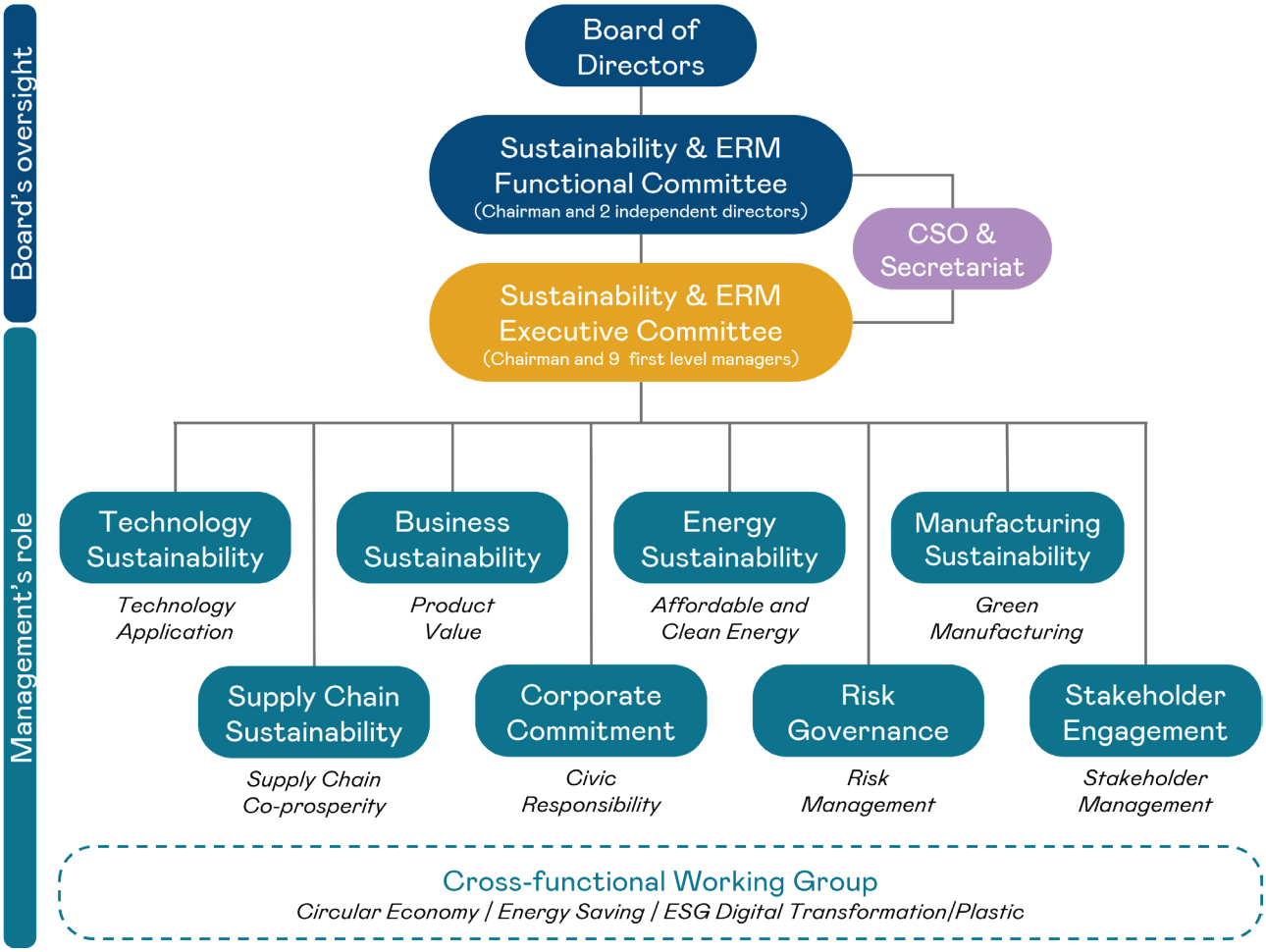
Source: AUO Corporation 2023 Sustainability Report

2.2 MANAGEMENT'S ROLE ON NATURE

To advance our sustainability vision and strategy, and to implement sustainability plans and actions, AUO established the 'Sustainability & ERM Executive Committee' under the Functional Committee. The Execution Committee comprises the chairman and nine of AUO's first level managers (**Figure 3**).

Overseeing by the Sustainability & ERM Committee led by the Chairman, and with the support from the Chief Sustainability Officer (CSO), the Sustainability & ERM Execution Committee is responsible for integrating cross-functional strategies and allocating resources to address sustainability issues. It convenes quarterly to discuss long-term strategies and policies, review progress towards sustainability goals, and promote the implementation of AUO's sustainability initiatives.

FIGURE 3： AUO'S SUSTAINABILITY GOVERNANCE STRUCTURE

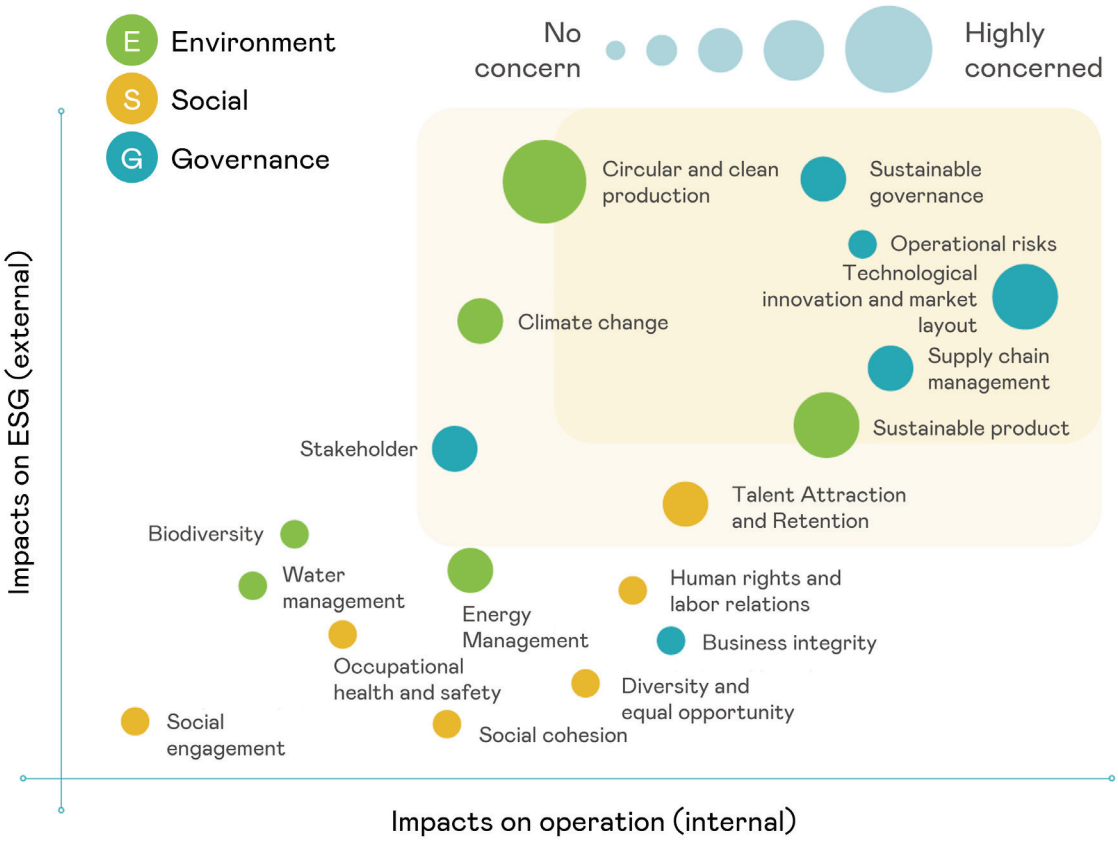


Source: AUO Corporation 2023 Sustainability Report

2.3 STAKEHOLDER MANAGEMENT IN NATURE ISSUES

Currently, AUO annually assesses stakeholders' interests in ESG issues, the operational impacts of ESG topics, and the sustainable development impacts on external economic, environmental, and social aspects, establishing a prioritized list of material topics for the company. Among the identified materiality topics, nature-related issues such as Biodiversity, and Water management, and also Circular and Clean Production which concerns reducing pollution on nature, are covered in AUO's ESG Materiality Matrix (**Figure 4**) and being managed by the company. This demonstrates the incorporation of nature-related issues in AUO's overall ESG management system.

FIGURE 4： AUO'S ESG MATERIALITY MATRIX



Source: AUO Corporation 2023 Sustainability Report

AUO recognizes the potential connection between nature and human rights issues, with respect to affected people, local communities and other stakeholders, in the organization's assessment of, and response to, nature-related dependencies, impacts, risks and opportunity. Echoing with the TNFD Recommended Disclosures on this, AUO has relevant human rights policy in place. We established the 'AUO Human Rights Policy' in 2006 (the management process shown in **Figure 5**), aligning with international standards such as 'UN Guiding Principles on Business and Human Rights', 'Global Sullivan Principles', 'Social Accountability 8000', 'Corporate Sustainability Due Diligence Directive,' and 'Responsible Business Alliance Code of Conduct.' AUO has implemented this policy to address both internal and external human rights issues, conducting regular due diligence to prevent potential human rights impacts from our business operations. For more information about AUO's human rights policy, please visit our Sustainability website.

FIGURE 5： AUO'S HUMAN RIGHTS MANAGEMENT PROCESS

Identification	Prevention	Monitoring	Mitigation
Confirm material topics in human rights for the organization and conduct inventory of affected stakeholders.	*Conduct inventory of internal systems and define related policies to prevent human rights incidents.*	*Periodically evaluate human rights risks to devise various preventive policies and action plans.*	*Track policies and action plans to ensure the effectiveness of human rights management and mitigate the impact.*

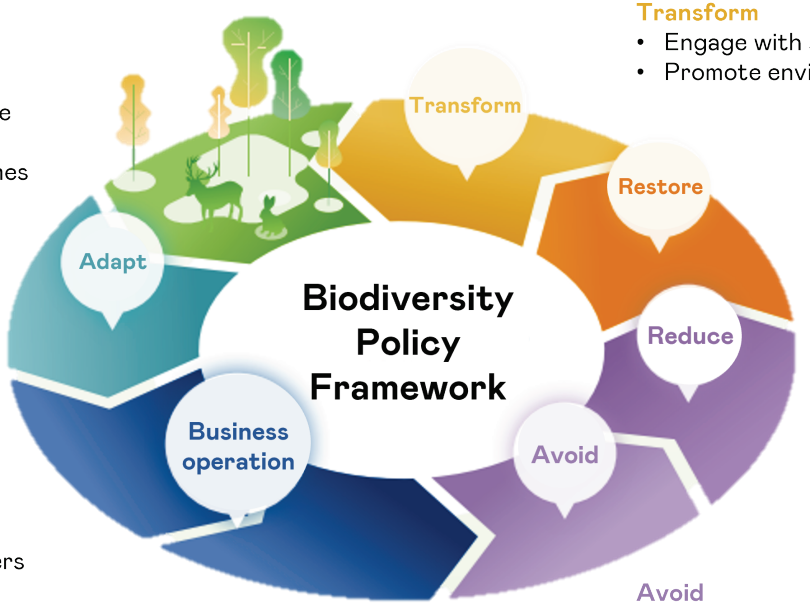
Source: AUO Corporation 2023 Sustainability Report

3. STRATEGY

3.1 ROADMAP TOWARD NATURE POSITIVE

AUO regards environmental sustainability as our core value. In 2023, we published the 'AUO Biodiversity, Ecosystems, and Zero-deforestation Policy' in response to the 'Kunming-Montreal Global Biodiversity Framework' and the international community's call to halt biodiversity loss. The Policy outlines AUO's commitment to biodiversity, underpinned by a set of policy instruments include avoiding, reducing, and restoring the impact of our business operations (**Figure 6**). In addition, we announced a goal of achieving plastic neutrality by 2030, starting with our own operations and collaborating with value chain partners. Looking ahead, our long-term nature strategy aims to achieve no gross deforestation and have a net positive impact on biodiversity by 2050.

FIGURE 6： AUO'S BIODIVERSITY POLICY FRAMEWORK



Adapt
- Adopting TNFD framework into the risk management system
- Participation in certification schemes such as LEED for green buildings

Disclosure
- Following international frameworks such as GRI, SBTN, and TNFD for disclosure in our sustainability report

Stakeholder Engagement
- Actively engage with stakeholders including local communities

Transform
- Engage with suppliers on nature actions
- Promote environmental education

Restore
- Within AUO: Conduct environmental restoration and offset at own photovoltaic sites
- Outside AUO: Promote tree planting and ecological conservation

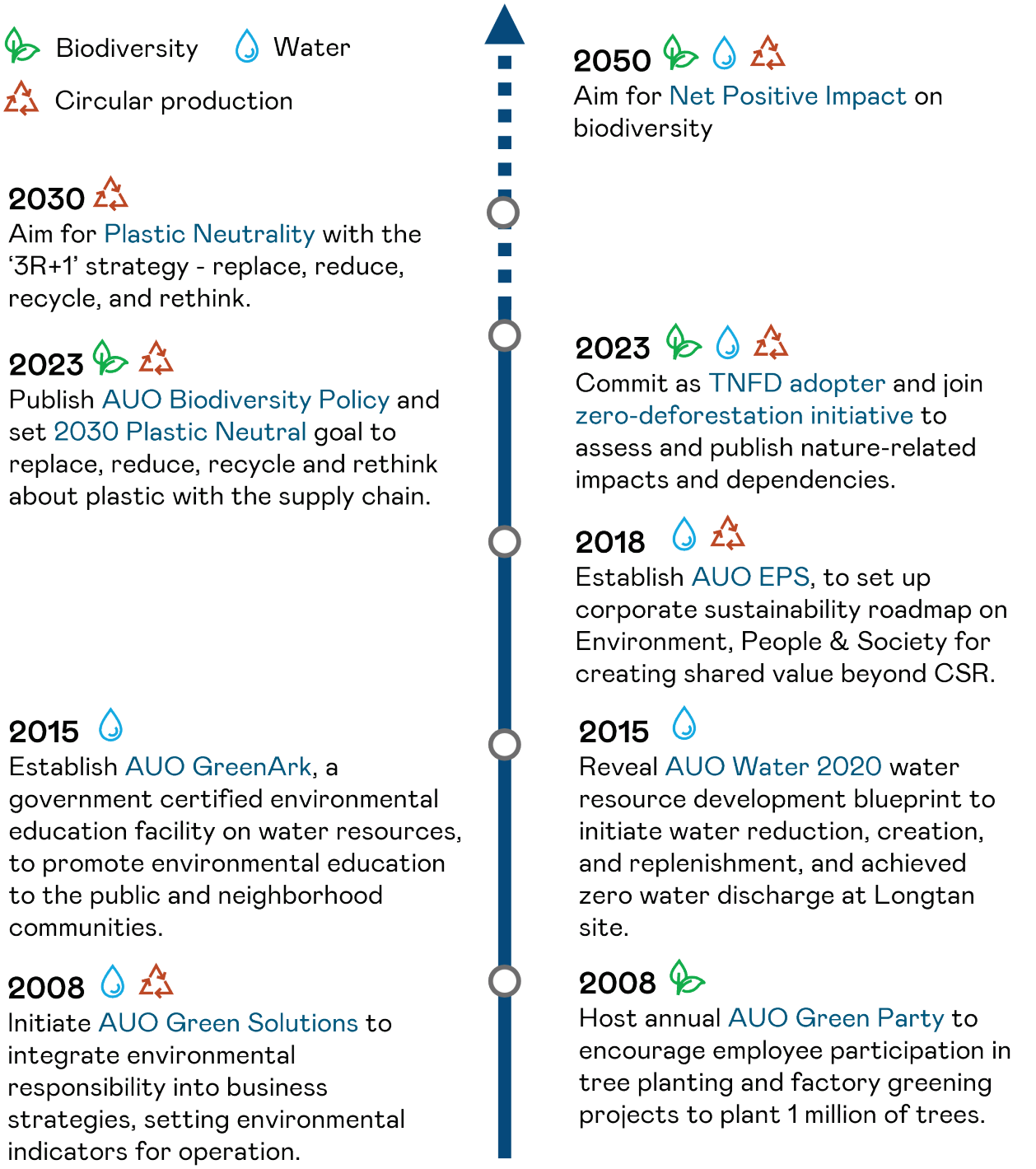
Reduce
- Comply with legal requirements on pollution control and wastewater discharge

Avoid
- Raw material: Implement green procurement process
- Operation: Conduct environmental impact assessments
- Products: Comply with regulatory requirements and actively follow green product labels, including EPEAT, WEEE, and RoHS etc.

3.2 AUO'S STRATEGY ON NATURE

The milestones of AUO's strategic moves on nature are illustrated in **Figure 7** below. These milestones are also labelled as moves in relation to 'Biodiversity', 'Water' and 'Circular production' as biodiversity and water are the major components in nature that AUO's activities would impact on or depend upon, while circular production is a way in addressing environmental pollution that would impact on nature.

FIGURE 7 : AUO'S STRATEGIC MOVES ON NATURE



4. RISK & IMPACT MANAGEMENT

4.1 AUO'S OVERALL APPROACH IN THIS TNFD EXERCISE

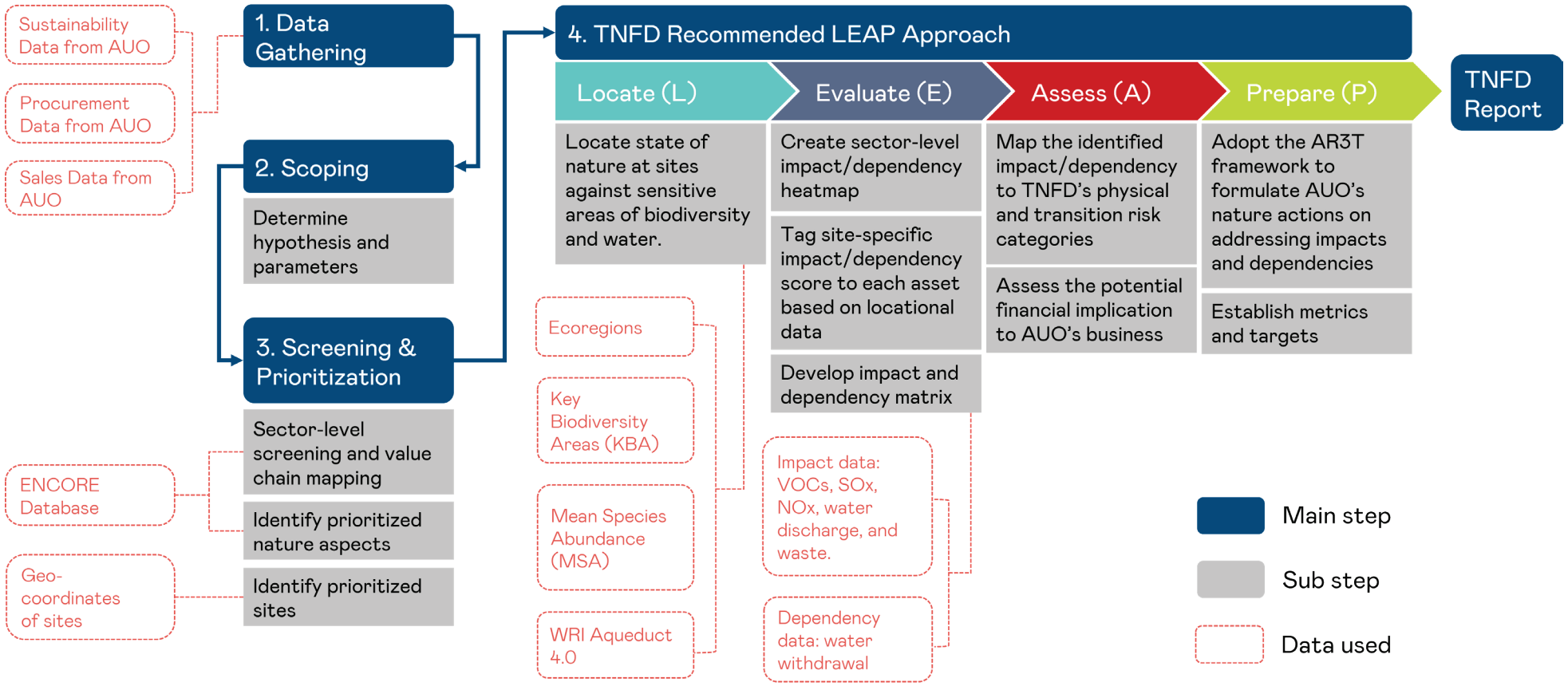
In order to identify, evaluate and assess the nature-related dependencies, impacts, risks, and opportunities in relation to AUO's business, AUO has adopted an overarching approach to review the nature-related issues that are relevant to AUO's own operations and value chain.

The overall approach covers internal data gathering with different AUO executive and operations departments, for the purpose of scoping, screening and prioritization of material nature-related locations and aspects. Subsequently, the identification and assessment of nature-related impacts, dependencies, risks and opportunities are conducted. Lastly, actions in responding to nature-related impacts and dependencies are framed with the AR^{3}T framework, and metrics are determined for action tracking. The findings and implications of the TNFD exercise are disclosed in this report and to be communicated externally and internally, including with the board and management, so as to inform AUO's future decisions in nature-related governance, strategies and policies. The overall approach is presented in **Figure 8** below.

4.1.1 TNFD'S RECOMMENDED LEAP APPROACH

In accordance with TNFD recommendations, AUO adopts the 'LEAP approach' (Locate, Evaluate, Assess, Prepare), a four-phase integrated assessment approach designed by TNFD, as the method to identify and assess our nature-related dependencies, impacts, risks, and opportunities in the risk and impact management processes.

FIGURE 8： AUO'S OVERARCHING APPROACH TO REVIEW NATURE-RELATED ISSUES



4.2 SCREENING AND PRIORITIZATION

As a key part of AUO's nature strategy, we have adopted the TNFD v1.0 framework released in September 2023, as well as the LEAP methodology, as tools to identify, evaluate, and assess nature-related dependencies and impacts. Based on this methodology, when assessing the impacts and dependencies of business models and strategies, TNFD recommends to first screen both the own assets and value chain components, and then prioritize those with potentially higher impacts and dependencies related to nature. Considering assessment efficiency and data availability, priority should be given to the nature aspects and sites with potentially higher nature-related impacts and dependencies. As such, AUO has adopted the prioritization on nature aspects and locations for identifying and evaluating impacts and dependencies covering AUO's global manufacturing sites, suppliers representing 66% of total purchases value, and customers representing 46% of total sales value, as further discussed below.

4.2.1 PRIORITIZED NATURE ASPECTS

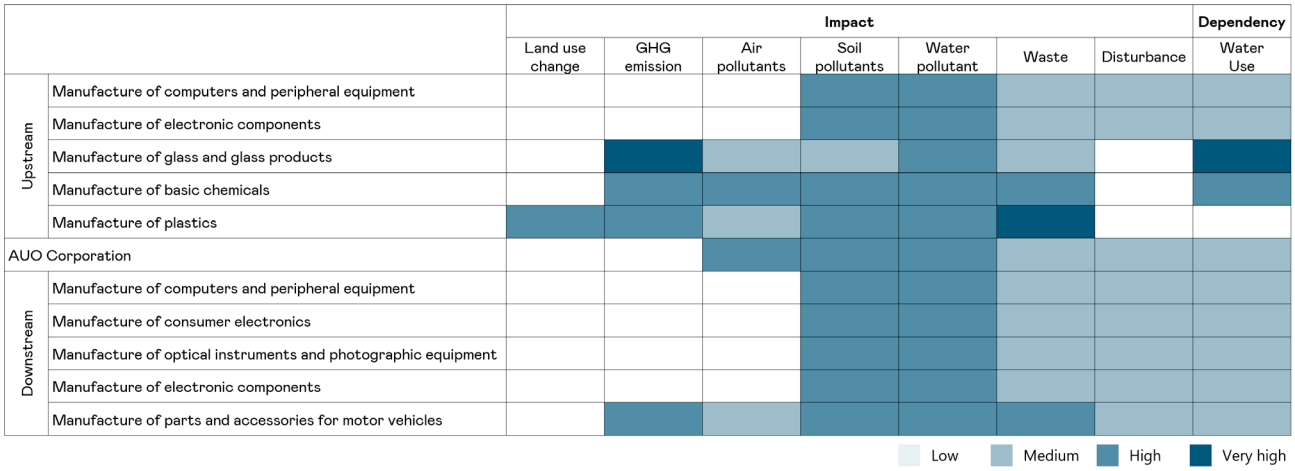
For selecting the prioritized nature aspects to evaluate, AUO uses the ENCORE tool to create a sector-level heatmap for our business and value chain. ENCORE is a tool developed by UN Environmental Program (UNEP) aims at helping businesses to take their first steps towards understanding their dependencies and impacts on nature. ENCORE provides materiality of impacts and dependencies on natural capital for sectors or sub-industries, which is informed by sector research and expert interviews, allowing users to understand which areas might be most relevant for further analysis.

According to the Global Industry Classification Standard (GICS) that is used by ENCORE to classify industry sectors, AUO belongs to Electrical Component and Equipment Sub-Industry. For upstream, AUO's top 66% suppliers in terms of purchase are from production processes including manufacturing of computers and peripheral equipment, electronic components, glass and glass products, basics chemicals and plastics. For downstream, AUO's top 46% of customers in terms of sales are from production processes including manufacturing of computers and peripheral equipment, electronics, optical instruments and photographic equipment, electronic components, and parts and accessories for motor vehicles.

According to the ENCORE results, we further consider the characteristics of the actual production processes to correspond ENCORE's sectorial information to AUO's own operation and value chain. The results are illustrated in a value chain heatmap on nature impact and dependency in **Figure 9** below. In general, AUO's operations, as well as those of its suppliers and customers, have higher materiality in terms of impacts on nature induced by pollutants and wastes, as well as a higher materiality in dependency on nature related to water use. Although land-use change, greenhouse gas (GHG) emissions and disturbances are also shown on the heatmap, they are not included as prioritized aspects in this report for the following reasons:

Land-use change is only observed in one of our upstream supplier types, and the procurement amount accounts for a relatively small portion of the entire supply chain. Considering its lower significance, it is not included as a priority in this report. GHG emissions, despite having a high potential impact on nature, are not location-specific, making them incompatible with the site-specific analytical framework of the TNFD methodology. For information on AUO's overall footprint and efforts regarding GHG emissions, please refer to our TCFD report. Regarding disturbances, while ENCORE identifies noise as a potential medium-level impact driver on nature for the sector, noise generation is not a prioritized concern for AUO given the characteristics of our manufacturing processes. In this regard, we identified 'pollutants and waste' and 'water use' as the primary nature-related impacts and dependencies that are relevant for further evaluation and assessment.

FIGURE 9： VALUE CHAIN HEATMAP ON NATURE IMPACT AND DEPENDENCY



ENCORE impact/dependency categories		Relevant aspects on AUO's value chain
Impact	Air/Soil/Water pollutants	• Pollutants generated by AUO's production activities and value chain
	Waste	• Waste generated by AUO's production activities and value chain • End-of-life waste from AUO's product lifecycle
Dependency	Water use	• Water usage and reliance of AUO's production processes and value chain

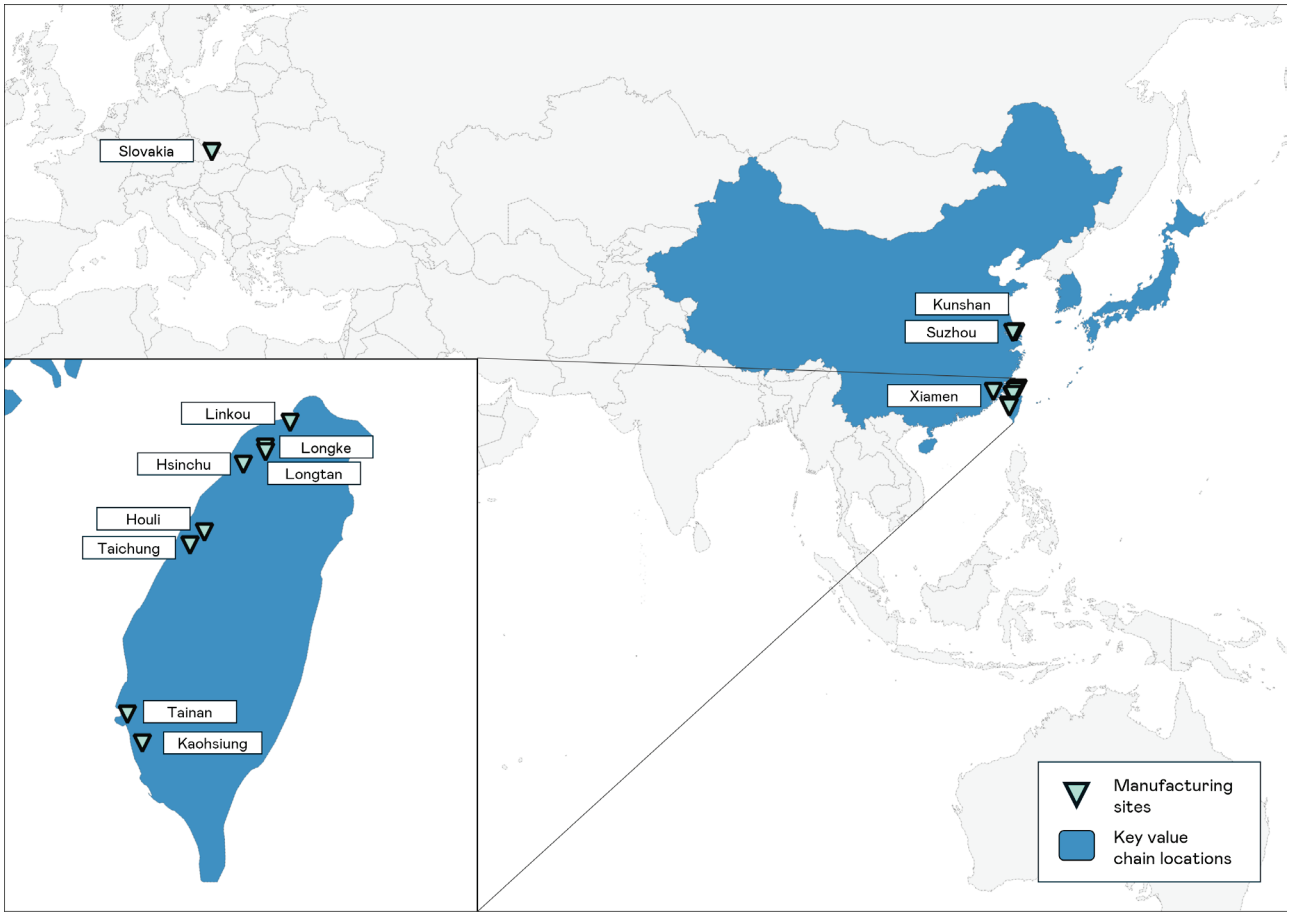
4.2.2 PRIORITIZED LOCATIONS

Considering the characteristics of our business activities, AUO selected our global manufacturing sites (i.e., fabs, which have higher resource consumption and generate pollutants, making them critical locations to understand nature-related impacts and dependencies) as the prioritized locations among all the asset types within our own operation. Assets such as offices are not selected for the evaluation. As for the value chain, based on data availability, the top 66% of suppliers in terms of purchase value are presented by 31 site-level locations and the top 46% of customers in terms of sales value are represented by 22 country-level locations (**Figure 10**). It should be noted that the locations of the downstream customers are at country level only. The prioritized sites and locations are illustrated in **Figure 11** below.

FIGURE 10： PRIORITIZED LOCATIONS FOR 2023 ASSESSMENT

Prioritized locations for 2023 assessment		
Own operation sites	Upstream locations	Downstream locations
AUO's global manufacturing sites (fab)	Locations (site-level) of the top 31 Tier 1 suppliers by purchasing value in 2023 (66% of total purchases)	Locations (country-level) of the top 22 Tier 1 customers by sales value in 2023 (46% of total sales)

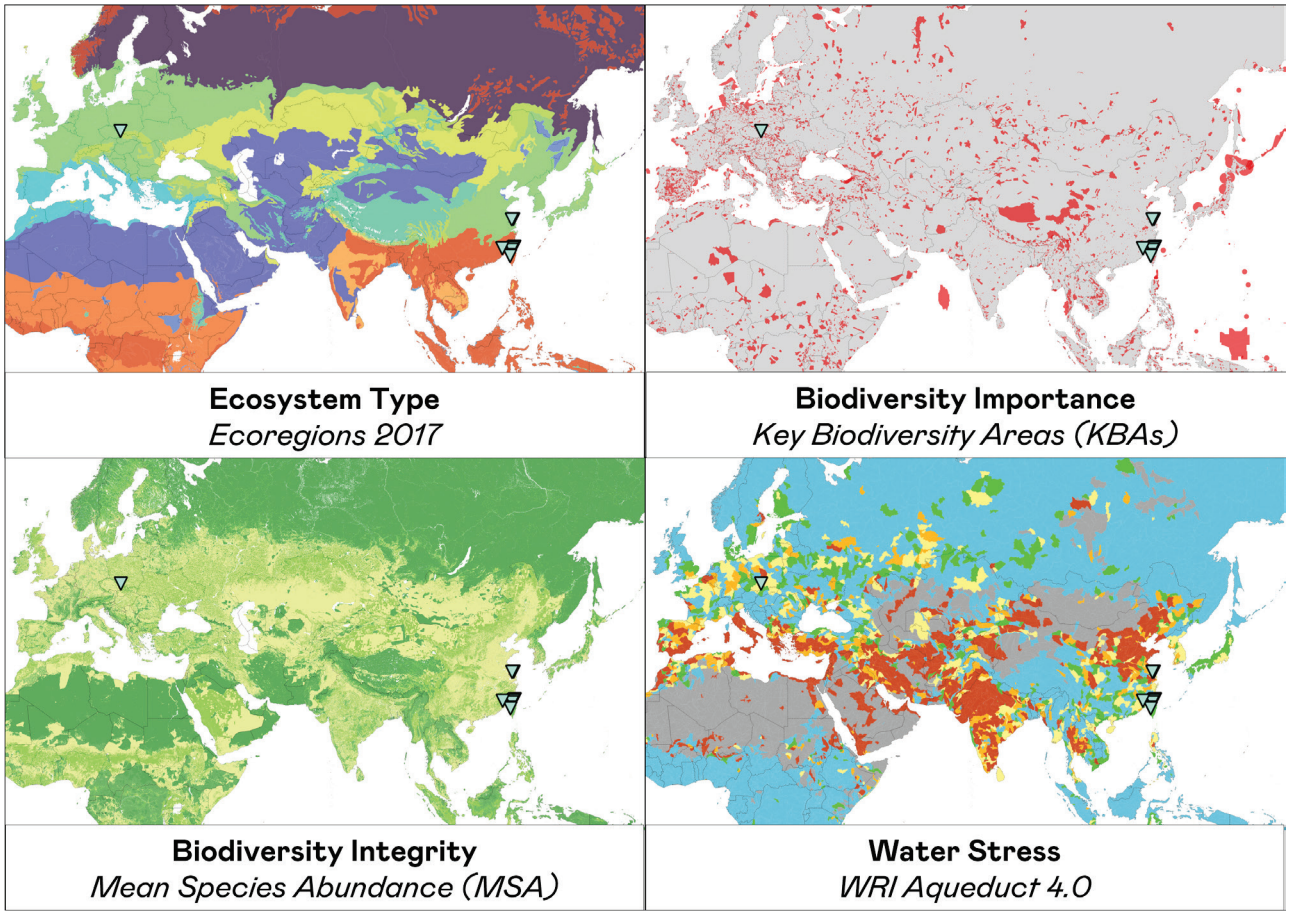
FIGURE 11： MAP OF PRIORITIZED SITES AND LOCATIONS



4.3 LOCATE (L)

The objective of the Locate phase of LEAP is to filter and prioritize potential nature-related issues by screening the 'state of nature' at the sites and the business activities' 'interface with nature'. To identify the information, we overlaid the geo-coordinates of the sites of assessment with four nature data layers of (1) type of ecosystem, (2) biodiversity importance, (3) biodiversity integrity, and (4) water stress (**Figure 12**). The results provided data indicating the 'state of nature' at each site of the analysis, which was then used in the Evaluate phase of LEAP.

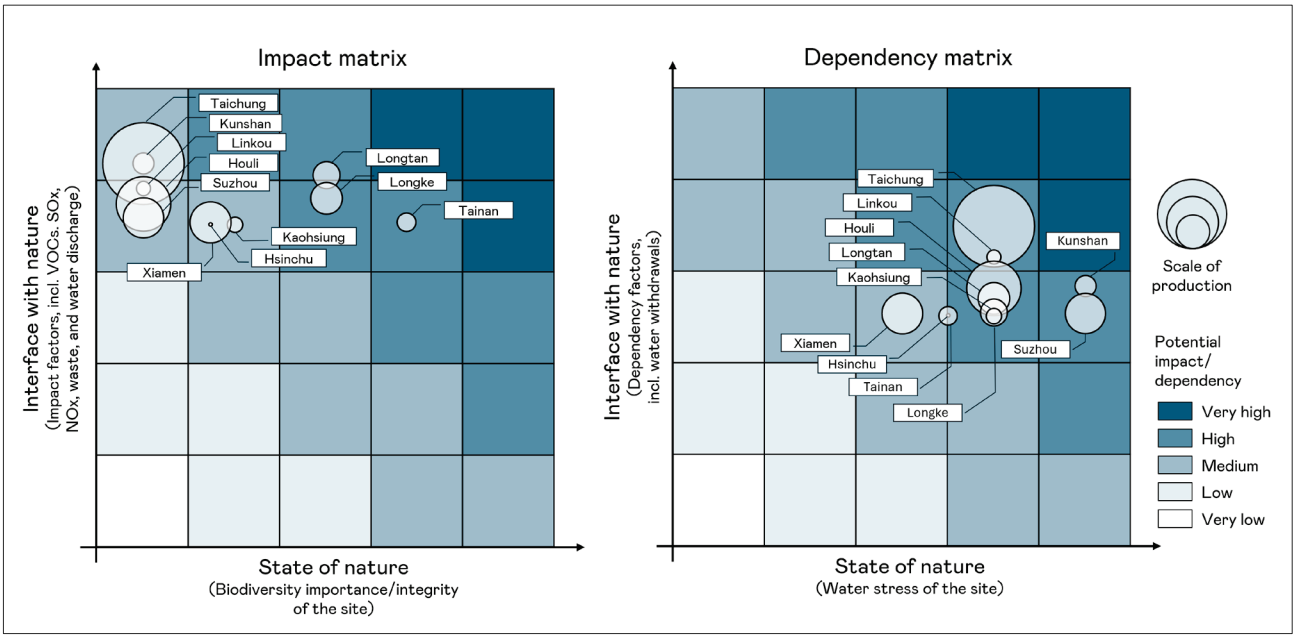
FIGURE 12： NATURE DATA LAYERS USED



4.4 EVALUATE (E)

For evaluating the nature-related impact and dependency of our own manufacturing sites and key value chain locations, AUO adopts a three-step evaluation process. First, we built up a sector-level impact and dependency heatmap using ENCORE to filter the prioritized nature aspects for AUO's manufacturing activities and value chain. Then, asset-level data (such as VOCs, SOx, NOx, waste, and water withdrawals and discharge, etc.) were incorporated into an asset tagging model to determine the exposure of each site to certain impacts and dependencies (i.e., interface with nature). Finally, the result of asset tagging was combined with the outcome of the Locate phase to create the impact/dependency matrix. The result below (**Figure 13** and **Figure 14**) demonstrates the evaluation of the potential level of impact and dependency of AUO's manufacturing sites and main supplier categories, indicating the prioritized areas of further consideration.

FIGURE 13： IMPACT AND DEPENDENCY MATRIX OF AUO'S FABS

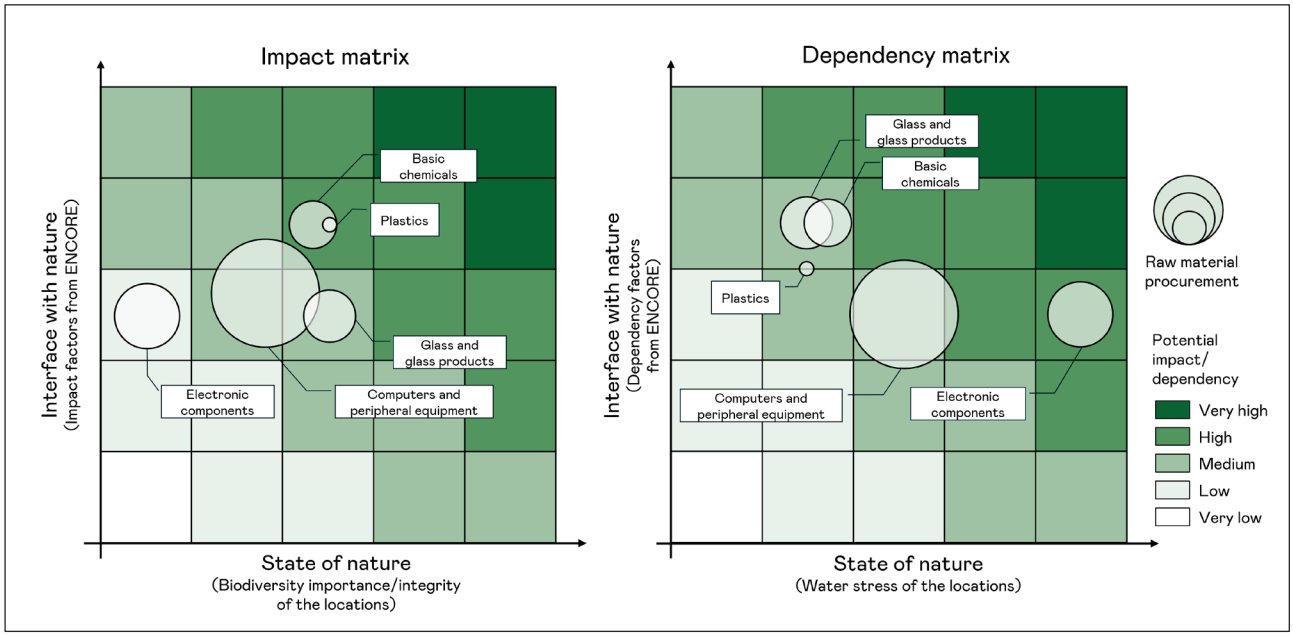


In the impact matrix of AUO's manufacturing sites, the potential nature-related impact of each site is evaluated and presented through two factors. The X-axis represents the state of nature surrounding each site. Higher values on this axis indicate greater biodiversity importance or ecological integrity, meaning these areas are potentially more sensitive to impact. For this axis, AUO considers two indicators: the distance of each site from the Key Biodiversity Areas (KBA) and the Mean Species Abundance (MSA) score in the surrounding 1 km areas. The Y-axis represents each site's interface with nature, indicating the potential impact of business operations and activities on nature. AUO uses the ENCORE database's impact rating of our production activities as a baseline and then calculates and adjusts the values for each site based on internal benchmarking of actual pollutants emissions, waste generation and water discharge. Combining these two axes, the impact matrix forms five potential impact levels (from very low to very high) from the bottom left to the top right.

On the other hand, in the dependency matrix of AUO's manufacturing sites, we evaluate AUO's dependency on water resources. For the X-axis, we reference the peak water stress level from the WRI's Aqueduct 4.0 model's monthly data, and adjust the values based on historical water supply data from various counties in Taiwan to derive the water stress values for each site. The Y-axis is also based on the baseline rating from the ENCORE database, adjusted using actual water withdrawal data from each site.

The analysis results of these two matrices indicate that, in terms of natural impact, considering the surrounding nature conditions and our production activities, most of AUO's sites have a medium level of potential nature-related impact. Three sites (i.e., Longtan, Longke, and Tainan) are assessed as having a high level of potential impact due to the relatively high biodiversity and ecological value in the surrounding areas. In terms of nature dependency, most of AUO's manufacturing sites are at a high level of dependency, indicating a high demand for water resources and relatively high water stress at the site locations.

FIGURE 14： IMPACT AND DEPENDENCY MATRIX OF SUPPLY CHAIN



We applied a similar evaluation process to our supply chain, with the primary difference being the consolidation of suppliers in the same product category into one group. The state of nature and interface with nature for each group are weighted based on the proportion of procurement expenditure. In the impact matrix of AUO's supply chain, the X-axis uses the weighted sum of the suppliers' location biodiversity indicators. Due to data accessibility considerations, we use the country-level rating provided by Nature Needs Half in the matrix. The Y-axis continues to use the ENCORE impact rating for these supply categories. For the dependency matrix, the X-axis also uses data from WRI Aqueduct 4.0, while the Y-axis uses data from ENCORE.

The analysis results show that, after considering the locations of major suppliers and the features of their production processes for each product category, among AUO's five main supplier categories (i.e., computers equipment, electronic components, glass, chemicals, and plastics), chemicals and plastics have a high level of potential natural impact. In contrast, computer equipment, electronic components, and glass, which have a higher procurement proportion, have a medium to low level of potential impact. In terms of dependency, electronic component suppliers, primarily located in very high water stress areas, show a high level of dependency on water resources. The other four supply chain categories fall into the medium level of dependency.

4.5 ASSESS (A)

Translating an evaluation of nature-related dependencies and impacts into an assessment of financial risks and opportunities is currently a challenging area for many organizations, in particular quantitatively identifying all points of contact with nature and translating biophysical metrics into financial values. Nonetheless, we have made best efforts to conduct a preliminary exercise in assessing the potential financial implications of the nature risks and opportunities to AUO, enabled by the TNFD Guidance on the Identification and Assessment of Nature-related Issues.

According to TNFD, the Assess process is to identify and prioritize the nature-related risks and opportunities to the organization stemming from their identified dependencies and impacts on nature. The identification of these risks and opportunities requires the adaptation of existing risk management processes and incorporation into part of the materiality assessment of the corporation to ensure these new risks are fully integrated.

The assessment started with identification of nature-related risks and opportunities associated with the findings of the 'Evaluate' phase on the dependencies and impacts of our own operation and value chains on nature (i.e., the potential impact induced by pollutants on biodiversity, and the dependency on water resource). The impact and dependency were than mapped with the nature-related physical and transition risk categories recommended by TNFD by identifying the connections of the particular nature-related impact/dependency to AUO's business operation. Potential financial implications on such risk events can then be identified accordingly. For example, the dependency on water resources of our own operation and the supply chain makes us prone to be affected by water shortage events that can cause interruptions on the production. When water shortage occur, AUO would have to seek for costly alternative water supply, increasing the operating expenses, or to drop production which decrease the revenue.

On the other hand, although the impacts of our operations and value chains in regard to pollutants and biodiversity are unlikely to pose physical risks to our business, they can affect our sales revenue and company valuation if relevant stakeholders urge for products with a lower nature impact. These are transition risks expected to rise in the nature-positive trends. Other transition risks potentially arising from the impact on pollutants and biodiversity include the emerging requirements for nature-related disclosures and supply chain management, more stringent regulations on nature-related issues and actions that create positive/negative changes in sentiment towards the company. Finally, we identified a business performance opportunity from the increase in resource efficiency and material circularity of our production process. As we have clear targets for water use efficiency and waste reduction through improved recycling (listed in Section 5), this can result in cost savings as our demand for water, waste treatment and raw materials reduce.

The risk and opportunity assessment results are presented in **Figure 15** below:

FIGURE 15： AUO'S NATURE-RELATED RISK AND OPPORTUNITIES

Dependencies/Impacts	Category & Driver	Description of Risk/Opportunity	Financial Implication
Dependencies on Water Resources	Physical risk: **Water shortage**	Water shortage leads to production interruptions for own operation	OpEx ↑ Revenue ↓
		Water shortage leads to supply chain disruptions	OpEx ↑ Revenue ↓
Impact induced by pollutants/ on biodiversity	Transition risk/business performance opportunity: **Market**	Customers demand products or processes with lower nature impact	Revenue ↓↑
		Market and shareholders demand products or processes with lower nature impact	Valuation ↓↑
Dependencies on Water Resources & Impact induced by pollutants/ on biodiversity	Business performance opportunity: **Resource efficiency**	Increase resource efficiency or the usage of circular materials in production process	OpEx ↓

Dependencies/Impacts	Category & Driver	Description of Risk/Opportunity	Financial Implication
Impact induced by pollutants/ on biodiversity	Transition risk: **Policy**	Emerging requirements for nature-related disclosures or supply chain management	OpEx ↑
Impact induced by pollutants/ on biodiversity	Transition risk: **Liability**	More stringent regulations on nature-related issues	OpEx ↑
Impact induced by pollutants/ on biodiversity	Transition Risk/Business Performance Opportunity: **Reputational Capital**	Actions that create positive/negative changes in sentiment towards the company due to its contributions to/ impacts on biodiversity	Market valuation ↑ ↓

Reference: TNFD Nature-related Risk and Opportunity Registers, November 2022

4.6 PREPARE (P)

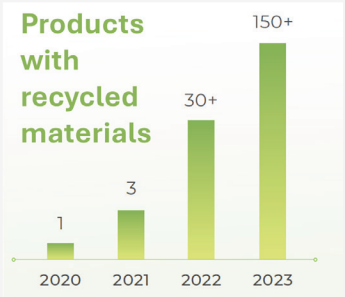
To address the nature-related dependencies, impacts, risks, and opportunities, AUO has been implementing various measures within our business operations and taking actions to engage and work together with wider stakeholders. To better organize and plan our nature-related measures and actions, AUO adopts the 'AR^{3}T' framework introduced by the Science-based Targets Network (SBTN) (**Figure 16**). Based on the mitigation and conservation hierarchy, the framework provides a guidance for the company to plan and arrange the nature actions to (1) avoid future impacts, (2) reduce current impacts, (3) restore/regenerate ecosystems, and (4) transform the systems.

Source: Science-based Targets for Nature: Initial Guidance for Business, September 2020

FIGURE 16 : AR^{3}T FRAMEWORK

The actions that AUO has adopted under AR^{3}T Framework is presented in **Figure 17** below. To track and monitor the progress of the mitigation measures AUO has been implementing, a set of quantitative metrics and targets were established in Section 5. Meanwhile, further details of our broader nature-related actions are specified in Section 6.

FIGURE 17 : AUO'S ACTIONS UNDER AR³T FRAMEWORK

AR³T Framework	Nature topic	AUO's Action	Engagement Partner		
			Direct op.	Value chain	Stake holder
1. Avoid	Air/water pollutants	• Implementing and improving pollutant processing technologies 	○		
2. Reduce	Water usage	• Reducing water consumption of manufacturing process • Optimizing water recycling efficiency • Increasing the use of reclaimed wastewater	○		
	Waste (industrial)	• Reducing non-reusable waste generated from production	○		
	Waste (recycle)	• Promoting the usage of circular and recycled materials in AUO's production  • Increasing the suppliers of recycled materials	○	○	
	Waste (plastic)	• Promoting the Plastic Neutrality Initiative and cooperate with value chain partners	○	○	

AR³T Framework	Nature topic	AUO's Action	Engagement Partner		
			Direct op.	Value chain	Stake holder
3. Restore & Regenerate	Biodiversity integrity	• Environmental monitoring round the Longtan site and the Xiaoli River • Removing invasive plants along the Xiaoli River together with local stakeholders  	○		○
4. Transform	Awareness	• AUO Green Party – promoting tree planting and awareness on deforestation and forest conservation • AUO Ocean Party – promoting beach cleaning and awareness on marine waste	○		○
	Education	• AUO GreenArk - promoting environmental education on water resource to the public and local communities  	○		○

5. METRICS AND TARGETS

Having defined its plan to respond to nature-related dependencies, impacts, risks and opportunities, the TNFD recommends organizations to determine metrics and set targets to trace the implementation of the plan. The aim of the metrics is to measure progress against their actions, policies and plans to respond to nature-related issues. The set of response metrics could be draw from the factors used in the dependency and impact assessment (the Evaluate phase of LEAP) and the risk and opportunity assessment (the Assess phase of LEAP).

AUO has set the following targets for 2024 in managing nature-related impacts and dependencies. The impact-related and dependency-related metrics and targets are illustrated in **Figure 18** and **Figure 19** below.

FIGURE 18： IMPACT-RELATED METRICS AND TARGETS

Category	Goal	Metrics	2024 Target
Air Pollutants	1% reduction per year compared to 2020	Volatile Organic Compounds (VOCs) emission per year (ton)	<142.1 tons
Water Pollutants	Complying with government regulation	Fluoride ions concentration in discharged water (ppm)	<10 ppm
Waste	Reducing non-reusable waste from production	Total volume of non-reusable waste (tons)	<8,700 tons
		Total volume of non-reusable hazardous waste (tons)	<3,400 tons
	Promoting the usage of circular and recycled materials with third-party certificate	Usage of recycled materials on specializing products (%) *Calculated by the weight of raw materials	30%
	Increasing the number of suppliers for recycled materials	Number of suppliers for recycled materials	58
	Cooperating with certified suppliers for recycled materials	Percentage of certified circular economy suppliers for recycled materials (%)	> 90%

FIGURE 19： DEPENDENCY-RELATED METRICS AND TARGETS

Category	Goal	Metrics	2024 Target
Water usage	Reducing water consumption of manufacturing process	Total water consumption (cubic meter per day, CMD)	< 64,000 CMD
	Increasing the use of reclaimed wastewater in the production process	Use of reclaimed wastewater (CMD) *AUO has started cooperating with Taichung Shuinan water reclamation plant from 2024	14,000 CMD
	Optimizing the water recycling efficiency	Production water recycling rate (%) *Defined as process recycled water/point-of-use (POU) consumption	93%
	Maximizing the percentage of water consumption under system monitoring	Percentage of water consumption monitored by the POU water network system in Taiwan (%)	90%
	Expending sites with ISO 46001 certificate	Percentage of sites obtaining ISO 46001 water efficiency management system certificate in Taiwan (%)	100%

6. FURTHER NATURE-RELATED INITIATIVES AND OPPORTUNITIES

To further contribute to the goal of net positive impact on biodiversity by 2050, and to cultivate the concept of managing nature-related risks as a business opportunity in the long run, AUO has additionally committed to the following:

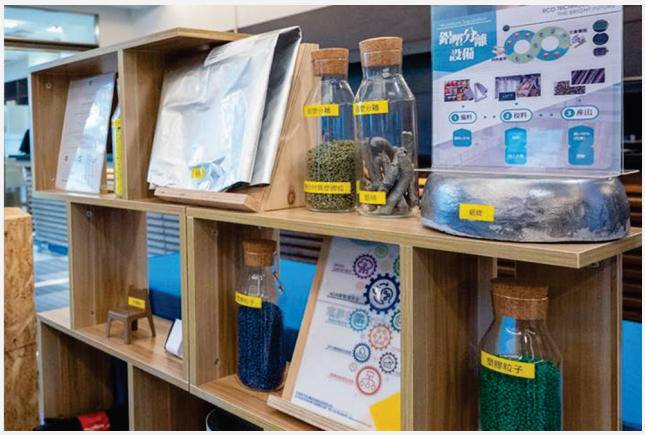
6.1 PLASTIC NEUTRALITY INITIATIVE

Research reports highlight plastic pollution as a critical threat to biodiversity. In response, AUO is committed to reducing plastic usage and aims to raise industry-wide awareness to plastic issues. We started the initiative by assessing our plastic use in the production processes as well as office activities. We set 2023 as the baseline year and aim for achieving plastic neutrality by 2030. AUO has adopted the '3R+1' strategy (replace, reduce, recycle, and rethink), and formed a cross-functional plastic task force to coordinate the efforts.

We also promote this initiative to our value chain and announced this plastic neutrality goals at the annual Supplier CSR Conference. By cutting down on single-use plastics and promoting the use of recycled and reusable plastics in the production processes, AUO collaborates with upstream and downstream partners to recycle waste plastics into our own products.

FIGURE 20 AUO WORKS WITH OUR VALUE CHAIN TO PROMOTE PLASTIC NEUTRALITY

FIGURE 21 AUO ENCOURAGE EMPLOYEES TO JOIN OUT '3R+1' PLASTIC ACTIONS



6.2 INVASIVE SPECIES REMOVAL PLAN

AUO values the environment surrounding our sites and has been actively involved in restoring and conserving the surrounding areas with high ecosystem integrity. Our Longtan site serves as a good example. We have long been paying attention to the water quality and ecology of the Xiaoli River near our Longtan site. After achieving zero wastewater discharge in 2015, the subsequent monitoring activities showed an invasion of *Mikania micrantha* in the area. *Mikania micrantha* is a plant known for its vigorous growth which would overtake and kill nearby trees. As such, it is commonly referred to as the 'green cancer' and listed among Taiwan's top ten invasive plants.

In 2023, AUO launched our '5-Year Invasive Species Removal Plan' for *Mikania micrantha*. This initiative aims to collaborate with government agencies, schools, local communities, and environmental conservation groups. Together, we will focus on removing controlling *Mikania micrantha* along the 3-kilometer area of Xiaoli River and aim to reduce its coverage by 30% by 2027.

FIGURE 22 AUO COROPERATES WITH LOCAL COMMUNITIES TO REMOVE 1,311 KG OF INVASIVE SPECIES ALONG THE XIAOLI RIVER

6.3 AUO GREEN & OCEAN PARTY

Since 2008, AUO has organized the Green Party initiative, launching tree planting campaigns to mobilize employees, their families, volunteers, suppliers, and local communities to promote tree planting efforts. Over the years, AUO has successfully planted over a million trees. Starting in 2020, AUO expanded this action by collaborating with the Forestry and Nature Conservation Agency, engaging in forest conservation in areas such as Houlung, Qingshui, and Yujing.

Meanwhile, in response to the marine waste problems, AUO has initiated the Ocean Party beach cleaning action since 2022. By 2023, we have held six beach cleaning events, removing a cumulative total of 3,797 kilograms of marine waste.

FIGURE 23 AUO'S OCEAN PARTY BEACH CLEANING INITIATIVE TO REMOVE MARINE WASTE

See also: 2023 Ocean Party documentary

7. WAY FORWARD

Based on the findings of this TNFD exercise, as well as to strive for adhering to the nature-related policies and goals of AUO, AUO will continue looking into opportunities in managing nature-related risks and contributing to nature positive.

Particularly, through the current TNFD exercise, the possible areas that AUO could look into include deepened subsidiary and value change nature-related risk assessment, as well as site-specific nature positive measures such as biodiversity enhancement measures at selected sites with higher linkage to natural habitats.

In addition to understanding the company's relationship with nature and setting commitments that credibly contribute to nature positive, AUO will follow the SBTN AR^{3}T Framework to Avoid, Reduce, Restore & Regenerate and Transform in regard to managing its nature-related business impacts and actions towards nature positive. AUO aims at adhering to the global goal that taking actions that reduce harm to help collectively reverse nature loss by 2030, while pursuing restorative, regenerative and transformative actions are critical to achieving full recovery by 2050.

APPENDIX A TNFD GLOSSARY

Term	Definition
Asset tagging	According to TNFD's LEAP guidance, asset tagging is a method deepen the heatmap method by using data specific to corporate assets to determine the exposure to dependencies and impacts.
Biodiversity	The variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.
Dependencies (on nature)	Dependencies are aspects of environmental assets and ecosystem services that a person or an organization relies on to function. A company's business model, for example, may be dependent on the ecosystem services of water flow, water quality regulation and the regulation of hazards like fires and floods; provision of suitable habitat for pollinators, who in turn provide a service directly to economies; and carbon sequestration.
Double materiality	Double materiality has two dimensions, namely: impact materiality and financial materiality.
Impacts (on nature)	Changes in the state of nature (quality or quantity), which may result in changes to the capacity of nature to provide social and economic functions. Impacts can be positive or negative. They can be the result of an organization's or another party's actions and can be direct, indirect or cumulative. A single impact driver may be associated with multiple impacts.
Liability risk	Liability risks arise directly or indirectly from legal claims. As laws, regulations and case law related to an organization's preparedness for nature action evolves, the incident or probability of contingent liabilities arising from an organization may increase.
Market risk	Changing dynamics in overall markets, including changes in consumer preferences, which arise from other risk categories as a result of changing physical, regulatory, technological and reputational conditions and stakeholder dynamics.
Nature-positive	A high-level goal and concept describing a future state of nature (e.g., biodiversity, ecosystem services and natural capital) that is greater than the current state.
Policy risk	Changes in the policy context due to new (or enforcement of existing) policies associated with creating positive impacts on nature or mitigating negative impacts on nature.
Priority locations	Priority locations are locations that are: ·Material locations: Locations where an organization has identified material nature-related dependencies, impacts, risks and opportunities in its direct operations and upstream and downstream value chain(s); and/or · Sensitive locations: Locations where the assets and/or activities in its direct operations – and, where possible upstream and downstream value chain(s) – interface with nature in: · Areas important for biodiversity; and/or · Areas of high ecosystem integrity; and/or · Areas of rapid decline in ecosystem integrity; and/or · Areas of high physical water risks; and/or · Areas of importance for ecosystem service provision, including benefits to Indigenous Peoples, Local Communities, and stakeholders.
Reputational risk	Changes in perception concerning an organization's actual or perceived nature impacts, including at the local, economic, and societal level. This can result from direct company impacts, industry impacts and/or impacts of activities upstream and/or downstream in a value chain.
State of nature	The condition and extent of ecosystems, and species population size and extinction risk, including positive or negative changes.
Technology risk	Substitution of products or services with a reduced impact on nature and/or reduced dependency on nature. For example, the replacement of plastics with biodegradable containers.

AUO Corporation TNFD Report 2023

Contact

https://csr.auo.com/en

✉: csr@auo.com