



2024

Acer Biodiversity Risk Assessment Report

acer

Our Biodiversity Commitment

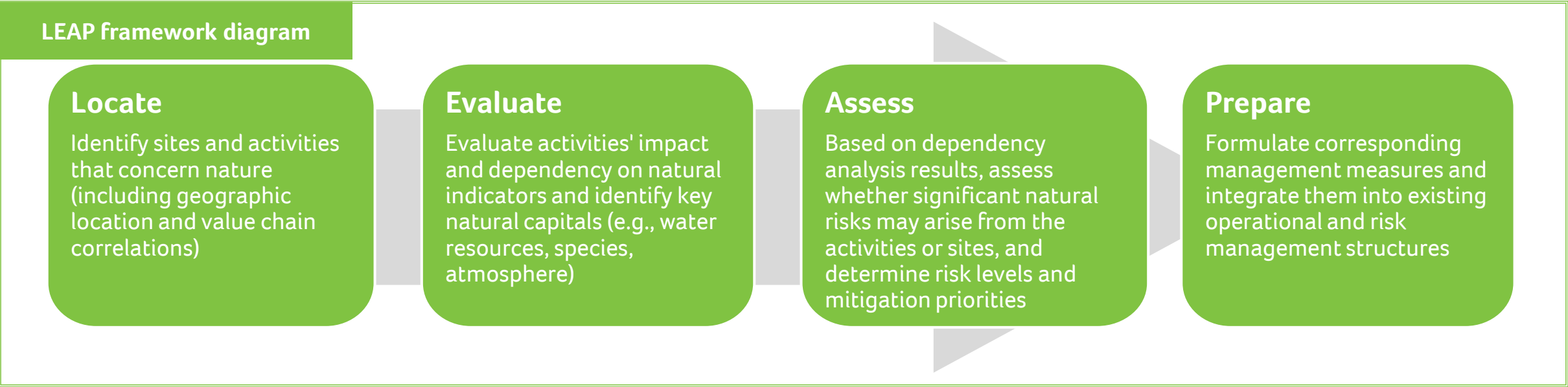
- Biodiversity is a precious natural asset, and its protection is vital to ensure the long-term health of the global ecosystem and the survival of life on this planet. We are committed to achieve no net deforestation, no net loss (NNL), and increase the net positive impact (NPI). We are committed to applying mitigation hierarchies, such as avoidance, minimization, restoration, offset, and additional conservation actions, and engaging with stakeholders to fulfill followings :
 - Ensure that our businesses comply with global, national, and local laws of biodiversity.
 - Use internationally recognized tools to assess the biodiversity-related risks of our operating sites.
 - Require our suppliers and partners to assess the biodiversity-related risks of their operating sites, encourage them to make biodiversity commitments and to adopt necessary measures (e.g. avoid, reduce, restore, and offset) when operating in areas in close proximity to critical biodiversity, biologically diverse ecosystems, and habitats to minimize negative impacts.
 - Seek opportunities with partners and relevant stakeholders to reduce impacts on biodiversity and work together toward the long-term goal of a net positive impact on biodiversity.
- To achieve the above objectives and effectively mitigate the impact of value chain on biodiversity, Acer, based on the TNFD's LEAP (Locate, Evaluate, Assess, and Prepare) assessment framework, utilizes relevant data and tools to analyze the impact, dependencies, and risks associated with biodiversity, aiming to create positive impacts on nature through progressively improving our management plans.

Our Biodiversity Commitment: <https://www.acer.com/sustainability/en/esg-governance/operations-and-environment/biodiversity>

Natural resources and ecosystems are deteriorating at an accelerating rate. The loss of biodiversity has surpassed nature's recovery capacity. Changes and declines in natural capital threaten the stability of ecosystems and pose potential risks to economic activities reliant on natural resources, such as supply chain disruptions, policy restrictions, and reputational damage. These have become indispensable factors in corporate sustainability.

To identify and address nature-related risks and opportunities, Acer adopts the LEAP method proposed by the Taskforce on Nature-related Financial Disclosures (TNFD), along with international tools like ENCORE and the WWF Biodiversity Risk Filter (BRF), to comprehensively analyze the impact and dependency on natural capital throughout the value chain, from upstream operations to downstream activities.

This report presents the consolidated results of Acer's 2023 and 2024 natural risk analysis, covering key dependency indicators, significance ranking of value chain activities, identification of high-risk areas, and critical natural capital. It also proposes management strategies and improvement directions, serving as the foundation for enhancing natural risk governance and advancing nature-positive transitions in the future.



Assessment Framework and Methods

Locate



Collect key sites and transaction amounts or revenues within the value chain (upstream suppliers, Acer's own operation, downstream customers) for the following analysis:

- Analysis of the proximity or location of value chain operational sites in or near ecologically sensitive areas and the associated impacts.
- Evaluation of the overall impact and dependency of the value chain on biodiversity, and identification of significant risk indicators.
- Assessment of the value chain's detrimental effects on biodiversity and identification of key driving factors.

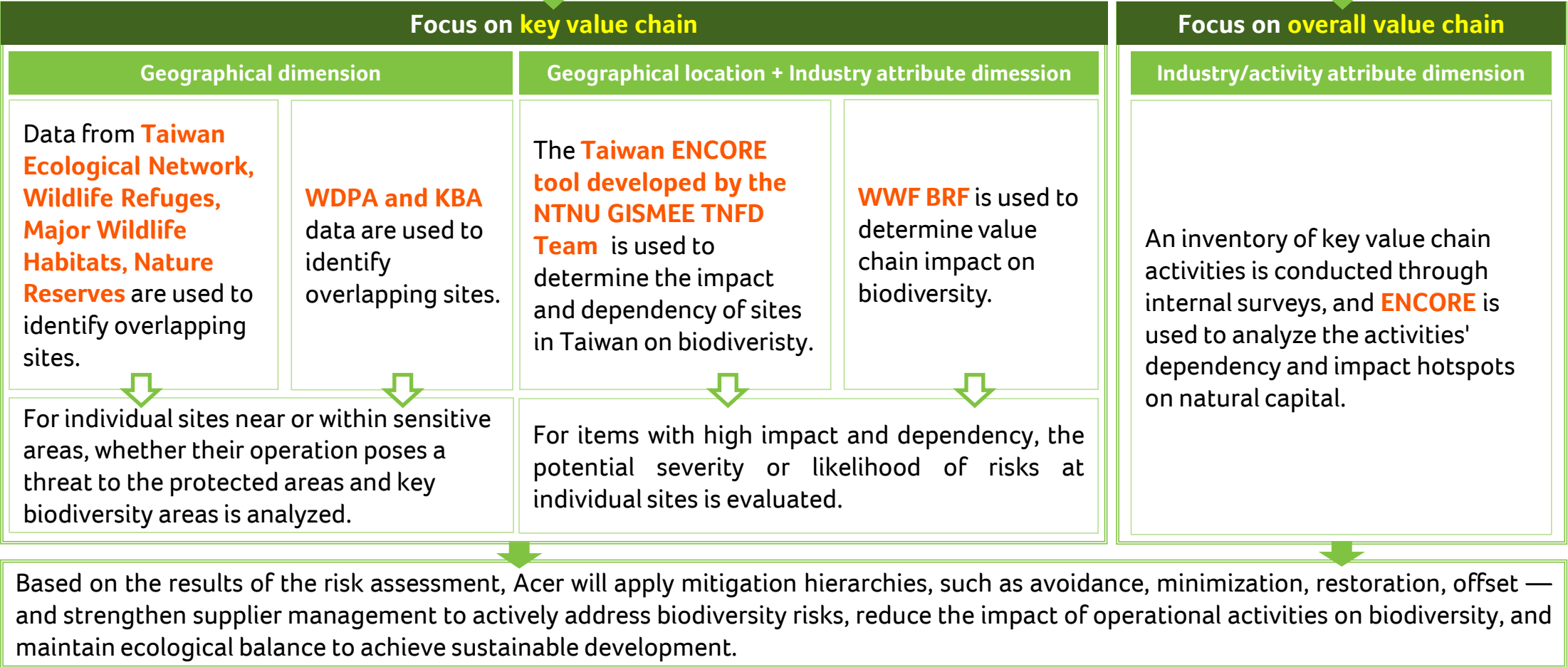
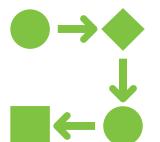
Evaluate



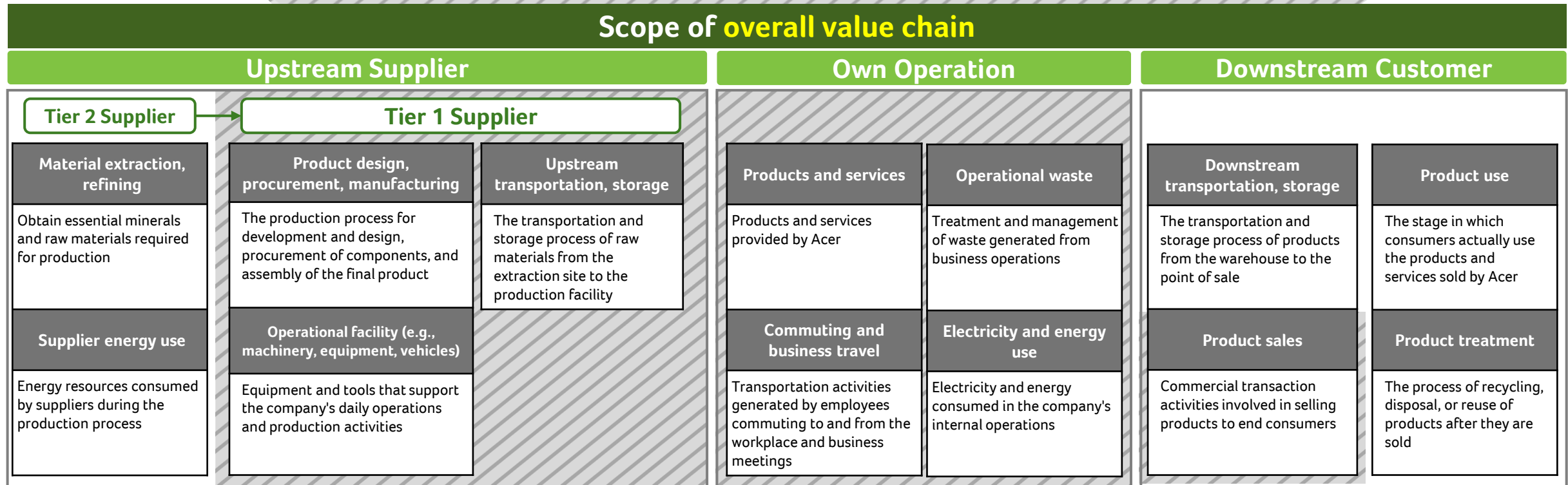
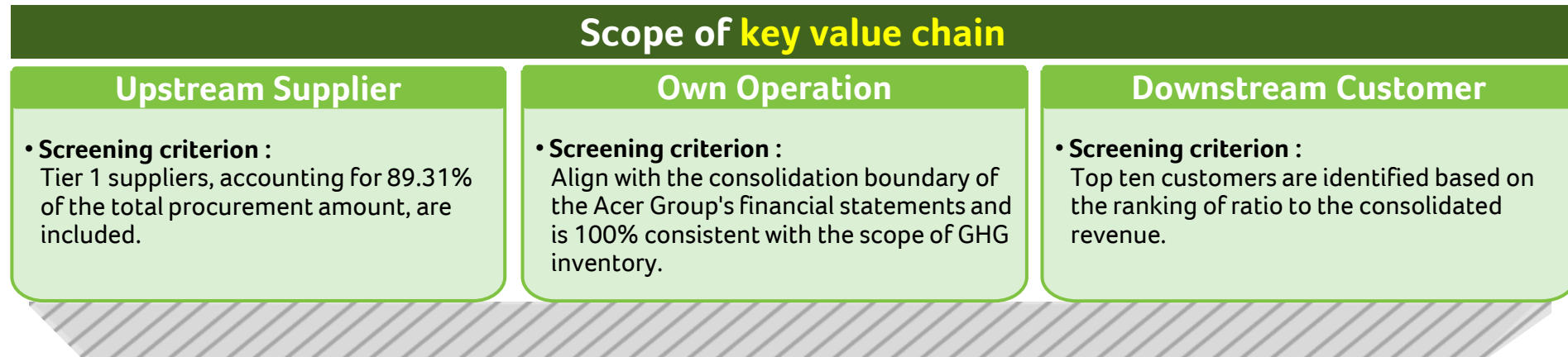
Assess



Prepare



Explanation for the Value Chain Scope Covered in the Assessment



Evaluation Results

1.

Geographical Risk Analysis of Site Overlap with Nature-sensitive Areas

Taiwan – Key Value Chain - Ecological Green Networks, Protected Areas, and Critical Habitat Analysis

Acer surveyed the Taiwan Ecological Network, Wildlife Refuges, Major Wildlife Habitats, and Nature Reserves in 2024, reviewing whether its operating sites in Taiwan are situated in or near these areas. For individual sites with higher risks, whether their operations may pose a threat to these areas is analyzed.

Indicator	Risk Level		Upstream Supplier	Own Operation		Downstream Customer	
➤ Taiwan Ecological Network ➤ Wildlife Refuges ➤ Major Wildlife Habitats ➤ Nature Reserves	1	More than 2 km away from Taiwan Ecological Network	66.7%	54.4%	100%		
	2	Within 2 km of Taiwan Ecological Network	33.3%	26.3%	0%		
	3	Within Taiwan Ecological Network	0%	19.3%	0%		
	4	Near Nature Reserves	0%	0%	0%		
	5	Within Nature Reserves	0%	0%	0%		
			Very low	Low	Medium	High	Very high

Analysis results

1. None of the sites in our value chain is located within wildlife refuges, major wildlife habitats, or nature reserves.
2. 19.3% of Acer’s operating sites are situated within the Taiwan Ecological Network, 26.3% are within two kilometers of the area, and 54.4% are more than two kilometers away from it. As for upstream suppliers, 33.3% are within two kilometers of the Taiwan Ecological Network, and 66.7% are more than two kilometers away. All downstream customers are located more than two kilometers away from the Taiwan Ecological Network. Acer considers the number of employees, the area, and the nature of operations at these sites, and will subsequently focus on the Priority Biodiversity Areas of the Taiwan Ecological Network: Northwest IV and North IV for further attention.

Global–Key Value Chain- Key Biodiversity Areas (KBAs) Analysis

Acer places great importance on the impact of its operations on biodiversity and is committed to achieving environmental protection while generating profits. To ensure that the impact of its operations on ecosystems is minimized, Acer evaluates whether key value chain sites are located in or near protected areas or key biodiversity areas. Corresponding protective measures are formulated to reduce the potential negative impact of activities in these areas on the environment, promoting biodiversity and balancing corporate development with the sustainability of natural resources.

Indicator	Risk Level	Upstream Supplier	Own Operation	Downstream Customer
Key Biodiversity Areas	1	36.8%	20.9%	43.5%
	2	45.6%	75.6%	53.9%
	3	15.8%	2.9%	2.6%
	4	1.8%	0.6%	0.0%
	5	0.0%	0.0%	0.0%
Very lowLowMediumHighVery high				

Analysis results

1. For high-risk locations, analysis shows that 1.8% of upstream supplier sites are situated within Key Biodiversity Areas (KBAs) (see table on the right). Further assessment indicates that these areas are home to species classified as Vulnerable (VU) by the International Union for Conservation of Nature (IUCN). However, the operational locations of the suppliers do not overlap with the distribution ranges of these species, and therefore, the risk of causing substantive impact to the species within the area is considered relatively low.
2. Additionally, 0.6% of own operation sites are located more than two kilometers away from key biodiversity areas.

	Upstream Supplier	Own Operation	Downstream Customer
More than 2 km away from KBAs	0.0%	0.6%	0.0%
Within 2 km of KBAs	0.0%	0.0%	0.0%
Within KBAs	1.8%	0.0%	0.0%

Note : Key Biodiversity Areas (KBAs) are sites that contribute significantly to the global persistence of biodiversity in terrestrial, freshwater and marine ecosystems. The data presented below are drawn from the World Database of Key Biodiversity Areas, which is managed by BirdLife International on behalf of the KBA Partnership.

Global–Key Value Chain- Protected / Conserved Areas (PAs) Analysis

Indicator	Risk Level	Upstream Supplier	Own Operation	Downstream Customer
Protected / Conserved Areas	1	0.0%	39.0%	41.5%
	2	87.7%	59.3%	51.8%
	3	5.3%	1.2%	4.6%
	4	7.0%	0.5%	2.1%
	5	0.0%	0.0%	0.0%
<div>Very low</div> <div>Low</div> <div>Medium</div> <div>High</div> <div>Very high</div>				

Analysis results

- For high-risk sites, analysis shows that 1.7% of upstream suppliers are located within IUCN Category VI protected areas (see table on the right). These areas permit limited use of natural resources, provided such use is compatible with ecosystem conservation. Acer has engaged with the suppliers to ensure they have developed appropriate response strategies and monitoring mechanisms. We will continue to monitor these sites. Additionally, 5.3% of suppliers are located more than 2 kilometers away from protected areas. After reviewing their exact locations, we have assessed that this distance is unlikely to pose an impact on the protected areas.
- For Acer's own operations, 0.5% are located more than 2 kilometers from protected areas. Upon review, these sites are primarily general office spaces for business operations and have minimal environmental impact. We will continue to monitor our own activities.
- For downstream customer sites, 0.5% are located within 2 kilometers and 1.6% are more than 2 kilometers from protected areas. These sites are primarily involved in distribution or retail activities typical of general office operations. Considering the nature of these activities, no significant negative environmental impact has been identified, and we will continue to monitor these locations.

	Upstream Supplier	Own Operation	Downstream Customer
More than 2 km away from PAs	5.3%	0.5%	1.6%
Within 2 km of PAs	0.0%	0.0%	0.5%
Within PAs	1.7%	0.0%	0.0%

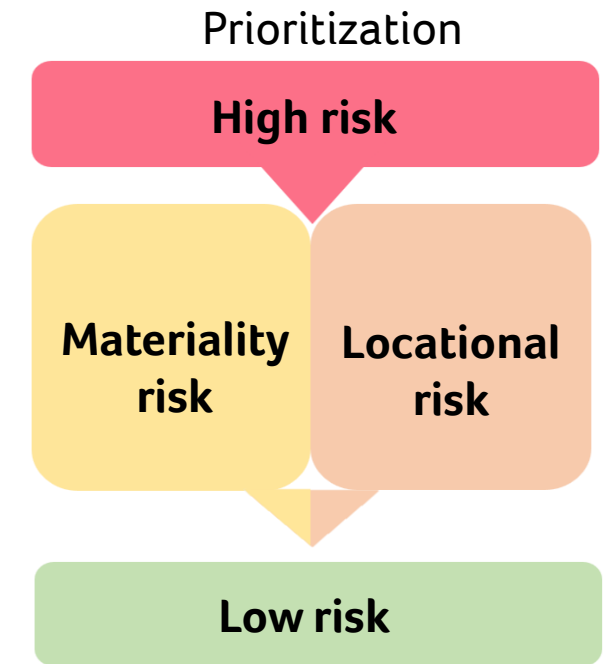
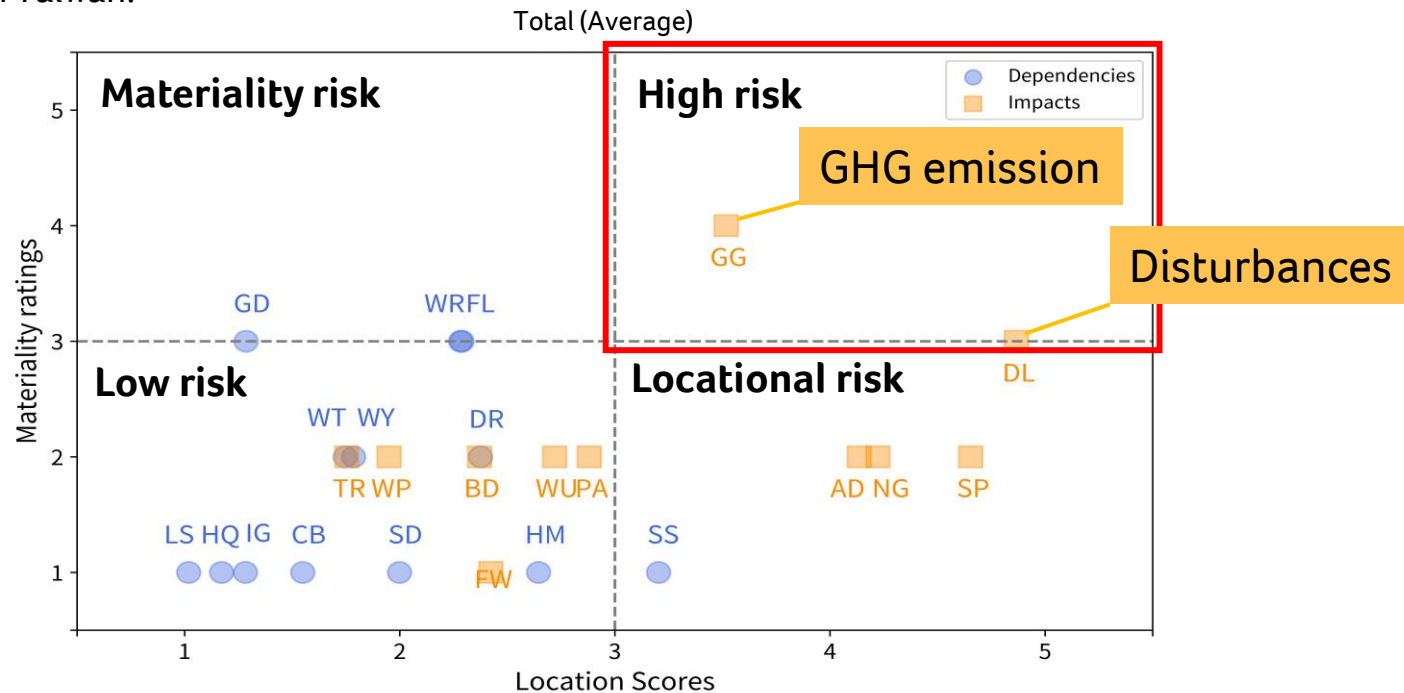
2.

Key Value Chain

**Analysis of Impacts and Dependencies on
Nature and Biodiversity**

Taiwan – Own Operation Sites – Analysis of Impacts and Dependencies on Nature and Biodiversity

In 2024, Acer participated in a joint project in collaboration with CTBC Financial Holding and a team led by Associate Professor Kuanhui Elaine Lin based at Graduate Institute of Sustainability Management and Environmental Education (GISMEE), National Taiwan Normal University (abbreviation: NTNU GISMEE TNFD). The project focused on implementing an investigation of Acer's sites in Taiwan to explore opportunities for extended cooperation. As part of this project, a materiality questionnaire to identify industry's attribution on natural capitals, together with the Taiwan ENCORE tool, was utilized to examine locally applicable industrial baseline data. This helped Acer conduct a more precise assessment of its operational dependencies and impacts on nature within Taiwan.



Analysis results

1. Climate change remains the top priority issue that Acer intends to address.
2. Regarding ecological disruptions, Acer will respond to the previously identified Taiwan Ecological Network by following the principles of avoidance, minimization, restoration, and offset.

Global- Key Value Chain- Impacts and Dependencies on Nature and Biodiversity

Acer used data provided by the WWF Biodiversity Risk Filter (BRF) to assess the impact and dependency on biodiversity across different industries in the key value chain and selected important indicators.

WWF BRF Direct Dependency Indicators

1.1 Water Scarcity
1.2 Limited Timber Availability
1.3 Limited Wild Flora & Fauna Availability
1.4 Limited Marine Fish Availability
2.1 Soil Condition
2.2 Water Condition
2.3 Air Condition
2.4 Ecosystem Condition
2.5 Pollination
3.1 Landslides
3.2 Fire Hazard
3.3 Plant/Forest/Aquatic Pests and Diseases
3.4 Herbicide Resistance
3.5 Extreme Heat
3.6 Tropical Cyclones
4.1 Tourism Attractiveness

WWF BRF Direct Impact Indicators

5.1 Land, Freshwater and Sea Use Change
5.2 Deforestation
5.3 Invasives
5.4 Pollution
6.1 Protected/Conserved Areas
6.2 Key Biodiversity Areas
6.3 Other Important Delineated Areas
6.4 Ecosystem Condition
6.5 Range Rarity

Analysis results

Key Direct Dependency Indicators

Upstream Supplier	Own Operation	Downstream Customer
1.1 Water Scarcity	3.1 Landslides	3.1 Landslides
3.1 Landslides	3.5 Extreme Heat	3.6 Tropical Cyclones
3.6 Tropical Cyclones	3.6 Tropical Cyclones	

Key Direct Impact Indicators

Upstream Supplier	Own Operation	Downstream Customer
5.4 Pollution	-	5.4 Pollution

Acer plans to identify and manage risks and opportunities related to Water Shortage, Typhoons and Natural Disasters, Extreme High Temperatures, Water Pollution, and Waste (please refer to p18)

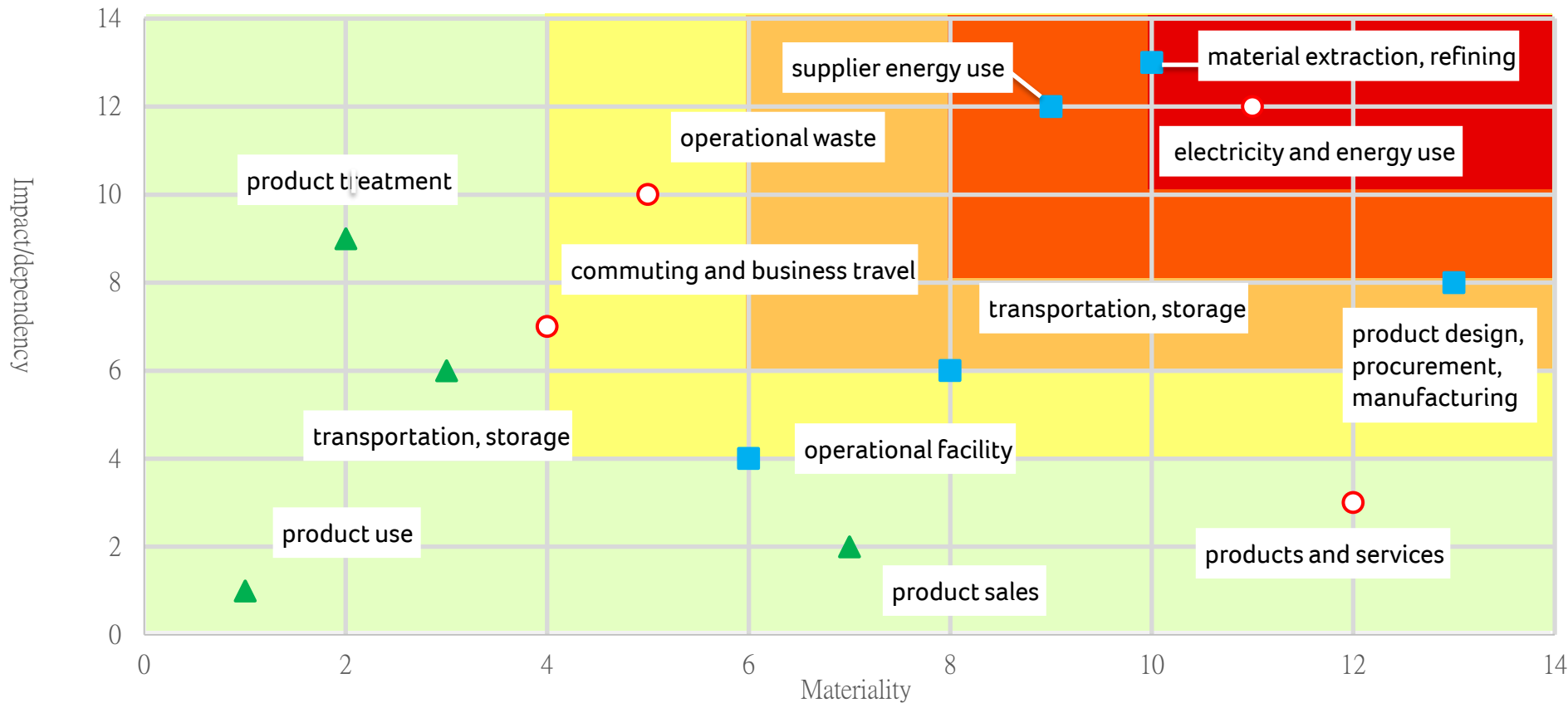
3.

Overall Value Chain

**Analysis of Hotspots for Impacts and
Dependencies on Nature and Biodiversity**

Global- Overall Value Chain- Analysis of Hotspots for Impacts and Dependencies on Nature and Biodiversity

To gain a deeper understanding of the overall value chain's impacts and dependencies on nature and biodiversity, Acer, based on the nature of key activities at each stage of operations, combined internal surveys with external expert opinions to prioritize activities by materiality. The survey assessment covers three main aspects: control ability, operational impact, and environmental impact, in order to select high-priority activities for further analysis. Subsequently, Acer used ENCORE to assess the impact and dependency of the aforementioned key activities on the natural environment, evaluating their potential dependency on and impact risks to the natural environment.



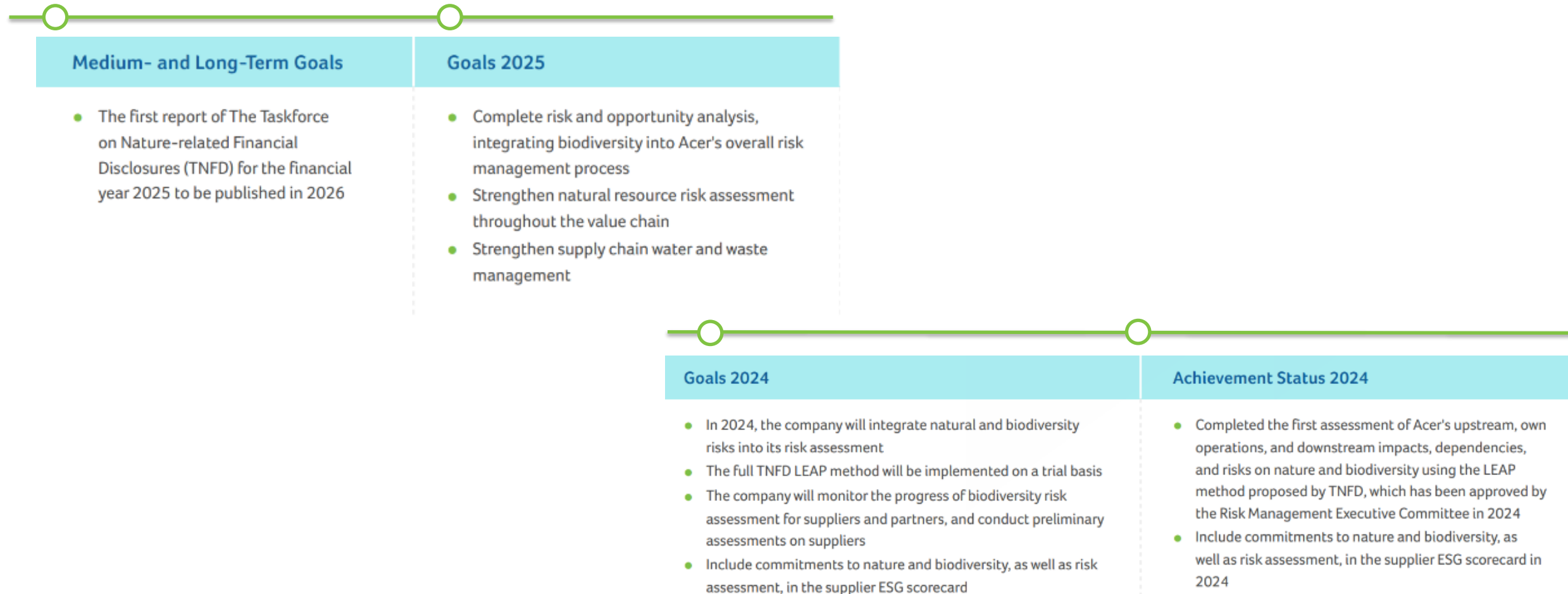
Analysis results

Analysis results show that “Upstream - Raw Material Extraction and Refining” and “Own Operation - Electricity and Energy Use” are the high-risk activities with the greatest potential impact, followed by “Upstream - Product Design, Procurement, and Manufacturing” and “Upstream –supplier energy use”.

- Upstream Supplier
- Own Operation
- Downstream Customer

Acer's Subsequent Strategies and Response

Acer actively adopts the Taskforce on Nature-related Financial Disclosures (TNFD) framework to identify, assess, and disclose nature-related risks and opportunities. Based on the LEAP (Locate, Evaluate, Assess, and Prepare) approach, Acer applies relevant data and tools to conduct an analysis of the impact, dependency, and risks on biodiversity. The TNFD governance, strategy, risk management, and target indicators are disclosed in the 2024 report. Acer's medium and long-term goals and annual progress for nature and biodiversity are as follows.



Risk and Opportunity Identification

Building on the results identified using the WWF Biodiversity Risk Filter (BRF), Acer conducts risk and opportunity identification and management responses for Water Shortage, Typhoons and Natural Disasters, Extreme High Temperatures, Water Pollution, and Waste.

	Potential Material and Transformation Risks	Response	Derived Opportunities
Water Shortage	Many electronic manufacturing and assembly processes heavily rely on water resources, particularly in the production of semiconductors and electronic components.	We systematically manage and collect water usage data, and encourage suppliers to adopt water recycling systems to circulate industrial water.	<ul style="list-style-type: none"> We encourage suppliers to reduce their dependence on water resources, which could improve production efficiency, lower long-term costs, and enhance operational resilience. Smart water storage projects are being developed under the Group's business planning as well.
Typhoons and Natural Disasters	Natural disasters such as typhoons, extreme rainfall, or earthquakes may damage production facilities and local transportation infrastructure, causing material supply disruptions or delays, which in turn affect production schedules, timely product delivery, thereby affecting sales and customer satisfaction.	For earthquakes or extreme rainfall caused by typhoons, we regularly review the adequacy of our existing insurance arrangements (such as global property/goods insurance policies) to ensure that potential risks to our operations are appropriately transferred.	<ul style="list-style-type: none"> In the event of major natural disasters, Acer's cloud architecture ensures that critical business operations remain unaffected by significant information system failures or disasters, ensuring continuous operations.
Extreme High Temperatures	Extreme high temperatures may increase the load on the power grid, leading to power outages or instability, which impacts productivity and operational stability. Rising temperatures increase the use of air conditioning and cooling systems, which drives up energy consumption and costs, thus raising overall operational expenses.	Acer implements multiple energy efficiency improvement projects and audits suppliers' energy management systems, energy use, and energy-saving measures through the ESG scorecard.	<ul style="list-style-type: none"> We promote annual energy conservation and carbon reduction projects to minimize the likelihood that suppliers will adjust their prices due to higher energy costs, thereby affecting product competitiveness.
Water Pollution and Waste	As international attention to environmental protection grows, environmental regulations are becoming stricter, requiring suppliers to invest more resources in handling waste and other issues to comply with regulations, hence increasing operational costs.	Acer considers the environmental impact at each stage of the product lifecycle and has established supplier evaluation standards, requiring suppliers to comply with RBA codes of conduct and carefully manage chemicals in products.	<ul style="list-style-type: none"> Our efforts to promote suppliers' green transformation also enhance our green image and appeal to environmentally conscious consumers.

Acer recognizes that biodiversity is a valuable natural asset and a crucial element of sustainable development. In 2023, we established the "Biodiversity Commitment" and the "Product Packaging and Forest Conservation Policy." In collaboration with stakeholders, we are committed to achieve our ultimate goals of No Net Deforestation (NND), No Net Loss (NNL), and Net Positive Impact (NPI). We are committed to applying mitigation hierarchies, such as avoidance, minimization, restoration, offset, and additional conservation actions, and engaging with stakeholders. ° Acer's overall strategy for addressing nature and biodiversity is as follows:

Operations	Products	Value Chain
<p>Integration into the company's risk management framework</p> <ul style="list-style-type: none"> • Include biodiversity issues in the 2024 corporate risk management key risk indicator review. <p>Reduction of Carbon and Ecological Footprints</p> <ul style="list-style-type: none"> • Follow RE100 and SBTi, and transition according to Acer's net-zero strategy. • Optimize water resource usage and waste management. <p>Enhancement of Internal Employees' Awareness</p> <ul style="list-style-type: none"> • In 2023, biodiversity was included as one of the themes adopted by the ESG Project Award, encouraging employees to implement community collaborations centered on nature and biodiversity conservation. 	<p>Implementation of the Concept of Circular Economy</p> <ul style="list-style-type: none"> • Acer gives the best effort to reduce the products' environmental impact, and actively adopts low-carbon recycling strategies such as innovative design, prolonging product life cycle, and effective use of materials to reach a balance between product management and environmental protection. <p>Establishment of Acer Products' Energy Efficiency and Recycled Material Usage Goals</p> <ul style="list-style-type: none"> • 45% reduction in average personal computer energy consumption in 2025. • 20-30% of PCR plastics content in computers and displays in 2025. 	<p>Nature and Biodiversity Management in Supply Chain Partners</p> <ul style="list-style-type: none"> • Include commitments to nature and biodiversity, as well as risk assessment, in the supplier ESG scorecard. <p>Identification of Priority Materials List</p> <ul style="list-style-type: none"> • In 2024, Acer analyzed and evaluated various raw materials including metals, plastics, paper, and glass based on seven major aspects: regulatory trends, environmental and biodiversity impacts, social and human rights considerations, among others, to identify a priority materials list. <p>Continue to improve nature and biodiversity-related risk identification throughout the value chain.</p> <ul style="list-style-type: none"> • Continue to evaluate impact priorities within the value chain through data collection, internal surveys, and other methods

Regarding Acer's dependence and impact on nature, the corresponding internal management indicators and objectives are as follows:

	Supply Chain Management Targets	Own Operations Management Targets
Water Resource	Strengthen supply chain water and waste management	Total water consumption in 2030 needs to be reduced by 30% compared to 2019
Climate Change	By 2025, 80% of key suppliers will commit to RE100 or set carbon reduction SBTs, and by 2030, value chain carbon emissions will be reduced by 35%	Acer committed to achieve the net-zero goal by 2050, set SBTs and product energy consumption targets, and a green product target of using post-consumer recycled plastics in core products
Waste and Raw Material Usage	<ul style="list-style-type: none"> ● 20-30% of PCR plastics content in computers and displays in 2025 ● Strengthen supply chain water and waste management ● For information on eco-friendly packaging materials and design for waste reduction 	Total waste disposed in 2030 needs to be reduced by 30% compared to 2019

Currently, Acer is actively participating in the following biodiversity initiatives :

Name	Acer Participation
Taiwan Nature Positive Initiative by the BCSD Taiwan	<ul style="list-style-type: none">Acer joined the Taiwan Nature Positive Initiative launched by the Business Council for Sustainable Development Taiwan to gain a deeper understanding of international biodiversity trends and the stakeholders' expectations.In 2024, BCSD-Taiwan focused on Nature Positive as its core theme. Through an analysis of the ACT-D corporate action framework steps, they published "Nature Positive - Taiwan Report." This comprehensive publication integrates perspectives from Taiwan government agencies, local tools, expert recommendations, and case studies from leading companies in the nature and biodiversity initiative platform.
Marine Debris Recycling Coalition	<ul style="list-style-type: none">Acer responds to Sustainable Development Goal SDG 14 (Life Below Water) by transforming marine waste into environmentally friendly products. The company has joined the Marine Debris Recycling Coalition, actively participating in the Alliance's exhibitions and industry exchange activities to collectively establish a circular resource chain for marine waste.



Using technology to assist in natural observation and resource management

In 2024, Acer's subsidiary, Altos, took on the Xucuogang Project in the Dayuan District, Taoyuan City, leveraging its core competencies to assist in avian identification initiatives. The Xucuogang Wetland, the largest coastal wetland in northern Taiwan, features rich biodiversity and offers spectacular views of thousands of water birds gathering during winter months. It has also been recognized by BirdLife International as an important habitat for wild birds. For the Xucuogang avian identification project, Altos delivered comprehensive solutions beyond merely providing high-performance AI workstations. The company collaborated closely with software partners to develop an integrated, precision-driven bird identification system. This solution harnesses advanced AI technology to catalog and monitor 25 common wetland bird species, including the Chinese egret and little tern. The system documents essential ecological data including species nomenclature, distinctive characteristics, behavioral patterns, conservation status, endemic classification, and habitat information. The information is streamed live to an online platform, ensuring higher accuracy and precision in identification processes, thus facilitating more effective ecological research and conservation efforts.



Additionally, Altos initiated the Water Resource Management Project in West Java, Indonesia (Sumber Daya Air Provinsi Jawa Barat), supporting the agency in flood monitoring and disaster management. This project aims to improve water resource management efficiency, hence ensuring the safety and quality of life for local residents. In this project, Altos provided not only high-performance servers but also implemented the NVMe solution—GRAID. Through powerful data processing and analytical capabilities, they developed a comprehensive and precise flood monitoring solution. This solution utilizes advanced AI technology to process real-time water level changes, rainfall measurements, and related environmental data, streaming information directly to monitoring platforms. This ensures enhanced accuracy and immediacy, enabling local water resource management authorities to make more effective disaster prevention decisions and responses, thus reducing flood risks and protecting community safety.

Active Participation in Marine Conservation Initiatives

In response to the theme “Planet vs. Plastics” for Earth Day 2024, Acer encourages users to actively participate in ocean conservation efforts through understanding the importance of coastal and waterway cleanups, participating in local activities, and sharing relevant information, working hand-in-hand to maintain a sustainable marine environment. Additionally, Acer has partnered with Plastic Bank, a Canadian social enterprise, committing to recycle and collect at least 50 tons of plastic waste from the environment in 2024. The project combines the efforts of collectors in Southeast Asia to prevent over 2.5 million plastic bottles from entering the ocean. Collectors gather plastic waste and deliver it to Plastic Bank branches, where they can exchange it for additional income at local market prices and social benefits, such as meal vouchers and health insurance. This enables residents to collect and trade plastic as a source of income or exchange it for goods and services to support their livelihoods.



Please refer to Acer's 2024 Sustainability Report for more information