

## Biodiversity Risk Assessment and TNFD Summary Report

### Introduction

Biodiversity has become one of the emerging topics in ESG (Environmental, Social, and Governance) in recent years. Influenced by climate change and the depletion of Earth's resources, the resources that companies depend on—including those used in raw material extraction, business operations, and manufacturing processes, such as water resources—are being affected. Additionally, extreme weather events such as heavy rains and heatwaves, driven by climate change and environmental shifts, are becoming more common. Human activities also contribute to environmental threats like water pollution, chemical contamination, and air pollution. As businesses rely on Earth's resources for their existence, their operations inevitably impact the ecological environment and biodiversity.

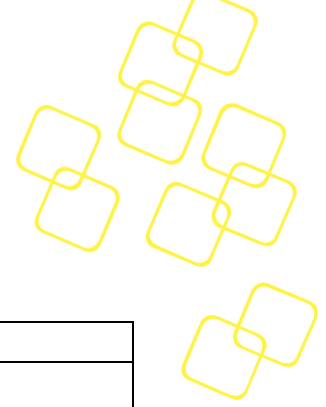
In response to the consensus from the 15th United Nations Conference on Biodiversity and the recommendations outlined in the global biodiversity framework, which suggest biodiversity policy objectives and guidelines for companies to follow, Advantech has made public commitments concerning biodiversity and forest protection. For more details, please refer to: [Biodiversity Commitment](#) and [No Deforestation Commitment](#).

Starting in 2022, Advantech has begun focusing on biodiversity and forest protection issues. The company has joined the "Taiwan Nature Positive Initiative (TNPI)", initiated by the Business Council for Sustainable Development of the Republic of China. Advantech is taking more proactive steps towards this initiative to enhance the company's resilience and apply its IoT expertise to empower natural conservation efforts

In 2023, Advantech investigated its own operation locations and the biodiversity risk assessment in the supply chain (Scope: headquarters and Mainland China) to identify major risk items, affected sites, potential risks, and risk management recommendations. Relevant information and Advantech's biodiversity commitments are disclosed on Advantech's ESG official website. We are committed to publishing the 2025 fiscal year TNFD report in 2026.

In this brief document integrating biodiversity risk assessment with the TNFD reporting framework, we use the BRF to align with the LEAP methodology to assess physical risks, transition risks, and systemic risks. The following content covers the sections marked in black in the LEAP methodology. The LEAP methodology items covered include:

Locate	<input type="checkbox"/> L1 Span of the business model and value chain <input checked="" type="checkbox"/> L2 Dependency and impact screening <input checked="" type="checkbox"/> L3 Interface with nature <input checked="" type="checkbox"/> L4 Interface with sensitive locations
Evaluate	<input checked="" type="checkbox"/> E1 Identification of environmental assets, ecosystem services and impact drivers <input checked="" type="checkbox"/> E2 Identification of dependencies and impacts <input checked="" type="checkbox"/> E3 Dependency and impact measurement



	■E4 Impact materiality assessment
Assess	■A1 Risk and opportunity identification ■A2 Adjustment of existing risk mitigation and risk and opportunity management ■A3 Risk and opportunity measurement and prioritisation ■A4 Risk and opportunity materiality assessment
Prepare	<input type="checkbox"/> P1 Strategy and resource allocation plans <input type="checkbox"/> P2 Target setting and performance management <input type="checkbox"/> P3 Reporting <input type="checkbox"/> P4 Presentation

I. Process, Methodology, and Scope of Biodiversity Risk Assessment:

This report's evaluation time period: from January 1, 2023, to December 31, 2023.

The operational locations covered in this report: Advantech's operational sites in Taiwan (ACL) and China (AKMC, ACL), totaling 52 sites.

The value chain scope includes Taiwanese and Chinese suppliers, covering a total of 32 operational sites. The principles for supplier selection in this assessment report are as follows:

1. Exclude agents.
2. Set procurement amount and volume thresholds for suppliers to be included in the assessment.
3. Suppliers whose raw materials are irreplaceable.
4. Suppliers in industries with potential environmental or biodiversity impacts.

In this report, the Biodiversity Risk Filter (BRF) tool and database, established by the World Wide Fund for Nature (WWF), is used to assess biodiversity-related risks, covering both physical and reputational risks.

After importing and analyzing data through the BRF system, the results yield eight types of risk outcomes, with the number of sites in each risk category varying.

Furthermore, a detailed analysis is conducted on the 33 identified risk indicators. In particular, future actions corresponding to the high-risk items are evaluated and discussed. In the analysis results, Advantech set the significant risk standard at 50% of sites falling into high and very high-risk categories. Follow-up will involve setting management indicators and further researching potential risks. Finally, the distribution of sites for each high-risk indicator is visualized.

The quantified information described in this report is currently voluntarily disclosed and has not been verified by an independent third party. Future disclosure quality and verification needs will be improved as necessary.

II. Results of major risks in Advantech's Taiwan and China sites and supply chain:

Using the BRF tool and sorting the risk scores from high to the low, the standard for

major risks was set as 50% of the sites falling into high and very high, and a total of 10

BRF risk indicators		Scape Physical Risk	2.2 Water Condition	2.3 Air Condition	3.1 Landslides	3.2 Fire Hazard	3.5 Extreme Heat	3.6 Tropical Cyclones	5.4 Pollution	Scape Reputational Risk	6.1 Protected/Conserved Areas	7.3 Labor/Human Rights	8.1 Media Scrutiny
Percentage of High risk/ Very high risk	Taiwan sites				100%			100%				100%	80%
	China sites		50%	50%		62%	90%	83%				100%	98%
	Supply chain Taiwan sites				100%			100%	100%		93%	100%	
	Supply chain China sites					53%	100%	100%	100%			100%	
Percentage of Very high risk	Taiwan sites				80%			100%					
	China sites							50%					
	Supply chain Taiwan sites				93%			100%					
	Supply chain China sites							100%	100%				

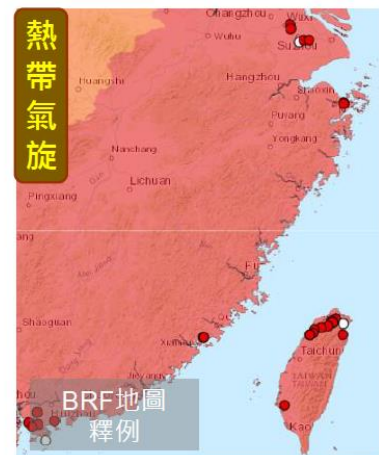
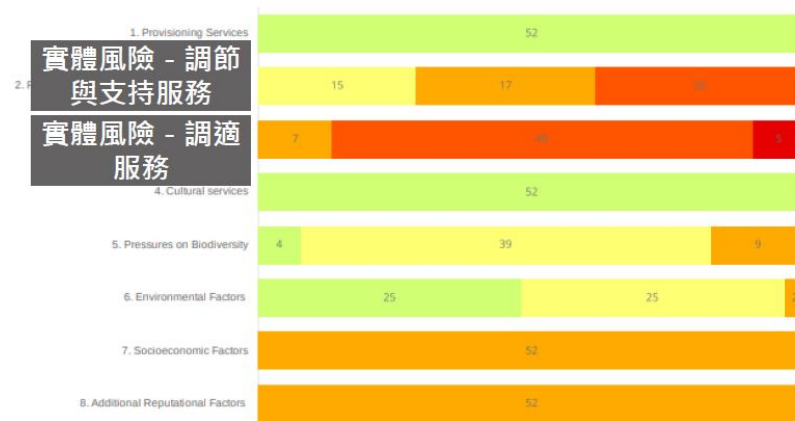
items were identified.

WWF Biodiversity Risk Filter Levels

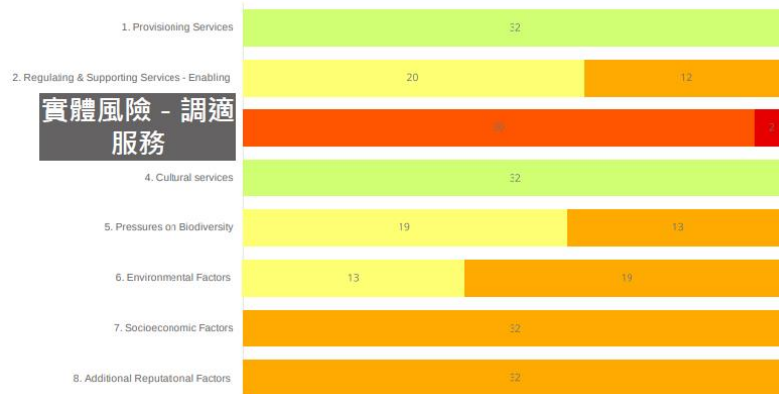
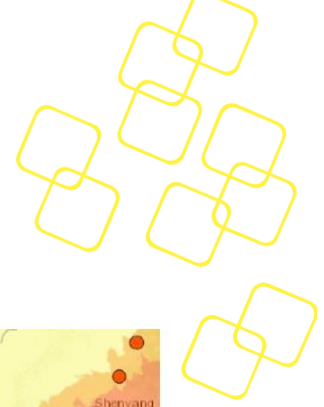
Very low (1.0-1.8)	Low (1.8-2.6)	Medium (2.6-3.4)	High (3.4-4.2)	Very high (4.2-5.0)

	實體風險	水質狀態	空氣品質狀態	山體滑坡/土石流	野火風險	極端高溫	熱帶氣旋	污染	聲譽風險	保護區/保留區	勞工/人權	媒體監督
Biodiversity Risk Filter	Scape Physical Risk	2.2 Water Condition	2.3 Air Condition	3.1 Landslides	3.2 Fire Hazard	3.5 Extreme Heat	3.6 Tropical Cyclones	5.4 Pollution	Scape Reputational Risk	6.1 Protected/Conserved Areas	7.3 Labor/Human Rights	8.1 Media Scrutiny
Site Name	SPH	S2_2	S2_3	S3_1	S3_2	S3_5	S3_6	S5_4	SRP	S6_1	S7_3	S8_1
HK Advantech Technology Co., Ltd 香港研華	2.56	2.5	3.5	4	3.5	4	4.5	2.75	2.89		3.5	4
北京研華興業電子科技有限公司上海研華	3	3	3.5	3	3	4.5	4.5	2.75	2.89		3.5	4
北京研華興業電子科技有限公司東莞研華	2.56	2.5	3.5	3	3.5	4	4.5	2.75	2.89		3.5	4
北京研華興業電子科技有限公司佛山研華	3	3	3.5	3	3.5	4	4.5	2.75	2.89		3.5	4
北京研華興業電子科技有限公司蘭州研華	3.38	3.5	3.5	4	3.5	3	3	2.88	2.89		3.5	4
北京研華興業電子科技有限公司北京研華	3.5	3.5	3.5	3	4	4	3	2.88	2.89		3.5	4
北京研華興業電子科技有限公司南京研華	3	3	4	3	3.5	4.5	4.5	3.12	2.89		3.5	4
北京研華興業電子科技有限公司南京研華	2.81	2.5	3.5	3	3.5	4	4.5	2.75	2.89		3.5	4
北京研華興業電子科技有限公司南昌研華	3	3	3.5	3	3	4.5	4.5	2.88	2.89		3.5	4
北京研華興業電子科技有限公司廈門研華	3	3	3.5	3	3	4.5	4.5	2.75	2.89	1.5	3.5	4
北京研華興業電子科技有限公司合肥研華	3.5	3.5	4	3	3.5	4.5	4.5	3.12	2.89		3.5	4

Visualization of Advantech sites' risks:



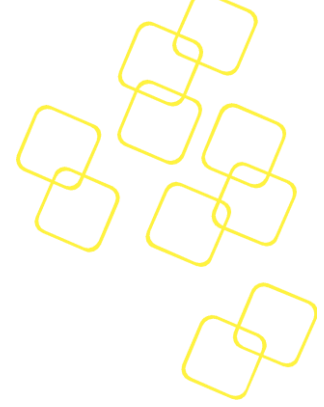
Visualization of Advantech supply chain's risks:



III. Risk assessment results: dependency risk items  
According to the BRF assessment results, there are 10 major risk issues identified in Advantech's direct operational sites and supplier sites. Based on the recommendations of ENCORE Drivers and TNFD guidelines, these major risk issues are classified into dependency risk items as follows.

	Dependency related Risk (high risk/extremely high risk sites)	Regulating and Supporting Services: Facilitation		Regulating Services: Reduce Impacts			
		Water quality	Air quality	Landslides/debris flow	Wildfire risk	Extreme high temperatures	Tropical cyclones
Advantech Sites	Significant Risks Number of sites in Taiwan	-	-	10 (100%)	-	-	10 (100%)
	Significant Risks Number of sites in China	21 (50%)	40 (95%)		26 (62%)	38 (90%)	35 (83%)
Advantech Supply Chain	Significant Risks Number of sites in Taiwan	-	-	15 (100%)	-	-	15 (100%)
	Significant Risks Number of sites in China	-	-	-	9 (53%)	17 (100%)	17 (100%)

IV. Risk Assessment Results: Impact and Other Risk Items

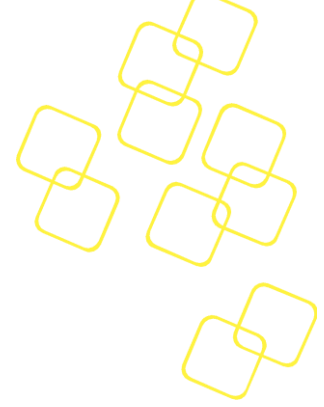


Impact-related risks		Biodiversity Pressures
		Pollution
Advantech Sites	Significant Risks Number of sites in Taiwan	15 (100%)
	Significant Risks Number of sites in China	17 (100%)
Advantech Supply Chain	Significant Risks Number of sites in Taiwan	—
	Significant Risks Number of sites in China	—

#### Items Unrelated to Dependency or Impact

Items that cannot be categorized	Environmental Factors	Socioeconomic Factors	Other Reputational Factors
	Protected Areas/Reserves	Labor/Human Rights	Media Supervision
Significant Risks Number of operational sites in Taiwan	—	—	—
Significant Risks Number of operational sites in China	—	42 (100%)	41 (98%)
Significant Risks Number of supplier sites in Taiwan	14 (93%)	—	—
Significant Risks Number of supplier sites in China	—	17(100%)	—

\* Three major risk items—protected areas/reserves, labor rights, and media supervision — belong to the reputational risk category, which are part of the BRF's own assessment items. These are not required to be included in the TNFD framework. Furthermore, in the BRF tool, labor rights and media supervision are assessed at a broader geographical scale, making it difficult to capture detailed nuances. However, they are disclosed as items for future



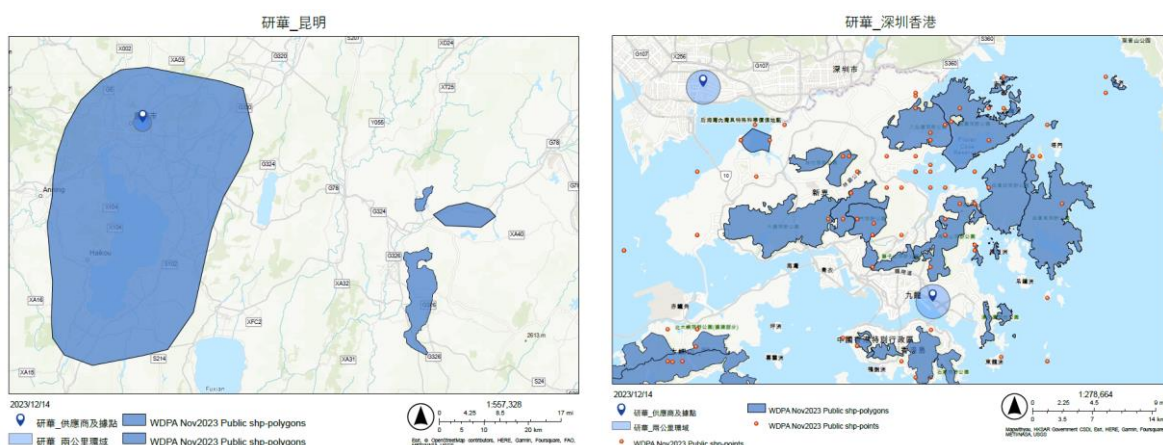
attention.

#### Summary of Major Risks at Each Site:

Sites	Taiwan Headquarters	Landslides/debris flow, tropical cyclones
	ACN 、AKMC 、AKTC	Water quality, air quality, wildfire risk, extreme high temperatures, tropical cyclones, labor rights, media supervision
Supply Chain	Taiwan Headquarters	Landslides, debris flow, tropical cyclones, pollution, protected areas/reserves
	ACN 、AKMC 、AKTC	China sites: Wildfire risk, extreme high temperatures, tropical cyclones, pollution, labor rights

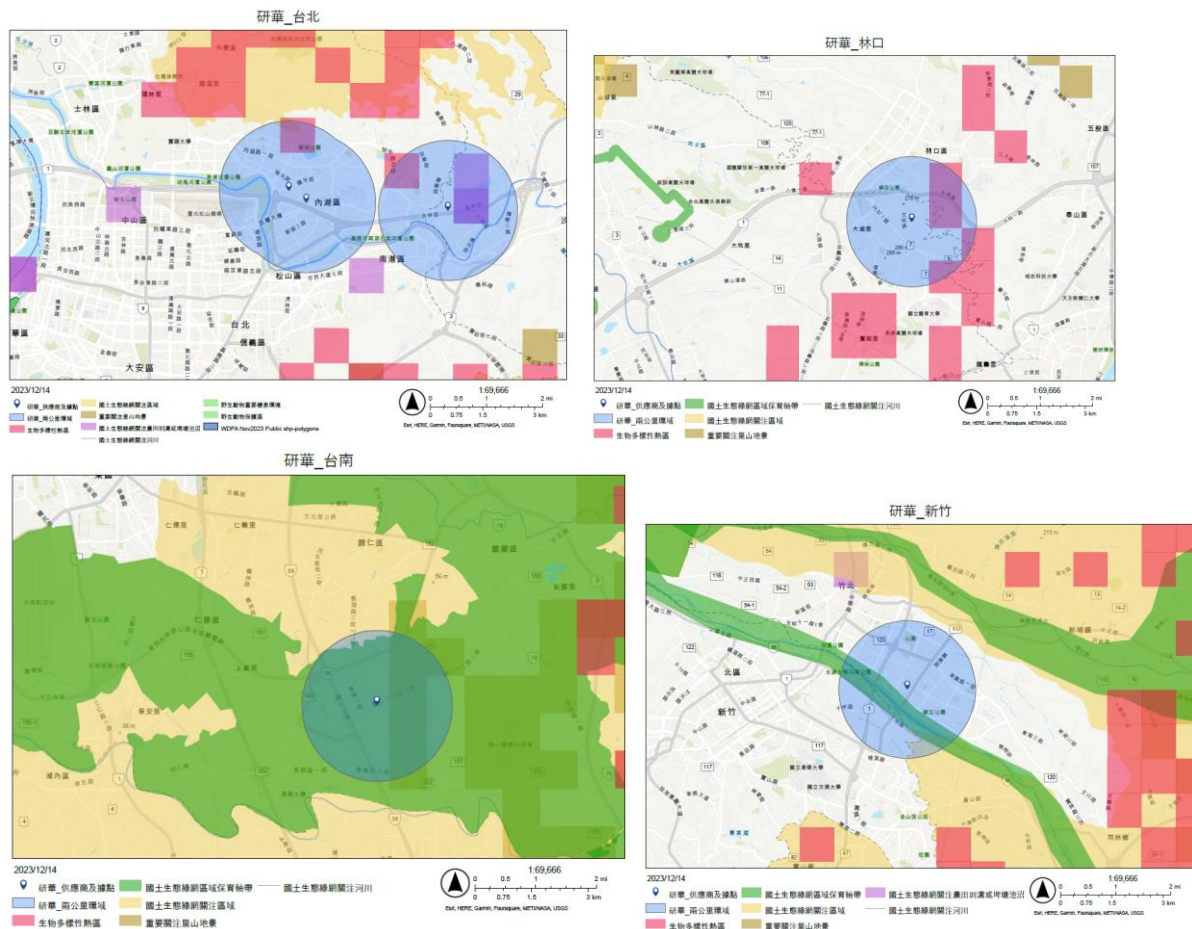
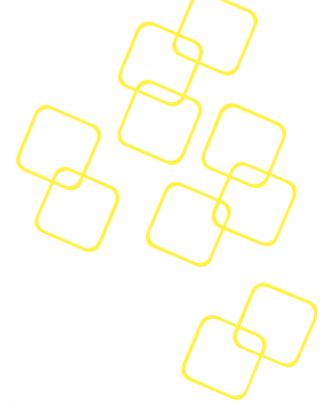
#### V. Positioning and Exploration Analysis Results for Environmental Analysis (2-Kilometer Radius)

The previous analysis was limited to Advantech's operational sites and supplier sites in Taiwan and China. To gradually improve the report and based on the future TNFD produced by various operational sites in Taiwan (Taipei, New Taipei, Hsinchu, Taichung, Tainan, Kaohsiung) and key RBUs, Advantech conducted preliminary exploration from a location dimension. Thus, external experts were enlisted to assist in conducting an environmental analysis around the world (including Advantech's Taiwan headquarters and the five major RBU sites). Using a 2-kilometer radius around operational sites as the scope of analysis, Taiwan's map data analysis used WDPA map data, Taiwan legal protected area data, and the National Green Network conservation areas. For operational sites in China, due to the larger scale of map data and the lack of further regional map data overlays, the WDPA analysis results showed significant overlap with the Dian Lake scenic area near the Kunming site and proximity to protected areas for the Hong Kong site.



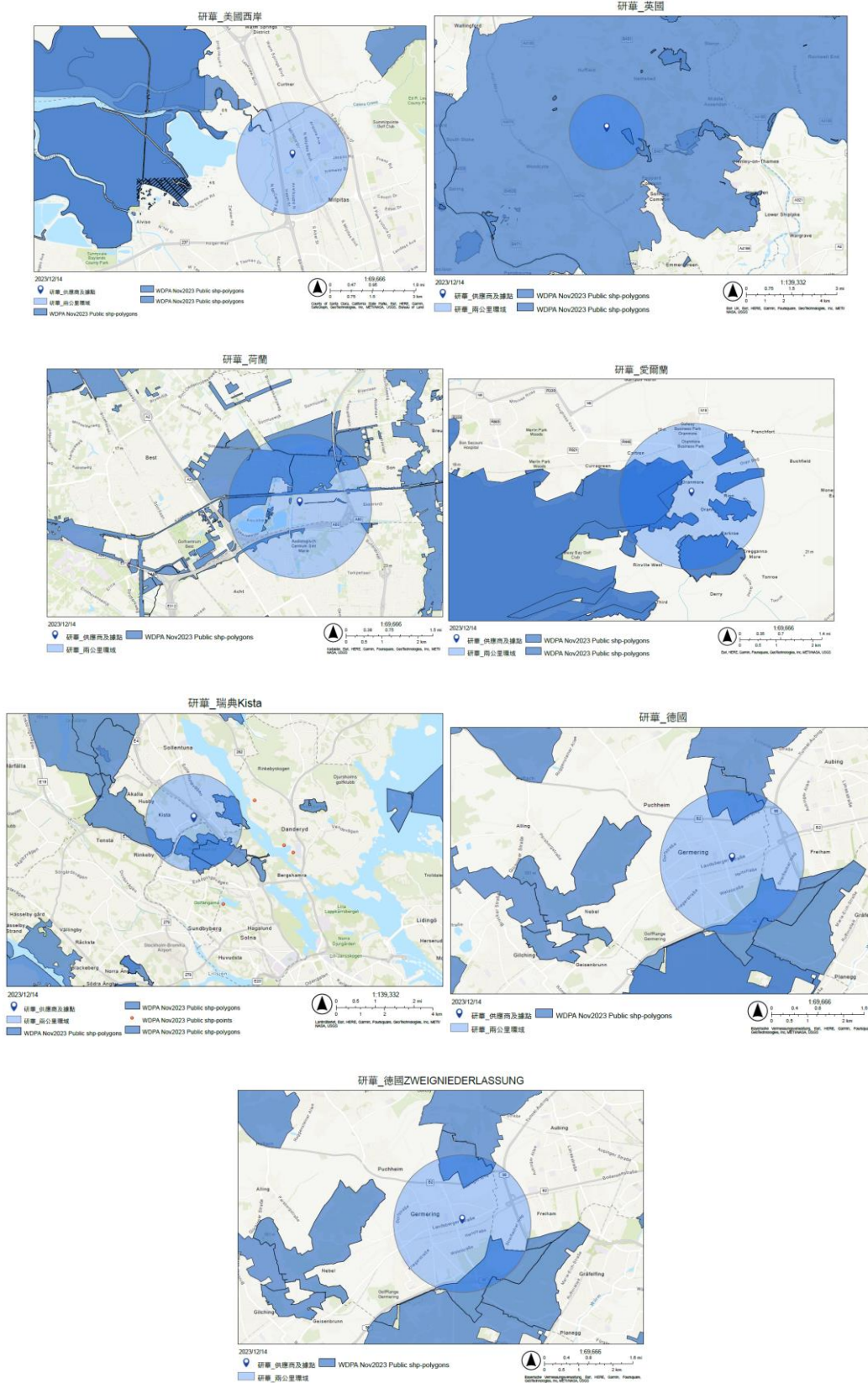
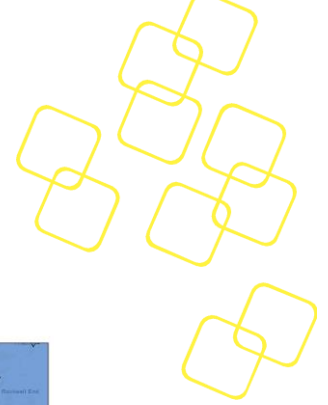
Advantech's operational sites in Taiwan showed considerable overlap within a 2-kilometer radius with Taiwan's legal protected areas, the National Green Network conservation areas, and biodiversity hotspots.





Advantech Taiwan Operational Sites	2-Kilometer Radius
Neihu SunnyBuilding and Headquarters	Biodiversity hotspots
Linkou Campus	Biodiversity hotspots
Hsinchu	National Ecological Green Network conservation areas, National Ecological Green Network priority areas
Taichung	X
Tainan	National Ecological Green Network conservation areas, National Ecological Green Network priority areas
Kaohsiung	X

Other global Advantech operational sites in Europe have numerous WDPA data, with scattered protected areas near each site, but not within the 2-kilometer radius. In the western United States, the United Kingdom, the Netherlands, Ireland, Sweden, and Germany (two locations), there are seven sites overlapping with nearby protected areas. Below are screenshots of sites overlapping with protected areas:



After conducting the environmental analysis, we can preliminarily understand the protected areas overlapping with Advantech's operational sites, thereby identifying potential



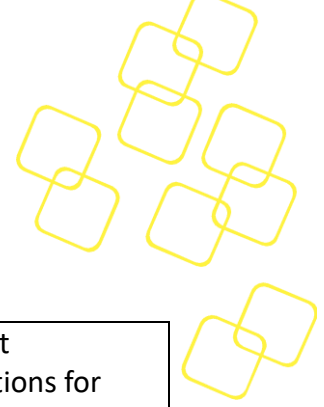


opportunities, risks, and management indicators related to biodiversity issues. In the coming year, we will refine management indicators and actions as needed, explore whether to extend the environmental analysis to the supply chain, and gradually optimize the content of TNFD disclosures.

## VI. Summary of TNFD Disclosure

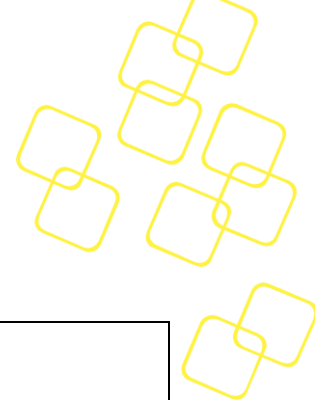
Advantech officially became a TNFD Adaptor member in 2024 and has committed to publishing its TNFD report for the fiscal year 2025 by 2026. Prior to this deadline, Advantech will annually provide voluntary summary disclosures and continuously improve its reporting as a practical response to biodiversity goals.

<b>Governance</b> <b>Disclose the organisation's governance of nature-related dependencies, impacts, risks and opportunities.</b>	
<b>TNFD recommended disclosures</b>	<b>Actions and/or progress</b>
<p>A.</p> <p>Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities.</p>	<p>The highest guiding and supervisory body for nature-related risks is the Sustainability Development Committee (SDC) at the board level. Chaired by the Chairman of the Board, the committee meets four times a year. Regular attendees include the General Manager, the Head of Audit, members of the ESG Corporate Sustainability Office, and the Corporate Governance Officer. Functional teams, executive units, or operational managers, as well as co-governance general managers, attend based on the topics being discussed. The biodiversity planning, biodiversity commitments, and no-deforestation commitments were reported and approved in 2023.</p>
<p>B.</p> <p>Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities .</p>	<ul style="list-style-type: none"> <li>● The ESG Corporate Sustainability Office is responsible for analyzing and disclosing biodiversity-related information, recommending resources, opportunities, or practices for implementing corporate biodiversity programs for the reference of the biodiversity project execution team.</li> <li>● The Sustainable Supply Chain team will use biodiversity-related disclosures and risk management requirements as references to mitigate biodiversity impacts through management documents or ESG-related training. In 2024, they will incorporate biodiversity protection requirements into the supplier code of conduct.</li> </ul>



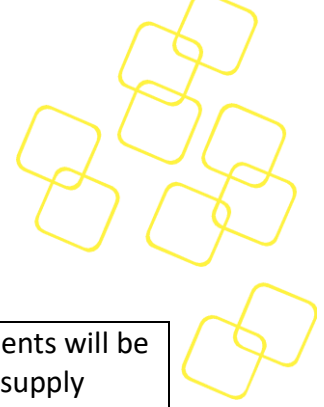
	<ul style="list-style-type: none"> <li>The Emerging Business Development department is working on AIoT solutions for biodiversity and collaborating with universities and biodiversity-related fields to develop product solutions.</li> </ul>
<p>C.</p> <p>Describe the organisation's human rights policies and engagement activities, and oversight by the board and management, with respect to Indigenous Peoples, Local Communities, affected and other stakeholders, in the organisation's assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.</p>	<p>This initiative has not yet commenced and is listed as a direction for improvement in the coming year.</p>

<b>Strategy</b> <b>Disclose the effects of nature-related dependencies, impacts, risks and opportunities on the organisation's business model, strategy and financial planning where such information is material.</b>	
<b>TNFD recommended disclosures</b>	<b>Actions and/or progress</b>
<p>A.</p> <p>Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium and long term .</p>	<ul style="list-style-type: none"> <li>Dependence and Impact: Please refer to the list of dependence and impact risks identified in this report.</li> <li>Risks: Please refer to the 10 types of risks identified in this report, which will be considered in short, medium, and long-term assessments.</li> <li>Opportunities: Advantech is integrating its core business to develop scientific and automated AIoT monitoring solutions. Among these, bio-acoustic monitoring stands out for its low cost and low power consumption, which facilitates extensive monitoring of biological activities. In addition to collaborating with external academic and industry experts, Advantech is leveraging its AIoT core capabilities to develop acoustic warning systems and AI-based activity recognition solutions.</li> </ul>
<p>B.</p> <p>Describe the effect nature-related dependencies, impacts, risks and</p>	<p>This initiative has not yet commenced and is listed as a direction for improvement in the coming year.</p>



opportunities have had on the organisation's business model, value chain, strategy and financial planning, as well as any transition plans or analysis in place	
C. Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios .	This initiative has not yet commenced and is listed as a direction for improvement in the coming year.
D. Disclose the locations of assets and/or activities in the organisation's direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations.	Based on the aforementioned environmental and biodiversity analysis results, local data from Taiwan (such as protected areas, important habitats, and biodiversity hotspots) and international data (e.g., IUCN World Database on Protected Areas, WDPA) have been applied.  At this stage, the analysis includes significant supply chain and operational locations for the organization but does not yet extend to sites in Europe, the United States, Japan, and South Korea. In response to Advantech's focus on sustainable raw materials starting in 2023, the company will further strengthen its analysis and develop improvement actions in the coming year.

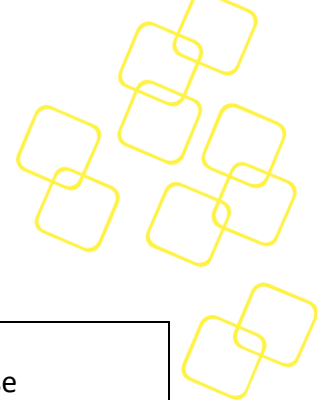
<b>Risk &amp; impact management</b>	
<b>Describe the processes used by the organisation to identify, assess, prioritise and monitor nature-related dependencies, impacts, risks and opportunities.</b>	
<b>TNFD recommended disclosures</b>	<b>Actions and/or progress</b>
A. i Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its direct operations.	<ul style="list-style-type: none"> <li>● Guiding Principles: Publish biodiversity policies and commitments that specify avoiding operational activities near globally or nationally significant biodiversity sites. This policy also requires suppliers, contractors, and partners within the Advantech value chain to adhere to these guidelines.</li> </ul>
A. ii. Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s) .	<ul style="list-style-type: none"> <li>● Mitigating Negative Impacts on Ecosystems: Enhance operational efficiency at sites to reduce the consumption of various resources. Commit to developing green products to decrease dependence on natural resources and minimize environmental impacts. For managing natural risks within the supply</li> </ul>



	<p>chain, it is anticipated that requirements will be progressively strengthened through supply chain management documents in 2024.</p> <ul style="list-style-type: none"> <li>● Biodiversity and Forest Conservation Actions: Advantech sponsors the Taiwan Mountain Forest Restoration Association's "Taichung Dadu Plateau Ecological Afforestation Project," which promotes public participation in environmental education and improves carbon sequestration, with an estimated annual carbon sequestration of approximately 1.78 tons. Additionally, Advantech organizes multiple biodiversity conservation volunteer activities each year, including wetland maintenance, stone weir restoration, beach cleanups, and ecological trail maintenance.</li> <li>● Note: For detailed information, please refer to the risk assessment process outlined in this report.</li> </ul>
<p>B.</p> <p>Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities .</p>	<p>The biodiversity risk assessment has been completed; however, a monitoring system has not yet been established and is listed as an area for improvement in the coming year.</p>
<p>C.</p> <p>Describe how processes for identifying, assessing, prioritising and monitoring nature-related risks are integrated into and inform the organisation's overall risk management processes.</p>	<p>This initiative has not yet commenced and is listed as a direction for improvement in the coming year.</p>

<b>Metrics &amp; targets</b> <b>Disclose the metrics and targets used to assess and manage material nature-related dependencies, impacts, risks and opportunities.</b>	
<b>TNFD recommended disclosures</b>	<b>Actions and/or progress</b>
<p>A.</p> <p>Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process .</p>	<p>Example Description:</p> <ul style="list-style-type: none"> <li>● Number of Ecological Conservation Volunteer Sessions and Participation Hours</li> <li>● Carbon Sequestration in Forest Conservation Areas</li> </ul> <p>The work has not yet commenced and is listed as an area for improvement in the coming year.</p>





<p>B.</p> <p>Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature.</p>	<p>Example Description:</p> <ul style="list-style-type: none"> <li>● Requirement for Suppliers to Disclose Compliance and Biodiversity Major Risk Analysis Indicators</li> <li>● Whether Operational Sites Have Established Typhoon Emergency Response Measures</li> </ul> <p>The work has not yet commenced and is listed as an area for improvement in the coming year.</p>
<p>C.</p> <p>Describe the targets and goals used by the organization to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.</p>	<p>Example Description:</p> <p>The AIoT for Biodiversity project aims to deploy AIoT observation stations at Advantech's Linkou Park, Xitou Experimental Forest, and Yushan National Park by 2024. By 2026, the project will integrate image recognition technology, establish one smart forest management command center, and expand application areas. A three-year plan and objectives have already been established for this initiative.</p> <p>Detailed work has not yet commenced and is listed as an area for improvement in the coming year.</p>

VII. Future Improvement Advices:

After risk analysis and internal self-assessment, biodiversity-related indicators have not been fully incorporated into the risk management evaluation system. In the second half of 2024, discussions with the risk management team will focus on significant risk management indicators, implementation methods, and annual improvements based on individual sites and research results.