

2025

Chunghwa Telecom TNFD

Report for Taskforce on Nature-Related Financial Disclosures

June, 2026





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Chi-Cheng Chien, CHT Chairman

簡志誠

Message from the Chairman

As the leader in Taiwan's telecommunications industry, Chunghwa Telecom (hereinafter referred to as "Chunghwa Telecom") upholds a management philosophy centered on simplification, pragmatism, and intelligence. Guided by the vision of "Chunghwa AI Ignites the Future", we aspire to serve as an enabler of industry and society. We recognize that long-term business success is inseparable from living in harmony with nature, and that biodiversity is fundamental to maintaining ecosystem stability and supporting human well-being. Accordingly, we regard nature conservation and biodiversity as key pillars of our sustainability strategy. Guided by the core themes of "digital resilience, smart empowerment, sustainable future", we integrate nature sustainability into every aspect of our business decision-making.

We support the international vision set forth in the Kunming-Montreal Global Biodiversity Framework, adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP15), namely "halting and reversing biodiversity loss" by 2030 and "living in harmony with nature" by 2050. In 2023, Chunghwa Telecom took the lead in the industry by publishing its Biodiversity and No Deforestation Commitment, pledging to achieve Net Positive Impact (NPI) and No Net Deforestation (NND) by 2030. We designated 2024 as the Inaugural Year for Biodiversity Implementation and established a dedicated biodiversity project team led by the Senior Executive Vice President. Focusing on two strategic priorities—mitigating nature loss and promoting nature positivity—we have developed long-term biodiversity conservation pathways built around four key strategies: "Science-based Nature Assessment", "No Deforestation", "Alignment with the Nature Positive Initiative", and "Mainstreaming Nature Positive". In 2025, we continued to advance these efforts by further re-

fining our initiatives and broadening their impact.

To strengthen our science-based nature assessment practices, we applied the LEAP (Locate, Evaluate, Assess, and Prepare) approach recommended by the Taskforce on Nature-related Financial Disclosures (TNFD). We expanded the scope of analysis from point-based sites to include linear sites and, for the first time, incorporated submarine cable landing sites into the Locate and Evaluate phases. This marked the expansion of the Company's natural footprint assessment from terrestrial to marine areas. In addition, the assessment scope was broadened from Chunghwa Telecom's own operations to include group subsidiaries and significant Tier-1 suppliers. Through this process, we identified six priority group subsidiaries and four priority industries, further enhancing the Group's overall nature resilience.

We also continued to deliver meaningful progress through nature-positive initiatives supported by our technological capabilities. Our Black-faced Spoonbill Conservation Project was upgraded to Version 2.0, expanding AI image recognition from a single species to 11 wetland bird species, integrating the Sound Identification and Labeling Intelligence for Creatures (SILIC) system capable of identifying 33 bird species, and combining GPS tracking data to establish a cross-border migration database. We also established the AI-powered Ecological Restoration Education Center at Dingshan Elementary School to promote citizen science and local revitalization. The Hundred-Species Restoration Project expanded from its demonstration site at the Taipei Jinshan Building to the Wuqing Service Center in Kaohsiung, broadening the scope of plant restoration sites. Through the Bamboo Forest Management Project, 61 representatives from more than 40 suppliers participated in

bamboo forest tending and ecological engagement activities, extending circular sustainability practices throughout the supply chain. We also pioneered the Citizen Scientists for Tree Carbon Project, with 264 employees trained in 2025 and field measurements completed for 3,631 trees. Under our "150,000 trees in 8 years" afforestation program, more than 77,139 trees have been planted to date. During the year, we once again partnered with our Sustainability Ambassador Tai Tzu-ying to plant 1,800 native Taiwanese tree seedlings in Budai Township, Chiayi County. Notably, Chunghwa Telecom's Sanyi Jiweigu Telecommunications Base, as a demonstration site, was among the first recipients of Other Effective Area-based Conservation Measures (OECMs) certification issued by the Ministry of Agriculture's Forestry and Nature Conservation Agency in early 2026. This marked the first such recognition awarded to a telecommunications company in Taiwan and demonstrated how telecommunications facilities can be transformed into natural capital with conservation value.

Looking ahead, we believe biodiversity is a cornerstone of sustainable development. Protecting natural ecosystems not only reflects our commitment to the environment and society, but also creates long-term value that supports shared prosperity. As a key industry driver, we will continue to leverage our influence and work closely with value chain partners and cross-sector collaborators to advance nature conservation through technological innovation. Together, we strive to ensure that our future generations can continue to enjoy a rich, diverse, and sustainable natural environment.



Key Initiatives for Advancing Sustainability

Guided by the management philosophy of “simplification, pragmatism, and intelligence” and the vision of “Chunghwa AI Ignites the Future”, Chunghwa Telecom collaborates with upstream and downstream partners to co-create sustainable value and foster a mutually beneficial sustainability ecosystem. In 2025, we continued to deepen our three strategic pillars of digital resilience, smart empowerment, sustainable future. Anchored in our “AI Everywhere” concept and enabled by the integration of AI with next-generation networks, we charted three key development directions—Advancing Technology, Expanding Business, and Extending Footprint—while continuing to serve as an enabler and co-creator. In doing so, we support industries across all sectors in advancing both digital transformation and net-zero transition, thereby further amplifying our sustainability impact.

Significant milestones driven by previous nature sustainability initiatives are as follows:

1 The scope of application for joining RE100 includes the parent company and five subsidiaries (Chief Telecom Inc., Honghwa International Corporation, Chunghwa Precision Test Tech.Co., Ltd., Chunghwa Leading Photonics Tech Ltd., and International Integrated Systems, Inc.).

2006

Established a “Corporate Social Responsibility Committee” to promote corporate social responsibility and environmental sustainability with keener insight, a forward-looking mindset, and a systematic approach.

2007

Published the first Corporate Social Responsibility (CSR) Report, marking an important milestone in Chunghwa Telecom’s engagement and communication with stakeholders.

2008

Led the industry in conducting Greenhouse Gas (GHG) inventories, covering 100% of operational sites, and verified by SGS-Taiwan, becoming the first telecommunications operator in Taiwan to obtain ISO 14064-1 certification.

2018

Proposed the “Sustainable Supply Chain Initiative” with reference to the “ISO 20400 Sustainable Procurement Guidelines,” and introduced a “Supplier Sustainability Grading System.”

2021

Restructured the “Corporate Social Responsibility Committee” into the executive-level “Sustainable Development Committee.”

2022

- ◆ Became the first telecommunications operator in Taiwan to issue sustainability bonds, with an issuance amount of NTD 3.5 billion – the largest sustainability bond issuance by a non-manufacturing enterprise in Taiwan at that time.
- ◆ Piloted internal carbon pricing, with carbon emissions priced at NTD 1,600 per metric ton of carbon.

2023

- ◆ Published the “Biodiversity and No Deforestation Commitment,” pledging to achieve Net Positive Impact (NPI) and No Net Deforestation (NND) by 2030.
- ◆ Integrated the “Sustainable Development Committee” and the “Strategy Committee” into the “Sustainable Development and Strategy Committee,” and elevated it to the level of a functional committee under the Board of Directors.
- ◆ Joined the RE100 initiative, committing to 100% renewable energy use across the Group¹ by 2040.
- ◆ Validated by SBTi for near-term greenhouse gas emission reduction targets, committed to halving Scope 1 and Scope 2 carbon emissions by 2030.
- ◆ Joined the “Nature and Biodiversity Initiative Platform” launched by BCSD Taiwan.

2024

- ◆ Became the first telecommunications operator in Taiwan to issue a Taskforce on Nature-related Financial Disclosures (TNFD) report, and the first to establish a localized biodiversity scientific assessment procedure in Taiwan.
- ◆ Established a “Chunghwa Telecom No Net Deforestation Policy” in accordance with the EU Deforestation Regulation (EUDR) to prevent all forms of deforestation activities.
- ◆ Became the first telecommunications operator in Taiwan to join the EV100 initiative, committing to achieving the goal of 100% electrification of engineering and official vehicles by 2030.
- ◆ Verified by SBTi for greenhouse gas net-zero targets, committed to achieving net-zero by 2045.

2025

- ◆ Chunghwa Telecom’s MSCI ESG rating was upgraded to AAA.
- ◆ The Company received the Gold Prize (highest honor) in the for-profit category of the 2025 Taiwan Biodiversity Awards for its initiative AI-driven Smart Technology and Biodiversity Sustainability.
- ◆ Chunghwa Telecom received the highest honor of the “Annual Honor Roll” at the 2025 Global Views ESG Corporate Sustainability Awards, and won two Model Awards and one Excellence Award in the “Outstanding Project” category.
- ◆ The Company issued the first sustainability bond in Taiwan’s telecommunications industry to incorporate biodiversity considerations, totaling NT\$3.5 billion.
- ◆ Chunghwa Telecom revised the Charter of the Sustainable Development and Strategy Committee, with the President serving concurrently as the Chief Sustainability Officer.
- ◆ The Company secured a diversified green electricity procurement arrangement, commencing in 2027, for the wheeling of over 4.6 billion kWh of green electricity over a 20-year period.
- ◆ Chunghwa Telecom proactively aligned with the IFRS Sustainability Disclosure Standards, incorporating a dedicated sustainability disclosure section in its 2025 Annual Report.
- ◆ The Hundred-Species Restoration Project completed the Kaohsiung site, bringing the cumulative number of conserved threatened species to eight.
- ◆ The Citizen Scientists for Tree Carbon certified 264 corporate volunteers, with field measurements completed for 3,631 trees.
- ◆ The Bamboo Forest Management Project completed 9.244 hectares of bamboo forest tending, representing 27% progress.



2025 Performance Highlights

The year 2024 marks the “The launch year of Biodiversity Initiatives” for Chunghwa Telecom. Adhering to the two core principles of “mitigating nature loss” and “promoting nature positivity,” the Company continues to plan and implement long-term biodiversity conservation pathways, striving to fulfill the “Biodiversity and No Deforestation Commitment.” These efforts aim to achieve No Net Deforestation (NND) and Net Positive Impact (NPI) on biodiversity by 2030. In 2025, Chunghwa Telecom continued to advance the previous directions and, in alignment with the Strategic Action Plan for Natural Carbon Sinks under Taiwan’s 2050 Net-Zero Transition, positioned natural carbon sinks as an integral component of its overall decarbonization strategy. Through a diversified approach—including carbon credit mechanisms and various nature-based solutions—we advanced ecological initiatives such as afforestation, bamboo forest restoration, and the Citizen Scientists for Tree Carbon. These efforts further strengthened biodiversity conservation, while refining implementation plans and broadening their impact. The key performance highlights for 2025 include:

Black-faced Spoonbill Conservation Project 2.0

Chunghwa Telecom has been implementing the first AI-enabled habitat conservation project in Taiwan’s telecommunications industry since 2024. Focusing on the nationally important Qigu Salt Field, the initiative introduced Taiwan’s first AI-enabled Black-faced Spoonbill Monitoring System. In 2025, the Black-faced Spoonbill Conservation Project 2.0 was launched with enhanced features, including citizen science and education outreach, expanded AI-based migratory bird identification system, AI-powered bird call identification, and black-faced spoonbill migration tracking. Leveraging its core technologies, the Company contributed to the increase of black-faced spoonbill population in Taiwan while promoting local revitalization and citizen science initiatives.



Hundred-Species Restoration Project

Chunghwa Telecom has been advancing the first native plant restoration project in Taiwan’s telecommunications industry, using its operational sites as conservation bases and deploying AIoT monitoring technologies to track plant growth conditions, with the goal of conserving 100 threatened and native plant species. In 2024, the Taipei Jinshan Building, which features an ecological pond, small flower beds and enjoys high public visibility, was selected as a demonstration site. Following ecological surveys and expert consultation, five representative conservation species were identified: *Arundina graminifolia*, *Angelica pubescens*, *Asarum taitonense*, *Chrysanthemum boreale* var. *tomentellum*, and *Hypericum monogynum*. In 2025, Chunghwa Telecom expanded the Hundred-Species Restoration Project to the Wuqing Service Center in Kaohsiung. Conservation areas were established in the entrance area and around the employee rest pavilion, where a restoration ecosystem was created, featuring threatened plant species including *Clausena excavata*, *Kalanchoe garmbienensis* Kudo, *Scutellaria tashiroi* Hayata, *Scutellaria austrotaiwanensis* T.H.Hsieh & T.C.Huang, and *Salvia tashiroi* Hayata. The project was also integrated with the workplace childcare center to provide education rooted in local characteristics, encouraging young children to engage with plants and learn about ecological conservation.

Bamboo Forest Management Project

Through the Forestry and Nature Conservation Agency’s matchmaking platform, Chunghwa Telecom launched the Bamboo Forest Management Project in September 2024 in collaboration with local communities, including the Atayal tribe in Fuxing District, Taoyuan City. In 2025, the project was extended from four years to a ten-year horizon (through 2034) to ensure sustainable management of bamboo forest ecosystems. During the year, the Company continued to carry out conservation activities, including site maintenance, thinning and management of Makino bamboo forests, and bamboo shoot season protection. More than 40 suppliers, represented by 61 participants, were invited to take part in the initiative. Through thematic presentations, site tours, and hands-on field activities, participating supplier representatives experienced a bamboo-centered circular sustainability model first-hand and gained a deeper understanding of the ecological value of bamboo forests. The initiative aligns with Forest Strategy 2: Strengthening Forest Carbon Sink Management under the Strategic Action Plan for Natural Carbon Sinks under Taiwan’s 2050 Net-Zero Transition, by promoting bamboo forest management and revitalizing bamboo production.



Citizen Scientists for Tree Carbon Project

In collaboration with a research team from National Taiwan University in 2024, Chunghwa Telecom provided employees with foundational training in tree ecology, carbon sinks, and field survey techniques. In 2025, 264 employees were certified as Citizen Scientists for Tree Carbon, equipped with scientific literacy and hands-on field capabilities. A total of 3,631 trees were measured in field surveys. The project aligns with Forest Strategy 4: Strengthening R&D Capacity for Forest Carbon Sink-Related Technologies under the Strategic Action Plan for Natural Carbon Sinks under Taiwan's 2050 Net-Zero Transition. By establishing methodologies for measuring carbon sink capacity in natural habitats, the initiative promotes and advances forest management models and research that enhance carbon sink benefits.



Afforestation Program

Since announcing the expansion of the “150,000 trees in 8 years” afforestation program in 2023, Chunghwa Telecom has established 38.14 hectares of afforested area, with more than 77,139 trees planted to date. In 2025, the Company once again partnered with Taiwanese badminton star and Chunghwa Telecom Sustainability Ambassador Tai Tzu-ying to host the “Sustainability in Action – Moving Forward with Tai” tree-planting event in Budai Township, Chiayi County. The event took place at the No. 1920 Wind-break Protection Forest in Haomei Village, located in the southwestern corner of Budai Township, Chiayi County. Prioritizing native Taiwanese tree species, the project created a multi-layered landscape forest beneath existing *Casuarina equisetifolia* and *Millettia pinnata* stands. A total of 1,800 seedlings—including butterfly- and bird-attracting species, such as *Pittosporum pentandrum*, *Myoporum bontiodides*, *Scaevola taccada*, and *Phoenix hanceana*—were planted. The program aligns with Forest Strategy 1: Increasing Forest Area under the Strategic Action Plan for Natural Carbon Sinks under Taiwan's 2050 Net-Zero Transition, through afforestation on state-owned, public, and private lands to enhance both forest coverage and carbon sink capacity.

No Deforestation Sharing Session

In December 2025, Chunghwa Telecom hosted the “No Deforestation: From Global Trends to Corporate Practice” sharing session to explore the relationship between the Forest Stewardship Council (FSC) and deforestation issues, as well as global and local developments. The event enhanced both internal and external stakeholders' understanding of no-deforestation issues and related policies.



OECM Certification

In alignment with the Forestry and Nature Conservation Agency's Terrestrial OECMs Certification Programme, Chunghwa Telecom designated its Sanyi Jiweigu Telecommunications Base as a demonstration site. The site was certified in 2026, marking the first recognition of its kind for a telecommunications operator in Taiwan. The initiative transforms existing telecommunications facilities into natural capital with conservation value, continues to foster a biodiversity-friendly environment, minimizes wildlife disturbance, and implements a sustainability strategy that integrates habitat protection with site operations and maintenance.



About the Report

In 2022, the 15th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP15) finalized the Kunming-Montreal Global Biodiversity Framework, with the Conference of the Parties committing to 23 action targets for 2030 and 4 long-term goals for 2050. In 2024, COP16 further advanced negotiations on governments’ responsibilities and targets, with a focus on strengthening the implementation of the Kunming-Montreal Global Biodiversity Framework to address global biodiversity challenges. Guided by this framework, countries have further developed and implemented their National Biodiversity Strategies and Action Plans (NBSAPs), serving as key national-level instruments for advancing biodiversity conservation.

To support the implementation of Target 15 of the Kunming-Montreal Global Biodiversity Framework², Chunghwa Telecom, in alignment with Taiwan’s National Biodiversity Strategies and Action Plans, has adopted the TNFD framework announced during Climate Week NYC in September 2023. Accordingly, we structures its nature-related disclosures around four pillars—Governance, Strategy, Risk and Impact Management, and Metrics and Targets—and applies the LEAP approach recommended under the TNFD framework to systematically assess its dependencies and impacts on nature. Moreover, Chunghwa Telecom also references the international GRI Standards in analyzing natural biodiversity, aiming to responsibly address nature-related risks, collaborate with related parties to strengthen corporate resilience, and promote Nature Positive growth.

This report primarily discloses information pertaining to Chunghwa Telecom’s headquarters, related business sites, group subsidiaries and suppliers in the Company’s supply chain, covering the period between January 1, 2025, and December 31, 2025. However, as advancing nature sustainability actions requires long-term commitment, some sections include content from previous and subsequent years. The taskforce for this report is a collaboration between Chunghwa Telecom, the International Climate Development Institute (ICDI), the team led by a retired associate professor of National Taiwan University, and the Sustainable Transformation Service Team from Deloitte & Touche Sustainability and Risk Advisory Co., Ltd. (hereinafter referred to as “the Taskforce”).

²Target 15 of the Kunming–Montreal Global Biodiversity Framework states: “Businesses should regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity and promote sustainable consumption patterns in order to progressively reduce negative impacts on biodiversity”.





1 Commitment to Nature and Governance

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1-1 Natural Vision and Commitment

Chunghwa Telecom fully recognizes the importance of biodiversity and no deforestation to ecological balance and climate stability. Therefore, we commit to preserving and promoting biodiversity, avoiding all deforestation activities, and further advancing forest restoration not only in our own operations, but also jointly with our Tier-1 suppliers and non-Tier-1 suppliers across the supply chain and other partners, so as to align with the United Nations Sustainable Development Goals (SDGs) ³ 6, 12, 13, 14, and 15, as well as the Post-2020 Global Biodiversity Framework. Furthermore, in 2023, we announced the “Biodiversity and No Deforestation Commitment”, leading the industry by pledging to achieve Net Positive Impact (NPI) on biodiversity and No Net Deforestation (NND) by 2030. This commitment aims to honor the “Kunming-Montreal Global Biodiversity Framework”, and achieve the 2030 milestone of “halting and reversing biodiversity loss” and the 2050 vision of “living in harmony with nature,” thereby realizing our goal of “becoming a global benchmark for sustainable development”. Our commitment includes:

- ◆ As a general principle, our new operating activities (including the establishment of office buildings/service centers, telecom facilities, base stations, etc.) should be avoided in areas⁴ adjacent to key biodiversity areas (KBAs). Where national infrastructure development necessitates the construction of telecommunications facilities in areas adjacent to KBAs, we will conduct environmental impact assessment in compliance with relevant national regulations. This includes the assessment and monitoring of risks related to biodiversity and forest degradation, and formulating measures to prevent, mitigate, restore and offset the impacts. Additionally, we will collaborate with external partners to protect the ecosystem in areas adjacent to KBAs and strive for No Net Loss (NNL).
- ◆ If current operating activities are carried out in areas adjacent to KBAs, we will progressively conduct risk assessments and monitoring associated with the use of natural resources and biodiversity conservation, in order to plan response actions, reduce reliance on natural resources, and minimize negative impacts. We aim to achieve a Net Positive Impact (NPI) on the biodiversity in the affected areas by 2030.
- ◆ We will inventory the current use of wood-based products in operational activities (such as paper, packaging, building materials, and furniture) and allocate resources for forest restoration, with the goal of progressively achieving No Net Deforestation (NND) by 2030.
- ◆ We will continuously raise stakeholders’ (employees, clients, suppliers, partners) awareness of the importance of biodiversity and forest conservation.
- ◆ We will engage in major domestic and international biodiversity initiatives, and collaborate with external experts (such as scholars, consultants or non-governmental organizations) to keep abreast of biodiversity progress and formulate long-term strategies.
- ◆ We will regularly disclose the progress of biodiversity and no net deforestation initiatives through the Company’s official website or sustainability reports.



³ SDG 6: Clean water and sanitation, SDG 12: Responsible consumption and production, SDG 13: Climate action, SDG 14: Life below water, SDG 15: Life on land.⁵

⁴ Within 2km around national important biodiversity areas and the habitats of species classified as Critically Endangered, Endangered, or Vulnerable on the IUCN Red List.



1-2 Long-Term Biodiversity Conservation Pathway Commitments

To promote biodiversity conservation and no deforestation, and to advance toward achieving NPI and NND by 2030, Chunghwa Telecom has established long-term biodiversity conservation pathways built upon two core commitments: mitigating nature loss and promoting nature positivity.

Under its commitment to mitigating nature loss, Chunghwa Telecom has set two key objectives: Science-based Nature Assessment and No Deforestation. As part of its Science-based Nature Assessment efforts, the Company began collaborating with a dedicated taskforce in 2024 to conduct localized Locate and Evaluate analyses⁵ under the TNFD framework. Initially, the assessment scope covered point-based sites such as base stations. In 2025, the scope was expanded to include group subsidiaries, with the results disclosed in Chunghwa Telecom’s 2025 TNFD Report. Going forward, the Company will continue to broaden the scope of its assessments. To support its no deforestation efforts, Chunghwa Telecom hosted the “No Deforestation: From Global Trends to Corporate Practice” sharing session in December 2025, providing insights into topics such as the relationship between the Forest Stewardship Council (FSC) and deforestation issues.

Under its commitment to promoting nature positivity, Chunghwa Telecom has established two key objectives: Alignment with the Nature-Positive Initiative and Mainstreaming Nature Positive. As part of its Alignment with the Nature Positive Initiative efforts, the Company trained 264 employees in 2025 to become Citizen Scientists for Tree Carbon with scientific literacy and hands-on field capabilities, and completed field measurements of 3,631 trees. Regarding Mainstreaming Nature Positivity, efforts include promoting the Hundred Species Restoration Project, where we selected multiple rare plants for conservation in 2025. For detailed information, please refer to “[4-2 Hundred-Species Restoration Project – Kaohsiung Expansion](#)”.

Further information on the commitments under Chunghwa Telecom’s long-term biodiversity conservation pathways is provided in Table 1. Looking ahead, the Company will continue to review the implementation of its strategies and action plans and ensure that related measures are effectively carried out through adaptive management and tracking mechanisms, thereby demonstrating its long-term commitment to natural capital and biodiversity conservation, and progressively realizing the vision set forth in its long-term conservation pathways.

Commitment	Target	Strategy	Action plan
Biodiversity and No Deforestation	Mitigating nature loss	Science-based nature assessment	Developing science-based assessment procedures (including TNFD)
			Reviewing the impact of operating activities (TNFD - Locate, Evaluate, Assess)
		Developing and adopting mitigation measures	Adopting mitigation and positive solutions (TNFD - Prepare)
			Assessing mitigation benefits (TNFD - Prepare)
	No Net Deforestation	Eliminating the use of deforestation-linked products	Completely eliminating the use of deforestation-linked products
		Promoting the no-deforestation initiative	Publicizing the impact of deforestation and promoting no-deforestation practices
	Alignment with the Nature Positive Initiatives	Participating in nature-positive communities	Participating in domestic and international nature-positive initiatives
			Engaging with nature-positive communities
		Promoting the concept of nature positivity	Aligning with a nature-positive trend
			Promoting the concept of natural positivity
Promoting Nature Positive	Building a nature-positive paradigm		Promoting a local conservation paradigm (Ecological field restoration)
			Combining relevant conservation site verification (Ecological field restoration)
	Mainstreaming Nature Positive	Promoting the mainstreaming of nature positivity	Establishing species conservation guidelines (Hundred Species Restoration Project)
			Building a nature-positive showcase network (Hundred Species Restoration Project)

Table 1. Implementation of Long-term Conservation Pathways

⁵For further details, please refer to Chapter 2-1: Introduction and Implementation of the LEAP Methodology. As described above, the scope of this analysis has been expanded to include key group subsidiaries and the value chain.

1-3 Nature-Related Governance Framework

Chunghwa Telecom’s Sustainable Development and Strategy Committee is a functional committee under the Board of Directors. The Committee comprises five to nine directors, who elect one member from among themselves to serve as convener. The Committee provides strategic guidance on significant matters related to the Company’s sustainable development vision, medium- and long-term objectives, long-term policies, and management principles. Through quarterly meetings, it continuously oversees and reviews the implementation progress and outcomes of key issues, including climate change and nature-related risks and opportunities.

Members of the Board possess diverse professional expertise and extensive industry experience. To support alignment with the TNFD requirements for the Governance pillar, the Board continues to strengthen its oversight of sustainability and nature-related issues, enhance its capabilities in identifying and managing risks and opportunities, and deepen its understanding of the TNFD framework and related methodologies. These efforts help ensure that the Company is able to appropriately assess and manage the potential impacts of related issues on its operations and strategies.

To further strengthen these governance functions, Chunghwa Telecom implemented director training programs in 2025 and engaged external professional institutions to provide relevant training. Incorporating both risk and opportunity perspectives, the programs enhanced the Board’s understanding of sustainability, climate- and nature-related issues, and green transition trends, while strengthening its strategic thinking and decision-making capabilities. More than half of the directors participated in the training, demonstrating that the Board has incorporated climate- and nature-related issues into its decision-making and continues to enhance its oversight and governance effectiveness in support of the Company’s sustainable development, low-carbon transition, and operational resilience.

To enhance nature-related governance, a Sustainable Development Promotion Committee has been established under the Sustainable Development and Strategy Committee. The Sustainable Development Promotion Committee, comprising members of management, is chaired by the Chairman and vice-chaired by the President. It acts on behalf of the Board in formulating and reviewing sustainability strategies, policies, and objectives. The Committee is responsible

for advancing the Company’s sustainability blueprint and action plans, coordinating cross-functional collaboration and resource integration, monitoring implementation progress, and regularly reporting achievements and future plans. Through these efforts, it supports the Board in formulating relevant policies and management principles and further enhances sustainability risk management effectiveness. To effectively advance the Company’s ESG vision and sustainability strategy, the Sustainable Development Promotion Committee oversees four working groups: Environmental (E), Social (S1 and S2), and Governance (G). The President concurrently serves as the Chief Sustainability Officer and directs the Secretariat in supporting committee operations, planning and implementing appropriate sustainability initiatives, and regularly reporting implementation progress to the Sustainable Development and Strategy Committee. Through this governance structure, the Company continues to create long-term and stable sustainable value for stakeholders (Figure 1).

According to the World Economic Forum’s Global Risks Report 2026, “biodiversity loss and ecosystem collapse” ranks second on the ten-year outlook, highlighting its potential to generate far-reaching impacts across economic, environmental, and social dimensions. To further strengthen biodiversity management, Chunghwa Telecom has established a dedicated biodiversity project team. The team is convened by the Senior Executive Vice President of Technology and oversees several working groups, including technology, restoration, afforestation, and public relations (Figure 2). The team is responsible for implementing projects addressing nature-related dependencies, impacts, risks, and opportunities. Its work encompasses habitat restoration, tree-planting and afforestation activities, industry-academic cooperation programs, as well as the monitoring and research on international initiatives and trends in nature sustainability. Through these efforts, the Company seeks to enhance its capabilities in managing and responding to nature-related issues.

Looking ahead, Chunghwa Telecom will continue to expand the reach of its actions and initiatives gradually across the Group’s value chain, working together with group subsidiaries and suppliers to advance nature conservation and sustainability projects. Through cross-organizational collaboration and resource integration, we aim to contribute to ecological conservation and move toward a sustainable future of shared prosperity.

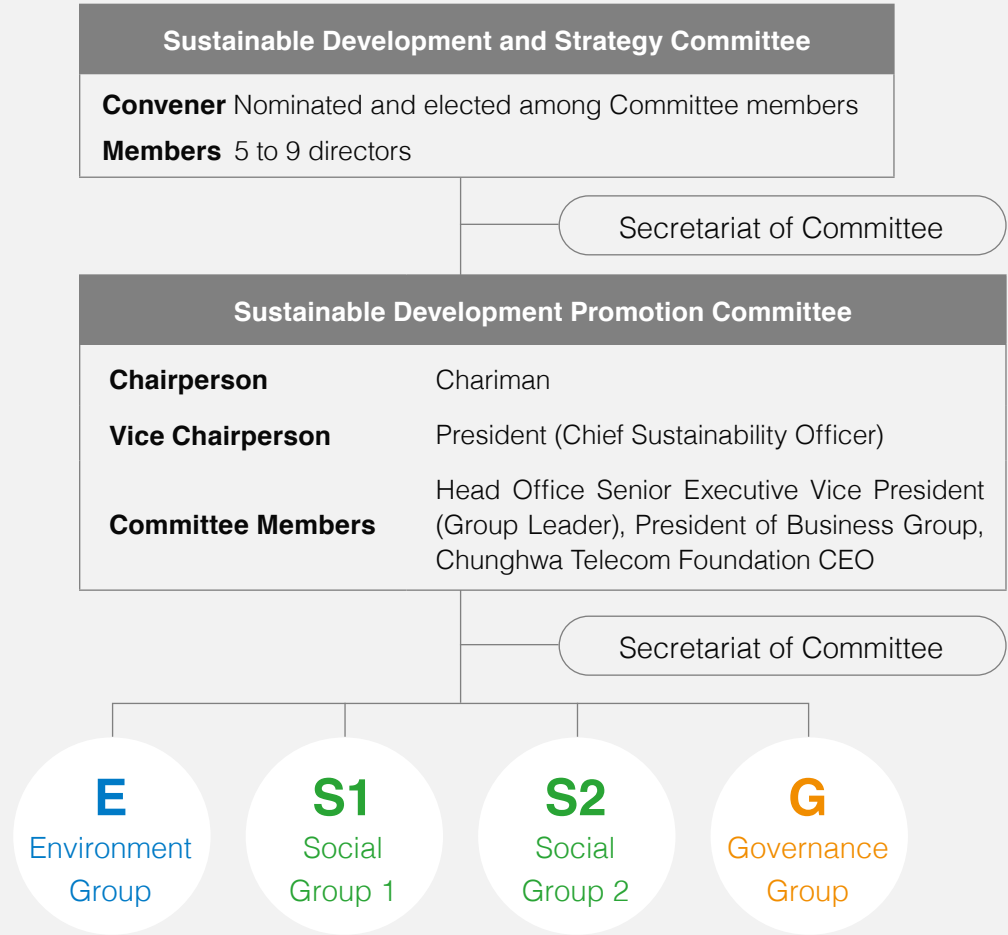


Figure 1. Sustainable Development Governance Framework

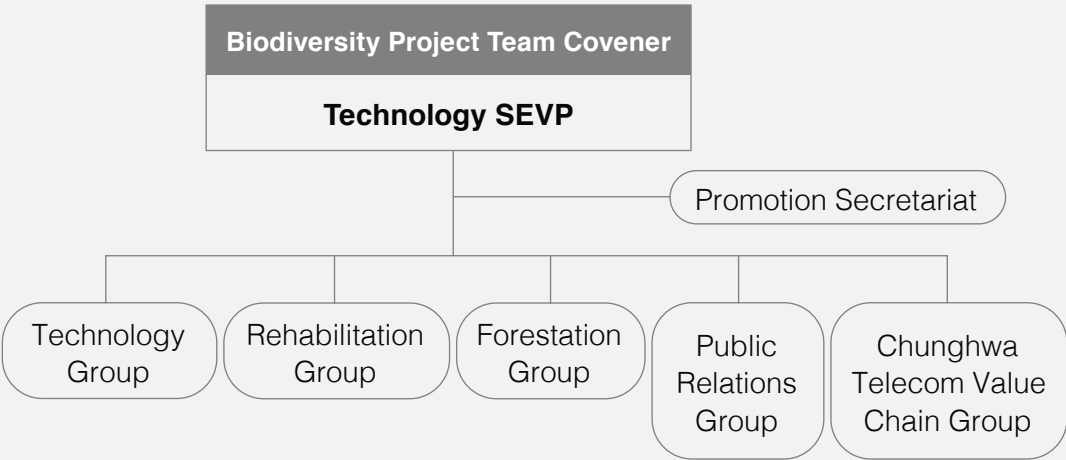


Figure 2. Biodiversity Management Governance Framework



1-4 Stakeholder Engagement Initiatives

Chunghwa Telecom supports the idea of human rights protection and voluntarily adheres to various internationally recognized human rights regulations and initiatives, including the Universal Declaration of Human Rights, the United Nations Global Compact, the United Nations Guiding Principles on Business and Human Rights, and guiding principles and spirits of the conventions formulated by the International Labour Organization. The Company pays close attention to human rights issues including anti-discrimination, gender equality, freedom of association, collective bargaining, the prohibition of child labor, and the protection of indigenous peoples' rights, integrating human rights protection into the Company's corporate operations and management mechanisms.

To strengthen human rights management, Chunghwa Telecom conducts regular human rights due diligence to continuously identify, prevent, and mitigate human rights risks across all segments of its value chain, with the aim of avoiding any human rights violations. When human rights risks are identified or occur, the Company establishes corresponding remediation measures. Relevant responsible units review the scope of impacts and required improvements, and, where necessary, adopt an adaptive management mechanism to continuously adjust and enhance related practices. For detailed results of human rights assessment within the value chain, as well as mechanisms for mitigating and remedying human rights incidents, please refer to the Human Rights Management section on the [official website of CHT](#).

In its biodiversity actions, Chunghwa Telecom also refers to the final TNFD recommendations and integrates nature-related stakeholders into its overall assessment and management processes. In addition to incorporating relevant factors into the LEAP assessment process in its own operations and across its value chain (please refer to “2 Assess-

ment of Nature-related Dependencies, Impacts, Risks and Opportunities” in this report), the Company also conducts material nature-related stakeholder workshops in collaboration with various internal departments. These workshops are designed to identify key stakeholders associated with Chunghwa Telecom's operations as a result of their impacts on, or dependencies upon, nature, and to gather their input on nature-related risks and opportunities faced by the Company. Such input is used to further strengthen and refine Chunghwa Telecom's nature-related risk management.

The process for identifying major nature-related stakeholders is as follows:

- ◆ Referencing international nature-related trends and the official recommendations of TNFD to compile a list of stakeholders associated with Chunghwa Telecom's natural environment.
- ◆ Assessing stakeholders according to the principles of responsibility, impact, and diversity of perspectives stipulated in the AA1000 SES Stakeholder Engagement Standard; each department evaluates stakeholders based on their relationship and level of impact; relevant assessment details are provided in the table below (Table 2).
- ◆ Consolidating and statistically standardizing the assessment results from each department, and identifying a list of Chunghwa Telecom's nature-related stakeholders and the degree of their relationship with the Company.
- ◆ Based on criteria such as the closeness, significance, and degree of impact on naturerelated stakeholders, Chunghwa Telecom has selected the top two-thirds and suppliers, resulting in eight categories of nature-related stakeholders identified as the Company's major nature-related stakeholders⁶ (Table 3).

Evaluation Dimensions	Definition
Responsibility	Departments are responsible for protecting the natural environment, preventing biodiversity loss, and safeguarding the rights and interests of stakeholders' habitats or residential environments.
Impact	Stakeholders whose actions affect the department's nature-related impacts or decisions.
Perspective diversity	Diverse opinions from stakeholders benefit the departments by allowing them to gain new insights into special situations or discover new opportunities.

Table 2. Stakeholder Evaluation Dimensions and Definitions

Relevance	Item	Nature-related skateholders
	1	Goverment agencies
	2	Customers
	3	Influential advocacy organizations
	4	Local communities / Indigenous people
	5	Investors / Shareholders
	6	Employees
	7	Non-profit organisations
	8	Academic institutions
	9	Suppliers / Contractors
Low	10	Financial institutions

Table 3. Identification Results for Major Stakeholders of Chunghwa Telecom in 2025

6 For the current year, as there have been no significant changes in the Company's business model or related operations, the prioritization of stakeholders remains consistent with the identification results from 2024. However, a comprehensive annual reassessment is still conducted with respect to nature-related risks and opportunities through stakeholder input survey. Please refer to “Ch2 Assessment of Nature-related Dependencies, Impacts, Risks and Opportunities” in this report.



Chunghwa Telecom recognizes that understanding stakeholders’ views on issues related to its operations and management, and building consensus through engagement, are fundamental to advancing sustainability and long-term corporate development. To strengthen engagement with stakeholders affected by its operations, the Company organizes a range of events and forums, and actively participates in government-led public policy briefings and public hearings, as well as exchanges with academia and other relevant institutions. Meanwhile, we collaborate with employees to promote various nature conservation activities, while recognizing the critical role that indigenous peoples and local communities play in environmental protection and management. We actively engage with them and incorporate their feedback as a valuable reference for Chunghwa Telecom’s business planning and implementation. For detailed information about Chunghwa Telecom’s engagement with major nature-related stakeholders, please refer to the table below.

Engaged Stakeholders

Key Engagement Activities*

Government Agencies	◆ “Bamboo Forest Management Project” ESG Initiative: Chunghwa Telecom collaborated with the Forestry and Nature Conservation Agency in September 2024 to launch the Bamboo Forest Management Project. In 2025, the project completed conservation actions including site maintenance, thinning and management of Makino bamboo forests, and bamboo shoot season protection, continuously advancing local conservation through public–private partnerships. ◆ “Leopard Cat Project” ESG Initiative: In 2025, Chunghwa Telecom’s Miaoli Branch Office worked with the Ministry of Agriculture and local partners to promote leopard cat conservation. The Taiwan Biodiversity Research Institute under the Ministry of Agriculture was invited to provide in-depth insights into leopard cat rescue operations and the significance of leopard cat-friendly farming practices. On-site demonstrations of proper rescue procedures were conducted, alongside the sharing of recent rescue cases and the importance of leopard cat-friendly farming (Figure 3). ◆ “Hand-protecting Matcha Mountain Sustainable Trail” ESG Initiative: Chunghwa Telecom’s Yilan Branch Office partnered with the Forestry and Nature Conservation Agency’s Yilan Branch. Professional trail builders from the Taiwan Thousand Miles Trail Association led Chunghwa Telecom volunteers, members of the Kavalan Mountaineering Association, and local residents in hand-built trail restoration and environmental patrol activities on the Sacred Mother Trail, better known today as Matcha Mountain (Figure 4).
Customers	◆ Old for New Device Trade-in: Chunghwa Telecom, in line with its circular economy philosophy, allows customers to bring their old mobile phones to designated stores for appraisal and recycling, ensuring that the devices enter an effective recycling process and helping to reduce environmental pollution. ◆ Promotion of Electronic Billing: Chunghwa Telecom continues to encourage customers to adopt electronic billing. Currently, 73.6% of customers use paperless billing, helping protect forests from deforestation and reduce carbon emissions.
Influential Advocacy Organizations	◆ Chunghwa Telecom participated in the World Economic Forum (WEF) “Nature Positive Transitions for Tech Workshop”, jointly assessing the dependencies and impacts of semiconductors, data centers, and electronic hardware on nature. In December 2025, the report Nature Positive: Role of the Technology Sector was published. ◆ In September 2025, Chunghwa Telecom participated in the BCSD Taiwan Exploring Nature Materiality Seminar, sharing practical experience, challenges, and solutions in corporate assessment processes. ◆ Chunghwa Telecom joined the BCSD Taiwan Pilot Group for SBTN to gain a deeper understanding of science-based target setting for nature.
Local Communities/ Indigenous People	◆ Bamboo Forest Management Project: Chunghwa Telecom, through communication with and coordination by the Forestry and Nature Conservation Agency, launched the Bamboo Forest Management Project in September 2024. This project collaborates with local communities, including the Atayal tribes in the Fuxing District, Taoyuan City, to introduce sustainable management practices that maintain the ecological health and sustainability of bamboo forests. This is a ten-year program for bamboo forest tending and management, aiming to promote the local green circular economy and support the preservation of traditional bamboo craftsmanship. ◆ “Leopard Cat Project” ESG Initiative: In 2025, Chunghwa Telecom’s Miaoli Branch Office worked with the Ministry of Agriculture and local partners to promote leopard cat conservation. Signage was installed in ecologically sensitive areas to discourage feeding of free-roaming animals, and products bearing the Leopard Cat-Friendly Farming Label were purchased to support pesticide-free farming (Figure 3). ◆ “Hand-protecting Matcha Mountain Sustainable Trail” ESG Initiative: Chunghwa Telecom’s Yilan Branch Office partnered with local teams to promote forest sustainability, biodiversity, forest therapy, and environmental education, integrating sustainability DNA into corporate culture and creating win-win outcomes with local communities (Figure 4).

* Chunghwa Telecom is committed to advancing nature sustainability initiatives and discloses the related achievements in this report. The stakeholder engagement activities presented in this part primarily illustrate the Company’s efforts to seek opportunities for collaboration with diverse stakeholders in implementing these initiatives, thereby amplifying their impact. This is the primary reason why some content overlaps with discussions in other sections of the report.



Engaged Stakeholders

Key Engagement Activities*

Investors/Shareholders	◆ Investor Conference: Chunghwa Telecom holds quarterly investor conferences to explain the Company’s ESG-related actions to shareholders and investors, including the advancement towards carbon reduction commitments, the promotion of natural sustainability initiatives, and the ESG-related awards won and ratings received. This enables investors and shareholders to fully understand the Company’s sustainability performance.
Employees	◆ Education and training for Hundred-Species Restoration Project: Chunghwa Telecom utilizes its operational sites as conservation bases for threatened and native plant species, and trains employees as interpreters to enhance community and stakeholder engagement and recognition. ◆ Citizen Scientists for Tree Carbon: In collaboration with the team led by a retired Associate Professor from the National Taiwan University, we cultivate colleagues to become citizen scientists for tree carbon with scientific literacy and practical operational capabilities. In addition, a total of 264 employees participated in the Citizen Scientists for Tree Carbon certification program and obtained the corresponding credentials, and 3,631 trees were measured. ◆ “Hand-protecting Matcha Mountain Sustainable Trail” ESG Initiative: To support this forest sustainability initiative, Chunghwa Telecom organized employee volunteers to participate in hand-built trail restoration activities led by local trail builders and community members. Locally sourced materials were used for restoration to minimize the environmental impacts associated with external construction materials (Figure 4).
Non-profit Organizations	◆ Establishment of Taiwan’s first AI-powered Ecological Restoration Education Center and Successful Release of Black-faced Spoonbills: Chunghwa Telecom’s Tainan Branch Office partnered with the Taiwan Biodiversity Research Institute, the Taiwan Black-Faced Spoonbill Conservation Association, and Taiwan Cooperative Bank to conduct a black-faced spoonbill release program at the Qigu Salt Field Wetlands. Through AIoT technologies, two injured black-faced spoonbills were successfully rehabilitated and returned to the wild, demonstrating the effectiveness of cross-sector rescue collaboration. ◆ 2025 Taiwan COP5: Under the theme “Sustainability in Action, Advancing Across Generations”, Chunghwa Telecom showcased achievements in ecological conservation enabled by information and communication technology, including long-term conservation pathways, TNFD outcomes, citizen scientists and tree carbon sequestration, AI-enabled black-faced spoonbill monitoring and restoration, and the Hundred-Species Restoration Project, supporting NGO-led initiatives through concrete actions.
Suppliers/Contractors	◆ “Bamboo Forest Management Project” ESG Initiative: Through the Forestry and Nature Conservation Agency’s matchmaking platform, Chunghwa Telecom launched the Bamboo Forest Management Project in September 2024 in collaboration with local communities. In 2025, more than 40 suppliers, represented by 61 participants, were invited to take part in the initiative. Through forest tours, local timber education, and field visits to bamboo conservation sites, the initiative deepened supplier engagement in biodiversity, sustainable forestry, and regional revitalization. ◆ No Deforestation Sharing Session: In December 2025, Chunghwa Telecom held a No Deforestation: From Global Trends to Corporate Practice sharing session for employees, group subsidiaries, and suppliers to promote awareness of no-deforestation principles, strengthen overall understanding of no-deforestation issues and related policies, and encourage broader corporate participation in no-deforestation efforts. ◆ Collaborative Pathways to Nature-Positive Growth” Seminar: In November 2025, Deloitte & Touche invited Chunghwa Telecom to participate in the Collaborative Pathways to Nature-Positive Growth seminar, where the Company shared its experience in identifying nature-related dependencies and impacts, embedding them into core business operations, and its priorities for further advancing these efforts.

* Chunghwa Telecom is committed to advancing nature sustainability initiatives and discloses the related achievements in this report. The stakeholder engagement activities presented in this part primarily illustrate the Company’s efforts to seek opportunities for collaboration with diverse stakeholders in implementing these initiatives, thereby amplifying their impact. This is the primary reason why some content overlaps with discussions in other sections of the report.

Overall, Chunghwa Telecom continues to maintain active interaction with stakeholders through diverse communication channels and proactively advances stakeholder engagement. Stakeholder feedback and recommendations gathered through these interactions are incorporated as important considerations in operational decision-making and business development. At the same time, the Company leverages smart technologies and innovative solutions to support biodiversity and sustainability initiatives, harnessing the power of technology to advance nature conservation, promote a green transition, and foster ecological sustainability. Through these efforts, Chunghwa Telecom strives to contribute to a future that promotes economic development, environmental protection, and harmonious co-existence between people and nature (Figure 5).



Figure 3. Chunghwa Telecom Supported and Promoted Leopard Cat-Friendly Farming



Figure 4. Chunghwa Telecom Hosted the “Hand-protecting Matcha Mountain Sustainable Trail” Initiative



Figure 5. Chunghwa Telecom Engaged Stakeholders to Advance Nature Sustainability



2 Assessment of Nature-Related Dependences, Impacts, Risks, and Opportunities

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As a leading telecommunications operator in Taiwan, Chunghwa Telecom is keenly aware that business operations are closely related to nature, and thus places immense importance on the stability of the natural environment. Recognizing the interactions between operational activities and nature, which in turn affect stakeholders, we follow the TNFD framework and analytical methodology. By considering the perspectives of all stakeholders, Chunghwa Telecom systematically evaluates the impacts of its operations on nature and stakeholders, to lay a solid foundation for the management of nature-related risks and opportunities, and actively foster the harmony between humanity and nature. Based on the scope of assessment in previous years, we further expanded the boundaries in 2025 to include group subsidiaries. We examined the dependencies and impacts of the Group's operational activities on natural capital, and assessed their financial impacts in combination with the nature-related risks and opportunities this year, to strengthen Chunghwa Telecom's capabilities in managing nature-related risks and opportunities.



2-1 Introduction and Implementation of the LEAP Methodology

Considering Taiwan's local natural conditions and the availability of relevant data, the taskforce adopted the TNFD-recommended LEAP methodology to define the assessment scope, review and iterate through the four phases of Locate, Evaluate, Assess, and Prepare, and developed localized Locate and Evaluate analytical processes, to ensure the assessment results better aligned with Taiwan's local conditions. With the expansion of the analysis scope, we included group subsidiaries in the analysis in 2025, and further incorporated Chunghwa Telecom's linear sites, such as submarine cable landing sites, into the Locate process in the subsequent step.

According to the LEAP methodology, the Locate phase focuses on analyzing and prioritizing an organization's dependencies and impacts on nature, linking operational activities with natural systems through a spatial approach. The Evaluate phase is about further analysis of the identified dependencies and impacts on nature. The Assess phase adopts a business operational perspective to assess potential nature-related risks and opportunities. The Prepare phase centers on the response to and disclosure of material nature-related issues. Following this methodology, the Company analyzed the overlap of Chunghwa Telecom's operational sites, group subsidiaries and key value chains with nature and sensitive areas in the Locate phase, and structurally assessed their dependencies and impacts on nature in the Evaluate phase. In the Assess phase, TNFD categorizes nature-related risks into physical risks⁷, transition risks⁸, and systemic risks⁹. Based on the dependencies and impacts identified in the Evaluate phase, the taskforce assessed the nature-related risks facing its own operations. Specifically, analysis of physical risks focuses on the potential impacts of the changing natural environment on business operations; analysis of transition risks takes

into account overall operations, external regulations, market trends, and other external changes. Meanwhile, the taskforce examined the possible nature-related opportunities¹⁰ created by promoting nature-related risk management and conducted materiality analysis of nature-related risks and opportunities. To reflect stakeholders' perspectives, we identified the representative nature-related stakeholders, as survey participants¹¹, incorporated the identified material nature-related risks and opportunities into questionnaire design and distributed the questionnaires to major nature-related stakeholders and suppliers to collect their opinions, which were summarized and used in subsequent analysis. This demonstrates Chunghwa Telecom's commitment to valuing stakeholders' feedback.

The LEAP analysis mentioned above paved the way for Chunghwa Telecom's subsequent refinement of nature-related issue management. Finally, disclosures were made in accordance with the four disclosure dimensions recommended by TNFD (Governance, Strategy, Risk & Impact Management, Metrics and Targets) (Figure 6).

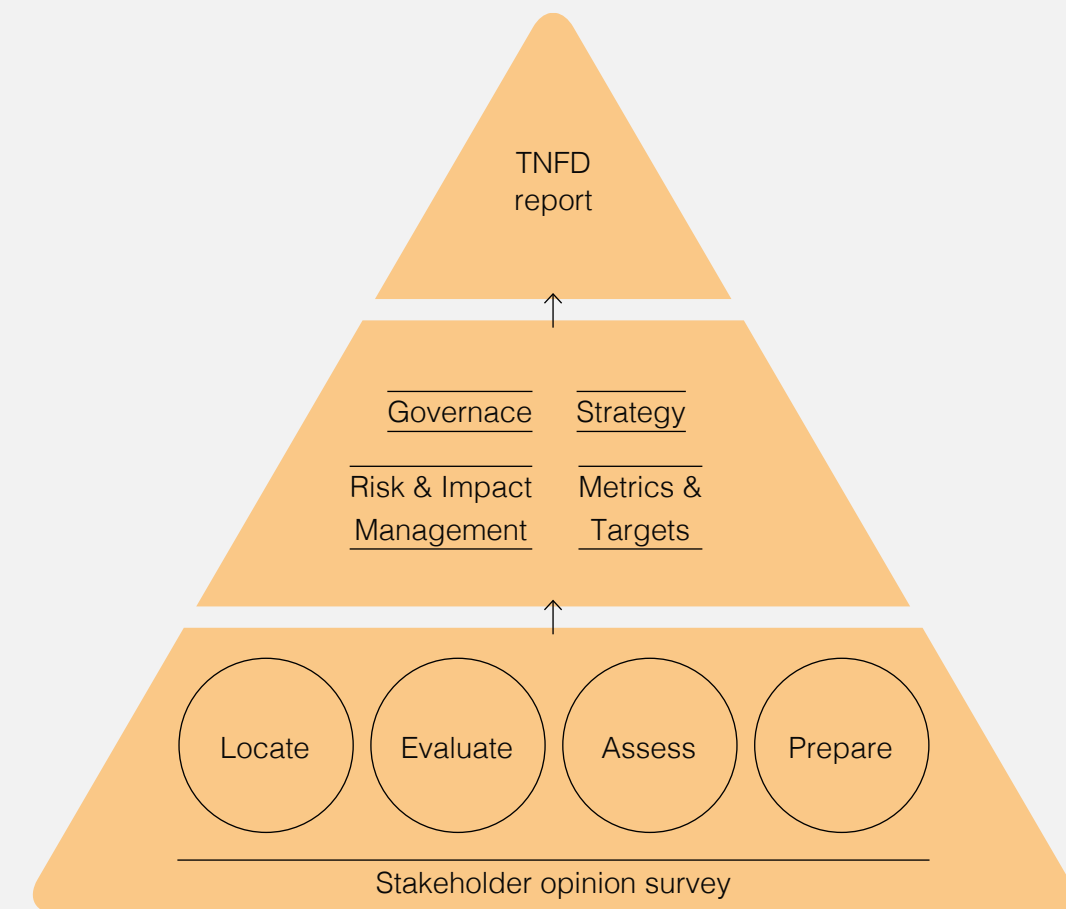


Figure 6. Chunghwa Telecom TNFD Implementation Roadmap

7 Risks posed to organizations by natural degradation, which are further categorized into acute risks: specific events having a strong impact or occurring in a short period that lead to changes in natural conditions, such as natural disasters causing changes in natural conditions; and chronic risks: long-term cumulative impacts that cause gradual changes to natural conditions, such as climate change causing changes in natural conditions.

8 Risks arising from the inconsistencies between management strategies and reduction of negative nature-related impacts, including policy and legal risks, market risks, technology risks, reputation risks, and liability risks.

9 Considering that nature-related systemic risks are relatively rare, they are not included in this analysis.

10 Nature-related opportunities are categorized into business performance, such as markets, resource efficiency, products and services, capital flows and financing, and reputational capital; and sustainability performance, such as ecosystem protection, restoration and regeneration, and the sustainable use of natural resources.

11 The major nature-related stakeholder identification results for 2025 follow those of 2024. Given Chunghwa Telecom's strong emphasis on supply chain sustainability, suppliers/contractors are included into major nature-related stakeholders based on the 2024 identification results.



2-2 Locate: Locating Nature-Sensitive Operational Sites

Analysis Methodology

◆ Own Operations

According to the LEAP methodology recommended by TNFD, the Company first performed the Locate step based on the localized analysis process (Figure 7). This step involves confirming the business footprint and value chain, as well as initially identifying the potential dependencies and impacts of the Company's operations on nature. Following the localized analysis Criterion I Natural Sensitivity and Criterion II Operational Impact, we analyzed the ecological environment near operational sites and the potential impacts of these operational sites, identified sensitive locations, and prioritized them for subsequent Evaluate analysis.

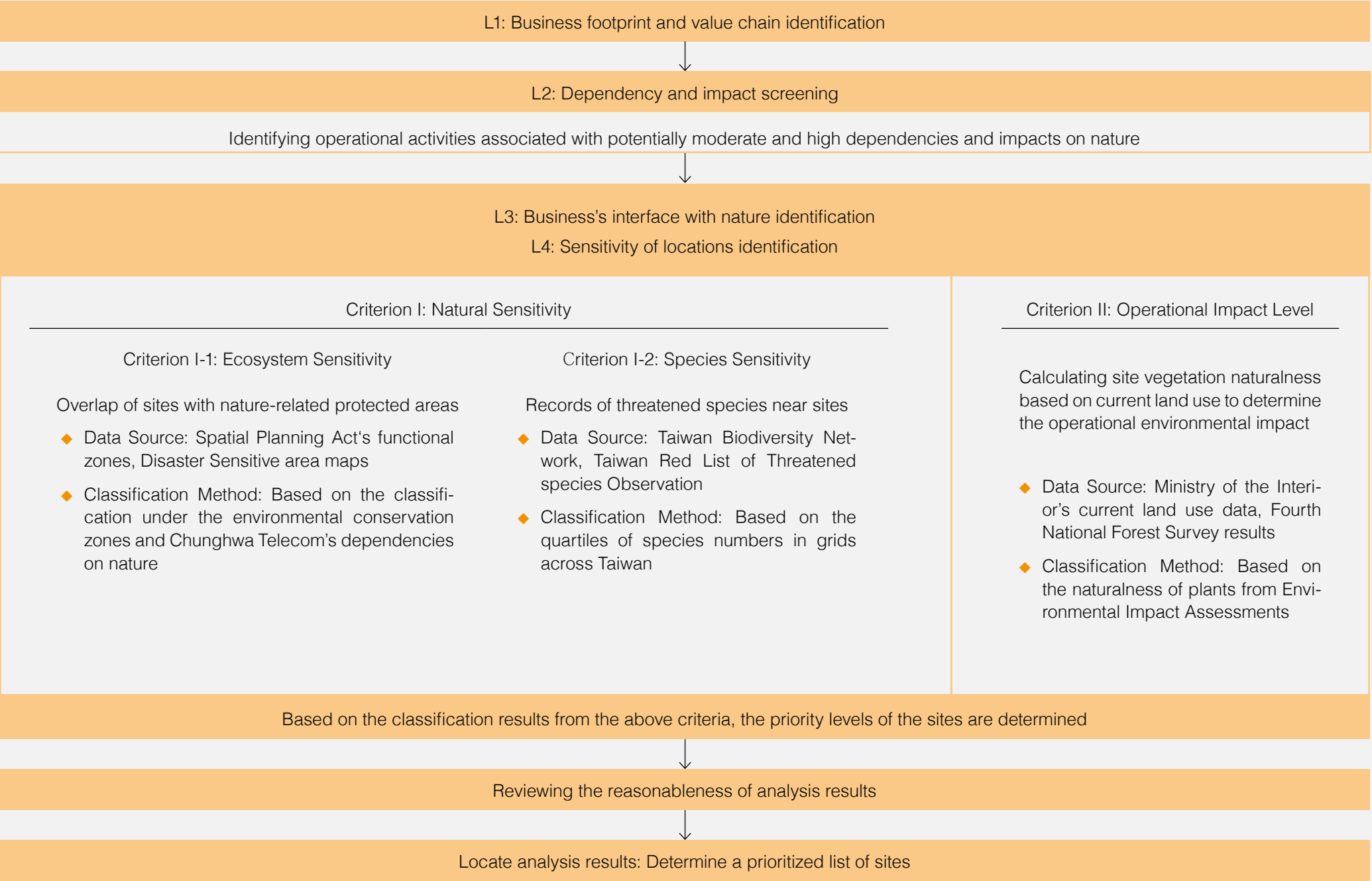


Figure 7. Localized Locate Analysis Process

◆ Group subsidiaries

Considering that the subsidiaries of Chunghwa Telecom Group operate across Taiwan and China and engage in different industries, they were included in the analysis scope for the first time this year, and underwent the Locate analysis based on the localized analysis process (Figure 8). The taskforce analyzed the operational activities of the group subsidiaries, mapped them to the industries under the International Standard Industrial Classification (ISIC), and then screened the dependent ecosystem services and impact drivers of various industries using the ENCORE database¹². Meanwhile, the degree of dependency and impact was quantified through the score conversion table. With the degree of dependency and the degree of impact as the two axes and “shareholding ratio × operating income” as a metric to quantify scale, a nature-related dependency and impact matrix was established for the group subsidiaries. On this basis, the group subsidiaries with high nature-related dependencies and impacts and high “shareholding ratio × operating income” were identified as priority ones, and the locations of their operational sites and factories were further collected.

Finally, when identifying the sensitivity of the operational sites, we adopted differentiated assessment based on the availability of cross-border data. The operational sites in Taiwan were assessed against the same two localization criteria applied to own operational sites (Criterion I Natural Sensitivity and Criterion II Operational Impact). For the operational sites in China, due to the limited access to land use data, the assessment was focused on Criterion I Natural Sensitivity only. The preservation area classifications in China and the world, as well as threatened species listed by the International Union for Conservation of Nature (IUCN) and in the Red List of China, were used instead as the basis for assessment to support the subsequent Evaluate analysis.

Analysis Scope: 40 CHT Group Subsidiaries

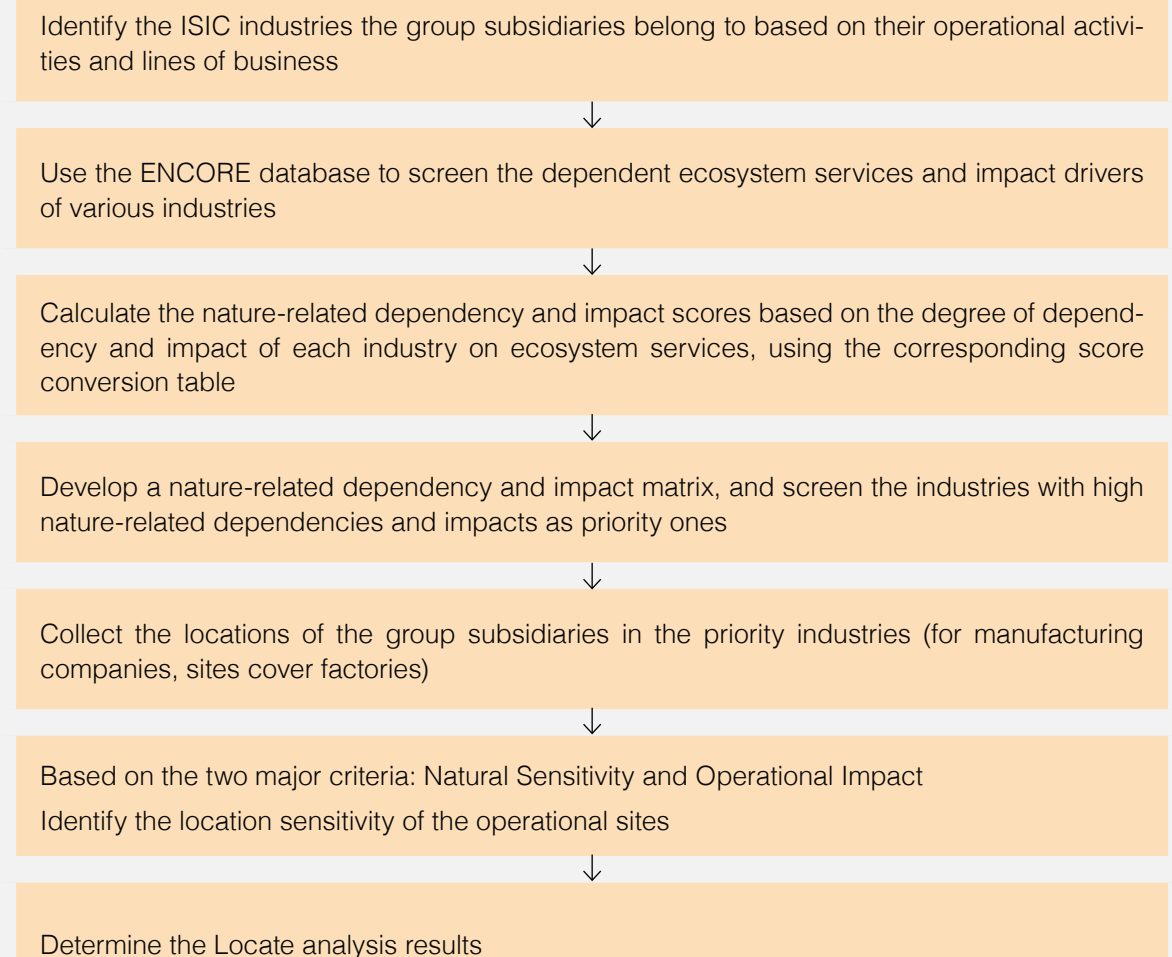


Figure 8 The Locate Analysis Process for the Group Subsidiaries

12 Exploring Natural Capital Opportunities, Risks and Exposure is a natural assessment database jointly developed by the United Nations Environment Program World Conservation Monitoring Center (UNEP-WCMC) and the Natural Capital Finance Alliance (NCFA).

◆ Suppliers

Considering that suppliers are central to the Company's value chain management, this year, we continued to conduct value chain assessment, and performed the localized Locate analysis (Figure 9). The taskforce first screened significant Tier-1 suppliers, and then identified the number of industries in accordance with the International Standard Industrial Classification (ISIC). After that, the taskforce used the ENCORE database to analyze the ecosystem services and impact drivers that the aforementioned industries depend on, and created a nature-related dependency and impact matrix. Industries with high nature-related dependencies and impacts, as well as high total contract values, were then selected as priority categories. For suppliers within these categories with medium to high contract values, their location information was collected. Finally, based on the two major criteria of Natural Sensitivity and Operational Impact, the location sensitivity of their sites was identified for subsequent Evaluate analysis.

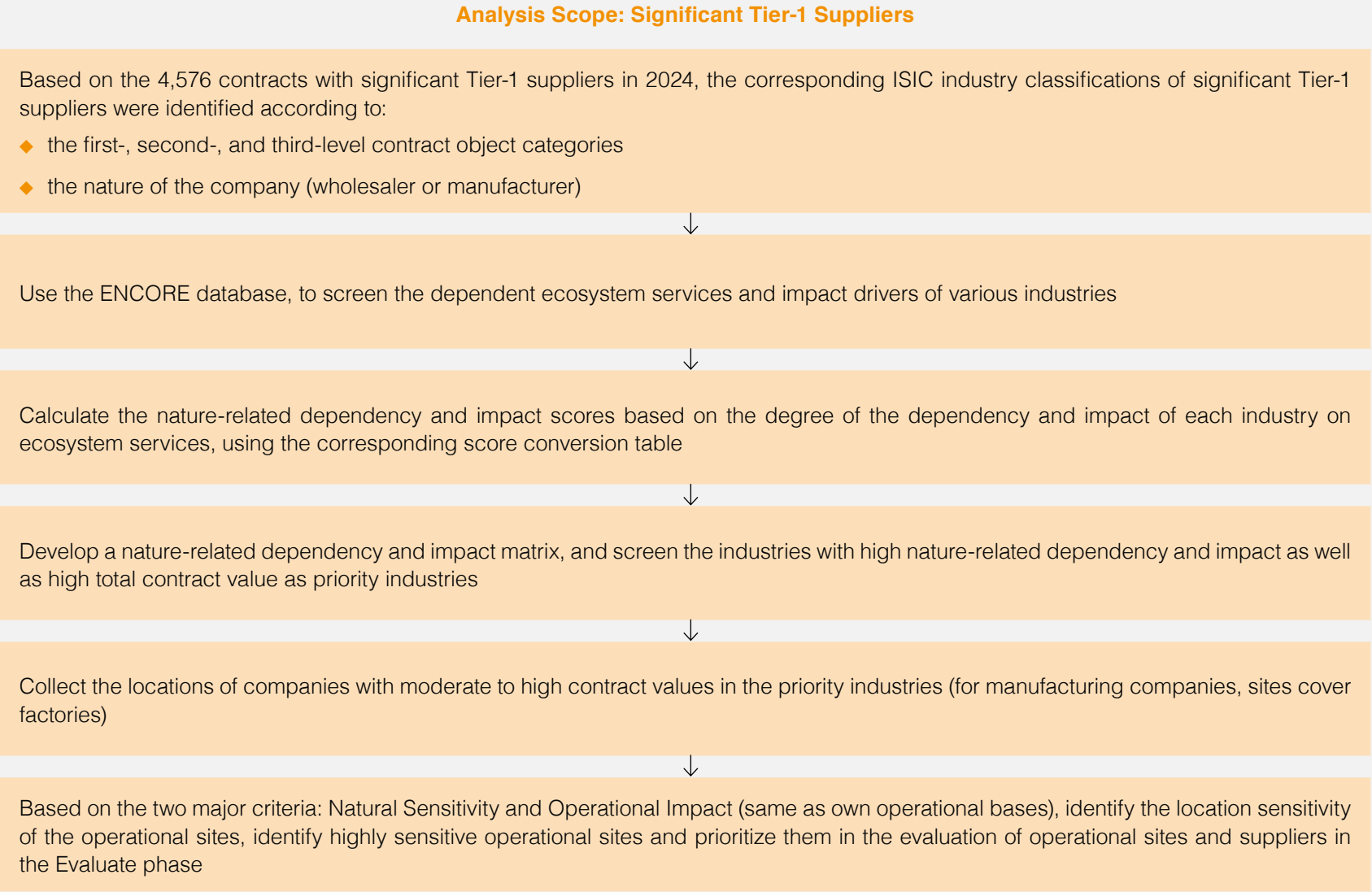


Figure 9. Supplier Localization Analysis Process

L1: Identifying Business Footprints and Value Chain

◆ Own Operations

Chunghwa Telecom's scope of business footprints and value chain can be divided into three parts: upstream suppliers, its own operational activities, and downstream consumers (Figure 10). Specifically, upstream suppliers mainly include facility suppliers and engineering contractors. Regarding its own operations, Chunghwa Telecom's established sites include base stations, telecom facilities, service centers and office buildings, pipeline facilities (cross-connect cabinets and telecommunication rooms), satellite stations, and submarine cables¹³ (Figures 11 to 14), providing domestic fixed communication, international fixed communication, mobile communication, data communication, and ICT services, to meet customers' demands for diverse and comprehensive communication services.

Following the assessment framework adopted in the previous year, this year's analysis scope for our own operational sites covers all land areas, including base stations, telecom facilities, pipeline facilities (including cross-connect cabinets and telecommunication rooms), satellite stations, service centers and office buildings, as well as submarine cables, to comprehensively assess how operational activities correlate with and potentially impact the natural environment.

¹³ Base stations serve as the central points for transmitting signals from mobile devices to telecommunication networks, enabling normal operations such as calls and data transmission. Telecom facilities are large information and data storage hubs for enterprises to access and manage information. The service centers and office buildings primarily serve as locations for staff to work, receive clients, and provide telecom services. The cross-connect cabinets and telecommunication rooms connect external telecommunication cables with the telecommunication equipment inside the buildings. Satellite stations are ground-based facilities used for transmitting signals to and receiving signals from communication satellites to enable long-distance communication transmission. Submarine cables are the optical fiber communication systems laid on the seabed to connect the telecommunication networks across different countries and regions.

◆ Group Subsidiaries

This year's analysis of group subsidiaries covers a total of 40 subsidiaries spanning Taiwan and overseas regions. Their corresponding ISIC industries were identified based on each subsidiary's operational activities and lines of business, to support the subsequent analysis of natural capital-related dependencies and impacts of various industries. Through assessment of the dependencies and impacts of various industries, the subsidiaries with high nature-related dependencies and impacts were identified as priority ones, serving as the key targets in the follow-up assessment of nature-related risks and opportunities.

◆ Suppliers

In this year's supplier analysis, we focused on 186 Significant Tier-1 suppliers (accounting for 85.6% of the procurement amount) and evaluated their nature-related dependencies and impacts. Based on the types of contracts with Significant Tier-1 suppliers in 2024 and the nature of suppliers' operational activities, the taskforce identified a total of 36 industries where the Tier-1 suppliers operate in line with ISIC.

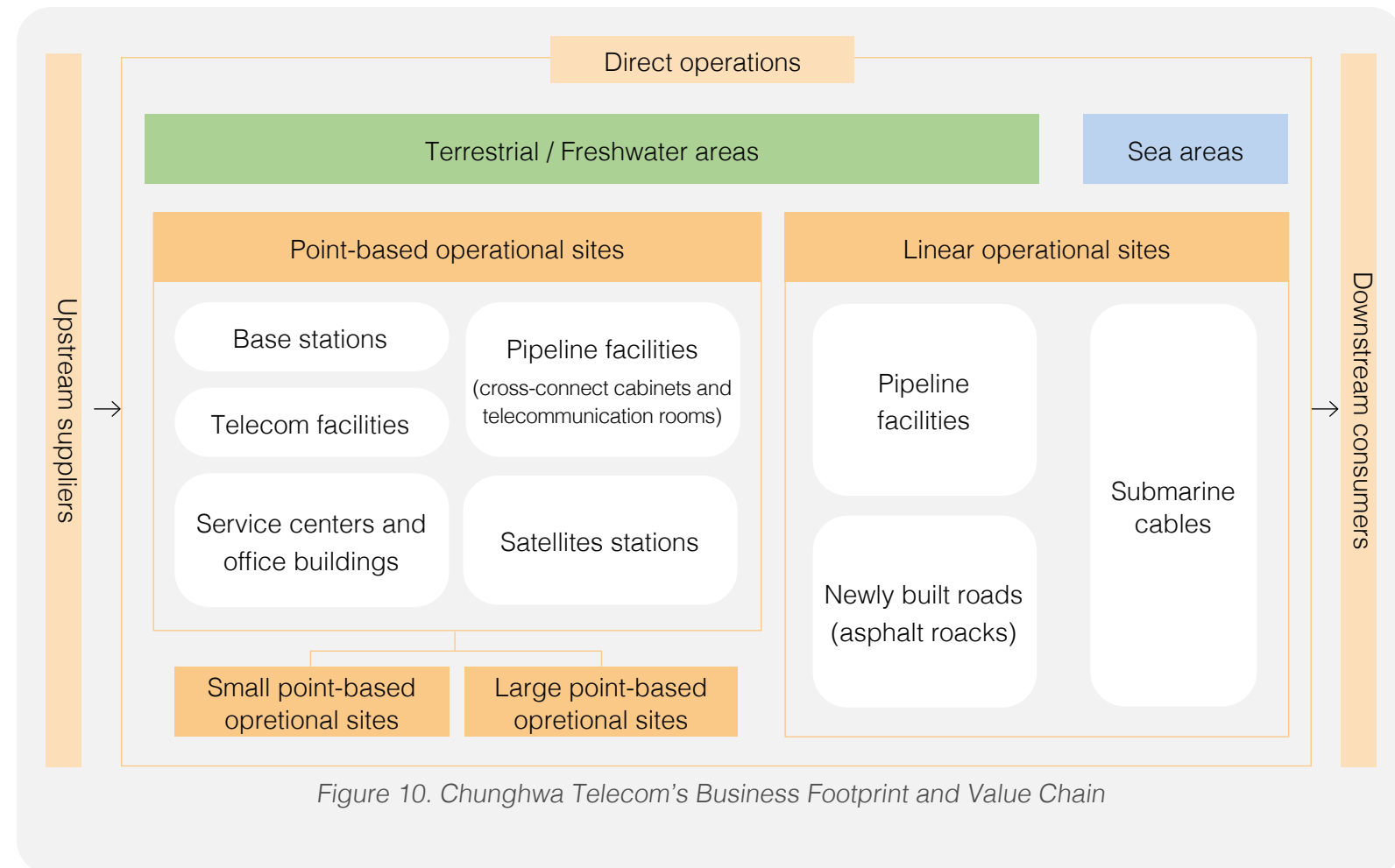


Figure 10. Chunghwa Telecom's Business Footprint and Value Chain



Figure 11. Chunghwa Telecom's base station



Figure 12. Chunghwa Telecom's telecom facilities



Figure 13. Chunghwa Telecom's service center and office building



Figure 14. Chunghwa Telecom's cross-connect cabinet

L2: Screening Dependencies and Impacts

Regarding the types of sites operated by Chunghwa Telecom as identified in the L1 phase, the taskforce referenced the ENCORE database, and initially screened the dependencies and impacts that Chunghwa Telecom’s operational sites, subsidiaries and significant Tier-1 suppliers have on nature, using general global assessment metrics and considering Taiwan’s natural conditions. On this basis, the sites that may have moderate to high nature-related dependencies and impacts were identified, to support the subsequent screening of priority ones.

◆ Own Operations

Analysis shows that all types of operational sites have a certain degree of dependency on specific ecosystem services and may have varying impacts on nature through operational activities. Since Taiwan is located in the circum-Pacific seismic belt and on the path of typhoons in the Northwest Pacific, it is prone to frequent disasters such as earthquakes, floods, landslides, and debris flows. Therefore, the taskforce included “natural disaster protection” as an additional highly dependent ecosystem service in the ENCORE analysis, to reflect Taiwan’s local natural conditions. According to further observation and analysis results, in terms of nature-related dependencies, service centers and office buildings have a lower degree of dependency on nature compared to other types of operational sites; in terms of nature-related impacts, telecom facilities and submarine cables, due to establishment requirements, have a higher degree of dependency and impact on nature compared to other types of operational sites. In particular, besides a heavy dependency on ecosystem services such as natural disaster protection and soil and sediment retention, submarine cables also involve impact drivers such as “use of terrestrial ecosystem areas” and “use of marine ecosystem areas” during their establishment and operation (Table 4).

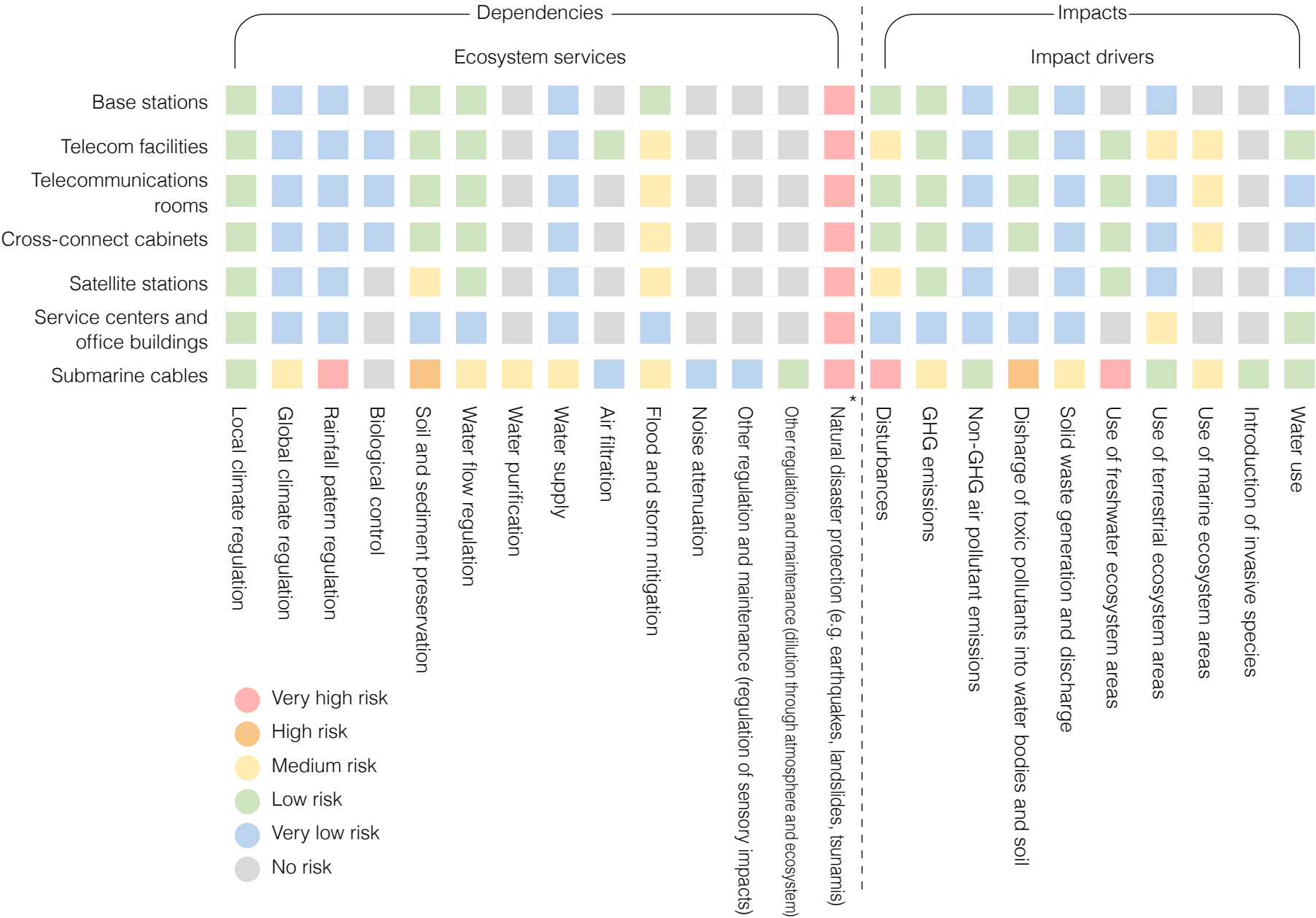


Table 4. Dependencies and Impacts on Nature by Type of Chunghwa Telecom’s Operational Sites

*Note: Dependency items newly added based on Taiwan’s natural conditions and the characteristics of Chunghwa Telecom’s operational sites.

◆ Group Subsidiaries

Based on the 40 subsidiaries identified in the L1 phase and their respective industries, the taskforce used the ENCORE database to screen the ecosystem services and impact drivers that each industry relies on. The degree of dependency and impact of each industry was then converted into scores to establish a matrix of nature-related dependencies and impacts of group subsidiaries (Figure 15).

Based on the above dependency and impact matrix, the group subsidiaries with high dependencies and impacts on nature, and high “shareholding ratio × operating income”, were selected as priority ones. This year, six priority group subsidiaries were selected: Donghwa Telecom Co., Ltd., Chunghwa Precision Test Tech. Co., Ltd., Su Zhou Precision Test Tech. Co., Ltd., Chunghwa Leading Photonics Tech Co., Ltd., Chunghwa System Integration Co., Ltd., and Light Era Development Co., Ltd¹⁴.

According to the ENCORE database, all priority group subsidiaries have a certain degree of dependency on specific natural capital and ecosystem services, and have varying impacts on nature, reflecting the varying types and degrees of impact caused by the characteristics of their operational activities, such as telecommunication services, electronic component manufacturing, computer programming, and construction engineering (Table 5). Among these subsidiaries, Light Era shows a higher degree of dependency and impact on nature as it involves land development and construction works.

14 Hereinafter referred to as Donghwa, Chunghwa Precision Test, Su Zhou Precision Test, Chunghwa Leading, Chunghwa System Integration, and Light Era respectively, and “priority group subsidiaries” collectively.

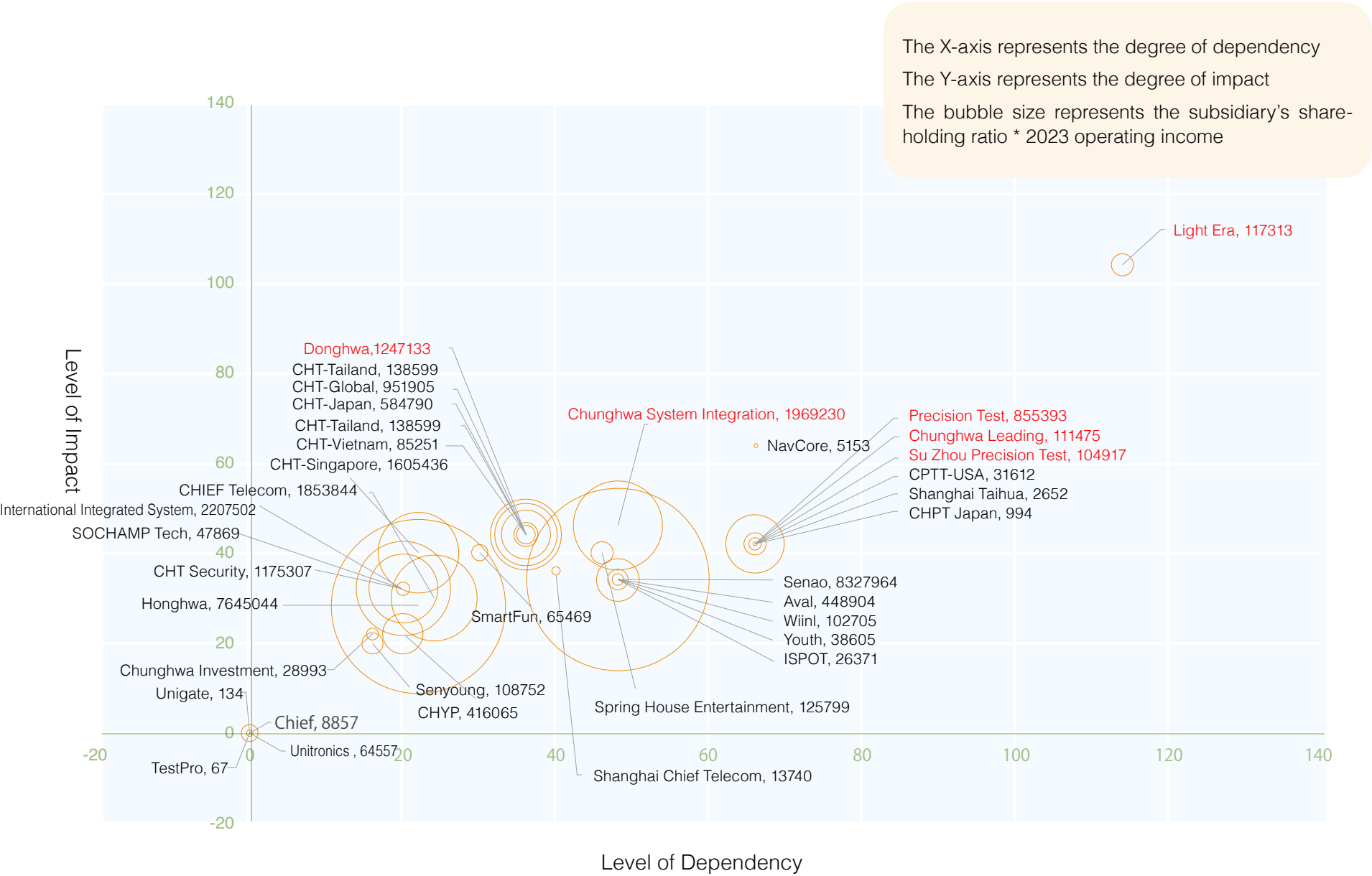


Figure 15. Matrix of Dependencies and Impacts of Group Subsidiaries

[illegible]

Table 5. Nature-related Dependencies and Impacts of Priority Group Subsidiaries

Suppliers

Based on the 36 industries identified in the L1 phase, the taskforce used the EN-CORE database to screen the ecosystem services and impact drivers that each industry relies on. The degree of dependency and impact of each industry was then converted into scores to establish a matrix of supplier dependencies and impacts by industry (Figure 16).

Based on the matrix analysis results, and taking into account supplier dependencies and impacts across various industries, the industries with high dependencies and impacts on nature, and high total contract values, were selected as priority categories. This year, four priority industries were selected: public utility construction, electrical pipeline and other installation works, industrial machinery and equipment installation, and communication equipment manufacturing.

In terms of nature-related dependencies, compared with other industries, the above four priority industries show a higher degree of dependency on water resources (such as water supply and water regulation) and the ecosystem services related to natural disaster protection (such as flood and storm mitigation, and natural disaster protection). In terms of nature-related impacts, different industries have significantly different impacts on nature, reflecting the varying types and degrees of impact caused by the characteristics of their operational activities (Table 6).

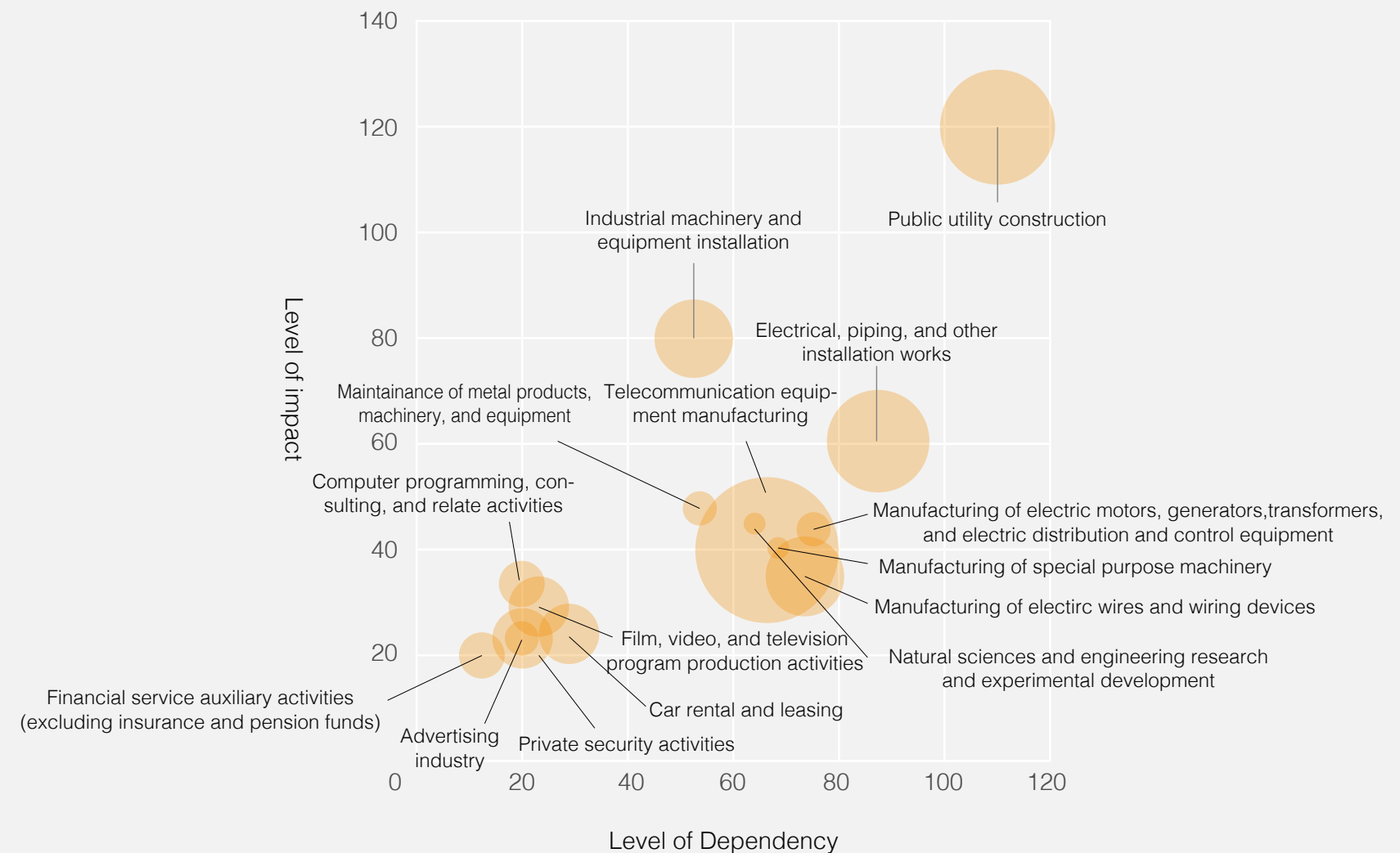


Figure 16. Matrix of supplier dependency and impact by industry

*Note: Only industries with a total contract value greater than TWD50 million in 2024 are presented. In terms of dependency, to focus on the physical and ecological dependency of various industries on nature, cultural services in ecosystem services (such as esthetic, spiritual, or symbolic values) are not included in the dependency score calculation. The x-axis represents the degree of dependence, the y-axis represents the degree of influence, and the bubble size represents the total contract value for each industry. Priority industries are indicated with solid bubbles.



*Note: Dependency items newly added based on Taiwan's natural conditions and the characteristics of Chunghwa Telecom operational sites.

L3: Identifying the Interface of Operations and Nature

Compared with other types of operational sites, Chunghwa Telecom’s base stations are more widely scattered and distributed, with more than 20,000 locations across Taiwan¹⁵. Some base stations, built as national infrastructure or for mountain or coastal emergency communications, are located near ecologically sensitive areas or even in ecological preservation areas. Therefore, base stations were included in the analysis as ever, to examine the interface between Chunghwa Telecom’s own operations and nature and facilitate nature-related risk management. For more comprehensive assessment of nature-related risks, the scope of analyzed sites is expanded when compared with 2024. This year’s analysis scope includes not only terrestrial point sites, namely operational sites (base stations, telecom facilities, satellite stations, telecommunication rooms, cross-connect cabinets, service centers, and office buildings), and value chain (significant Tier-1 suppliers), but also the Group’s value chain and linear/marine sites, incorporating priority group subsidiaries (such as Chunghwa Precision Test, Chunghwa Leading, Chunghwa System Integration, and Light Era) into structural assessment for the first time. In 2026, the interface between Chunghwa Telecom’s operations and nature is no longer confined to point-type facilities, and linear sites (submarine cables deployed across New Taipei, Yilan, Taitung and Pingtung) are incorporated into the Locate and Evaluate analyses. This expands the Company’s natural footprint assessment from terrestrial to marine areas, enabling more comprehensive natural ecosystem risk management.

L4: Identifying the Sensitivity of Operational Sites

For the identification of the priority sites with higher nature-related risks, based on publicly available data and considering the significant dependencies and impacts of Chunghwa Telecom, the taskforce established two major localization criteria to assess the location sensitivity of sites and rank their priorities. Criterion I Natural Sensitivity focuses on the characteristics of the ecological environment around the sites, including Criterion I-1 Ecosystem Sensitivity and Criterion I-2 Species Sensitivity. Criterion I-1 Ecosystem Sensitivity is used to assess the overlap between operational sites and Taiwan’s natural preservation areas; Criterion I-2 Species Sensitivity is used to evaluate the number of threatened species on Taiwan’s Red List near the operational sites. Criterion II Operational Impact is used to assess the naturalness of operational sites through current land use conditions to understand the potential degree of impact of site establishment and operation on the environment. The analysis process for each criterion is explained below:

Criterion I: Natural Sensitivity

Criterion I-1: Ecosystem Sensitivity

According to the “Spatial Planning Act”, the functional zones include four types: environmental conservation zones, urban-rural development zones, agricultural development zones, and marine resource zones. The designation of the “Environmental conservation zones” refers to the distribution of natural resources, ecology, landscapes, disasters, and the deployment of corresponding disaster prevention facilities; “marine resources zones” are demarcated based on the current situation and future development needs of inland waters and territorial seas, with consideration of the conservation and utilization of marine resources, traditional use by indigenous people, special purposes, and others.

The analysis method references the sensitivity levels of environmental conservation zones and the classification of marine resources zones by the nature of use, with consideration of Chunghwa Telecom’s high reliance on disaster resilience, to establish the Ecosystem Sensitivity classification standard (Figure 17).

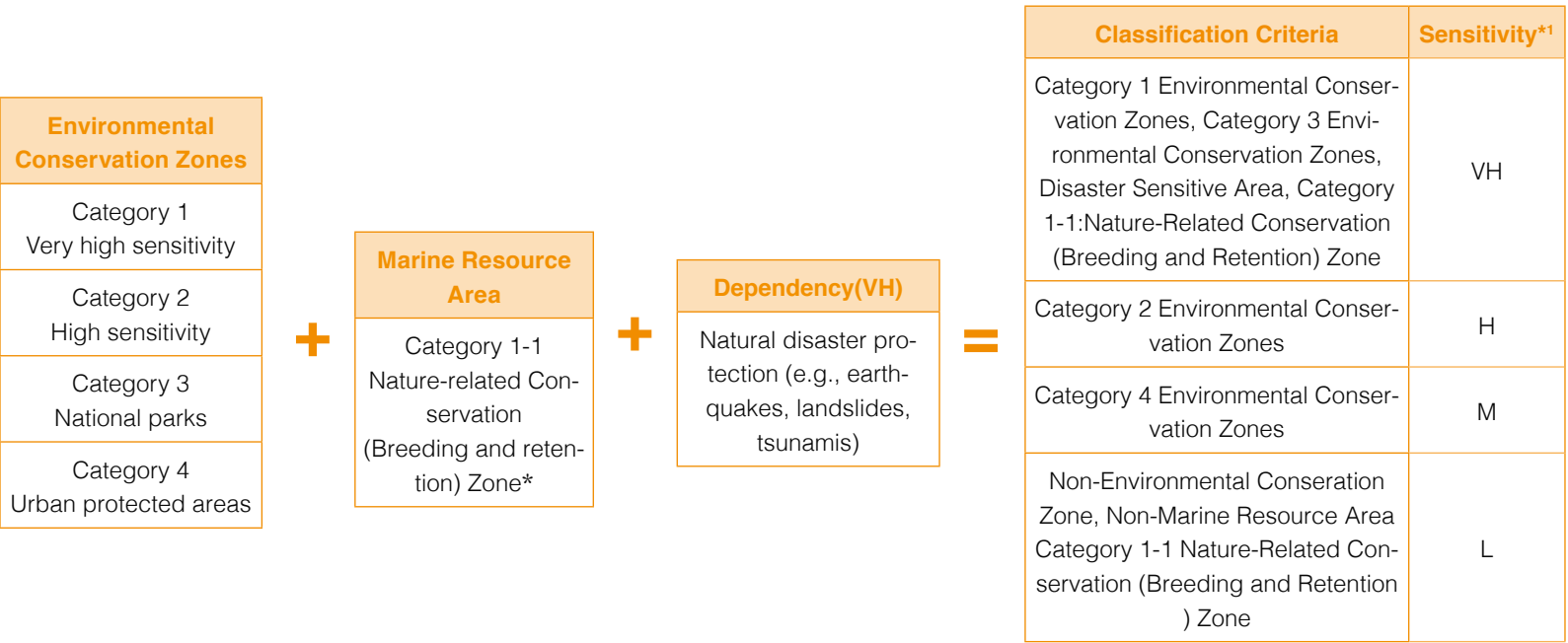


Figure 17. Ecosystem Sensitivity Classification Standard¹⁶

*Note: Marine Resource Zone Category 1 refers to areas with exclusive use, of which Category 1.1 comprises various protected (conservation, retention) areas designated in marine waters under other laws. Considering that the natural conservation (conservation, retention) areas are designated with the purpose of protecting biodiversity, they are included in the Ecosystem Sensitivity grading standard.

15 The entire region includes Taiwan, Penghu, Kinmen, and Matsu areas.

16 As described above, VH is Very High, H is High, M is Medium, and L is Low.

Criterion I-2: Species Sensitivity

The Species Sensitivity analysis aims to assess the number of threatened species on the Red List (i.e., Critically Endangered CR, Endangered EN, Vulnerable VU species) potentially present around Chunghwa Telecom sites. The analysis is based on publicly available data in Taiwan. During the analysis, with the focus on the occurrence points of Critically Endangered (NCR), Endangered (NEN), and Vulnerable (NVU) species on the Taiwan Biodiversity Network’s Taiwan Red List, as well as a 2 km buffer zone around these points (Table 7), the number of threatened species per unit grid is calculated, and a dataset of threatened species counts for all grids across Taiwan is established. Then, with the quartiles (1st quartile Q1, 2nd quartile Q2, 3rd quartile Q3) of the threatened species counts for all grids in Taiwan as the basis for grading, the Species Sensitivity grading standards are established. Finally, the threatened species count recorded in the grid where a site is located is used to determine the site’s Species Sensitivity level according to the classification standards (Figure 18).

Taxon	Number of threatened species
Mammals	12
Amphibians	11
Birds	52
Reptiles	5
Freshwater fish	25
Vascular plants	989
Total	1094

Table 7. Number of Threatened Species in Each Taxon

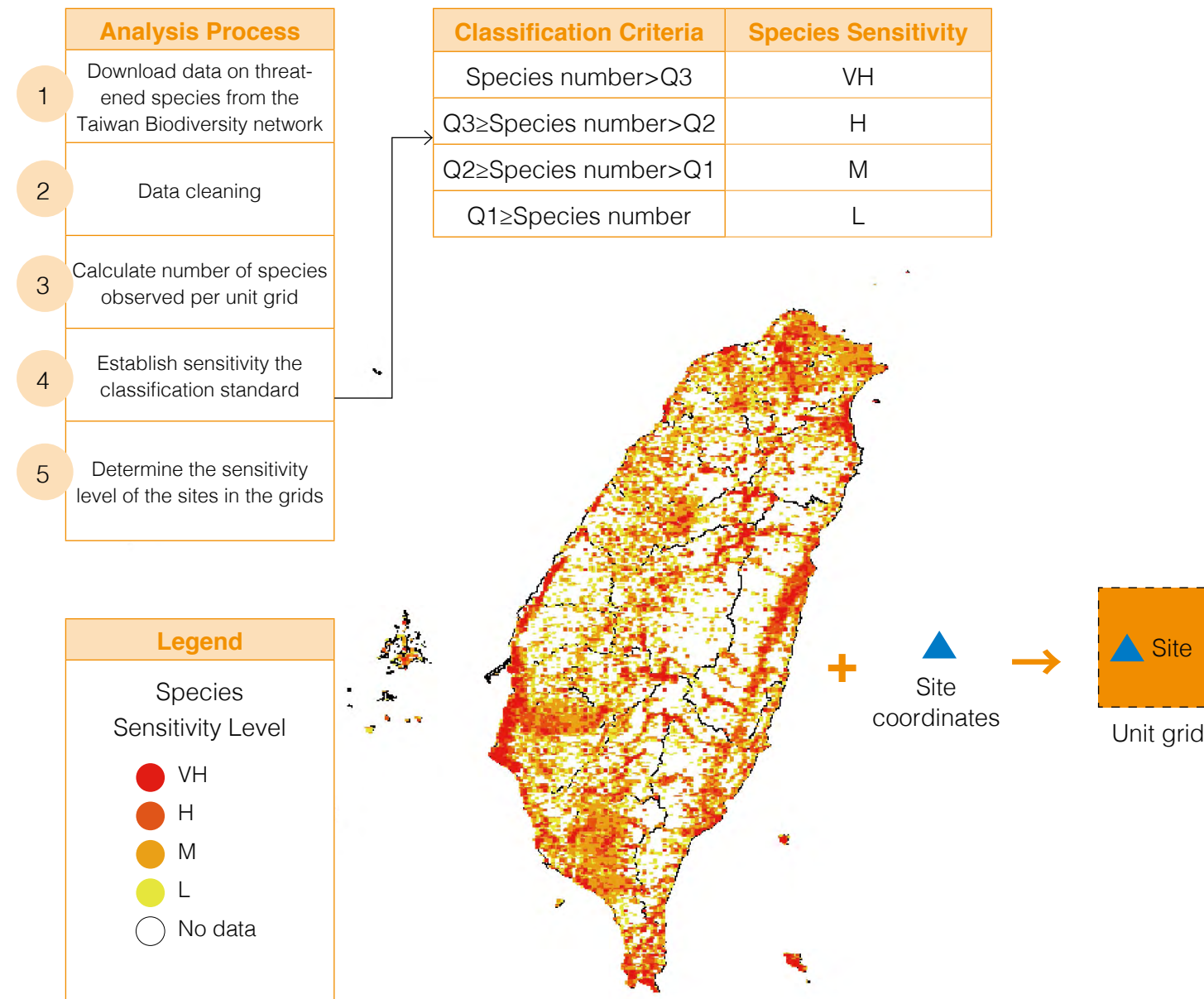


Figure 18. Species Sensitivity Analysis Process

The classification results of Criterion I-1 Ecosystem Sensitivity and Criterion I-2 Species Sensitivity are integrated to determine the site's Natural Sensitivity level based on the Natural Sensitivity matrix (Table 8).

		Ecosystem Sensitivity			
		VH	H	M	L
Species Sensitivity	VH	 VH	 VH	 H	 M
	H	 VH	 H	 M	 L
	M	 H	 M	 M	 L
	L	 M	 L	 L	 L

Table 8. Natural Sensitivity Matrix



Criterion II: Operational Impact

With reference to the naturalness investigation method for plants in the environmental impact assessment¹⁷, the land use data provided by the National Land Surveying and Mapping Center of the Ministry of the Interior and the results of the Fourth Forest Survey are used to assess the naturalness of the operational sites. It is inferred that the higher the naturalness of an operational site is, the greater impact the establishment and operation of the site will have on the environment. The classification standards for operational impact are shown in the table below (Table 9).

Based on the classification results of the two major criteria, the priority scores for the two major criteria of the operational sites are calculated according to the Priority Scoring Matrix (Table 10). Finally, the location evaluation order is determined by following the Corresponding Priority Table (Table 11).

Operational Impact	Naturalness	Naturalness Description	Reference Land Use Category defined by the Ministry of the Interior (Category Code)	Reference data from the fourth forestry investigation
VH	5	Natural forest areas	Forest (02)	Natural forests
H	4	Primary grassland	Grassland (0902), Wetland(0901)	-
	3	Planted forest and bamboo forests	Forest (02)	Planted forests, bamboo forests
M	2	Farmland is for cultivated crops	Agriculture (01)	-
L	1	Exposed areas are vegetation-free areas caused by natural factors	Transportation (03), Water Resources (04), Construction (05), Public (06), Recreation (07), Salt Mines (08), Others(09)	-
	0	Vegetation-free areas caused by human activities, such as buildings and roads		

Table 9. Operational Impact Classification Criteria

Priority Score Based on Two Major Criteria		Natural Sensitivity			
		VH	H	M	L
Operational Impact Level	VH	16	12	8	4
	H	12	9	6	3
	M	8	6	4	2
	L	4	3	2	1

Table 10. Priority Scoring Matrix

Priority	Score
1st	9-16
2nd	4-8
3rd	1-3

Table 11. Corresponding Priority Table

17The technical specifications for plant ecological assessment are formulated in accordance with Article 58 of the “Operational Regulations for Environmental Impact Assessments for Development Activities.”



◆ Own Operations

This year, besides base stations, telecom facilities, satellite stations, telecommunication rooms, cross-connect cabinets, service centers, and office buildings, the types of operational sites analyzed in the Locate step also include linear sites – submarine cables, to reflect the comprehensiveness of Chunghwa Telecom’s operational site management and risk control.

The analysis results show that, regarding point-based operational sites, first-priority sites account for approximately 0% to 1.5% (Table 12). Among them, satellite stations, telecommunication rooms, service centers, and office buildings are mostly located near metropolitan and densely populated areas; thus no sites fall into the first-priority scope following the localized analysis.

For linear asset locations, Chunghwa Telecom continues to participate in investments in multiple international submarine cable systems. With reference to existing environmental surveys of sensitive areas adjacent to relevant sites, and based on operational significance and data availability, four submarine cable landing sites in New Taipei, Yilan, Taitung, and Pingtung were prioritized for assessment this year. Sensitivity analyses were conducted for the submarine cable landing areas. Following an overlay assessment based on Criterion I Natural Sensitivity (covering environmental conservation zones, protected reef zones, and threatened species listed in the Red List) and Criterion II Operational Impact, three sites—New Taipei, Yilan, and Taitung—were identified as first-priority sites due to their very high/high (VH/H) natural sensitivity and high (H) operational impact. The Pingtung site was classified as a third-priority site due to its low (L) operational impact.

Type of operational sites	Ratio of first-priority sites
Base station	0.8%
Telecom facilities	1.5%
Satellite station	—
Telecommunications room	—
Cross-connect cabinet	Nearly 0% (fewer than 5 locations)
Service center	—
Office building	—

Table 12. Locate Analysis Types and Results for Our Operations

◆ Group Subsidiaries

Regarding the Locate analysis for group subsidiaries, the taskforce screened a total of 40 group subsidiaries in 2025. Based on the nature-related dependencies and impacts of ISIC industries, as well as the economic weight indicator of “shareholding ratio × operating income”, 6 priority group subsidiaries were identified. To precisely understand the interface between their operations and nature, 23 operational sites of 6 priority group subsidiaries were collected, including 21 sites in Taiwan (14 office buildings, 3 factories, 3 integrated factory-office complexes and 1 parking lot), and 2 sites in China (1 office building and 1 integrated factory-office complex).

In terms of analysis criteria, Chunghwa Telecom’s localized process was still adopted for the sites in Taiwan, with assessment conducted based on Criterion I Natural Sensitivity and Criterion II Operational Impact. For the sites in China, given the availability of data, Criterion I Natural Sensitivity was mainly used to identify the sensitivity of sites. Analysis results indicate no sites in either Taiwan or China fall into the first-priority scope. However, 3 sites in Taiwan fall in the second-priority scope (about 14%), and 1 site in China falls in the second-priority scope. The results provide a scientific spatial foundation for subsequent assessment of the group subsidiaries’ dependencies and impacts on nature.

◆ Suppliers

Based on the four priority industries identified in the L2 analysis, 65 suppliers with high contract values were selected, and their operational sites (manufacturers must cover factories) were prioritized for collection, totaling 68 in Taiwan, including 62 business addresses and 6 factory addresses. Based on Criterion I Natural Sensitivity and Criterion II Operational Impact, which are consistent with our own operations, the location sensitivity of the sites was identified. The results show that no sites fall into the first-priority scope.

2-3 Evaluate: Analysis of Nature-Related Dependencies and Impacts

To comprehensively assess the dependencies and impacts of operational sites, group subsidiaries, and value chains on nature, the taskforce adopted the LEAP methodology recommended by TNFD and simultaneously developed the localized Evaluate analysis process (Figure 19), taking into account Taiwan's local conditions.

Based on the nature-related dependencies and impacts identified in the Locate L2 phase, the Company reviewed various site types (base stations, telecom facilities, cross-connect cabinets and telecommunication rooms, satellite stations, service centers, office buildings, and submarine cables), focusing on relevant operational activities of the priority group subsidiaries and suppliers in prioritized industries. It reviewed its interdependencies with nature across the full lifecycle from site selection, planning and design, construction, and operation to decommissioning, so as to identify the dependencies and impacts of actual operations across Chunghwa Telecom's entire value chain on nature. Based on this, the taskforce established metrics for measuring the Group's dependencies and impacts as well as criteria for determining impact materiality. With these metrics and criteria, as well as the sensitivity analysis results of the operational sites from the Locate phase, the focus was placed on high-sensitivity first-priority point-based sites to measure relevant dependency and impact indicators. This allowed for a deeper understanding of the priority dependency and significant impact items for these high-sensitivity sites.

Meanwhile, for group subsidiaries that are not categorized as first-priority sites, the "company-level questionnaire interview" was adopted; for suppliers, we consolidated the contents of high-value contracts to conduct an in-depth analysis of their lifecycle-based operational characteristics and corresponding material dependencies and impacts. The analysis results from this phase—the dependency and impact items for each site type, and the dependency and impact items of group subsidiaries and suppliers—will serve as the basis for assessing the Group's physical risks in the Assess phase, as well as future site management, target setting and the advancement of the Group's sustainable supply chain management.

◆ Own Operations

In the Evaluate phase, based on the nature-related dependencies and impacts identified via ENCORE in the preceding Locate phase, the taskforce shifts the focus from a global scale to specific physical operational sites. Taking Taiwan's local natural conditions into consideration, it conducts the assessment of nature-related dependencies and impacts based on the characteristics of various types of sites and suppliers.

Through phases E1 and E2, the taskforce systematically identified the actual dependencies that maintain the normal operation of Chunghwa Telecom's various site types, as well as the impacts of each site type on nature across the lifecycle. In addition to point-based sites, the scope of the Evaluate analysis was expanded to include linear infrastructure assets, namely submarine cable systems. Given the differences in operational characteristics and the nature and extent of environmental impacts between point-based and linear asset types, their dependencies and impacts are presented separately below.

Point-based sites: Base stations, telecommunication rooms, cross-connect cabinets, telecom facilities, satellite stations, service centers, and office buildings.

In terms of dependencies, base stations, telecommunication rooms, and cross-connect cabinets are small, unstaffed site types that share similar dependencies, primarily including stable land conditions and reliable electricity supply. In contrast, telecom facilities, satellite stations, service centers, and office buildings occupy larger areas and require considerations related to personnel occupancy, telecom facilities, and cooling and ventilation systems necessary for equipment operation. As a result, in addition to electricity, these facilities demonstrate greater dependence on water resources and fuel, while diesel (or gasoline) is also required as a backup power source for generators (Table 13). The normal supply of the aforementioned dependencies relies on related ecosystem services (Table 14), the operation of which in turn depends on natural capital.

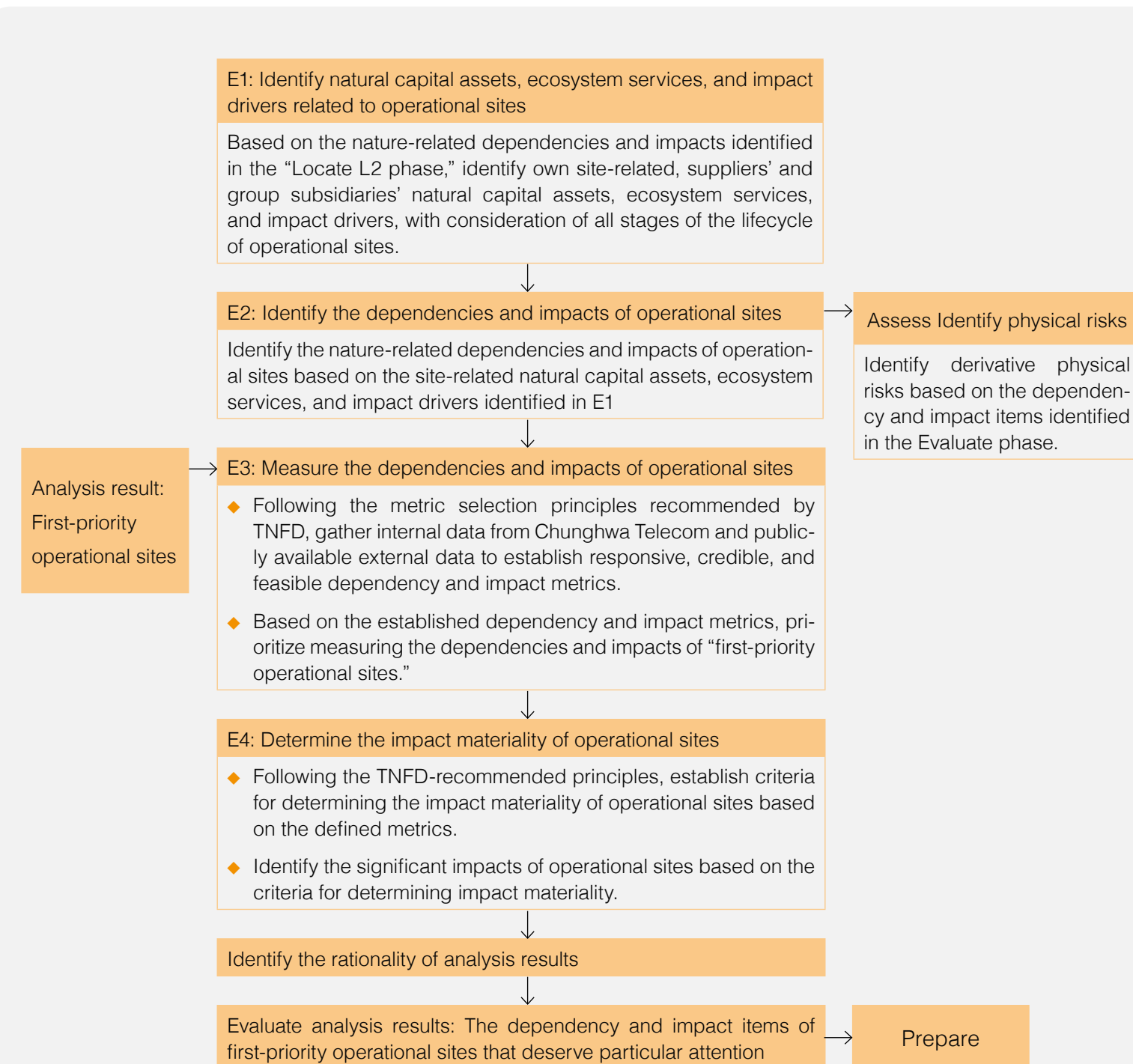


Figure 19. Evaluate: the Localization Analysis Process and Its Linkages with Other Stages



Dependency Analysis

◆ Base Stability

The ecosystem services that the base stability depends on include “soil and sediment retention”, which prevents foundation loosening and soil erosion, “flood and storm mitigation” and “water flow regulation”, which helps reduce erosion and flooding risks caused by extreme weather, “natural disaster protection”, which reduces the impact of disasters such as landslides, and “rainfall pattern regulation”, which helps maintain a stable hydrological environment, thereby enhancing the stability and resilience of the base and infrastructure as a whole.

◆ Water Resource Management

Water resource management highly depends on ecosystem services related to the water cycle and ecological purification, including “water supply”, which provides stable water sources; “rain-fall pattern regulation” and “global climate regulation”, which affect the spatiotemporal distribution and availability of water resources. “Water flow regulation” helps conserve and distribute water resources, while “water quality purification” reduces treatment costs and health risks. Additionally, “soil and sediment retention” supports the stability and water storage function of water sources.

◆ Electricity Supply

Electricity supply depends on various regulatory and maintenance ecosystem services, including “global climate regulation” and “local climate regulation”, which maintain stable temperature and humidity, ensuring the stable operation of power generation, transmission and distribution systems; “water flow regulation” and “water supply” are particularly important for power generation or cooling systems that require water; “air filtration” helps mitigate the corrosion and efficiency impact of air pollution on equipment, thereby enhancing the overall stability and reliability of power operations.

◆ Oil-product Supply

Oil-product operations, encompassing exploration, transportation, and storage, rely heavily on various ecosystem services for support. “Natural disaster protection” and “flood and storm mitigation” help reduce the risk of damage to facilities from extreme weather or geological disasters; “soil and sediment retention” maintains the stability of foundations and pipelines; “water purification” can lower environmental and operational risks caused by leakage pollution, while “air filtration” and “atmospheric and ecosystem regulation” support the quality and resilience of the environment surrounding the facilities.

Types of sites	iltems of dependencies				Items of impacts				
	Site stability	Water resources	Electricity	Oil	Land use (facilities)	Land use (access roads)	Solid waste	GHG emissions	Electromagnetic radiator
Base stations	●		●		●	●	●	●	●
Telecom facilities	●	●	●	●	●	●	●	●	
Satellite stations	●	●	●	●	●	●	●	●	●
Telecommunication rooms	●		●		●	●	●	●	
Cross-connect cabinets	●		●		●	●	●	●	
Service centers	●	●	●	●	●	●	●	●	
office buildings	●	●	●	●	●	●	●	●	

Table 13. Items of Dependencies and Impacts for Different Site Types

Ecosystem services	Dependencies			
	Base stability	Water resources	Electricity	Petroleum Product
Local climate regulation		▲	▲	
Global climate regulation		▲	▲	
Rainfall pattern regulation	▲	▲		
Soil and sediment preservation	▲	▲		▲
Water regulation	▲	▲	▲	
Water purification		▲		▲
Water supply		▲	▲	
Air filtration			▲	▲
Flood and storm mitigation	▲			▲
Other regulation and maintenace atmosphere and ecosystem				▲
Natural disaster protection	▲			▲

Table 14. Corresponding Ecosystem Services for Each Dependency Item



Impact Analysis

In terms of impacts, all types of operational sites involve land use due to infrastructure installation and the construction of access roads. The replacement and upgrading of equipment generate operational waste, while certain types of sites also produce small amounts of municipal solid waste from operation and maintenance personnel. In addition, all site types contribute to greenhouse gas emissions through electricity consumption. Furthermore, some wireless telecommunications facilities generate electromagnetic fields (EMFs) during operation; therefore, EMFs are identified as an impact associated with base stations and satellite stations.

Types of Linear Asset: Submarine Cable Systems

As a transmarine linear infrastructure asset, submarine cable systems involve nature-related issues across cable landing stations, marine areas, coastal zones, and certain freshwater ecosystems. Based on preliminary screening outcomes from ENCORE, inherent environmental characteristics and full-lifecycle activities of submarine cables, the taskforce identifies their dependencies and impacts on nature.

Overall, submarine cable systems rely heavily on stable natural capital and ecosystem services across the full lifecycle from site selection, construction, and operation to decommissioning. Meanwhile, they may trigger varying degrees of disturbances and impacts on marine, freshwater and terrestrial ecosystems.

◆ Site selection

During site selection, planning and design, offshore surveys and onshore investigations bring about vessel-generated noise and short-term disturbances to marine organisms from survey equipment. Although direct nature dependencies and impacts remain relatively limited, certain cable landing points adjoin estuaries, coastal shelterbelts and other sensitive coastal areas, posing potential risks to the integrity and environmental sensitivity of surrounding ecosystems.

◆ Construction

In the construction phase, submarine cable laying and onshore works are highly dependent on stable oceanographic and seabed conditions. Construction works may disrupt inshore, marine and freshwater ecosystems, including seabed disturbance, construction wastewater discharge and noise pollution.

◆ Operation

Throughout operation, submarine cable systems rely on stable power supply for onshore landing facilities and seabed stability to maintain normal operation. Direct natural impacts are marginal, mostly indirect greenhouse gas emissions stemming from power consumption of onshore facilities, alongside localized seabed disturbance and vessel fuel emissions generated during maintenance works.

◆ Decommissioning

Upon future site decommissioning, cable removal and facility dismantling works still require stable oceanographic and seabed conditions. Such works may again cause seabed disruption, noise, air pollution and waste generation. Proper waste recycling, site restoration and revegetation initiatives can mitigate long-term environmental impacts and facilitate the recovery of ecological functions.

For point-based operational site types, the E3 analysis was conducted to assess the identified dependency and impact items associated with each site type, based on the operational dependencies and impacts identified in the previous phase. Subsequently, with reference to the TNFD’s recommended principles for indicator selection and considering practical implementation aspects, the taskforce developed responsive, reliable, and feasible metrics for measuring dependencies and impacts through the collection of Chunghwa Telecom’s internal data and publicly available external data. The metrics adopted for each dependency and impact item are presented below (Table 15).

Dependency and impact items		Metrics
Dependen-cies	Base stability	Disaster potential level*
	Electricity	Annual electricity consumption
		Reserve power and its duration of supply
	Oil products	Annual oil consumption
	Water	Water use
Impact	Land use - facilities	Naturalness of operational sites
		Building areas
	Land use - roads	Site-related land or road development
	Waste	Standardized recycling process
	Carbon emissions	Carbon emissions
	Eletromagnetic wave	NCC non-compliant electromagnetic raidiation measurement record

Table 15. Dependency and Impact Measurement Indicators

*Note: The assessment of disaster potential is based on whether the site is directly located within or near 500 meters of areas prone to flooding, debris flow, large-scale landslides, dip slopes, rock mass slides, debris slides, rock-falls, soil liquefaction active faults, tsunami inundation, and volcanic eruption.



Based on the dependency and impact metrics defined in E3, and in accordance with the principles recommended by TNFD, the Company has established criteria for identifying key impacts, considering regulatory standards, the degree of impact, and the Company's sustainability goals. Also, the Company has defined criteria for identifying key dependencies, taking into account conditions and scenarios that could lead to the abnormal operation of its sites.

For the first-priority operational sites with high location sensitivity identified in the Locate phase, the taskforce has summarized corresponding dependency and impact metrics based on the dependency and impact items of each type of operational sites. To date, 100% of the metric data has been collected; based on the criteria for identifying key items, the priority dependency and impact items of each site have been identified to facilitate future management of operational sites. Analysis results show that in terms of dependencies, electricity is a critical dependency item that should be prioritized over others. In terms of impacts, considering the current environmental conditions of the first-priority site and Chunghwa Telecom's net-zero emissions target for 2045, land use (facilities) and greenhouse gas emissions deserve particular attention among the impact items.

◆ Group subsidiaries

In the Evaluate stage, the taskforce focuses on group subsidiaries. Based on the results of the Locate phase, none of their operational sites are categorized as first-priority sites, so TNFD-aligned questionnaire interviews are conducted at the company level to assess dependencies and impacts. By mapping the subsidiaries' business and value chain footprints and referencing operational characteristics of various types of sites, including factories, offices, construction yards and telecom facilities, across the full lifecycle from site selection, planning and design, construction, and operation to decommissioning, the taskforce identifies their material dependency and impact items¹⁸.

1. Chunghwa Precision—electronic component manufacturing

Chunghwa Precision's operational activities include manufacturing and production of semiconductor testing products at its integrated factory-office sites. Its operational activities rely heavily on natural disaster protection to maintain stable bases. Production, equipment cooling and factory utility systems entail substantial baseline demand for water and electricity. Drought, water rationing or unexpected power outages can halt production and trigger scrap losses of finished goods. Besides, raw material supply is vulnerable to supply disruption risks stemming from climate change and cross-border natural disasters.

In terms of impacts, production operations consume water, electricity and electronic metallic resources, generating defective products, scraps, regular industrial waste, air pollutants, domestic and industrial wastewater, together with greenhouse gas emissions and land use impacts. However, Chunghwa Precision recycles and reuses water and waste materials to feed back into its value chain, leading to an overall low environmental impact.

2. Su Zhou Precision—electronic component manufacturing

Su Zhou Precision's operational activities focus on PCB assembly and production at its integrated factory-office sites. Its operations rely heavily on natural disaster prevention and water-related services. As water acts as an essential prerequisite for equipment cooling and stable firefighting system operation, water cutoffs would directly disrupt continuous production. Furthermore, its operations also depend heavily on steady power and raw material supplies. Diesel generators are activated to maintain operations amid power outages, whereas inbound raw materials face delivery delays caused by transboundary extreme weather such as heavy snowstorms.

From an impact perspective, production generates waste chemicals, scrapped equipment and defective products. All such wastes are sorted and stored in compliance with hazardous substance regulations before being handed over to qualified contractors for disposal; accordingly, most of its natural impact drivers fall within the low-impact category overall.

18 Based on the internal assessment, Donghwa is tasked with developing a localized Evaluate methodology for linear sites; the linear Evaluate analysis schedule will be aligned with that for its own operational sites and is therefore excluded from the current Evaluate assessment.



3. Chunghwa Leading—electronic component manufacturing

Chunghwa Leading's operational activities include manufacturing and production of focal plane array sensors, photodiodes and related products at factory and office sites. Its production factories rely heavily on natural disaster protection and water-related services. As water is critical for wafer cleaning and temperature-controlled cooling throughout production, drought would directly compromise equipment safety and production continuity. Moreover, its operations are also highly dependent on stable power supply and specialty raw materials such as InGaAs, sapphire and ceramic substrates.

Regarding environmental impacts, production is carried out in constant-temperature and constant-humidity cleanrooms, driving high energy consumption and significant greenhouse gas emissions. The process also generates scrap metals, waste industrial solvents, industrial wastewater, packaging waste and other solid waste, with inherent risks of toxic contamination to water and soil. Overall, its nature-related impacts are assessed as moderate to high.

4. Chunghwa System Integration—computer programming & equipment management services

Chunghwa System Integration's operational activities encompass ICT services, construction works, facility installation, integration testing and telecom facilities maintenance at general central office and office sites. Its general telecom facilities and construction sites rely heavily on natural disaster protection and stable bases. Earthquakes may lead to equipment damage; and water serves as an essential prerequisite for central office maintenance. Its core business is highly dependent on stable power supply and cannot sustain regular operation without backup power. In addition, field operations and inspections also entail oil products.

With respect to environmental impacts, construction sites and building works impose relatively substantial environmental impacts, including land use, greenhouse gas emissions, construction noise and vibration disturbance, water use, massive solid waste (from construction), as well as potential water and soil contamination. Dismantling and scrapping phases also generate substantial non-hazardous waste and carbon emissions on a one-time basis; nonetheless, all waste is processed by qualified contractors in accordance with regulations, resulting in limited environmental impacts.

5. Light Era—real estate development and construction works

Light Era's operational activities span construction works, property sales and real estate leasing at construction sites, telecom facilities, parking lots, offices and reception centers. Its construction sites and reception centers rely heavily on natural disaster protection, rainfall pattern regulation and soil conservation; and soil conservation stands as the core guarantee for building safety and seismic resistance. Construction works are dependent on groundwater and tap water supply, alongside stable power and raw materials such as rebar and cement, whose prices are susceptible to market fluctuations.

When assessing environmental impacts, construction and dismantling activities bring substantial adverse impacts on nature, including land use changes from infrastructure and roadway construction, sizeable greenhouse gas emissions, construction noise nuisance, groundwater extraction and discharge, excavated spoil and construction waste generation, as well as potential nutrient contamination of water and soil. Such adverse impacts can be largely mitigated through the installation of rainwater harvesting systems, permeable pavements and green building design.

The above analysis results regarding group subsidiaries' natural resource dependencies and environmental impacts will serve as a key reference for site management, natural target setting and natural risk control of group subsidiaries, serving as the basis for the Group's sustainable governance.



◆ Suppliers

In the Evaluate phase, the taskforce focuses on priority industries, and further deepens the assessment of their dependence on and impact on nature based on the analysis results of the preceding Locate phase. By consolidating contract contents of high-contract-value suppliers, operational activities related to the Company are summarized, and relevant dependency and impact items are systematically identified with reference to their operational characteristics at various stages of the lifecycle.

1.Public Works Construction

In the field of public utility construction, the Company's related operational activities include cable laying, civil engineering, relocation and renovation works. In terms of dependencies, such activities are highly dependent on base stability to avoid risks of ground sliding or settlement during construction. The accessibility of external roads is also a necessary condition for the entry and exit of engineering materials and construction equipment. In addition, the construction process depends on water resources for concrete curing and dust suppression, and relies on stable power supply and fuel support. With respect to impacts, these activities also have multiple impacts on nature, such as land use changes and habitat destruction caused by facility and road construction, disturbances to ecosystems triggered by construction noise and vibration, and possible disturbance and pollution to freshwater or marine ecosystems for adjacent water bodies. In addition, engineering activities entail waste generation, elevated water consumption, emissions of greenhouse gases and non-greenhouse gases, alongside potential release of toxic substances.

2.Installation of electrical conduits and others

These operational activities include the installation of user equipment, mobile communication equipment, transmission equipment, and information equipment. From a dependency perspective, such activities depend primarily on base stability to ensure safe facility installation, and on transportation accessibility to facilitate execution of works. The equipment components and materials required for these operations are mostly processed products of natural resources, and water resources and temporary electricity or fuel may also be used during the installation or testing process. Regarding impacts, relevant activities may lead to land use changes due to facility construction and create disturbances such as light and noise generated during operations, alongside potential adverse effects on local ecological interactions when the project is located near ecologically sensitive areas. In addition, the installation and construction process will also involve generation of packaging waste and old equipment waste, as well as emissions associated with energy and material consumption required for the project.

3.Installation of industrial machinery and equipment

The Company's related operational activities include the installation of exchange equipment, power, and air-conditioning equipment. With regard to dependencies, such operations rely on stable foundation conditions and clear roads to support the transportation and installation of large equipment. The installation or cooling test process often requires a large amount of water, and is highly dependent on electricity and fuel supply. In terms of impacts, the operational process may trigger changes in land use arising from site planning and spatial layout adjustments, noise and vibration interference generated during equipment operation, and potential contact with the ecology of nearby sea areas in some installation scenarios. In addition, lubricants, refrigerants, and hydraulic oils used during the equipment installation and testing phases will generate relevant waste, while the electricity and fuel consumed in operations will result in greenhouse gas and non-greenhouse gas emissions.

4.Manufacturing of communication equipment

The Company's supply chain operations related to equipment manufacturing include manufacturing of switching equipment, mobile communication equipment, and transmission equipment. In respect of dependencies, such activities rely on a stable base and a good transportation system to support factory establishment and logistics circulation. Metal mineral resources (such as copper, aluminum, rare earth elements, etc.) required in manufacturing are important nature-related dependencies. Stable power supply and sufficient water resources are also required during the production phase to support processes such as cooling and cleaning, and may involve fuel consumption. Regarding impacts, such activities may lead to land use changes and generate environmental impacts including heat and noise emissions during manufacturing. Meanwhile, such activities also entail water consumption and waste management, alongside material safety and emission management during the use of specific chemicals or heavy metal materials.

The analysis results regarding the dependencies and impacts on nature by the priority industries will serve as a reference for Chunghwa Telecom in promoting supply chain risk management and sustainable procurement policies.

2-4 Assess: Nature-related risks and opportunities assessment

Following the Locate and Evaluate phases that screened out the priority sites and nature-related dependencies and impacts of material significance, the Assess phase further analyzed the Company’s actual nature-related risks and opportunities based on the foregoing identification outcomes.

Drawing on the nature-related dependencies and impacts of all sites and value chains identified in the Evaluate phase, the Company further clarified the relevant ecosystem services and sources of natural pressures. Besides, it systematically analyzed potential nature-related risks and opportunities that may emerge when these dependencies change or impacts continue to accumulate. Based on the above findings, the Company assessed whether the identified nature-related dependencies and impacts give rise to risks to business operations, and evaluated commercial and sustainable development opportunities for the organization. According to the TNFD classification framework, nature-related risks can be categorized into physical risks, transition risks, and systemic risks. Among them, physical risks are closely associated with the shortage of nature-dependent items at specific sites, while transition risks are largely associated with policy, market and technological changes driven by the impacts that the Company and its value chains impose on nature.

Through materiality identification and prioritization, the taskforce clarified the degree of impact and the likelihood of occurrence of the risks and opportunities on the Company. The results served as a key reference for Chunghwa Telecom to formulate response strategies and roll out subsequent nature-related management measures. To comprehensively analyze potential nature-related risks and opportunities, the taskforce summarized and identified nature-related risks and opportunities in four steps (Table 16), based on the actual operating conditions of Chunghwa Telecom.

	Process	Items	Description
1	Collection	Listing nature-related risks/opportunities	Based on the analysis results from the Evaluate step as well as internal and external information, a list of relevant risks and opportunities is developed.
2	Identification	Organizing TNFD workshops to identify risks/opportunities	Departments assess nature-related risks and opportunities arising from their business’s dependency on nature and corresponding impact; in particular, they evaluate the most significant factors affecting the business and organization within the value chain, and explain the timing of these impacts.
		Consolidating identification results	The taskforce integrates nature-related risks and opportunities related to the business of various departments.
3	Materiality assessment	Nature-related risk/opportunity matrix	Calculate the likelihood of occurrence and degree of impact of the nature-related risks and opportunities, and plot the corresponding matrix.
		Formulating response strategies	Chunghwa Telecom’s responsible departments formulate strategies to address material nature-related risks and opportunities.
4	Response strategy	Setting indicators and targets	Chunghwa Telecom’s responsible departments formulate corresponding indicators and targets to evaluate the implementation of relevant response strategies.
		Nature-related policy management and related work	The Sustainable Development Promotion Committee regularly monitors the implementation progress, and provides regular reports to the Board of Directors, which serve as a reference for tracking performance.

Table 16. Nature-related Risks and Opportunities Identification Process

Phases 1 & 2: Collection and identification of nature-related risks/opportunities

First, with reference to the analysis results from the Evaluate phase regarding the degree of dependencies and impacts of various types of operational sites, group subsidiaries and value chains on nature, the taskforce further assessed various factors that may arise in the operational process, and then developed a list of subsequent nature-related risks and opportunities.

During the process of collecting and identifying physical risks, the taskforce took the nature-dependent items identified in the Evaluate phase as the starting point for analysis, and conducted the assessment according to the pathways through which physical risks arise (Figure 20). Changes to natural capital and ecosystem services caused by external natural drivers such as natural disasters and climate change, or the enterprise's own impact drivers including greenhouse gas emissions and land use, may give rise to nature-related physical risks, thereby impacting operational activities. On this basis, the Company further analyzed potential physical risks deriving from these two types of drivers to identify the potential impacts of natural changes on operations:

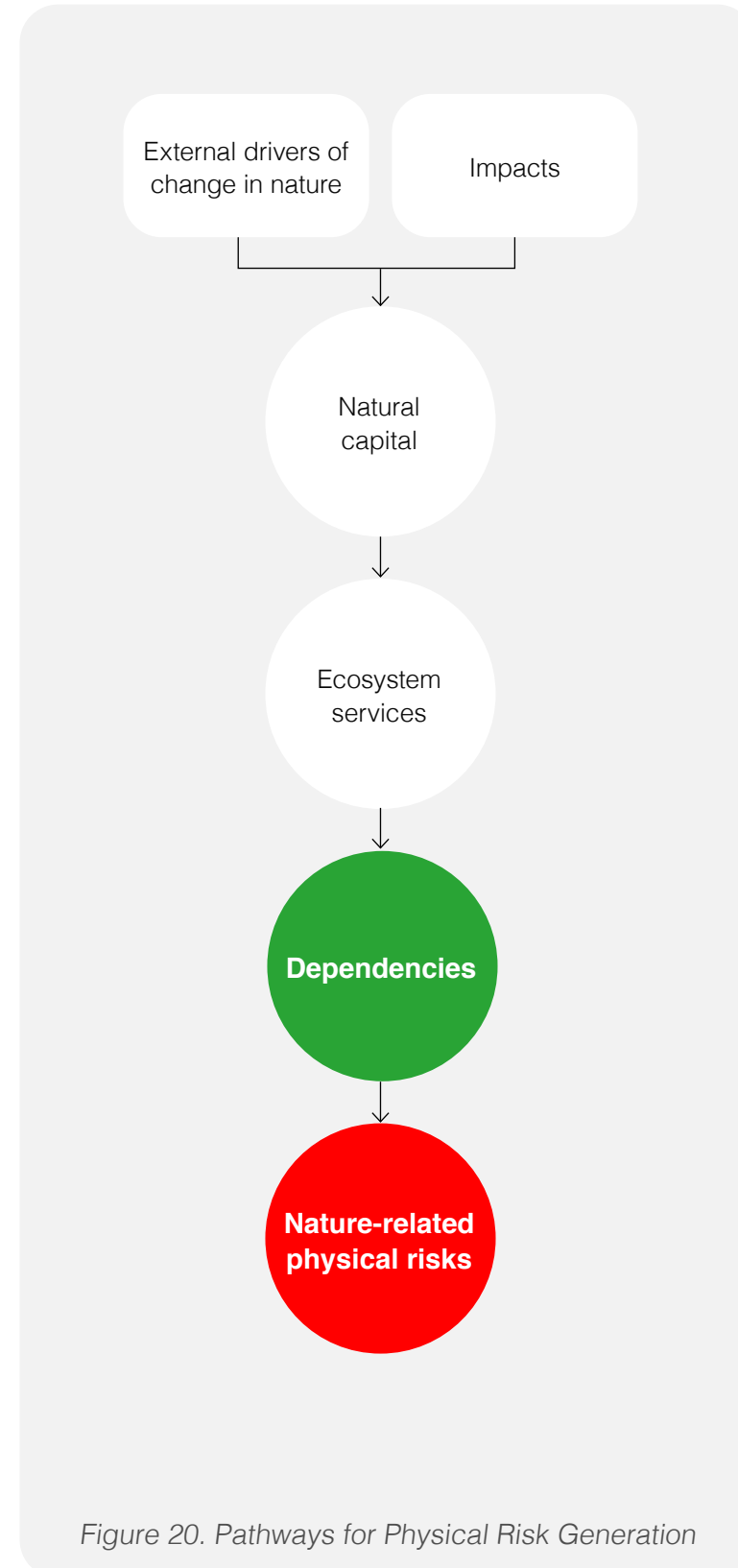


Figure 20. Pathways for Physical Risk Generation

1. Base stability

The base relies on geological and land stability to maintain daily operations. External drivers such as natural disasters (e.g., earthquakes, heavy rainfall) and climate change may lead to facility collapse, equipment damage, or road closures, thereby triggering operational interruption risks. Additionally, land development in neighboring areas or by the enterprise itself (e.g., clearing original vegetation) may weaken the land's resistance to disasters and increase the risk of base instability.

Physical risks arising from base stability cover all operational sites, including base stations, telecom facilities, satellite stations, and distribution cabinets. For priority group subsidiaries, their precision manufacturing plants (e.g., Chunghwa Precision, Chunghwa Leading, Su Zhou Precision), telecom facilities (e.g., Chunghwa System Integration) and construction sites (e.g., Light Era) are exposed to ground movement or soil erosion caused by extreme rainfall. Such hazards may result in damage to precision equipment and production line disruptions, and the Company may also incur additional costs for seismic reinforcement and restoration.

In terms of value chains, suppliers' pipeline layouts, large-scale equipment installations and factory buildings are highly dependent on geological stability and accessibility. Disasters may hinder delivery of components and engineering progress.

2. Energy supply (electricity and oil products)

Stable energy supply is the foundation for maintaining normal operations at various sites. Natural disasters (such as earthquakes and heavy rain) and climate change are two external drivers that could lead to disruptions in the power grid or oil supply chain, rendering primary and backup power systems inoperable, and thereby increasing the risk of service interruptions. At the same time, the enterprise's own greenhouse gas emissions may exacerbate climate change, further increasing disaster risks and indirectly affecting the stability of energy supply.

Risks stemming from energy supply also affect all operational sites. Priority group subsidiaries and suppliers rely heavily on stable power grids and oil product backup for the operation of heavy construction machinery, dust-free production lines for precision communication equipment, and maintenance of telecom facilities. Unexpected energy outages will suspend cooling and testing activities, halt production lines and delay deliveries, thereby resulting in substantial financial losses and non-compliance liabilities.



3. Water resources

Water shortage will affect the normal operation of cooling systems and sanitation facilities. Natural disasters (such as droughts and floods) and climate change are two external drivers that may lead to water depletion, water quality deterioration, or supply system failures, which will affect equipment operation and employee work. If enterprises discharge wastewater or waste that pollutes water bodies, it may also lead to a decrease in water resource availability. The operational sites involved in water resource-related risks are primarily those that rely on water resources for operation, including telecom facilities, satellite stations, service centers, and office buildings. Across value chains, manufacturers including Chunghwa Precision, Chunghwa Leading, Su Zhou Precision and communications equipment manufacturers require large volumes of stable water for process cooling and rinsing. Construction projects of Light Era and public utility suppliers also rely on sufficient water for concrete curing and dust suppression. Water rationing amid drought will substantially raise water deployment costs and force production halts. Furthermore, improper disposal of industrial wastewater, toxic chemicals, lubricants and construction waste during manufacturing and construction activities will worsen water and soil pollution, thereby indirectly threatening overall supply and availability of water resources.

4. Raw material supply (value chain-specific dependencies)

Priority group subsidiaries engaged in communication equipment manufacturing and construction engineering industries (e.g., Light Era) rely heavily on metallic minerals such as copper, aluminum and rare earths, as well as building raw materials. Long-term climate change and natural environment degradation may result in resource scarcity, supply chain disruptions and sharp price fluctuations, thereby driving up procurement costs and undermining the stability of production plans.

Based on the above analysis, the physical risks can be classified into four major categories by the types of driving factors:

- (1) Land use and declining ecological regulation functions – land development and utilization reduce the resilience of land to disasters, exacerbating the risk of service disruptions.
- (2) Natural disaster events (excluding climate change) – Risk of service disruptions caused by natural disasters.
- (3) Climate change – climate change exacerbates the risk of service disruptions.
- (4) Shortage of natural resources – water pollution caused by wastewater and waste leads to the shortage of water, resulting in service disruption risks.

Based on the four categories of physical risks identified in the analysis, the taskforce convened a TNFD risks/opportunities identification Workshop to review Chunghwa Telecom’s own operations and operations of priority group subsidiaries and key suppliers with various departments, and adopted transition risk issues such as regulatory developments and policy trend changes as the basis for analysis. On this basis, the taskforce comprehensively assessed the potential impacts of changes in the natural environment, business models and regulatory adjustments on the enterprise’s upstream and downstream value chains. It systematically identified potential nature-related risks and opportunities facing business operations, organizational management and overall value chains, and specified the timing of these impacts. The results serve as the basis for subsequent risk management and strategy planning.

Phases 3 & 4: Materiality Identification and Response Strategies

We plotted a nature-related risk and opportunity matrix by assessing “likelihood of occurrence” and “degree of impact” of all nature-related risks and opportunities to conduct their materiality identification, with the analysis results listed below. Chunghwa Telecom proposed corresponding response strategies based on the identification outcomes, and advanced and tracked subsequent implementation¹⁹. For related content, please refer to “Chapter3-2 Response Strategies for Nature-Related Risks and Opportunities” in this report.

At the same time, to extensively collect the views of nature-related stakeholders and enhance the completeness of analysis, we distributed online and physical questionnaires to the seven identified categories of major nature-related stakeholders²⁰ and significant Tier-1 suppliers. The aim was to gather stakeholders’ concerns, expectations and suggestions on material nature-related issues, and incorporate the survey results into subsequent analysis and management planning to respond to stakeholders’ concerns regarding nature-related issues.

19 Priority group subsidiaries assessed the relevance of their operations to material nature-related risks and opportunities to determine whether to further formulate relevant response strategies at present.
20 The questionnaires cover employees of priority group subsidiaries.

◆ Identification of Material Nature-Related Risks

The taskforce, following the analysis process described above, collected a total of 14 nature-related issues covering two major categories: physical risks and transition risks. It then assessed these issues based on the likelihood of occurrence and the degree of impact to produce a Nature-Related Risks Matrix (Figure 21). Ultimately, two physical risks and two transition risks with high likelihood of occurrence and high degree of impact were selected as material nature-related risks and opportunities for priority management.

Physical risks include “occurrence of natural disasters” and “shortage in supply of natural resources”, while transition risks encompass “customers’ preference shifting towards nature-friendly products or services” and “demand for high-efficiency, low-impact technological transformation (suppliers)”²¹. The relevant results are as follows.

21 Given that suppliers constitute material nature-related stakeholders of Chunghwa Telecom, relevant issues are incorporated into priority management.

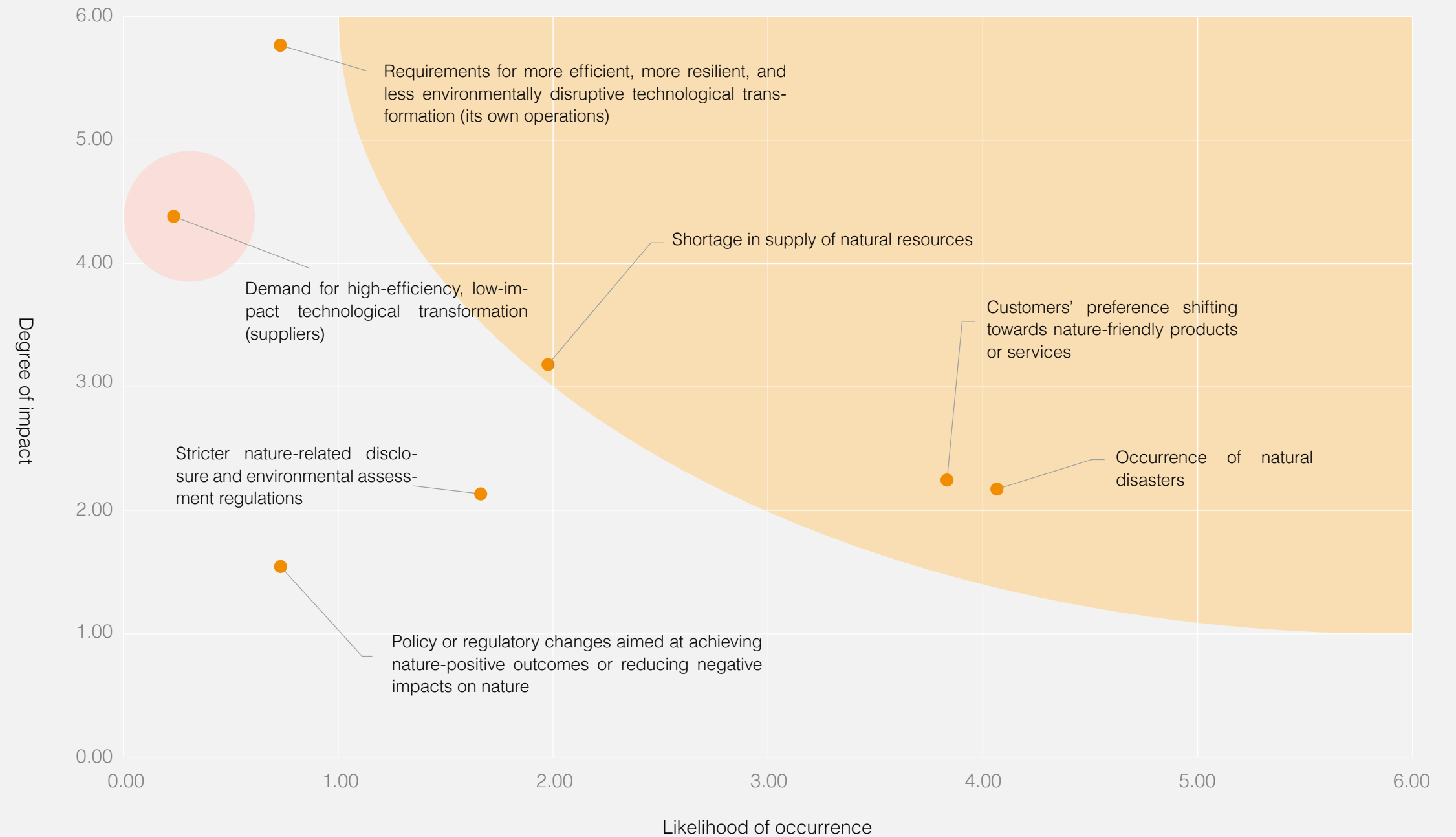


Figure 21. Chunghwa Telecom's Nature-Related Risks Matrix



After identifying 4 material nature-related risks, we distributed online and physical questionnaires to the 8 identified categories of major nature-related stakeholders to understand the extent of their connection to nature-related risks and their expectations. This helps the Company better incorporate the perspectives of major nature-related stakeholders when formulating nature-related risk management strategies. According to the survey results, most major nature-related stakeholders attach great importance to Chunghwa Telecom’s response to 4 material nature-related risks, and believe that these risks are moderately to highly correlated with their rights and interests.

In terms of physical risks, influential advocacy organizations, local communities/indigenous peoples, investors/shareholders and non-profit organizations deem themselves moderately to highly connected to “occurrence of natural disasters”. They noted that natural disasters will severely undermine the operational stability of Chunghwa Telecom and its priority group subsidiaries, potentially leading to operational constraints or even disruptions. They stand ready to discuss and advance relevant risk prevention initiatives with Chunghwa Telecom as needed. Regarding “shortage in supply of natural resources”, influential advocacy organizations and non-profit organizations attach great importance to the impacts of this issue on Chunghwa Telecom, and expect the Company to deliver timely responses and implement adequate preventive measures when such risks arise.

With regard to transition risks, “customers’ preference shifting towards nature-friendly products or services” has emerged as a notable risk amid the shift in consumer mindsets and the transformation pressure from industry peers. Chunghwa Telecom also relies on collaboration with suppliers to drive the progress in sustainable development and nature-related risk management. Accordingly, major nature-related stakeholders including customers, influential advocacy organizations, group employees, non-profit organizations and suppliers attach moderate to high importance to “demand for high-efficiency, low-impact technological transformation (suppliers)”. The relevant survey results are as follows.

Types of risks	Occurrence of natural disasters	customers’ preference shifting towards nature-friendly products or services	Shortage in supply of natural resources	Demand for high-efficiency, low-impact technological transformation (suppliers)
Government agencies				
Customers				
Influential advocacy organizations				
Local communities/Indigenous people				
Investors/Shareholders				
Group employees				
Non-profit organizations				
Suppliers				

High-related Medium-related Low-related

Overall, the identification for material nature-related risks reveals a clear correlation between different types of major nature-related stakeholders and natural risk issues, further demonstrating the representativeness and comprehensiveness of Chunghwa Telecom’s nature-related risk identification. Specifically, stakeholders pay particularly close attention to “occurrence of natural disasters”, and the findings also echo the earlier results from the Locate and Evaluate phases. The risk of “occurrence of natural disasters” will disrupt the operation of the Company’s own sites and supplier-dependent items, resulting in operational and supply chain disruptions. This also highlights the critical and irreplaceable role of communication services amid extreme natural events. Having long recognized such expectations and the context of risk management, Chunghwa Telecom takes digital resilience as a key initiative to advance sustainable development and address nature-related risks. For relevant strategic plans and implementation outcomes, please refer to Chapter 5 Corporate Governance: Digital Resilience in [the Company’s 2025 Sustainability Report](#).

◆ Identification of Material Nature-Related Opportunities

As for the identification of the aforementioned material nature-related opportunities, the taskforce collected 19 issues related to business performance and sustainability performance. Then, it conducted analysis to produce the Nature-Related Opportunities Matrix (Figure 22), ultimately selecting 2 business performance issues and 2 sustainability performance issues with high occurrence frequency and high level of impact as material nature-related opportunities for prioritized management.

The business performance issues are “new business models that have a positive impact on nature/reduce negative impact on nature” and “entry into emerging markets”, while the sustainability performance issues include “direct restoration or protection of ecosystem services or habitats” and “collaborate with stakeholders to improve the ecological environment”. The relevant results are as follows.

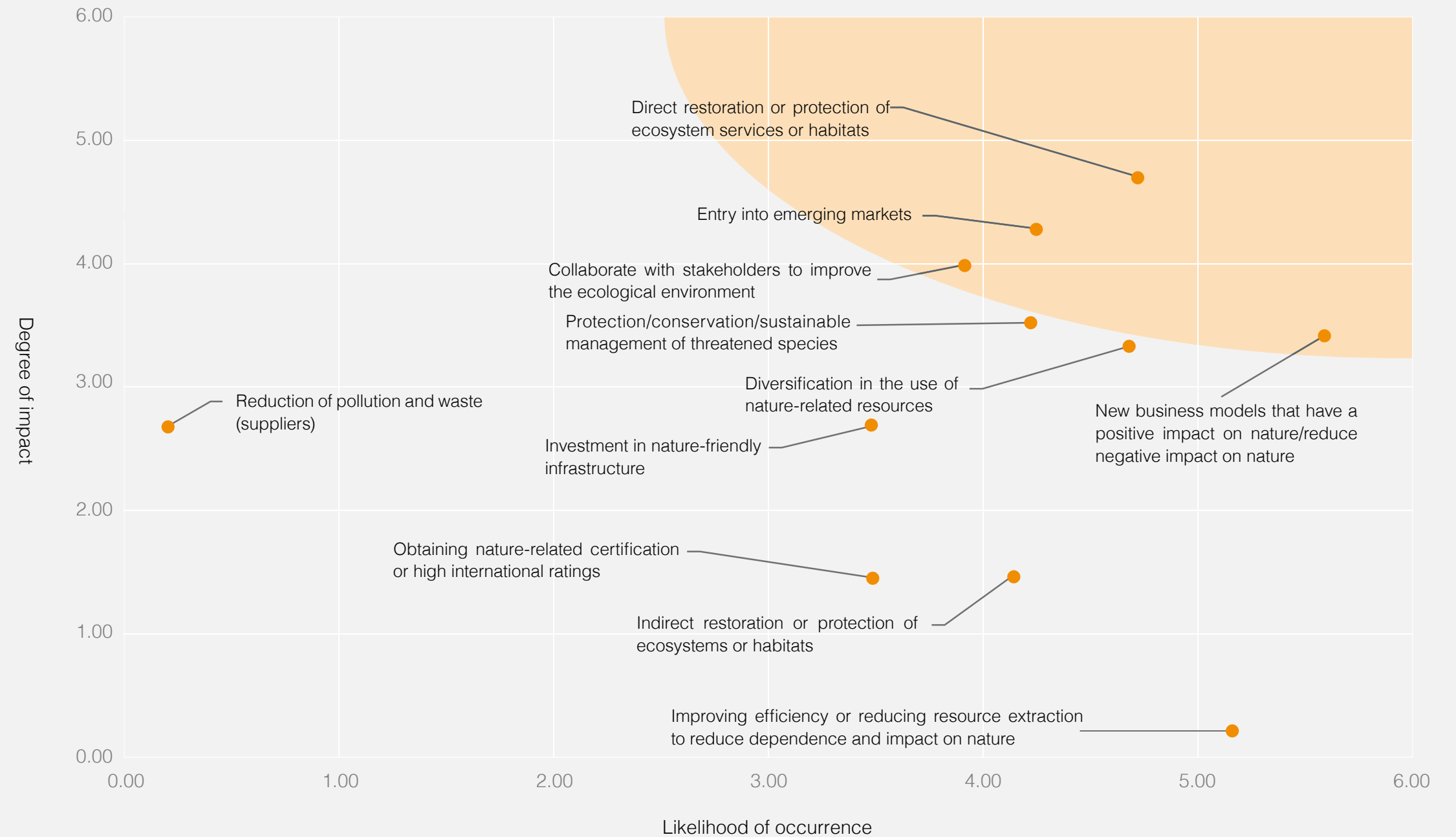
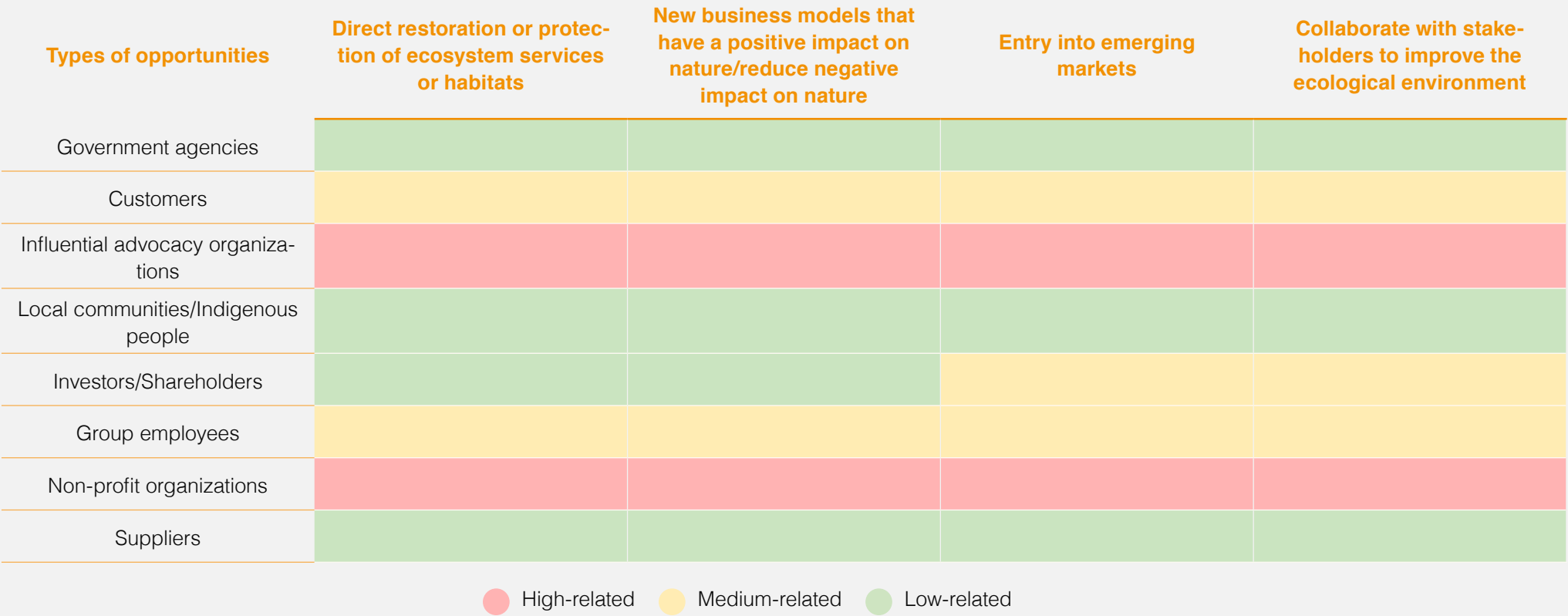


Figure 22. Chunghwa Telecom's Nature-Related Opportunities Matrix

After identifying 4 material nature-related opportunities, we also distributed on-line and physical questionnaires to 8 types of major nature-related stakeholders. According to the results of questionnaire, most stakeholders believe that material nature-related opportunities are moderately to highly correlated with their existing rights and interests. This demonstrates Chunghwa Telecom's full consideration of nature-related opportunities throughout the identification process, as well as the integration of stakeholders' needs and perspectives.

With regard to business performance, in response to the trend of nature conservation integrated with its core technologies, Chunghwa Telecom fully captured opportunities associated with “new business models that have a positive impact on nature/reduce negative impact on nature” and “entry into emerging markets”. Regarding sustainability performance, through Chunghwa Telecom's long-term rollout of nature-related initiatives such as the black-faced spoonbill conservation project and the hundred-species restoration project, “direct restoration or protection of ecosystem services or habitats” and “collaborate with stakeholders to improve the ecological environment” strengthened ties with all stakeholders and transformed ecological risks into nature-related opportunities. Among these issues, “entry into emerging markets” and “collaborate with stakeholders to improve the ecological environment” attracted moderate to high attention from a broad range of stakeholders including customers, influential advocacy organizations, investors/shareholders, group employees and non-profit organizations. This demonstrates that amid the rising focus on nature conservation, Chunghwa Telecom shall not only co-create sustainable value with stakeholders, but also pursue emerging market opportunities as an essential strategic priority.

The aforementioned issues receive high to extremely high attention particularly from influential advocacy organizations and non-profit organizations, which acknowledge Chunghwa Telecom's efforts and commitment to nature-related issues. They expect Chunghwa Telecom to continue leveraging its core technologies to advance nature management. The relevant survey results are as follows.



The results of this assessment reveal that all categories of major nature-related stakeholders hold high expectations for Chunghwa Telecom's active engagement in nature-related issues. Chunghwa Telecom also established a six-capital sustainable management framework²², within which “natural capital” serves as a core pillar driving the overall sustainable development. The Company continued to advance nature-based actions through biodiversity initiatives and value chain management. Supported by data collected from questionnaires, the future strategies for natural mitigation, adaptation, and protection formulated and promoted by Chunghwa Telecom will not only strengthen risk management, but also contribute to creating development opportunities ahead of industrial peers to deliver win-win outcomes jointly with stakeholders.

To actively manage the aforementioned four material nature-related risks and four material nature-related opportunities, the Company formulated response strategies and action plans, demonstrating Chunghwa Telecom's responsibility for natural and ecological protection. For details on relevant response strategies and implementation progress, please refer to “Chapter 3-2 Response Strategies for Nature-Related Risks and Opportunities” in this report.

22 The six-capital framework include financial capital, human capital, intellectual capital, manufactured capital, natural capital, and social capital.



2-5 Prepare: Proposing nature-related response strategies and targets

Based on the results of the Assess phase, to actively mitigate the impact of nature-related risks, seize nature-related opportunities and thus enhance competitive advantages, the taskforce, in collaboration with Chunghwa Telecom's various business units and priority group subsidiaries, evaluated the impacts of risks and opportunities arising from nature-related dependencies and influences on the Company's business model. Based on the four material nature-related risks identified, namely "occurrence of natural disasters", "customers' preference shifting towards nature-friendly products or services", "shortage in supply of natural resources" and "demand for high-efficiency, low-impact technological transformation (suppliers)", as well as the four material nature-related opportunities, namely "direct restoration or protection of ecosystem services or habitats", "new business models that have a positive impact on nature/reduce negative impact on nature", "entry into emerging markets" and "collaborate with stakeholders to improve the ecological environment", the taskforce proposed corresponding response strategies and conducted subsequent implementation and monitoring.

Chunghwa Telecom also charted long-term conservation pathways based on two core goals: "mitigating nature loss" and "promoting nature positivity". Moreover, the Company partnered with a wide range of stakeholders to roll out diverse nature-related projects, and integrated these initiatives with its core business operations, mitigating risks of biodiversity loss while unlocking potential commercial opportunities.

For detailed explanations of the response strategies for material nature-related risks/opportunities, please refer to "Ch3-2 Response Strategies for Nature-Related Risks and Opportunities" in this report.





3 Nature-Related Risk Management, Metrics and Targets, Metrics and Targets

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3-1 Building a Resilient Organization

In the face of the challenges posed by intensifying market competition, rapid technological advancement, tightening regulatory requirements, changes in natural environment and climate, among other external factors, Chunghwa Telecom continued to strengthen its risk management mechanism, to sustain steady business operations and long-term development. Therefore, the Company established a functional committee under the Board of Directors, the “Risk Management Committee”, as the highest supervisory and decision-making body for risk management. Additionally, an executive-level committee, the “Risk Management Promotion Committee”, has been set up to plan, coordinate and implement risk management activities across the Company. (Figure 23).

Upholding the sustainability vision of “living in harmony with nature”, Chunghwa Telecom is committed to balancing corporate growth with nature conservation and creating long-term value together with its stakeholders. Chunghwa Telecom adopts the LEAP methodology recommended by TNFD to assess the nature-related dependencies and impacts of operational sites, operational activities, as well as

upstream and downstream value chain. The LEAP enables the Company to systematically identify nature-related risks and opportunities associated with its business operations and strategic implementation. The Company integrates nature-related risk management into the Enterprise Risk Management (ERM) system to enhance risk response capabilities, reduce potential impacts, maintain operation resilience and stability and safeguard the interests of stakeholders.

In addition, to enhance the awareness and management of nature-related issues across the organization, Chunghwa Telecom continued to advance environmental education and corporate sustainability training, to help employees understand the interdependence between business operations and the natural environment, keep abreast of international sustainability trends and nature-related initiatives, and gradually improve their awareness of nature-related risks and sustainability management capabilities.

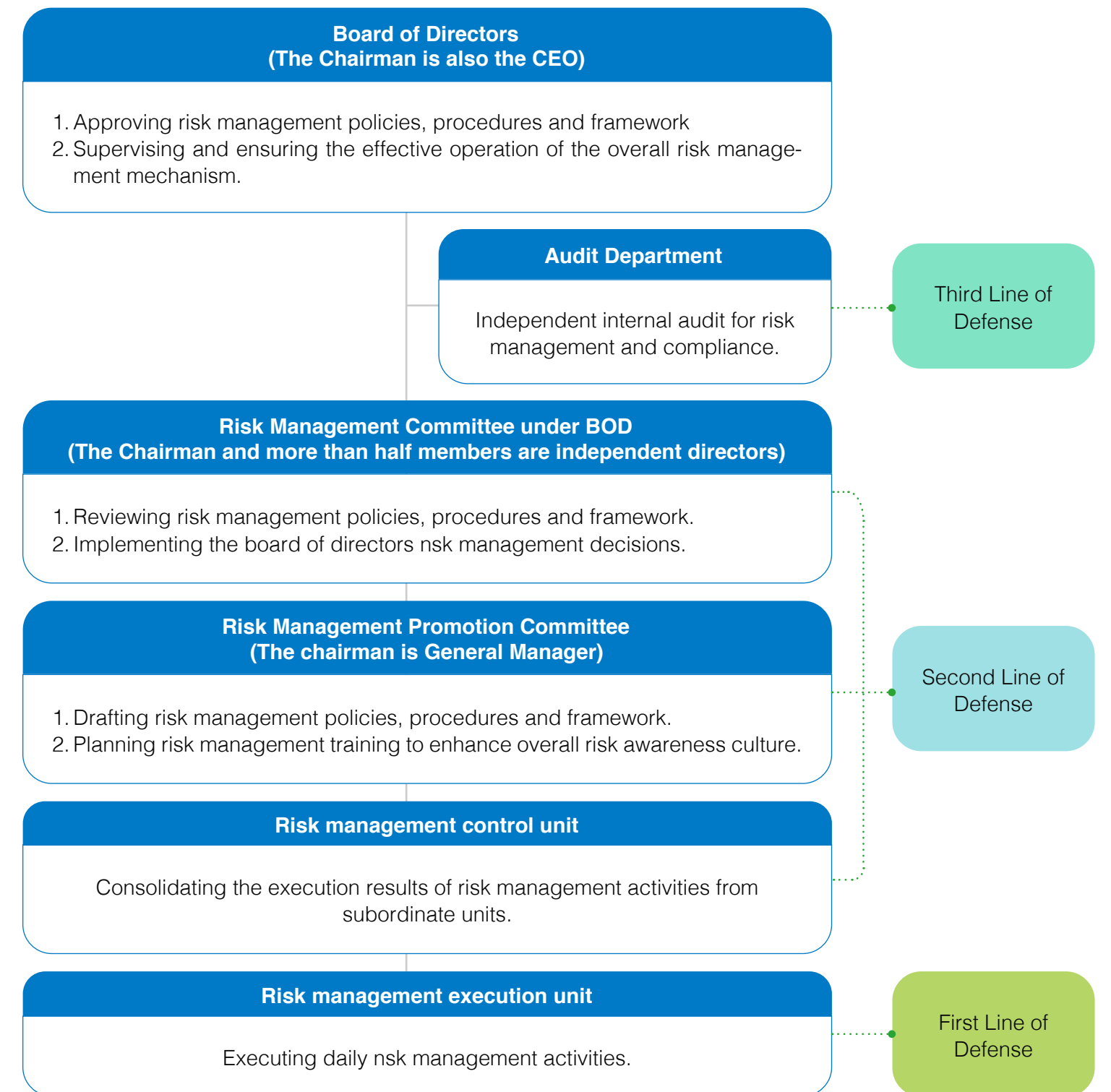


Figure 23. CHT Risk Management Organization Structure

3-2 Response Strategies to Nature-Related Risks and Opportunities

Based on the material nature-related risk factors identified, namely “occurrence of natural disasters”, “customers’ preference shifting towards nature-friendly products or services”, “shortage in supply of natural resources” and “demand for high-efficiency, low-impact technological transformation (suppliers)”, the Company has proposed corresponding response strategies and is carrying out subsequent implementation and monitoring ²⁴. The relevant details are as follows.

Risk 1: Occurrence of natural disasters

◆ Own Operations

Based on the results of the Evaluate analysis, natural disaster protection is identified as an important ecosystem service on which Chunghwa Telecom’s operations depend. Natural disasters such as typhoons and debris flows may disrupt telecommunications infrastructure in remote areas, resulting in higher operating and maintenance costs while adversely affecting brand reputation and customer loyalty. Such events may also pose risks to employee safety and physical and mental well-being, constituting key physical risks to the Company. If not effectively managed in a timely manner, these risks may lead to increased costs, reduced revenue, and customer attrition, while undermining corporate reputation and access to capital.

24 As described above, the Company assesses the relevance of the operations of its priority group subsidiaries to material nature-related risks and opportunities to determine whether further response strategies should be developed.

Risk Impacts	Response Strategy
Operational risks: ◆ Locating new telecom facilities in high-risk areas prone to flooding, seismic fault lines, or landslides may increase the likelihood of physical damage and service disruption, affecting operational stability and increasing operations and maintenance (O&M) and disaster prevention costs. ◆ Natural disasters may cause equipment malfunction or outages, resulting in call interruptions, network latency, and service disruptions. This may lead to customer complaints, erode customer trust, and increase operating costs. ◆ Damage to telecom facilities or service outages caused by natural disasters may be particularly challenging to restore in remote areas, affecting communications and external connectivity while reducing the effectiveness of emergency response and rescue operations. Risks to stakeholder rights and interests: ◆ Natural disasters may increase the costs associated with constructing and restoring telecom facilities, adversely affecting investment returns and operational performance while increasing financial burdens and long-term sustainability risks. ◆ Communication disruptions or a decline in service quality may affect both routine and emergency services. Instability in data transmission and private network services may disrupt business operations and public services, increase pressure for emergency repairs and contract performance risks, and ultimately undermine overall trust. ◆ Equipment damage or telecom facilities anomalies may result in service disruptions and reduced service quality, affecting customers’ communication needs, lowering customer satisfaction and trust, and potentially leading to customer churn and revenue loss.	◆ In high-risk areas, implement elevated platform construction, flood barriers, and seismic reinforcement designs. Install critical equipment on higher floors, with backup resources such as generators and energy storage systems deployed in parallel to enhance telecom facility disaster resilience and ensure operational continuity during disaster events. ◆ Strengthen structural reinforcements, upgrade equipment, and establish diversified redundancy mechanisms (including mobile base stations, satellite communications, and core network redundancy). Develop emergency response SOPs and priority dispatch mechanisms to ensure uninterrupted critical communication services. At the same time, enhance support for remote areas, strengthen occupational health and safety management, and safeguard public communication services, thereby improving overall operational resilience. ◆ Enhance telecom facility construction in remote areas and offshore islands, expand microwave transmission capacity, and deploy transmission redundancy equipment to accelerate post-disaster recovery. In parallel, implement routing and equipment decentralization planning to improve system availability and ensure stable operation of critical communications during disaster events.



Figure 24. CHT is making every effort to restore communications

◆ Priority group subsidiaries

With regard to priority group subsidiaries, Taiwan is frequently affected by natural disasters such as earthquakes and typhoons, which may cause damage to buildings and equipment, construction delays, and occupational health and safety risks, affecting production capacity, costs, and delivery performance. It is therefore necessary to enhance overall resilience and recovery capability through seismic-resistant design, strengthened drainage and electrical safety systems, monitoring systems, and operational contingency planning and drills.



Risk Impacts

Response Strategy

Product and service risks:

Chunghwa Precision

- ◆ Taiwan is located in a seismic zone. Although equipment protection and fixation measures are incorporated into routine operations, a major earthquake may still cause damage to buildings and equipment, leading to production line shutdowns, reduced capacity, and potential disruptions to overall operations.

Light Era

- ◆ Natural disasters such as typhoons may disrupt construction activities, resulting in work stoppages and project delays. In addition, groundwater or rainwater accumulation may increase construction difficulty and material waste. Inadequate protective measures may also give rise to occupational health and safety incidents.

Risks to stakeholder rights and interests:

Chunghwa Precision

- ◆ Earthquake events may cause structural damage to factory buildings, including cracks in structures, broken windows, and falling ceiling panels or wall tiles, creating hazardous working conditions for employees and necessitating emergency recovery measures.

Light Era

- ◆ Project delays and material waste may increase overall costs, thereby affecting investors' rights and interests. In addition, project delays may also lead to late product delivery, impacting customer rights and interests.

Chunghwa Precision

- ◆ Equipment and office fixtures are secured, and seismic-resistant design is integrated into factory construction activities. Earthquake detection and alert systems are installed, and business continuity plans and regular drills are implemented to enhance overall emergency response capability and operational resilience. In addition, new facilities incorporate earthquake protection designs to strengthen resistance against moderate-to-strong earthquakes.

Light Era

- ◆ Pre-disaster measures include strengthening structural stability, drainage, and electrical safety systems, as well as adjusting construction activities in response to weather conditions to reduce risks. Post-disaster actions include inspections of equipment and structures and site cleanup, along with personnel management and contractor safety plans. At the same time, strict quality control and schedule management are implemented to ensure construction safety and the timely resumption of work.

Risk 2: Customers' preference shifting towards nature-friendly products or services

As customers increasingly shift toward nature-friendly products and services, failure to strengthen the development and promotion of sustainable products and services in a timely manner may cause customers to switch to competitors or result in customer attrition, thereby reducing revenue, weakening brand reputation, and undermining long-term competitiveness.

Risk Impacts

Response Strategy

Product and service risks:

- ◆ As customers' preferences increasingly shift toward nature-friendly products and services, and competitors actively promote solutions that reduce environmental impacts, demand for Chunghwa Telecom's products and services may decline, potentially weakening its brand reputation and market competitiveness.
- ◆ Driven by requirements from international brands and decarbonization initiatives such as the Science Based Targets initiative (SBTi), large corporate customers are increasingly incorporating carbon inventories, emissions reduction targets, and third-party certifications into supplier evaluation criteria. If Chunghwa Telecom fails to implement relevant sustainability measures, it may be disadvantaged in supplier selection, potentially affecting business opportunities and future growth.

- ◆ Continue to promote the digitalization and paperless delivery of store services to reduce paper consumption and minimize environmental impacts. Shopping bags provided at stores are made primarily from recycled pulp and FSC-certified environmentally friendly materials, while annual targets are established to progressively reduce paper bag procurement.
- ◆ For products and services, four major service offerings—5G mobile internet, HiNet broadband (including FTTx circuits), domestic fixed voice service, and in-store counter service—as well as enterprise-specific products, including Domestic Data Circuits, HiLink VPN, and CDN, have obtained ISO 14067 carbon footprint certification and Carbon Footprint Label Certificates, demonstrating Chunghwa Telecom's commitment to ESG sustainability and low-carbon transition.
- ◆ Implement Scope 3 carbon management policies and requirements for customer premises equipment (such as HGW, Wi-Fi AP, and STB) and for resale and consignment products, including smartphones, accessories, and smart home appliances.



Risk 3: Shortage in supply of natural resources

◆ Own Operations

As the supply of natural resources becomes increasingly constrained and unstable, access to critical inputs and essential resources required for operations may be affected, potentially reducing service efficiency or causing service disruptions, while increasing operating and maintenance costs. In addition, limitations in resource availability or insufficient alternative solutions may impair Chunghwa Telecom’s ability to sustain long-term operations and fulfill its external commitments. This could weaken customer and market confidence in the Company’s operational stability and sustainability performance.

◆ Priority group subsidiaries

With regard to priority group subsidiaries, water shortage may affect telecom facilities cooling and construction progress, thereby reducing system stability and increasing the risk of service disruptions. It is therefore necessary to enhance water usage effectiveness and operational resilience through monitoring and maintenance practices, the use of alternative water sources, and construction scheduling.

Risk Impacts	Response Strategy
Product and service risks: ◆ Water shortage may affect the operation of cooling systems in data centers and telecom facilities, reducing heat dissipation efficiency and causing service disruptions. This may result in non-compliance with Service Level Agreements (SLAs) and increase O&M costs as well as reputational risk. In addition, insufficient green electricity supply may weaken the Company’s image as a green, low-carbon telecommunications provider and service credibility and may reduce the attractiveness of its services if corporate customers’ demand for green electricity wheeling cannot be met. Ecological and environmental risks: ◆ Water shortages may impair cooling efficiency in telecom facilities, leading to higher Power Usage Effectiveness (PUE), adversely affecting carbon reduction efforts and environmental sustainability performance. At the same time, an insufficient share of green electricity and continued reliance on conventional power sources may increase greenhouse gas emissions, affecting the achievement of overall carbon reduction and environmental protection objectives.	◆ Telecom facilities have been equipped with emergency water reserves and, in some cases, air-cooling systems to ensure continued cooling and service operation during water supply interruptions. Water storage capacity is incorporated into O&M indicators and is regularly inspected and adjusted according to water availability conditions. In addition, the Company continues to improve energy efficiency and carbon reduction performance through the procurement of high-efficiency equipment, energy-saving initiatives in telecom facilities, equipment replacement, and optimized energy management. ◆ Promote water-efficient telecom facilities design to optimize water usage effectiveness (WUE) and regularly review and improve performance. At the same time, continue to reduce energy consumption through energy efficiency projects, the implementation of energy management systems, and improvements in telecom facilities PUE. The Company also seeks to accelerate the execution of Corporate Power Purchase Agreements (CPPAs) for renewable energy to secure stable green electricity supply and increase green electricity wheeling ratios, supporting long-term carbon reduction and sustainability objectives.

Risk Impacts	Response Strategy
Product and service risks: Chunghwa System Integration ◆ Water shortage may affect air-conditioning O&M in telecom facilities (e.g., cleaning and humidity control), reducing cooling efficiency and increasing system instability risks. Maintaining operations may require load reductions or enhanced manual monitoring, thereby affecting service stability and increasing the risk of service disruptions. Light Era ◆ Construction activities are highly dependent on water resources, particularly during structural concrete pouring. In the event of water shortages, project delays may occur, potentially affecting construction quality and overall engineering stability.	Chunghwa System Integration ◆ Operational stability of telecom facilities and operational sites is maintained through existing O&M management and monitoring mechanisms. At present, no water recycling or alternative water sources have been implemented; however, water usage conditions are continuously monitored and risk assessments are conducted, with further response measures to be evaluated as necessary. Light Era ◆ Alternative water sources (such as groundwater, rainwater, and reclaimed water) are utilized, and innovative concrete curing technologies are introduced to reduce water consumption. In addition, flexible construction water scheduling is implemented to improve water usage effectiveness and resource utilization.



Risk 4: Demand for high-efficiency, low-impact technological transformation (suppliers)

◆ Own operations

As market demand for high-performance technologies and environmentally friendly solutions continues to grow, Chunghwa Telecom must work closely with supply chain partners to drive product and service innovation in response to industry transformation trends. Failure to adopt new technologies in a timely manner or align with low-environmental-impact development trends may not only increase operating costs and create supply chain management challenges, but also reduce customer acceptance of the Company's products and services. This could adversely affect its market share and brand value and, over the long term, weaken its overall competitiveness and ability to access capital.

Risk Impacts	Response Strategy
Product and service risks: ◆ Suppliers' sustainability strategies may lead to higher collaboration costs, including increased expenditures on product procurement and green supply chain management. In addition, efforts to advance environmental sustainability objectives may require the continued procurement of low-power equipment and the adoption of smart energy-saving features, resulting in higher purchasing costs. ◆ Failure to meet customer requirements for green electricity or a low-carbon supply chain may adversely affect business relationships. It may also limit supply chain carbon reduction progress and reduce the overall sustainability performance of the value chain.	◆ The Company continues to advance the deployment of the C-RAN architecture, centralizing equipment management within telecom facilities to effectively reduce air-conditioning energy consumption and lower equipment failure rates. ◆ Chunghwa Telecom is accelerating the execution of Corporate Power Purchase Agreements (CPPAs) to secure a stable supply of green electricity through wheeling arrangements. In addition, it procures high-efficiency products and implements optimization initiatives, such as energy-saving measures in telecom facilities and equipment replacement programs, together with enhanced energy management practices, to mitigate short-term green electricity supply shortages. Equipment replacement progress and energy-saving performance are reviewed annually on a rolling basis.

◆ Priority group subsidiaries

With regard to priority group subsidiaries, increasingly stringent environmental requirements may drive up the costs of raw materials such as steel and cement, increasing operational cost pressures. To address these impacts, Chunghwa Precision Test and Light Era conduct regular supplier evaluations and monitor price fluctuations, while adopting conservative cost estimation approaches and preferred supplier selection strategies for construction projects.

Risk Impacts	Response Strategy
Product and service risks: Chunghwa Precision, Light Era ◆ Increasing environmental requirements imposed on raw material suppliers may result in higher material costs. For example, if environmental compliance requirements for key raw materials such as steel and cement become more stringent, the resulting cost increases may raise overall product costs and operating expenses.	Chunghwa Precision ◆ Suppliers are evaluated on a quarterly basis, including assessments of fluctuations in material prices. Scores are adjusted based on the magnitude of increases or decreases in the prices of materials supplied. Light Era ◆ During project evaluation, raw material costs are estimated conservatively to support reasonable contract pricing. In addition, contractors with sufficient scale and established reputations are selected.



Based on the material nature-related opportunities identified above, namely “direct restoration or protection of ecosystem services or habitats”, “new business models that have a positive impact on nature/reduce negative impact on nature”, “entry into emerging markets” and “collaborate with stakeholders to improve the ecological environment”, the Company has proposed corresponding response strategies to conduct subsequent promotion and tracking. The relevant content is as follows.

Opportunity 1: Direct restoration or protection of ecosystem services or habitats

Chunghwa Telecom is committed to the conservation, management, and restoration of natural resources and actively promotes cross-industry collaboration to capture opportunities in emerging markets. Through the Black-faced Spoonbill Conservation Project 2.0 and the Hundred-Species Restoration Project, the Company integrates biodiversity conservation with AI-enabled monitoring technologies and collaborates with research institutions and conservation organizations to advance habitat restoration and species protection. These initiatives not only leverage Chunghwa Telecom’s core technological capabilities but also enhance its brand reputation and public trust. Continued expansion and deepening of these efforts can generate broad positive impacts while strengthening long-term business value and competitive advantage.

Opportunity Impacts	Response Strategy
Product and service benefits: Through the Black-faced Spoonbill Conservation Project, Chunghwa Telecom integrates AI image recognition, bird call identification, and AIoT-based water level and water quality monitoring to establish a smart habitat monitoring service capable of long-term operation. Its modular architecture enables rapid replication across additional sites, enhancing the Company’s visibility in ESG digital governance and nature-based solutions while creating opportunities for external partnerships.	Through the Black-faced Spoonbill Conservation Project and the Hundred-Species Restoration Project, Chunghwa Telecom has established an AIoT-enabled model for biodiversity initiatives and utilizes 5G AIoT technologies for real-time environmental monitoring and ecological performance assessment, providing a foundation for external ecological monitoring solutions.
Ecological and environmental benefits: - The Black-faced Spoonbill Conservation Project utilizes AI-powered electronic fencing to provide real-time alerts of human and stray dog intrusions and combines AIoT-based water level and water quality monitoring to support sluice gate operations and environmental early warnings. These measures help maintain suitable wetland ecological conditions and reduce environmental risks. Continuous monitoring and management also enhance habitat resilience and support the stable wintering of migratory birds. - The Hundred-Species Restoration Project uses operational sites as restoration bases and prioritizes the conservation of threatened plant species and native Taiwanese plant species located outside legally protected areas. Restoration species are selected based on site-specific environmental assessments to ensure suitability.	- Using the Qigu Salt Field as a demonstration site, the Black-faced Spoonbill Conservation Project integrates image, acoustic, and hydrological data and has established an alert dashboard. Equipment deployment standards, data formats, and O&M notification SOPs have been modularized to support future habitat restoration and replication efforts. The Company also works with the Taiwan Black-Faced Spoonbill Conservation Association and research institutions to identify habitat pressure sources and develop an integrated management strategy covering disturbance, hydrological and water quality conditions, and population monitoring. - The Hundred-Species Restoration Project was launched at the Kaohsiung Wuchang Building in 2025 and will continue to expand to additional implementation sites.
Benefits to stakeholder rights and interests: - Through the Black-faced Spoonbill Conservation Project, real-time alerts and monitoring data support the Taiwan Black-Faced Spoonbill Conservation Association and government authorities in improving patrol efficiency, habitat management decision-making, and long-term ecological research. Reduced external disturbances also contribute to local environmental safety and quality of life. In addition, environmental education programs and guided tours help promote conservation outcomes, increase public participation, and support ecotourism development, thereby amplifying positive social impacts. - Through the Hundred-Species Restoration Project, Chunghwa Telecom collaborates with government agencies and local communities to organize conservation activities and guided tours, while also participating in public exhibitions and climate expos to strengthen external communication of its biodiversity achievements and enhance corporate image alignment.	



Opportunity 2: New business models that have a positive impact on nature/reduce negative impact on nature

◆ Own operations

Chunghwa Telecom places biodiversity conservation and the restoration of threatened species at the core of its strategy, aligns with the international targets of “halting and reversing biodiversity loss” by 2030 and “living in harmony with nature” by 2050, and integrates related actions into the development of new business models. By combining AIoT-based monitoring, information and communication technology, and ecological restoration projects, Chunghwa Telecom develops nature data and sustainability solution services that can be offered externally, transforming conservation outcomes into products and services with market value. While strengthening its corporate sustainability image, the Company also enhances trust among customers and investors, further improving competitiveness and creating new opportunities for revenue growth.

Opportunity Impacts	Response Strategy
Product and service benefits: ◆ The “Qigu Model” is modularized into a replicable smart habitat monitoring system. It can respond to increasingly stringent environmental regulations, enhance adoption willingness among government agencies and developers, expand opportunities in nature-conscious governance, and strengthen corporate sustainability resilience. Ecological and environmental benefits: ◆ The new business model enhances long-term monitoring of bird and plant species, strengthens habitat protection, and improves species restoration outcomes. Benefits to stakeholder rights and interests: ◆ This model strengthens Chunghwa Telecom’s sustainability image and responds to the concerns of investors and rating agencies. It provides quantifiable monitoring data for regulators and conservation organizations to improve governance decision-making; promotes environmental education and citizen participation among communities and NGOs; enhances employee engagement; reduces operational risks; and strengthens societal trust.	◆ The “Qigu Model” is modularized into a replicable smart habitat monitoring system that integrates 5G, AI, and AIoT technologies and consolidates image, acoustic, hydrological, and alert data into a centralized web-based dashboard. The system enables real-time monitoring, alerting, and historical data queries. With high resilience and low-impact design, it supports a shift from passive habitat management to proactive early warning, and increases the willingness and value of adoption by government and site operators for nature-conscious governance. ◆ Centered on the Qigu site, Chunghwa Telecom has established systematic monitoring and event recording mechanisms, providing quantifiable and traceable governance data for the Taiwan Black-Faced Spoonbill Conservation Association, research institutions, and regulatory authorities. In addition, an AI-powered Ecological Restoration Education Center has been established to deliver exhibitions and environmental education programs, promoting participation from communities, schools, and NGOs in citizen science. A project collaboration mechanism further strengthens employee engagement and supports the development of a corporate sustainability culture.

◆ Priority group subsidiaries

For priority group subsidiaries, the introduction of low-carbon building materials and green building design, combined with systematic construction methods, can support the development of sustainable building models, enhancing product competitiveness and investment value while improving environmental quality. The Company strengthens carbon reduction and resource efficiency through the application of green materials, formwork construction methods, and supplier evaluation mechanisms.

Opportunity Impacts	Response Strategy
Product and service benefits: Light Era ◆ In terms of new business models, future products will incorporate low-carbon and green building materials and systematic construction methods, combined with green building design (such as ecological landscaping, soil and water conservation, and energy saving and carbon reduction), to develop sustainable building solutions with environmental benefits. This model not only enhances product differentiation and market competitiveness, strengthening sales and investment value, but also improves urban environmental quality, creating shared sustainability value among the enterprise, investors, and society.	Light Era ◆ It promotes the use of low-carbon and green building materials and reusable systematic formwork construction methods to reduce resource waste and mitigate the impact of material price volatility on cost and project timelines, while continuously advancing green building development. This approach helps enhance product sales and investment returns, improve urban environmental quality and soil and water conservation, and strengthen the competitiveness of low-environmental-impact suppliers by increasing environmental and carbon-reduction criteria in supplier evaluation mechanisms.



Opportunity 3: Entry into emerging markets

In response to the ESG trend, market demand for sustainable development and smart solutions continues to grow. Chunghwa Telecom leverages its information and communication technology to develop carbon-neutral solutions and provide communication services required by smart agriculture solution providers, transforming its sustainability capabilities into scalable products and services. Through new business models, the Company enhances revenue and brand reputation, strengthens competitive advantages, and creates emerging market opportunities, delivering multiple benefits to nature-related stakeholders.

Opportunity Impacts	Response Strategy
Product and service benefits: ◆ Through the deployment of smart agriculture solutions integrating IoT sensors, mobile communications, and AI analytics, agricultural producers are enabled to monitor crop and environmental conditions in real time. This facilitates the transformation of traditional agriculture into precision agriculture, enhancing data-driven decision-making capabilities and operational resilience. ◆ Chunghwa Telecom integrates its technology groups, subsidiaries, and ecosystem partners to deliver carbon-neutral solutions covering carbon inventory, emissions reduction, and energy transition. Leveraging its information and communication technology, the Company supports government agencies and enterprises in advancing net-zero transformation. Ecological and environmental benefits: ◆ Smart agriculture solutions can serve as a reference for natural resource management and ecological conservation, enhancing ecosystem stability and nature-related risk management capabilities. ◆ Carbon-neutral solutions help reduce carbon emissions and environmental impacts, promoting positive development of natural ecosystems. Benefits to stakeholder rights and interests: ◆ Smart agriculture systems provide timely and stable information to support farmers in production and risk management. Consumers benefit from improved food safety through environmental traceability. Government agencies and research institutions can utilize the data for policy development and resource allocation, while financial institutions and investors can translate it into data-driven nature credit to support sustainable finance applications. ◆ Carbon-neutral solutions enable customers to identify emissions hotspots, develop carbon reduction pathways, and comply with regulatory requirements. Leveraging information and communication technology, these solutions also support energy management and analytics, combined with green electricity and energy storage systems, thereby enhancing energy resilience.	◆ In collaboration with the Ministry of Agriculture, Chunghwa Telecom has established a standardized agricultural IoT data platform that integrates multi-source sensor data into a unified database to support smart agriculture applications such as meteorological analysis, irrigation management, and pest and disease early warning. Farm operators can leverage the integrated smart agriculture platform to achieve precision irrigation and reduce agricultural water use, while AI systems enable precise control of fertilizer and pesticide application. In the future, AI models will further enhance decision-making capabilities, enabling the Company to evolve from a communication service provider into an enabler of nature data and a provider of sustainable infrastructure. ◆ Chunghwa Telecom integrates its technology groups, subsidiaries, and ecosystem partners to comprehensively address customers' carbon management and emissions reduction needs. In the short term, it supports customers in identifying emissions hotspots through carbon inventory data collection systems. In the medium term, through energy-saving platforms, solar PV, and energy storage systems, it enables emissions reduction and energy transition. Ultimately, it supports customers in achieving carbon neutrality through an end-to-end service offering.

Opportunity 4: Collaborate with stakeholders to improve the ecological environment

Through cross-sector collaboration with diverse stakeholders, including government agencies, industry partners, and academic and research institutions, Chunghwa Telecom jointly advances initiatives aimed at improving the ecological environment and conserving biodiversity. Such collaboration facilitates the integration of resources and expertise, enhances conservation outcomes and implementation effectiveness, and strengthens the Company’s substantive contribution to sustainability issues.

Opportunity Impacts

Benefits to stakeholder rights and interests:

- ◆ Through sustainability bond issuance, allocating proceeds to biodiversity-related projects can encourage Chunghwa Telecom to increase investment in ecological conservation and environmental restoration, generating tangible environmental benefits.
- ◆ Through the Black-faced Spoonbill Conservation Project and the Hundred-Species Restoration Project, Chunghwa Telecom collaborates with stakeholders including government agencies, non-profit organizations, local communities, and employees to enhance habitat security and ecological resilience for species.
- ◆ Through the Citizen Scientists for Tree Carbon Project, Chunghwa Telecom not only collaborates with government agencies and non-profit organizations, but also enables employees and students to participate directly in carbon sequestration initiatives, embedding sustainability through education.
- ◆ Through participation in OECM certification and afforestation programs, the Company supports government-led conservation initiatives and promotes the planting of native tree species across Taiwan to help maintain biodiversity.

Response Strategy

- ◆ Under the Black-faced Spoonbill Conservation Project, Chunghwa Telecom collaborates with the Taiwan Black-faced Spoonbill Conservation Association and the Taiwan Biodiversity Research Institute, using monitoring data to support habitat management and decision-making. Under the Hundred-Species Restoration Project, the Company works with the International Climate Development Institute to provide support for species selection, site planning, conservation process design, and effectiveness evaluation, strengthening professional expertise and scalability.
- ◆ In 2026, Chunghwa Telecom partnered with the Ministry of Education and the National Park Service of the Ministry of the Interior of Taiwan to promote tree measurement activities in elementary and junior high schools. The initiative actively integrates tree carbon sequestration education into park and school curricula, enabling students to develop sustainability literacy and civic responsibility through hands-on learning experiences.
- ◆ In response to the Forestry and Nature Conservation Agency’s Terrestrial OECMs Certification Program, the Company selected its Sanyi Jiweigu Telecommunications Base as a demonstration site and became one of the first recipients of the certification. In addition, Chunghwa Telecom participated in the Forestry and Nature Conservation Agency’s 10-year Bamboo Forest Management Project, promoting the thinning and management of Makino bamboo forests to enhance bamboo forest health and productivity.

In response to the material nature-related risks and opportunities identified, Chunghwa Telecom has completed the assessment process, developed corresponding response strategies, and conducted financial impact and benefit evaluations through quantitative analysis. For further details, please refer to “Ch3-3 Financial Impact Assessment of Nature-related Risks and Opportunities”.

Overall, the Company places a high priority on nature-related issues in its operations and actively responds to stakeholders’ expectations regarding sustainable development. Feedback collected through stakeholder surveys is incorporated into management decision-making. In addition, Chunghwa Telecom continuously refines its practices with reference to international trends and integrates them into day-to-day operations, promoting biodiversity conservation and supporting long-term sustainable development.

Chapter 4 further presents the Company’s key conservation initiatives and achievements in 2025, providing a reference model for corporate biodiversity practices.



Figure 25. CHT’s Citizen Scientists for Tree Carbon Engaged Stakeholders in School-based Outreach Activities



3-3 Financial Impact Assessment of Nature-related Risks and Opportunities

Based on the four material nature-related risks and four material nature-related opportunities identified through the materiality assessment of nature-related risks and opportunities, and taking into account the operations of Chunghwa Telecom and its priority group subsidiaries, the Company assessed the actual impacts and corresponding response strategies associated with each material nature-related risk and opportunity. Based on this assessment, it evaluated and consolidated the financial impacts generated by these issues in 2025, providing a basis for the ongoing management of nature-related risks and opportunities and the development of related strategies.

Explanation of Nature-related Financial Impacts

The results of this financial impact assessment primarily reflect the operations of Chunghwa Telecom. Going forward, priority group subsidiaries will progressively evaluate the availability of quantitative financial data and conduct internal assessments and discussions before making relevant disclosures.

Nature-related risk/opportunity	Material nature-related risk/opportunity	Financial impact in 2025
Risk	Occurrence of natural disasters	◆ Frequent natural disasters (e.g., Typhoon Danas and Typhoon Krathon) disrupted communication services, resulting in approximately NT\$100 million in additional maintenance costs.
Risk	Requirement for high-efficiency, low-damage technological transition (Suppliers)	◆ To advance the high-efficiency, low-damage technological transition, the Company incurred approximately NT\$200 million in additional costs for replacing outdated, energy-intensive equipment.
Opportunity	New business models having positive impacts/reducing negative impacts on nature	◆ The development of biodiversity AIoT platform solutions resulted in approximately NT\$5 million in capital expenditures and R&D expenses.
Opportunity	Entry into emerging markets	◆ Smart agriculture and carbon-neutral solutions (including carbon inventory, emissions reduction, and energy transition) generated more than NT\$1 billion in operating revenue. ◆ Chunghwa Telecom secured nearly NT\$60 million in green financing, with the proceeds designated for nature-related projects before the bonds mature.
Opportunity	Collaboration with stakeholders to improve the ecosystem	◆ The Company invested more than NT\$30 million in costs associated with collaborating with government agencies on nature-related projects, strengthening stakeholder engagement, advancing community-based nature-related initiatives (such as the Citizen Scientists for Tree Carbon and the Hundred-Species Restoration Project), and cultivating volunteers with nature-related expertise.



3-4 Nature-related metrics and targets

To systematically advance nature-related governance and performance management, Chunghwa Telecom has established nature-related metrics and targets with reference to the TNFD framework, taking into account its operational characteristics and the materiality of nature-related issues. These metrics and targets serve as an important basis for tracking the effectiveness of nature-related actions and monitoring progress toward established targets. The metrics cover spatial footprint, changes in land use, waste management, nature-related opportunities, water usage effectiveness, and biodiversity conservation outcomes.

In designing these metrics, Chunghwa Telecom actively responds to the TNFD-recommended disclosures. For example, sustainability bond issuance has been incorporated into the design of nature-related opportunity metrics, demonstrating the Company's use of financial instruments to support a nature-positive transition. The Company has also developed representative company-specific metrics that reflect the characteristics and strategic priorities of the telecommunications industry, such as water usage effectiveness and volume of water recycled to measure resource use efficiency. All metrics are monitored through an annual review mechanism to track performance and ensure the effective implementation of nature-related initiatives. The metrics and targets presented in this chapter primarily focus on the TNFD-recommended disclosures and nature-related indicators. For other broader sustainability- or climate-related metrics and targets, please refer to “Ch6 Metrics and Targets for Climate Strategy” in the Company's 2025 TCFD Report.

Going forward, Chunghwa Telecom will continue to review the appropriateness of its metrics and the ambition of its targets in line with the maturity of its nature-related issue management practices and evolving disclosure trends. The Company will progressively enhance its nature-related performance measurement framework and strengthen alignment with long-term conservation pathways, TNFD disclosures, and nature-positive commitments, demonstrating through concrete actions its management achievements in promoting biodiversity conservation and nature sustainability.

◆ Nature-related Metrics and Performance Measurement

TNFD Code	Metric	Description	2025 Results
C1.1	Extent of land/freshwater/ocean-use change	Area covered by the Hundred-Species Restoration Project Number of species restored under the Hundred-Species Restoration Project	Taipei Jinshan Building: 252 m ² (13 native species, including 5 threatened plant species); Kaohsiung Wuchang Building: 237 m ² (8 native species, including 4 threatened plant species)
C2.2	Waste generation and disposal	Waste recycled/reused; total waste treated; waste incinerated; total waste generated	Waste recycled/reused: 4,919 metric tons Total waste treated: 1,519 metric tons Waste incinerated (including energy recovery): 1,519 metric tons Total waste generated: 6,439 metric tons
C7.3	Nature-related opportunity (financial)	Sustainability bond issuance	NT\$1.5 million
Custom Metric 1	Water usage effectiveness	Water Usage Effectiveness, WUE	2.75 L/kwh
Custom Metric 2	Water recycling and reuse	Volume of water recycled	2,287,710 liters
Custom Metric 3	Suppliers	Percentage of significant Tier-1 suppliers participating in nature- and environment-related engagement initiatives	79%



4 Highlights of Nature Conservation Initiatives

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4-1 Black-faced Spoonbill Conservation Project 2.0

Recognizing the importance of biodiversity, Chunghwa Telecom has adopted the LEAP methodology recommended by the TNFD to manage nature-related risks. Through this structured method, the Company assesses the dependencies and impacts of its operational sites on nature and further identifies potential nature-related risks and opportunities across its business operations and value chain.

As outlined in Chapter 2-4 Assess: Nature-related risks and opportunities assessment, Chunghwa Telecom identifies material nature-related risks and opportunities by calculating the “likelihood of occurrence” and “degree of impact” of nature-related risks and opportunities following relevant LEAP steps. For material nature-related opportunity factors such as “direct restoration or protection of ecosystem services or habitats” and “collaborate with stakeholders to improve the ecological environment”, Chunghwa Telecom not only integrates biodiversity considerations into its own operations but also engages its value chain and partners to jointly preserve and promote biodiversity. These efforts align with the Kunming-Montreal Global Biodiversity Framework and contribute to the 2030 milestone of halting and reversing biodiversity loss.

In 2024, Chunghwa Telecom launched the first AI-powered habitat conservation project in Taiwan’s telecommunications industry. Focusing on the nationally important Qigu Salt Field, the Company developed Taiwan’s first “AI-enabled Black-faced Spoonbill habitat ecosystem monitoring system,” empowering the ecological conservation of Black-faced spoonbill through intelligent technologies.

The Black-faced Spoonbill is an important winter migratory bird in Taiwan. Each year, about two-thirds of the global population choose Taiwan as their wintering habitat. However, the Black-faced Spoonbill is designated as a globally conserved species and is classified as Nationally Vulnerable in the Red List of the Birds of Taiwan 2024 published by the Taiwan Biodiversity Research Institute of the Ministry of Agriculture. Given this, long-term monitoring and conservation of the Black-faced Spoonbill are especially crucial. Chunghwa Telecom developed AI technology and collaborated with the Taiwan Black-faced Spoonbill Conservation Association, the Southwest Coast National Scenic Area Headquarters, and Taiwan Cooperative Bank, among other institutions, to promote its application. Together, these efforts aim to advance ecological conservation and make Qigu a permanent home for the Black-faced Spoonbill (Figure 26).

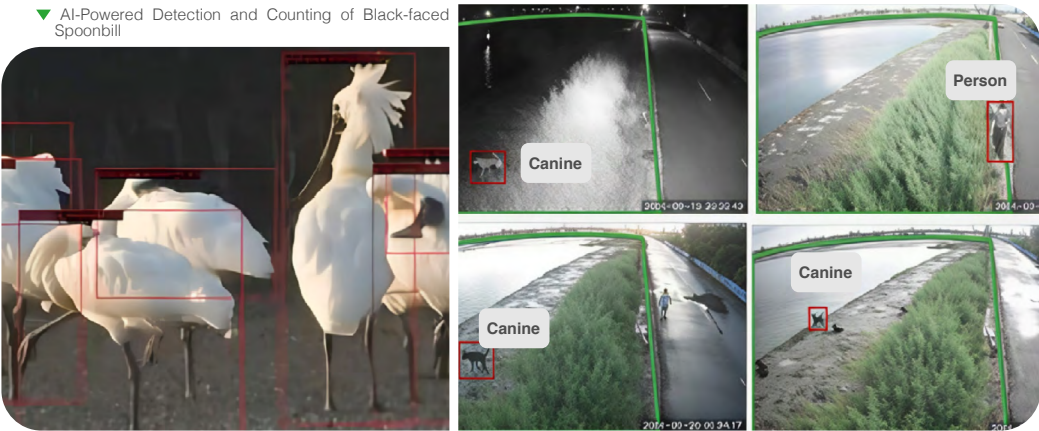
In 2025, Chunghwa Telecom expanded both the scope and depth of the initiative and upgraded it to the Black-faced Spoonbill Conservation Project 2.0. Key enhancements include a comprehensive upgrade of the AI-based migratory bird identification system, the introduction of the SILIC system for non-visual monitoring, the addition of water quality monitoring capabilities to provide real-time insights into wetland water conditions, the tracking of black-faced spoonbill migration routes and the establishment of a dedicated database, as well as the launch of the AI-powered Ecological Restoration Education Center as a demonstration site for the project. In addition to on-site conservation efforts for black-faced spoonbills, the project communicates conservation outcomes to the public through citizen science initiatives, thereby encouraging active participation by students and local residents, promoting wetland conservation, and fostering a stronger sense of local identity.



Figure 26. Project scope covers the Qigu Salt Field, a nationally important wetland

Chunghwa Telecom made use of AI technology to power the AI-enabled Black-faced Spoonbill monitoring system, which achieves over 90% accuracy in image processing. This system reduces the need for around 200 surveyors annually and enables real-time monitoring of the population and behavioral patterns of the Black-faced Spoonbill. In addition, an AI-powered electronic fencing system accurately identifies intrusions (such as humans or animals) and provides real-time alerts of potential threats (Figure 27). Besides, a smart hydrological monitoring system was developed through the Company’s AIoT platform, enabling more efficient water level monitoring and regulation in wetland environments. The Black-faced Spoonbill Conservation Project 2.0 introduced water quality monitoring capabilities, enabling real-time insights into wetland water conditions, including dissolved oxygen, pH, and salinity levels. These enhancements help maintain habitat quality and ensure environmental conditions capable of supporting the complete food chain on which black-faced spoonbills depend.

Figure 27. AI-powered system for automatic birds' identification and electronic



fencing AI-based technologies

The Black-faced Spoonbill Conservation Project 2.0 includes a comprehensive upgrade of the AI models. Originally designed to identify only black-faced spoonbills, the enhanced system can now recognize 11 common wetland bird species, including winter migratory species such as the Black-winged Stilt and summer migratory species such as the Little Tern. This expanded capability supports broader ecological monitoring and behavioral research. The upgraded system also integrates multi-year monitoring data. AI identification results are automatically transmitted to the cloud, where the system compiles statistics on migratory bird species and counts over time, forming a long-term monitoring database that supports scientific research and conservation efforts (Figure 28).

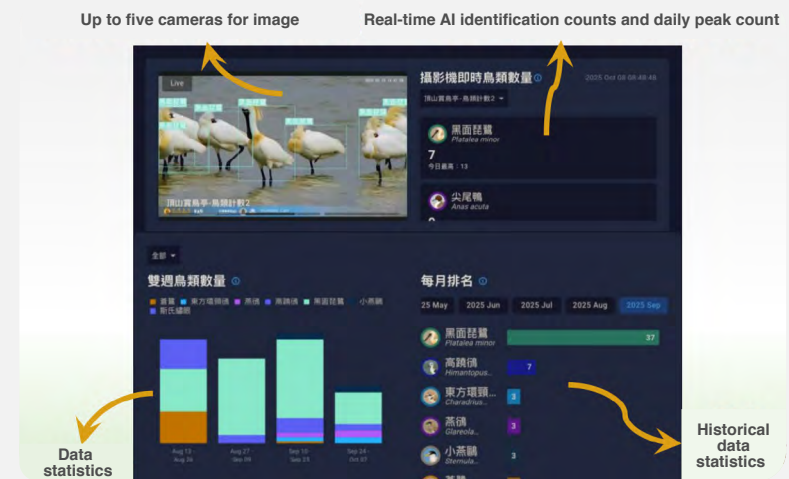


Figure 28. AI Image Recognition Enables Precise Monitoring of Migratory Bird Dynamics and Supports the Development of a Long-Term Database

In addition, Version 2.0 introduces the SILIC system, which can identify the vocalizations of up to 33 bird species. As a non-visual monitoring approach, the system complements image-based identification methods by addressing their

limitations. It also features “sound trajectory” and “spectrogram” display modes, combining interactivity, visual appeal, and educational value (Figure 29).

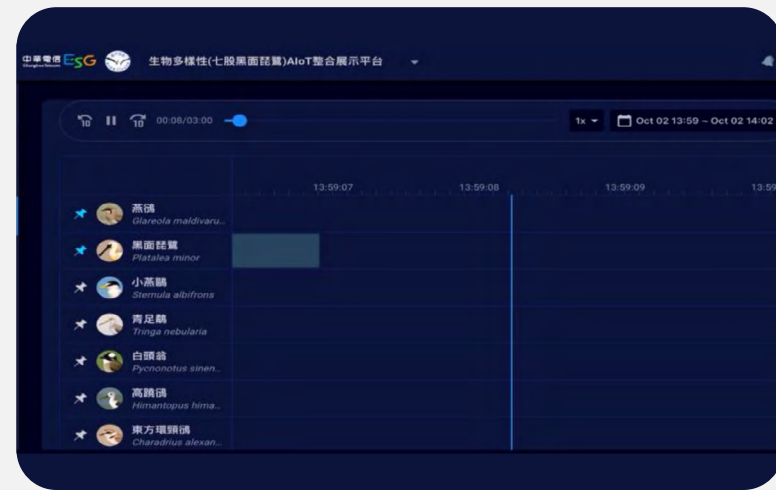


Figure 29. Listening to Nature through Sound Trajectories and Spectrograms: A New Frontier in Non-Visual Ecological Monitoring

For rehabilitated black-faced spoonbills that have been released back into the wild, experts install GPS tracking devices to capture their flight trajectories, temperature, atmospheric pressure, and altitude data, enabling comprehensive documentation of migratory movements. Through an AloT cloud platform, cross-border migration data are integrated and analyzed to reveal international migration routes and potential risks, such as wind farm facilities and avian influenza hotspots. The resulting information provides a scientific basis for international conservation cooperation and supports the development of a transnational migratory bird protection network (Figure 30).

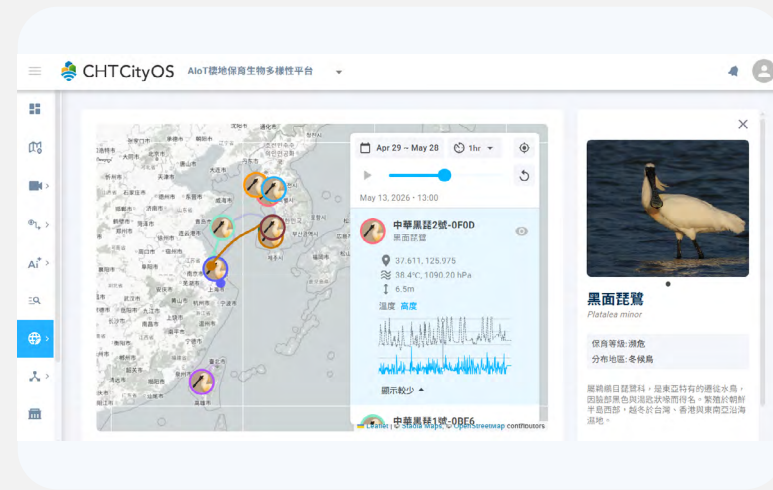


Figure 30. Analysis of Stopover Hotspots and Seasonal Patterns through Black-faced Spoonbill Migration Tracking Data

Beyond advancing AI technologies, Chunghwa Telecom established the AI-powered Ecological Restoration Education Center at Dingshan Elementary School. By integrating AloT applications, image recognition technologies, and environmental monitoring results, the Center serves as a demonstration site showcasing how technology can support ecological education. It enables visitors to “see nature through data” and experience the integration of technology and ecology firsthand. The Center also incorporates educational programs and corporate volunteer-guided tours to encourage active participation by students and local residents. Through community engagement, local revitalization, and citizen science initiatives, it helps deepen public awareness of biodiversity conservation (Figure 31).



Figure 31. Opening of the AI-powered Ecological Restoration Education Center as a Citizen Science Education Base

To integrate habitat livestreams, hydrological monitoring, electronic fence surveillance, and migratory bird census data into a unified ecological observation system, Chunghwa Telecom developed a visualized monitoring dashboard that overcomes traditional technical limitations in consolidating habitat-related environmental information.

By actively deploying advanced information and communication technology, Chunghwa Telecom has strengthened ecological monitoring and conservation efforts for black-faced spoonbills, significantly improving both data accuracy and operational efficiency. The project demonstrates the Company’s commitment to driving environmental sustainability through technological innovation while establishing a positive model for nature conservation.

4-2 Hundred-Species Restoration Project – Kaohsiung Expansion

Taiwan is home to more than 4,000 native plant species; however, public awareness and understanding of native plants remain limited. Many species grow in areas adjacent to human activities and are not covered by the legal protections afforded to protected areas, resulting in rapid habitat loss driven by development pressures. Notably, 989 plant species are classified as Critically Endangered, Endangered, or Vulnerable in the Red List of Vascular Plants of Taiwan, representing the most urgent conservation priorities. In response, Chunghwa Telecom has collaborated with members of the taskforce to implement the telecommunications industry's first project focused on conserving threatened plant species—the Hundred-Species Restoration Project, transforming its operational sites into conservation refuges for native Taiwanese plant species that fall outside protected areas, with a particular focus on endemic or threatened species. The project aims to enhance the landscape and ecological environment across operational sites and progressively conserve 100 native plant species over time.

In 2024, the Taipei Jinshan Building, which features an ecological pond, small flower beds and enjoys high public visibility, was selected as a demonstration site. Following ecological surveys and expert consultations, and taking into account species suitability and aesthetic value, 13 native plant species were incorporated into the landscape design. Among them, five conservation species were selected as representative plants for the site: *Arundina graminifolia*, *Angelica pubescens*, *Asarum taitonense*, *Chrysanthemum boreale* var. *tomentellum*, and *Hypericum monogynum*.

In 2025, the Hundred-Species Restoration Project expanded to Wuchang in Kaohsiung, with the Wuqing Service Center selected as a new implementation site. Conservation landscape design was carried out in the entrance area and around the employee rest pavilion, supported by soil

improvement, site preparation, planting works, and irrigation system installation, creating a demonstration site that combines ecological value with aesthetic appeal. In contrast to the cool and humid climate of Taipei, eight native plant species were introduced at the Kaohsiung site, which receives abundant sunlight. Sun-loving species such as *Kalanchoe garambiensis* Kudo, *Scutellaria tashiroi* Hayata, and *Scutellaria austrotaiwanensis* T.H.Hsieh & T.C.Huang (Figure 32) were selected. In shaded areas around the employee rest pavilion, representative conservation species such as *Salvia tashiroi* Hayata (Figure 33) were planted.

Chunghwa Telecom leverages its core telecommunications capabilities to support conservation actions. Through its leading 5G, AI, and AIoT technologies, the Company deploys sensors and surveillance cameras to monitor key environmental parameters for plant growth at operational sites, including temperature, light intensity, and humidity, thereby ensuring optimal plant growth conditions. Its proprietary Chunghwa Telecom IVS Platform enables long-term data storage and continuous monitoring of plant growth trajectories. By embedding technology into conservation practices, the Company achieves real-time monitoring and strengthens risk management capabilities (Figure 34).

Looking ahead, Chunghwa Telecom will continue to collaborate with members of the taskforce to advance the Hundred-Species Restoration Project, expanding restoration sites and species coverage. The Company will also share knowledge on plant conservation and Nature Positive concepts with customers and local communities through its employees, and leverage feedback from such engagement to further refine the project, thereby strengthening its biodiversity conservation efforts.

Kalanchoe garambiensis Kudo VU (Vulnerable)

Family: Crassulaceae

Growth form: Erect herb

Propagation: Cutting propagation

Characteristics: Endemic to Taiwan and distributed in Kaohsiung and the Hengchun Peninsula, this species is tolerant of drought, strong sunlight, and salt spray, with strong adaptability. It is a low-growing plant reaching 5–30 cm in height and produces small yellow flowers that open in the morning and close in the evening, remaining in bloom for 5–10 consecutive days. The leaves are thick and bright green in summer, turning dark red to black in autumn as the plant prepares to flower. Its leaves serve as a host plant for the larvae of *Tongeia hainani*.



Scutellaria tashiroi Hayata VU (Vulnerable)

Family: Lamiaceae

Growth form: Perennial herb

Propagation: Cutting propagation

Characteristics: Endemic to Taiwan and distributed in southern and eastern Taiwan, this species is cultivated as an ornamental plant. The plant has a creeping to ascending growth habit, with hairy leaves on both surfaces, and is tolerant of moisture and strong sunlight. Flowering occurs from September to April of the following year, producing small purple flowers. Reaching 10–40 cm in height, it is easy to cultivate and is suitable for hanging baskets to showcase its delicate flowers or for use as a ground cover.



***Scutellaria austrotaiwanensis* T.H.Hsieh & T.C.Huang**
VU (Vulnerable)

Family: Lamiaceae

Growth form: Perennial herb

Propagation: Cutting propagation

Characteristics: Endemic to Taiwan and distributed in southern and eastern Taiwan, this species is cultivated as an ornamental plant. The stems are erect, slender, and bright green, with good tolerance to moisture and strong sunlight. It produces blue-violet corollas and purple flowers, with hairs present only along the veins on the underside of the leaves. Reaching 30–50 cm in height, it is easy to cultivate and has traditionally been used for medicinal purposes, including clearing heat and toxins, promoting blood circulation and liver function, and treating bee stings and traumatic injuries.



***Salvia tashiroi* Hayata**
EN (Endangered)

Family: Crassulaceae

Growth form: Erect herb

Propagation: Cutting propagation

Characteristics: Endemic to Taiwan and distributed in low-elevation areas of southern Taiwan, this species is cultivated as an ornamental plant. The plant typically grows as a solitary individual and often produces stolons. The petioles are longer than the stem leaves, and the undersides of the leaves may appear purplish-red. The plant is tolerant of hot and humid conditions. It produces pale blue or white corollas and white to pale purple flowers, and typically reaches a height of approximately 10–50 cm.



Figure 32-33. Comparison of Restoration Conditions in the Entrance Area
(Left: Before Restoration; Right: After Restoration)



Figure 34. Hundred-Species Restoration Project Monitoring Platform

4-3 OECM Certification

OECM is a conservation concept promoted by the International Union for Conservation of Nature (IUCN) and the Convention on Biological Diversity (CBD). An OECM refers to a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values. The core principle is that, regardless of the primary objective of an area, it may be recognized as an OECM if it delivers effective conservation outcomes. The Kunming–Montreal Global Biodiversity Framework adopted in 2022 formally incorporates OECMs into global biodiversity conservation targets, making them an important tool for achieving the “30x30” global biodiversity target. In 2025, the Forestry and Nature Conservation Agency established the Terrestrial OECMs Certification Program building on the Taiwan Ecological Network blueprint and outcomes, and referencing international OECM guidelines and case studies to promote the certification of terrestrial OECMs in Taiwan, encouraging both public and private stakeholders to jointly conserve biodiversity.

Chunghwa Telecom designated its Sanyi Jiweigu Telecommunications Base as a demonstration site, becoming the first telecommunications industry case in Taiwan to be included in the inaugural cohort of sites certified under the Forestry and Nature Conservation Agency’s Terrestrial OECMs Certification Program (Figure 35). The site is located adjacent to the Huoyanshan Nature Reserve, within a low-elevation hill ecological transition zone and key buffer area. It has long maintained low-intensity development and minimal human disturbance, preserving a natural secondary forest structure and providing habitat for various low-elevation wildlife species. Recorded species at the site include the Chinese box turtle, Formosan pangolin, collared scops owl, and Taiwan blue magpie (Figure 36). The site also provides potential habitat suitability for the leopard

cat. It functions as an important ecological buffer and habitat corridor, fully reflecting the core value of OECMs as areas “outside protected areas but delivering conservation outcomes”.

Certification is only the beginning. Chunghwa Telecom continues to enhance habitat ecosystem service value through three key approaches: monitoring, management, and training. The Company utilizes an internal carbon fee fund as the source of financing, demonstrating an innovative approach that transforms carbon fee proceeds into natural capital. Over the next five years, Chunghwa Telecom will prioritize ecologically sensitive mowing management and the Citizen Scientists Project.

Under ecologically sensitive mowing management, to avoid harming Chinese box turtles that may be active on the ground or sheltering in leaf litter, the use of herbicides and blade-equipped mowing equipment is strictly prohibited. Instead, manual tools or string trimmers are used to ensure wildlife safety. In addition, to preserve sheltering and foraging habitat for leopard cats, vegetation height will be maintained at a minimum of 40–50 cm to avoid excessive vegetation clearing that could result in habitat loss and disturbance.

Under the Citizen Scientists Project, operations and maintenance staff and volunteers at the Sanyi Jiweigu Telecommunications Base will be trained as citizen scientists with wildlife observation and recording capabilities. Through field observations and regular surveys, they will record information on protected, native, and invasive species within the site, and upload records to the global open science platform iNaturalist Taiwan, serving as the foundation for biodiversity database development and scientific research.

Overall, Chunghwa Telecom continuously conducts biodiversity monitoring to gain insights into wildlife habitat use patterns and implements adaptive site management to pro-

vide more wildlife-friendly habitats. The Company also organizes wildlife conservation training programs to enhance internal conservation capacity. Through the integration of technology and ecological conservation, Chunghwa Telecom aims to transform telecommunications bases into ecological corridors, balancing infrastructure development with biodiversity conservation, ensuring stable and resilient habitats for species such as the Chinese box turtle and leopard cat. The Company will continue to advance the initiative through public–private collaboration, setting a new benchmark for corporate ESG and nature conservation.



Figure 35. CHT Became One of the First Recipients of the OECM Certification from the Forestry and Nature Conservation Agency

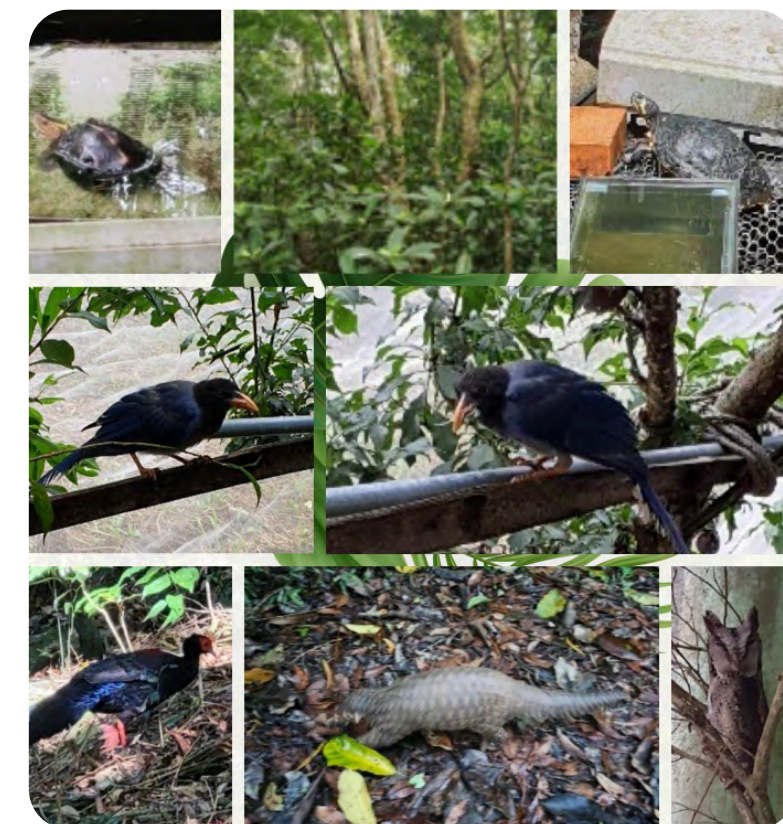


Figure 36. Biodiversity at CHT’s Sanyi Jiweigu Telecommunications Base



5 Vision and Outlook for Living in Harmony with Nature





To demonstrate its commitment to nature conservation and support the target of conserving 30% of Earth's land and seas by 2030 under the Kunming-Montreal Global Biodiversity Framework adopted in 2022, Chunghwa Telecom became the first telecommunications company in Taiwan to announce the goal of achieving NPI and NND by 2030. The Company also designated 2024 as its "Inaugural Year for Biodiversity Implementation" and established a cross-functional project team led by senior executives to oversee and coordinate related initiatives. Centered on the dual commitments of mitigating nature loss and promoting nature positivity, Chunghwa Telecom has been progressively developing a long-term blueprint for nature management and conservation. The blueprint focuses on four key areas: "Science-based Nature Assessment", "No Deforestation", "Alignment with the Nature Positive Initiative", and "Mainstreaming Nature Positive". Through clear strategic direction, action plans, and performance tracking mechanisms, the Company continuously reviews implementation outcomes and refines its management practices to advance its nature conservation objectives and create long-term value for ecosystem restoration, biodiversity conservation, and sustainable development.

In terms of concrete actions, Chunghwa Telecom has actively invested in innovative conservation initiatives and established new benchmarks for the telecommunications industry. The Black-faced Spoonbill Conservation Project was Taiwan's first biodiversity conservation initiative to apply AI technologies to habitat conservation. In 2025, the project was upgraded to Version 2.0, expanding the application of AI technologies in conservation and incorporating citizen science concepts. The Hundred-Species Restoration Project was the first initiative in Taiwan's telecommunications industry dedicated to the conservation of endangered plant species. In 2025, the project expanded its restoration efforts to Kaohsiung, demonstrating the Company's commitment to supporting nature conservation and sustainable development through technological innovation. The Citizen Scientists for Tree Carbon Project has brought together a wide range of stakeholders to promote knowledge of tree ecology and carbon sequestration through hands-on participation. In addition, Chunghwa Telecom joined the government-led OECMs certification program in 2025, extending its conservation efforts beyond legally protected areas. Through the ecological transformation of its Sanyi Jiweigu Telecommunications Base, the Company is creating natural capital that delivers both operational and conservation benefits.

Looking ahead, Chunghwa Telecom will continue to steadily advance its long-term biodiversity conservation pathways while further enhancing the depth and comprehensiveness of its TNFD disclosures to strengthen its capabilities in identifying, assessing, and managing nature-related issues. The Company regards biodiversity as a core pillar of sustainable development and believes that protecting natural ecosystems not only reflects its commitment to the environment and society but also creates long-term value that supports shared prosperity. As a leading force in the telecommunications industry, Chunghwa Telecom will continue to leverage its influence and work closely with value chain partners and cross-sector collaborators to advance biodiversity conservation, strengthen ecological resilience, and help create a more prosperous, diverse, and sustainable environment for future generations.





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TNFD’s Recommended Disclosures

Recommended Disclosures		Chapter
Governance	Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities	Chapter 1-3: Nature-Related Governance Framework
	Describe management’s role in assessing and managing nature-related dependencies, impacts, risks and opportunities	Chapter 1-3: Nature-Related Governance Framework
	Describe the organization’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 organization’s assessment of, and response to, nature-related dependencies, impacts, risks and opportunities	Chapter 1-4: Stakeholder Engagement Initiatives
Strategy	Describe the nature-related dependencies, impacts, risks and opportunities the organization has identified over the short, medium and long term	Chapter 2-2: Locate: Locating Nature-Sensitive Operational Sites Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts Chapter 2-4: Assess: Nature-related risks and opportunities assessment
	Describe the effect nature-related dependencies, impacts, risks and opportunities have had on the organization's business model, value chain, strategy and financial planning, as well as any transition plans or analysis in place	Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts Chapter 2-4: Assess: Nature-related risks and opportunities assessment
	Describe the resilience of the organization's strategy to nature-related risks and opportunities, taking into consideration different scenarios	Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts Chapter 2-4: Assess: Nature-related risks and opportunities assessment
	Disclose the locations of assets and/or activities in the organization’s direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations	Chapter 2-2: Locate: Locating Nature-Sensitive Operational Sites
	Describe the organization’s processes for identifying, assessing, and prioritizing nature-related dependencies, impacts, risks and opportunities in its direct operations	Chapter 2-2: Locate: Locating Nature-Sensitive Operational Sites Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts Chapter 2-4: Assess: Nature-related risks and opportunities assessment
Risk and Impact Management	Describe the organization's processes for identifying, assessing, and prioritizing nature-related dependencies, impacts, risks and opportunities in its upstream and down-stream value chain(s)	Chapter 2-2: Locate: Locating Nature-Sensitive Operational Sites Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts Chapter 2-4: Assess: Nature-related risks and opportunities assessment
	Describe the organization's processes for managing nature-related dependencies, impacts, risks and opportunities	Chapter 2-1: Introduction and Implementation of the LEAP Methodology Chapter 3-1: Building a Resilient Organization
	Describe how processes for identifying, assessing, prioritizing, and monitoring nature-related risks are integrated into and inform the organization's overall risk management processes	Chapter 3-1: Building a Resilient Organization
Metrics & Targets	Disclose the metrics used by the organization to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process	Chapter 2-5: Prepare: Proposing nature-related response strategies and targets
	Disclose the metrics used by the organization to assess and manage dependencies and impacts on nature	Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts
	Describe the targets and goals used by the organization to manage nature-related dependencies, impacts, risks and opportunities and its performance against these	Chapter 2-5: Prepare: Proposing nature-related response strategies and targets



GRI Standards Content Index

GRI Standards	Disclosure Items	Chapter
GRI 101-1	Policies to halt and reverse biodiversity loss	Chapter 1-1: Natural Vision and Commitment
GRI 101-2	Management of biodiversity impacts	Chapter 1 Commitment to Nature and Governance
GRI 101-3	Access and benefit-sharing	2025 Performance Highlights Chapter 4: Highlights of Nature Conservation Initiatives
GRI 101-4	Identification of biodiversity impacts	Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts
GRI 101-5	Locations with biodiversity impacts	Chapter 2-2: Locate: Locating Nature-Sensitive Operational Sites
GRI 101-6	Direct drivers of biodiversity loss	Chapter 2-3: Evaluate: Analysis of Nature-Related Dependencies and Impacts
GRI 101-7	Changes to the state of biodiversity	Chapter 2-1: Introduction and Implementation of the LEAP Methodology Chapter 2-5: Prepare: Proposing nature-related response strategies and targets
GRI 101-8	Ecosystem services	2025 Performance Highlights Chapter 1-4: Stakeholder Engagement Initiatives Chapter 4: Highlights of Nature Conservation Initiatives

