

**Chunghwa Telecom Co., Ltd.
Report for Taskforce on Nature-
Related Financial Disclosures
(TNFD)
2023 Edition**

June 2024

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I. About the Report

At the Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP15), the United Nations adopted the Kunming-Montreal Global Biodiversity Framework, which includes 23 specific action targets and defines the vision to achieve 30 X 30 biodiversity target by 2030. In particular, Target 15 specifically requires businesses to regularly monitor, assess, and disclose their risks, dependencies, and impacts on biodiversity; it further advocates for sustainable consumption patterns with the aim of gradually reducing negative impacts on biodiversity.

Chunghwa Telecom (hereinafter referred to as “CHT”) has advanced the implementation of the goals of the Kunming-Montreal Global Biodiversity Framework by adopting the official framework by the Taskforce on Nature-related Financial Disclosures (TNFD), unveiled at the New York Climate Week in September 2023. Following governance, strategy, risk and impact management, as well as relevant metrics and targets, CHT discloses nature-related information and employs the recommended LEAP (Locate, Evaluate, Assess and Prepare) methodology to systematically analyze its dependencies and impacts on nature. Moreover, CHT 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 CHT’s headquarters and related business sites, covering the period between January 1, 2023, and December 31, 2023. However, as this is CHT’s first report compiled based on TNFD recommendations, some sections include content from previous and subsequent years. The taskforce for this report is a collaboration between CHT, National Taiwan University, the International Climate Development Institute (ICDI), and the Sustainable Transformation Service Team from Deloitte & Touche Risk Management Advisory Co., Ltd..

II. CHT Nature-Related Action Focus

(I) Commitment to Sustainability

CHT acknowledges the significant role of biodiversity and the preservation of forests in maintaining ecological and climate stability. As a result, it is at the forefront of the industry to commit to achieving a Net Positive Impact (NPI) on biodiversity and realizing No Net Deforestation (NND) by 2030.

CHT has base stations, data centers, and operational sites located throughout Taiwan. Despite continuous facility expansion due to business growth, CHT still adheres to principles of promoting biodiversity and avoiding deforestation activities, and actively supports reforestation to fulfill the Kunming-Montreal Global Biodiversity Framework. The goals are to reverse biodiversity loss by 2030, realize human-nature harmony by 2050, and demonstrate CHT's commitment to restoring ecological balance and becoming a sustainable development-based international benchmark enterprise.

In 2023, in line with the Forestry and Nature Conservation Agency afforestation program, CHT chose Yilan, Taoyuan, and Chiayi to be afforestation sites, and implemented the rehabilitation of key national and coastal forests across Taiwan, aiming to plant 150,000 trees over an 8-year period. CHT will also continue to take inventory of the current usage and situation of wood products in our operational activities, reducing the use of wood products from the source, so as to gradually eliminate the use of deforestation-derived products, and achieve the 2030 NND goal.

(II) Biodiversity-Sensitive Site Assessment

In recent years, climate change, natural disasters, and frequent extreme climate events have necessitated that enterprises re-examine the impact of their operations on the ecological environment and take active measures to reduce negative impact on ecosystems. To further understand the impact and dependency of its daily operations on nature, CHT follows the TNFD's LEAP framework, to conduct assessments of biodiversity-sensitive sites.

Through this project, CHT conducted detailed assessments of its operational sites and their surrounding ecological environments, further identifying sites located in environmentally sensitive areas to enhance management and promote conservation measures. Moreover, these assessment results also contribute to the formulation of more geographically specific environmental protection strategies, ensuring the sustainable development of operations and local ecosystems, and realizing CHT's comprehensive transition into a green enterprise. For further details, please refer to "IV. Nature Conservation Strategy".

(III) Biodiversity Conservation Strategy Plan

In the field of biodiversity, CHT has made significant efforts and yielded excellent results. However, with changing perspectives on global biodiversity conservation and the ongoing updates of sustainable business practices, it remains essential to formulate long-term conservation strategies to achieve the symbiotic state of biodiversity conservation. Meanwhile, in order to align with the latest global frameworks or requirements for nature-related disclosures and conservation, such as the TNFD or certification for Other Effective Area-based Conservation Measures (OECM), CHT has cooperated with the International Climate Development Institute to initiate a project for planning a biodiversity conservation strategy starting in April 2024.

The project aims to integrate biodiversity concerns into CHT's short, medium, and long-term organizational development strategies; objectives of the project include

planning and promoting the NPI/NNL¹ conservation pathways as a tangible implementation step, and establishing a long-term conservation pathway for CHT, which will encompass biodiversity commitments, goals, strategies, and indicator frameworks. Furthermore, CHT plans to evaluate OECM sites based on domestic and international OECM certification criteria, establish rehabilitation demonstration areas, and continuously adjust operational norms in order to protect areas where with natural symbiosis.

Aforementioned project objectives aim to realize the following achievements:

Item	Expected Results
1	Establishing an effective conservation plan with comprehensive participation, as a concrete effort in implementing conservation.
2	Completing CHT's long-term conservation pathway planning and proposing a framework of biodiversity commitments, objectives, strategies, and indicators that will serve as the basis for CHT's biodiversity conservation for the next 10 years.
3	Completing the selection of appropriate sites and planning related projects based on domestic and international OECM certification criteria, as preparation for future OECM site applications.
4	Facilitating the integration of TNFD report's short-term recommendations and long-term strategies, and setting up site assessment guidelines for future evaluations.

(IV) Streamlining ICT² Use in Innovation Ecological Services for Biodiversity

The 28th United Nations Climate Change Conference (COP28), along with various international investment institutions, have placed growing emphasis on the compliance of companies to the Task Force on Climate-related Financial Disclosures (TCFD) and the disclosure of nature-related financial data. In addition, international sustainability rating agencies such as MSCI, DJSI, and CDP, in conjunction with ESG reporting frameworks such as the GRI Standards, also expect companies to include evaluations of natural capital and take proactive conservation measures to improve their resilience to nature and achieve Nature Positive growth.

CHT is the largest integrated telecommunications provider in Taiwan, and is committed to long-term digital transformation, aiming to enhance intelligence across the island, and providing optimal value to the government, businesses, as well as the public. Since April 2024, CHT has been collaborating with the Industrial Technology Research Institute to develop a range of ICT-driven biodiversity solutions, the project objective is empowerment of advantageous products through value proposition alignment, combining with technological integration and strategic partnership recommendations to develop new ICT products.

CHT aims to enhance corporate competitiveness and sustainable development capabilities, as well as achieve Nature Positive outcomes, by reaching a consensus on the conservation of terrestrial and marine biodiversity through the above-mentioned internal and external industry-academia cooperation.

¹ No Net Loss, referring to the policy/approach that aims to neutralize negative environmental impacts from developmental activities.

² Information and Communications Technology (ICT)

III. Governance of Nature-Related Issues

(I) Governance Organizational Structure

The Sustainable Development and Strategy Committee is the highest governing body for CHT’s sustainable development. It operates under the Board of Directors as a functional committee, with a convener elected by and among the members. The committee comprises nine directors and is primarily responsible for providing strategic guidance on CHT’s vision for sustainable development, medium to long-term goals, long-term policies, and management principles. Through quarterly meetings, the committee regularly oversees and evaluates the effectiveness of CHT’s initiatives on climate change, as well as nature-related risks and opportunities. Board members, with their extensive backgrounds and experiences, strengthen CHT’s sustainable governance capabilities. Significant emphasis is also placed on the highest governing body’s further education and training in sustainability and biodiversity, ensuring effective oversight of CHT’s overall development direction and the complete integration of sustainability strategies in business activities.

In addition, the Sustainable Development Promotion Committee, consisting of management personnel, has been established to uphold CHT’s sustainable development strategy and advance various sustainable action plans. It regularly reports on the implementation results and future plans to the Board of Directors, aiding in policy formulation and enhancing the efficiency of sustainable risk management.

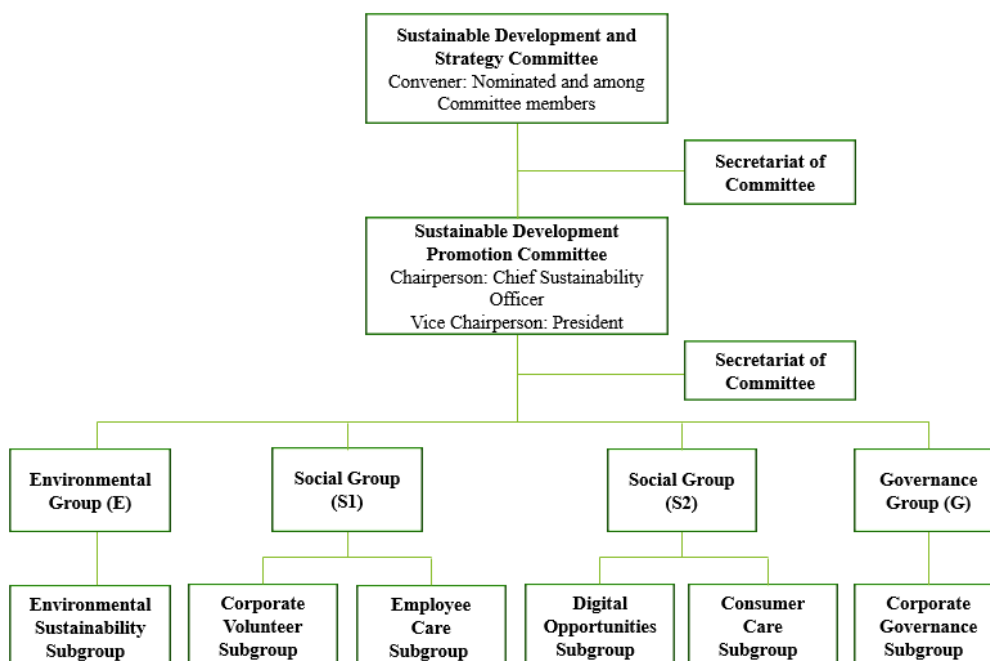


Figure 1. Sustainable Development Governance Framework

Given the increasing severity of biodiversity loss and ecosystem imbalance in recent years, the World Economic Forum’s “Global Risks Report 2024” has ranked this as the third biggest risk in the next decade; in the long term, it is projected to disrupt ecosystems and affect the economy, environment, and society. As a result, to enhance biodiversity management, CHT has put forward a governance framework for addressing biodiversity issues, led by the Deputy of Technology as the convener, and spearheads related efforts through groups focused on technology, restoration,

afforestation, and public relations. These groups are dedicated to executing projects focused on nature-related dependencies, impacts, risks, and opportunities; in particular, activities include habitat restoration, tree planting, promoting industry-academic cooperation, and keeping abreast of sustainable natural development trends and international initiatives.

In the future, CHT aims to expand the scope of activities and initiatives to encompass the entire value chain, collaborating with subsidiaries and suppliers on related projects, and working together to contribute to the ecological environment, creating a beautiful and sustainable future.

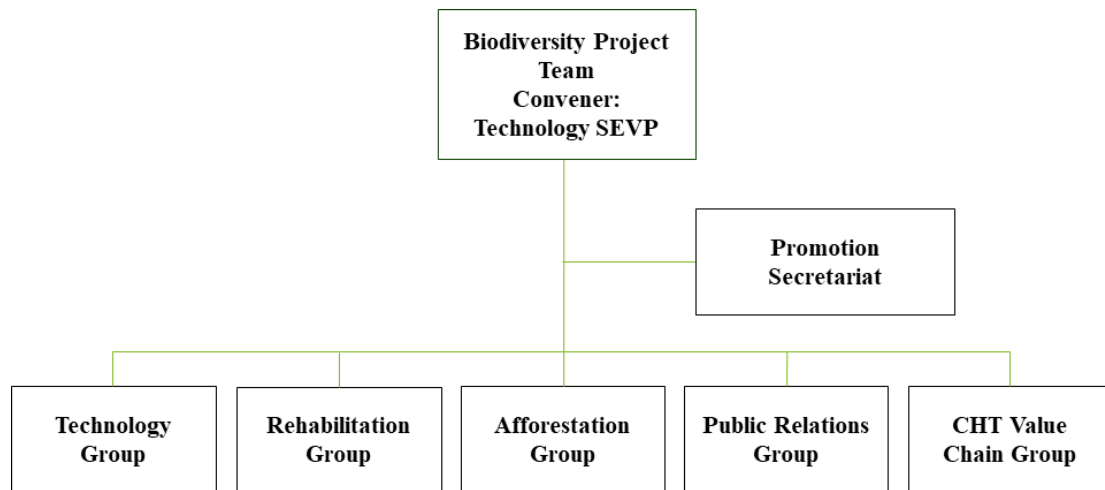


Figure 2. Biodiversity Management Governance Framework

(II) Stakeholder Communication and Engagement

CHT supports and voluntarily adheres to internationally recognized human rights conventions, such as the Universal Declaration of Human Rights, the United Nations Global Compact, the United Nations Guiding Principles on Business and Human Rights, as well as International Labour Organization (ILO) Convention. CHT’s dedication to safeguarding human rights is demonstrated through the promotion of protection for non-discrimination, gender equality, freedom of association, collective bargaining, child labor, and indigenous rights.

Notably, human rights due diligence investigations are conducted by CHT on a regular basis with the goal of minimizing and eradicating human rights violations across its entire value chain. Moreover, in response to human rights risk incidents, CHT has also developed appropriate remedial measures; these are then assessed by responsible departments for operational and scope enhancements, making adjustments as necessary. 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 of [CHT’s official website](#).

In addition to conducting human rights assessments, CHT also consults the official version of TNFD recommendations to include nature-related stakeholders in the overall assessment process and management. This includes considering relevant factors during the LEAP analysis (see “IV. Nature Conservation Strategy”), and hosting workshops with departmental groups to identify stakeholders involved in CHT operations and interactions with nature.

The process for identifying major stakeholders is as follows:

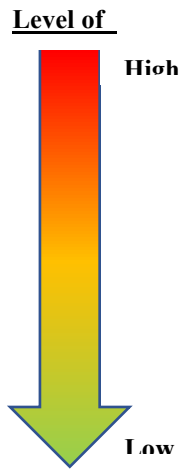
- Referencing international nature-related trends and the official recommendations of TNFD to compile a list of stakeholders associated with CHT’s natural environment.
- Assessing stakeholders according to the principles of responsibility, influence, and diversity of perspectives stipulated in the AA1000 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.

Evaluation Dimension	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 who have an impact on nature-related influence of the departments or their decision-making
Perspective diversity	Diverse opinions of stakeholders benefit the departments by allowing them to gain new insights into special situations or discover new opportunities.

Table 1. Dimensions and Definitions of Stakeholder Evaluation

- Summarizing the evaluation results of department heads, conducting statistical standardization, and compiling a list to determine the extent of CHT’s relationships with stakeholders.

- From the top two-thirds ranking, comprising 7 nature-related stakeholder categories, and based on their proximity, significance, and level of influence, selecting and identifying significant stakeholders of CHT.



Item	CHT 2023 Nature-Related Stakeholders
1	Government agencies
2	Customer
3	Investor shareholders
4	Influential Advocacy Organizations
5	Employees
6	Local community/Indigenous peoples
7	Academic institutions
8	Nonprofit organizations
9	Financial institutions
10	Supplier/Contractor

Table 2. Identification Results for Major Stakeholders of CHT

CHT believes that valuing and understanding stakeholders' opinions on company operations and management, achieved through idea exchange and consensus, is the core foundation of corporate sustainability. Consequently, a variety of activities are regularly organized to enhance stakeholder engagement. In addition to technological exchanges with government and academic institutions, CHT collaborates with employees on nature conservation efforts and frequently engages with indigenous peoples and local residents, acknowledging their contributions to environmental stewardship. Such feedback is pivotal to CHT's growth. Please refer to the following for details on CHT's engagement with key natural stakeholders.

Stakeholder	Engagement Activities
Government agencies	<ul style="list-style-type: none"> ● Cultivating Smart Agriculture: CHT, in cooperation with the Ministry of Agriculture's plan, is dedicated to developing standardized data formats for agricultural Internet of Things (IoT). This effort helps in accurately predicting pest and disease outbreaks, allowing for early preventive measures. Moreover, it also improves agricultural management and production efficiency, contributing to the sustainable development of agriculture and nature.
Customer	<ul style="list-style-type: none"> ● Old Device for New Device: To promote the circular economy concept, CHT allows customers to visit designated stores to get an estimate for recycling their old mobile phones; this enables the devices to effectively enter the recycling process, reducing pollution problems.

Stakeholder	Engagement Activities
Investor/Shareholders	<ul style="list-style-type: none"> ● Investor Conference: CHT holds quarterly investor conferences to explain its ESG initiatives to shareholders and investors. In particular, this includes updates on the progress of carbon reduction commitments, as well as ESG awards and rankings received, enabling investors and shareholders to fully understand CHT's achievements in sustainable development.
Influential Advocacy Organizations	<ul style="list-style-type: none"> ● Nature and Biodiversity Initiative: CHT joined the Business Council for Sustainable Development (BCSD) Taiwan's Nature and Biodiversity Initiative Platform (Taiwan Nature Positive Initiative, TNPI) to respond to the Global Goal for Nature, aiming to achieve Net Positive by 2030.
Employees	<ul style="list-style-type: none"> ● 5G Plastic-Free - Corporate Volunteer Activity: CHT adheres to the spirit of "5G Plastic-Free to be Carefree", aiming for mobile challenges and technological revitalization, and cultivating the reuse and recycling of plastics. It goes a step further by engaging employees and supply chain partners to participate in activities promoting the plastic-free environmental protection concept. Moreover, corporate volunteer training also demonstrates CHT's commitment to environmental sustainability and its efforts in protecting the natural environment. ● Education and Training: CHT offers environmental sustainability courses, taught by external instructors, to enhance the long-term capabilities of its employees. These courses allow employees to gain new knowledge and comprehension of CHT's sustainability principles and initiatives, encouraging employees to engage in communication with stakeholders and local community residents with a strong sense of responsibility.
Local community/Indigenous peoples	<ul style="list-style-type: none"> ● Click Taiwan: CHT collaborated with 22 local communities to encourage university students to stay in these communities for 15 days, during which time their expertise was utilized to provide community services. The goal is to preserve and pass on the precious natural landscapes and community life of Taiwan through digital media. ● Innovation Design: Co-organized and implemented by CHT, Kanner Village, Pingtung

Stakeholder	Engagement Activities
	<p data-bbox="708 237 1331 528">Gangkou Community Development Association, and Taiwan Indigenous Huilan Association; its aim is to assist support centers for people with disabilities, local industries, and tribal cultures to gain more support through various aspects such as space optimization and renovation, brand image redesign, and product packaging.</p> <ul style="list-style-type: none"> <li data-bbox="647 533 1331 824">● Little Neighborhood Auteurs: Encourages school children to interpret hometown stories through their innocent perspective combined with digital skills, envisioning unlimited possibilities for video creation; themes for 2023 covered diverse topics including environmental conservation, marine conservation, and rice culture.
Academic institutions	<ul style="list-style-type: none"> <li data-bbox="647 835 1331 1075">● Guardians of Water Sources: CHT's Yunlin branch and volunteers from National Yunlin University of Science & Technology collaborated to teach school children the importance of conserving water and valuing water resources, promoting the concept of sustainability.

IV. Nature Conservation Strategy

(I) Policy on Natural Biodiversity

CHT fully recognizes the detrimental impact of deforestation on biodiversity. Therefore, beyond its own operations, CHT commits to leading the value chain (including first-tier and non-first-tier suppliers) and partners to collectively comply with the pioneering EU Deforestation Regulation (EUDR), avoiding all deforestation activities and products, and promoting forest restoration. This commitment aims to fulfill the United Nations Sustainable Development Goals (SDGs) 12 (Responsible Consumption and Production), 13 (Climate Action), and 15 (Life on Land), in order to achieve the 2030 NND target.

Our Commitment

- Following EU Deforestation Regulation (EUDR), give priority to inventorying and establishing targets for timber products, before gradually reviewing other goods associated with deforestation in operational activities.
- Reduce the use of forest products at the source, eliminating the use of deforestation products entirely by 2030.
- Participate in significant initiatives to combat deforestation both domestically and internationally, raise public awareness of the importance of non-destruction of forests, and collaborate with external experts such as scholars, consultants, or non-governmental organizations to stay updated on the latest developments in deforestation issues and devise long-term promotion strategies.
- Regularly disclose the progress of non-deforestation initiatives on the official website or in sustainability reports.

Our Action

- Commission external experts to assist in the preparation of CHT's plan for biodiversity conservation strategies.
- Continue to promote process digitization (e.g. e-billing, e-applications) to reduce paper use.
- Paper products shall meet the certification standards of the Forest Stewardship Council (FSC), or the Programme for the Endorsement of Forest Certification (PEFC), be made from other forest-friendly materials, recycled eco-friendly paper materials, and eco-friendly ink printing, to ensure that the paper products are not associated with deforestation activities.
- Select suitable sites for the restoration of Taiwan's endangered native plants and encourage employees to engage with restoration efforts, in promotion of CHT's Native Plants Restoration Project, enhancing communication with local communities.
- Assess suitable locations for habitat restoration in response to the Kunming-Montreal Global Biodiversity Framework's 30 x 30 target, establish OECM and plans to obtain certification from the Forestry and Nature Conservation Agency.

CHT believes that policy commitments and concrete actions are key to driving our sustainable development towards environmental stewardship. Therefore, in addition to the commitment of achieving NPI/NND goals by 2030, CHT has also established a comprehensive environmental risk assessment mechanism to further understand the environmental impact of the entire value chain and take corresponding measures to mitigate it, reflecting CHT's responsible attitude towards the protection of the natural environment.

(II) LEAP Analysis Method

As the leading telecommunications company in Taiwan, CHT prioritizes the stability of the natural environment to ensure the normal operation of communications. Recognizing the interactions between the operations and nature, which in turn affect stakeholders, we follow the TNFD framework and analytical methodologies. By taking into account the perspectives of all stakeholders, CHT evaluates the impacts of its operations on nature and stakeholders. This becomes the utmost priority to CHT and is a key component in fostering a harmonious coexistence between people and nature.

By adopting the LEAP methodology recommended by TNFD and considering the local natural conditions of Taiwan and the availability of relevant data, the taskforce have developed a localized Locate and Evaluate analysis process to make the entire analysis more aligned with local realities. This allows CHT to systematically analyze dependencies and impacts of operational sites on nature, subsequently prioritizing these sites for management. Additionally, the taskforce identifies the potential nature-related risks and opportunities inherent in CHT's overall operations. Through these actions, CHT showcased its preparation for improvements in managing environmental issues.

Locate: Identification of nature-sensitive operational sites

Based on the localized Locate analysis process, this step involves confirming the business footprint and value chain, as well as initially identifying the potential dependencies and impacts of CHT's operations on nature. Following localized analysis criteria, we identify ecosystems that operational sites interface with, identify sensitive locations, and prioritize them in the facilitation of the subsequent Evaluate analysis.

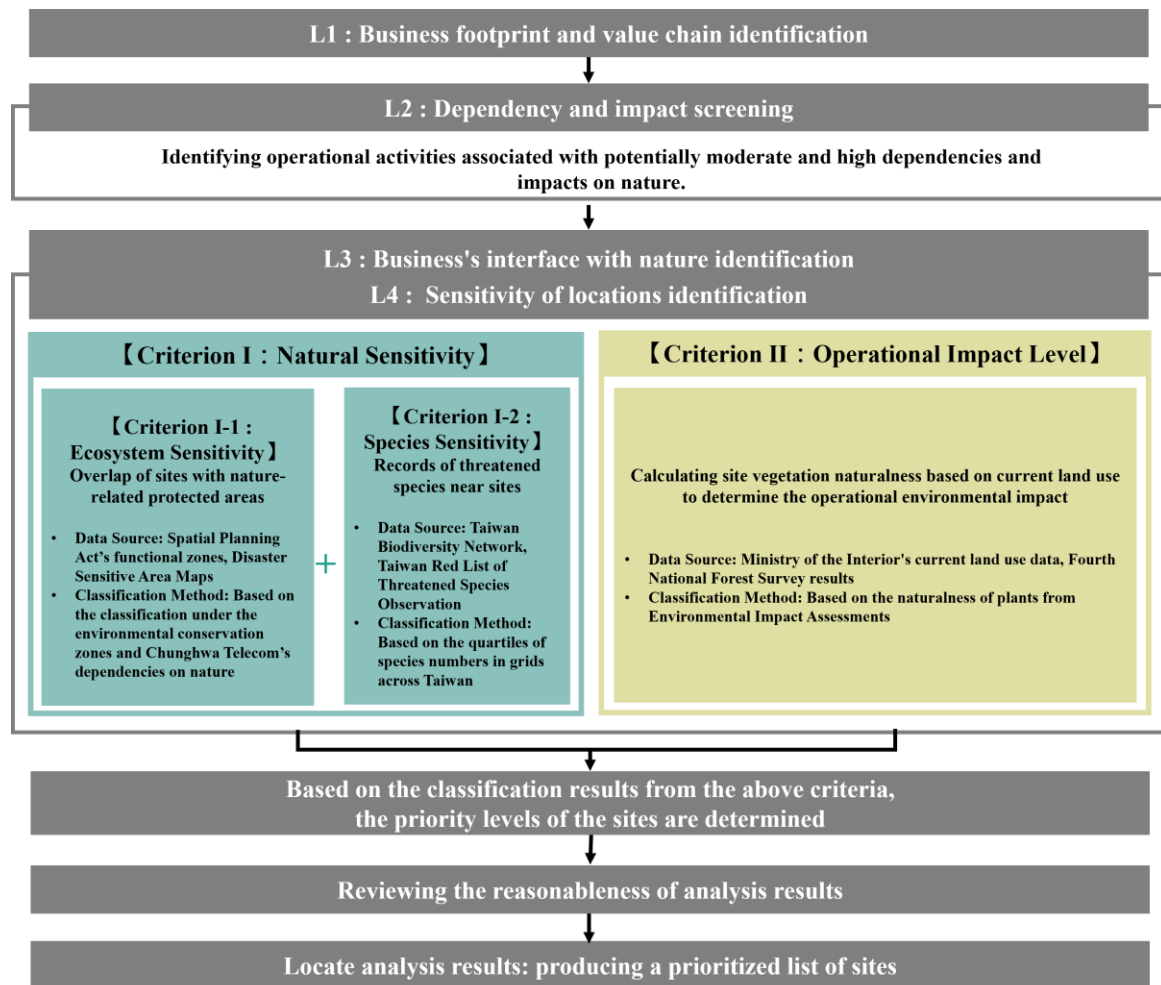


Figure 3. The Localized Locate Analysis Process

CHT's scope of operations and value chain can be divided into three parts: upstream suppliers, CHT operational activities, and downstream consumers. Upstream suppliers primarily include facility suppliers and engineering contractors. As for our own operational activities, the types of CHT's operational sites include base stations, data center facilities, pipeline facilities, submarine cables, satellite stations, business halls and office buildings. CHT provides customers with a comprehensive range of diverse communication services, including domestic fixed communications, international fixed communications, mobile communications, data communication, and information and communication technology (ICT) services, meeting the needs of both individual and corporate downstream customers.

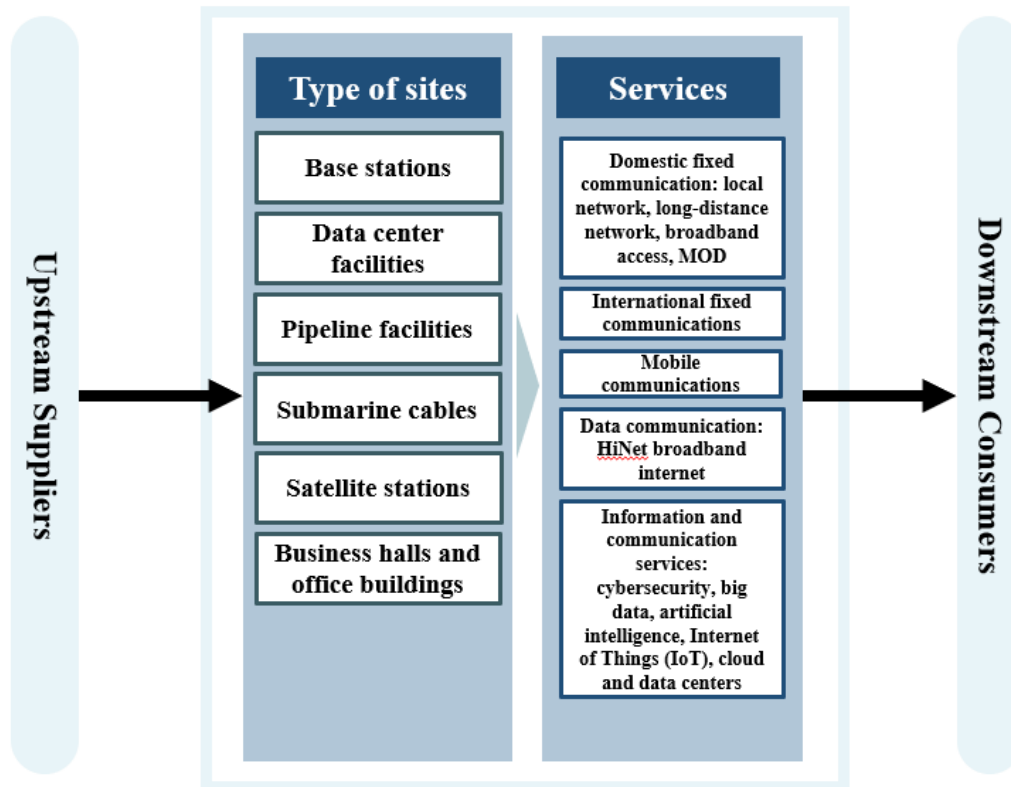


Figure 4. CHT's Business Footprint and Value Chain

To identify the potential moderate to high dependencies and impacts of CHT's operational activities on nature, the taskforce referred to the ENCORE³ database, developed by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and the Natural Capital Finance Alliance (NCFA), and considered Taiwan's natural conditions and the characteristics of CHT's operational site types to evaluate the dependencies and impacts of each type of operational site on nature.

³ Exploring Natural Capital Opportunities, Risks and Exposure.

Types of sites	Dependencies												Impacts														
	Natural capital assets						Ecosystem services						Impact Drivers														
	Atmosphere	Habitats	Land geomorphology	Soil and sediments	Minerals	Species	Water	Climate regulation	Mass stabilisation and erosion control	Bio-remediation	Buffering and attenuation of mass flows	Soil quality	Water quality	Flood and storm protection	Natural disaster protection (e.g., earthquakes, landslides, tsunamis)	Disturbances	Non-GHG air pollution	Soil pollution	Solid waste	Freshwater ecosystem use	Terrestrial ecosystem use	Marine ecosystem use	Water pollution	Water use	* Electromagnetic radiation	* GHG emissions from electricity use	
Base stations	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Data center facilities	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Pipeline facilities	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Submarine cables	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Satellite stations	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Business halls and office buildings	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk	No risk

Note: * Indicates additional dependencies and impacts specific to Taiwan's local natural conditions and the characteristics of CHT's operation sites.

Table 3. 12 Dependencies and Impacts of Each CHT's Operational Site Type on Nature

The result indicates that each type of operational site depends on specific natural capital assets and ecosystem services to a certain degree and impacts nature in different ways. Compared to business halls and office buildings, the development of facilities (including base stations, data centers facilities, pipeline facilities, submarine cables, and satellite stations) depends on and impacts nature to a greater extent.

Compared to other CHT's site types, base stations are widely distributed across Taiwan, with approximately 26,000 locations base stations across the entire region⁴, some of which are situated in ecologically protected areas. We referred to the environmentally sensitive areas defined by the Ministry of Environment's "Environmental Impact Assessment Operational Guidelines for Development Activities" and initially screened base stations located in or near biodiversity-related environmentally sensitive areas⁵ (approximately 2,500 stations). These base stations are prioritized for analysis, with plans to gradually expand the scope of analysis and extend the analysis to other types of sites.

⁴ The entire region including Taiwan, Penghu, Kinmen, and Matsu areas.

⁵ Biodiversity-related environmentally sensitive areas include nature reserves, natural conservation areas, wildlife protection areas, important wildlife habitats, reservoir storage areas, water quality protection areas, Taiwan Coastal Area Nature Conservation Plan (I), Taiwan Coastal Area Nature Conservation Plan (II), internationally important wetlands, nationally important wetlands, state forest enterprise zones, national parks, national nature parks, reservoir catchment areas, secondary coastal protection zones, aquatic life propagation and conservation areas, artificial reef areas, and protected reef areas.

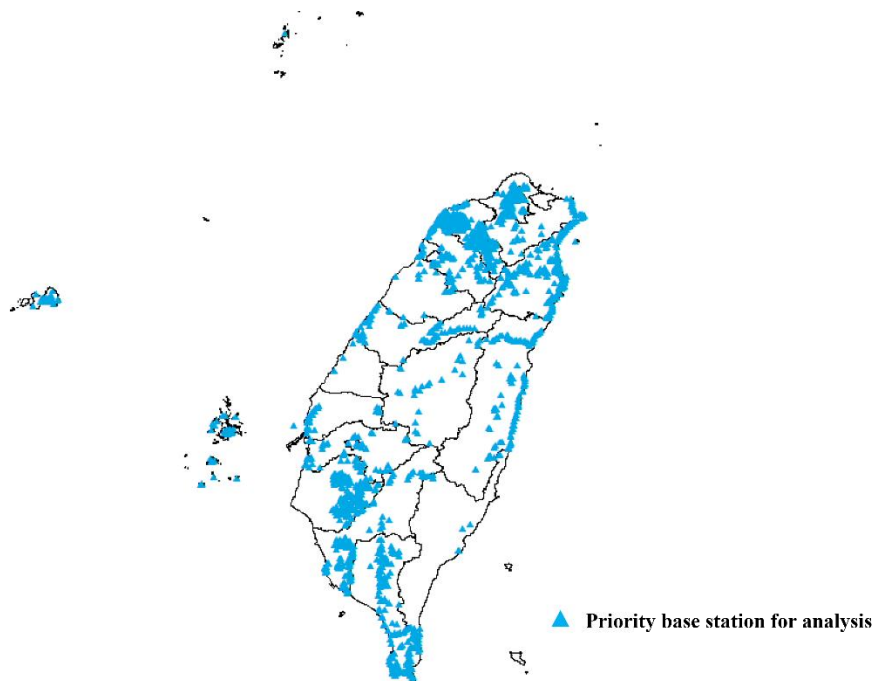


Figure 5. CHT’s Priority Base Stations Distribution Map

After establishing the analysis scope for CHT, the taskforce developed two major criteria to prioritize the sites, based on the current status of publicly available domestic data and CHT's significant dependencies and impacts. Criterion I is Natural Sensitivity, which includes Criterion I-1 Ecosystem Sensitivity and Criterion I-2 Species Sensitivity. Criterion I-1 assesses the overlap of sites with Taiwan's nature-related protected areas, and Criterion I-2 analyzes the number of threatened species listed in Taiwan's Red List in the vicinity of the site. Criterion II is Operational Impact Level, which assesses the naturalness of sites based on current land use to understand the potential environmental impact of site establishment and operations. The following will explain the analysis process for each criterion and present the final analysis results.

Criterion I: Natural Sensitivity

Criterion I-1: Ecosystem Sensitivity

According to the “Spatial Planning Act”, the functional zone includes four zones: 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. The analysis method references the sensitivity levels of environmental conservation zones and CHT’s reliance on disaster resilience to establish the ecosystem sensitivity classification standard.

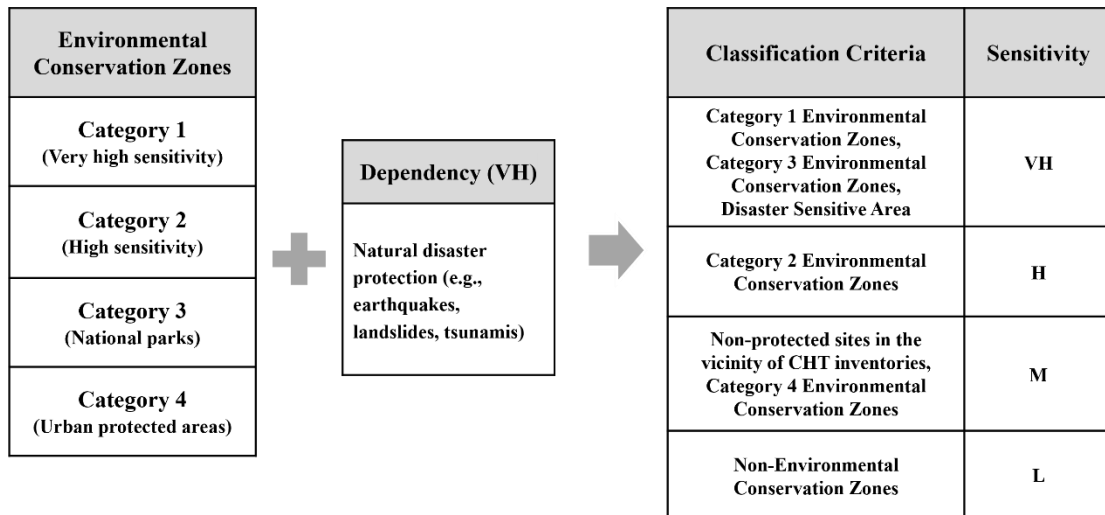


Figure 6. The Ecosystem Sensitivity Classification Standard

Criterion I-2: Species Sensitivity

The species sensitivity analyzes the number of threatened species, i.e., Critically Endangered (CR), Endangered (EN), Vulnerable (VU), from the IUCN Red List potentially present in the vicinity of CHT's sites. According to the current status of publicly available data in Taiwan, the analysis uses the occurrence points of Critically Endangered (CR), Endangered (EN), and Vulnerable (VU) species listed in the Taiwan Biodiversity Network's Red List as the analysis data. By calculating the number of threatened species recorded per unit grid, a dataset of threatened species numbers across Taiwan's grids is established. The classification standard for species sensitivity is then determined based on the quartiles (Q1, Q2, Q3) of threatened species numbers across all grids in Taiwan. Finally, by matching the number of threatened species recorded in the grid where each site is located to the classification standard, the species sensitivity level of each site is determined.

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

Table 4. The Number of Threatened Species in Each Taxon

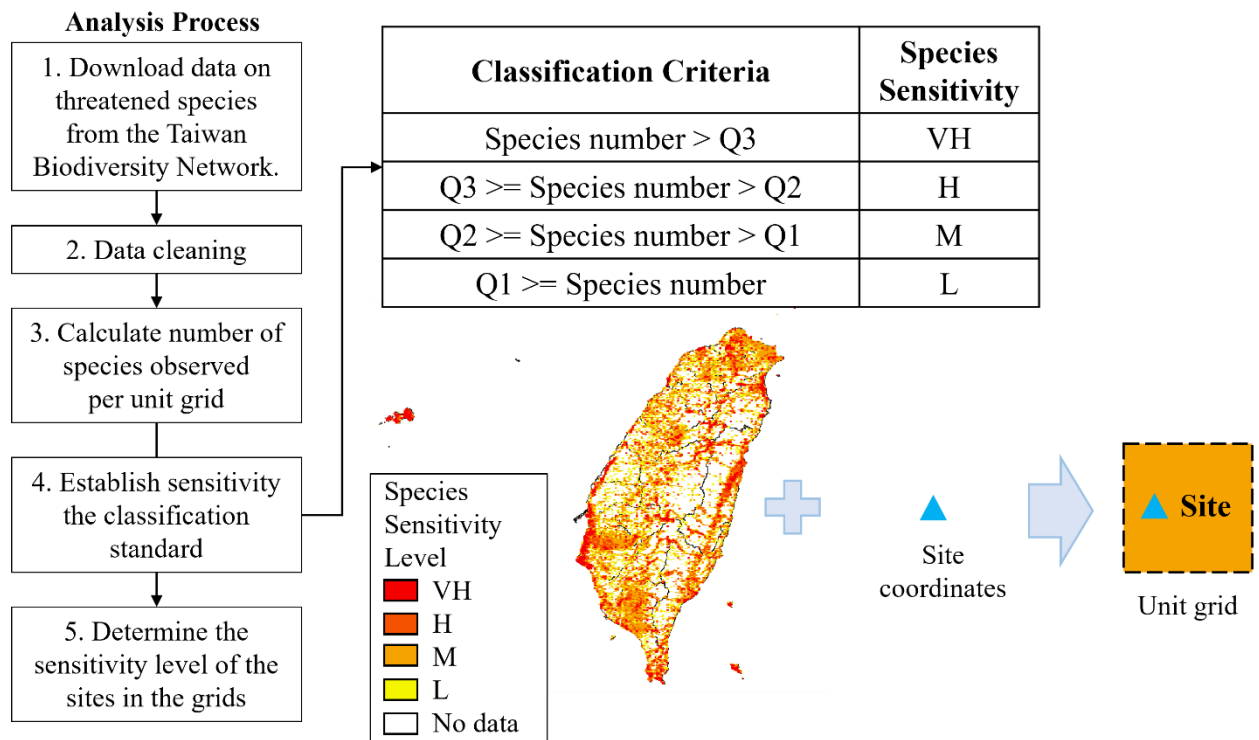


Figure 7. Species Sensitivity Analysis Process

Combining the classification results of Criterion I-1 Ecosystem Sensitivity and Criterion I-2 Species Sensitivity, the natural sensitivity level of each site is determined based on the Natural Sensitivity Matrix.

Natural Sensitivity		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 5. The Natural Sensitivity Matrix⁶

Criterion II: Operational Impact Level

Referencing the method for assessing the naturalness of plants in environmental impact evaluations⁷, the naturalness of sites is calculated using land use data provided by the Ministry of the Interior's National Land Surveying and Mapping Center and the Fourth National Forest Survey results; it is inferred that the higher the site's naturalness, the greater the environmental impact of its establishment and operation.

⁶ VH is for Very High, H for High, M for Medium, and L for Low.

⁷ Established technical specifications for plant ecological assessment in accordance with Article 49 of the Operational Regulations for Environmental Impact Assessments for Development Activities.

Finally, combining the classification results of the two major criteria, i.e., Criterion I: Natural Sensitivity and Criterion II: Operational Impact Level, we calculate the priority scores of the sites according to the Priority Scoring Matrix to determine the priority of each site.

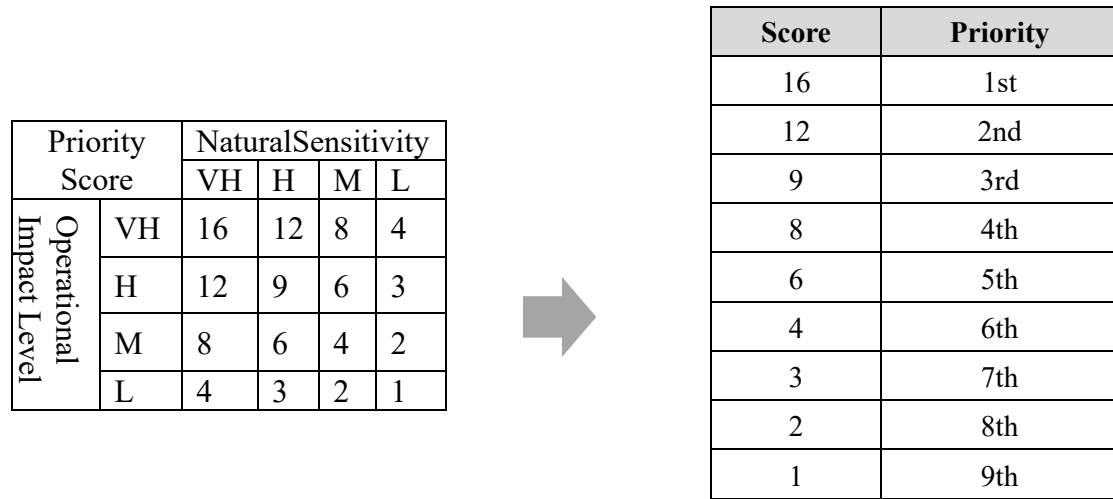


Figure 8. The Priority Scoring Matrix and Corresponding Priority Table

According to the results of the localized Locate analysis developed based on the LEAP methodology, priority base stations for analysis belonging to the top three priority categories (first to third) account for 1% of the total base stations in the entire region⁸.

⁸ The entire region including Taiwan, Penghu, Kinmen, and Matsu areas.

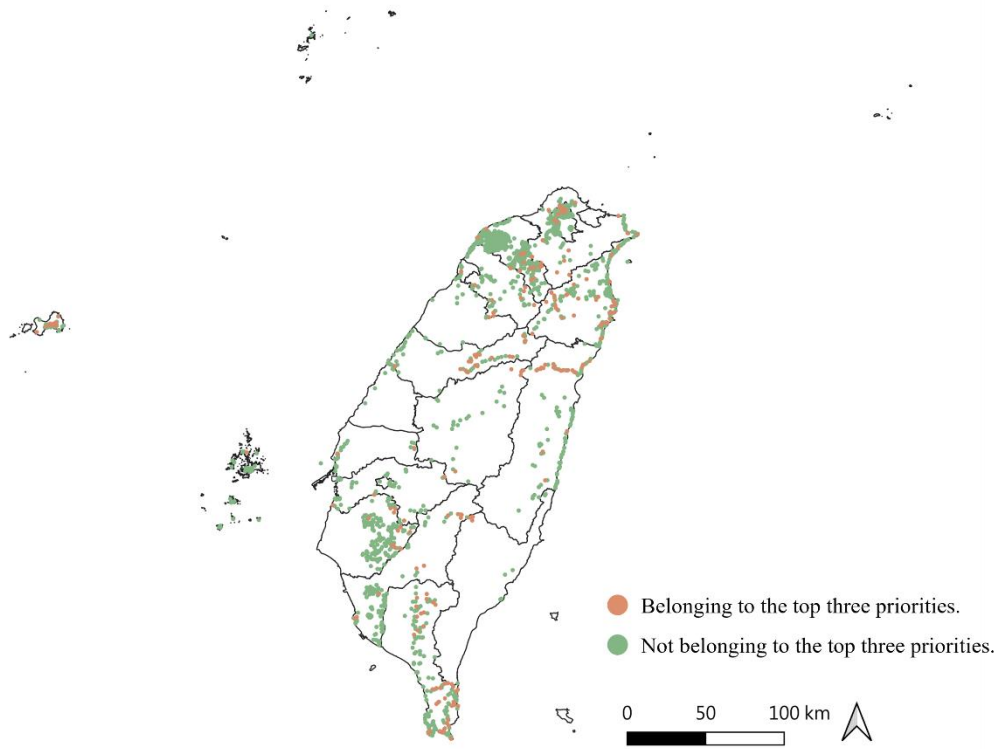


Figure 9. The Locate Analysis Results of Priority Base Stations for Analysis

Evaluation: Analysis of Dependencies and Impacts on Nature⁹

To fully evaluate the dependencies and impacts of base stations on nature, the taskforce developed a localized Evaluate analysis process by adopting the TNFD LEAP methodology and taking into account Taiwan's local conditions. Based on the dependencies and impacts on nature identified during the Locate phase, the interdependencies between base stations and nature throughout their lifecycle—from site selection, planning and design, construction, operation, to decommissioning—were examined. Additionally, CHT has established dependency and impact measurement indicators, as well as impact materiality determination standards, to measure the base stations' dependencies and impacts on nature and to identify significant impact factors.

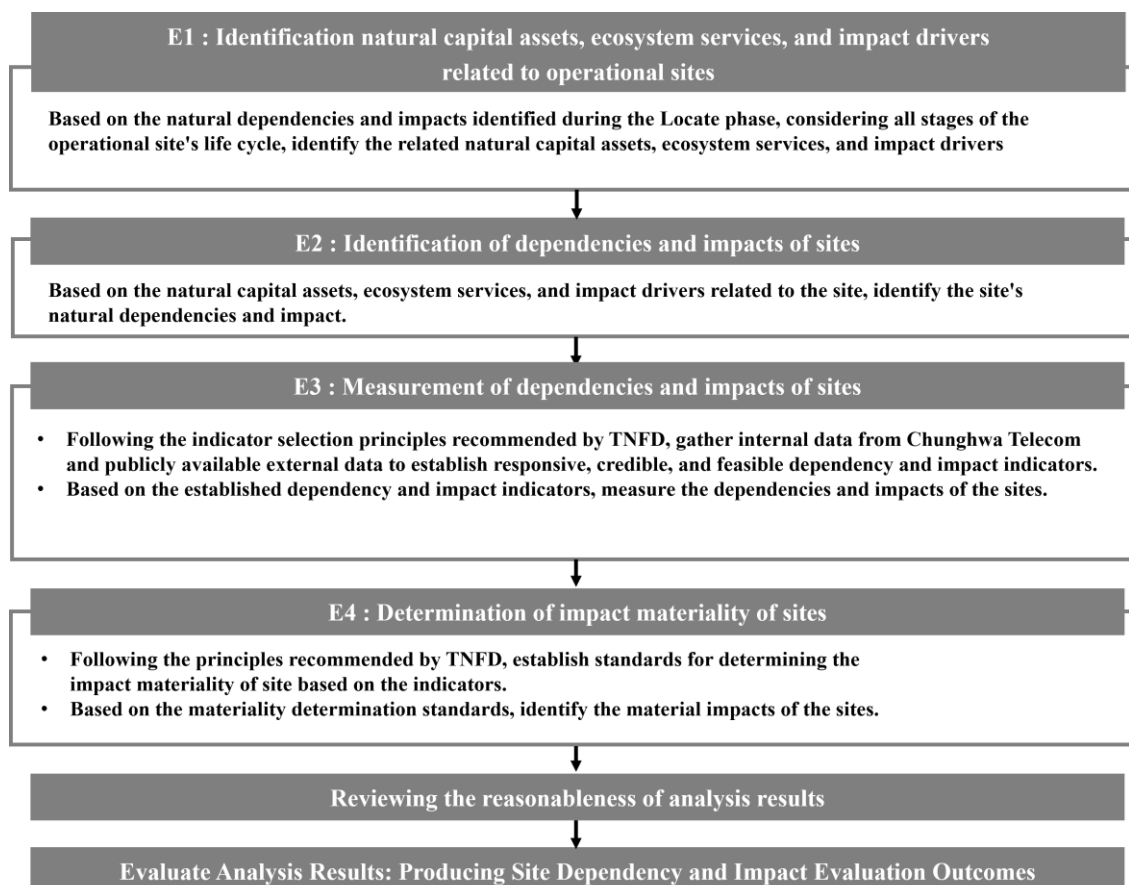


Figure 10. The Localized Evaluate Analysis Process

Natural capital assets related to base stations include habitats, species, atmosphere, soil and sediments, and water. The ecosystem services related to base stations include natural disaster protection (e.g., earthquakes, landslides, tsunamis), climate regulation, and flood and storm protection. These natural capital assets and ecosystem services provide essential dependencies for operations, such as site stability, accessibility of access roads, electricity, oil, and water resources. Regarding impacts, the operational impact drivers include land use, GHG emissions, wastewater/purified water, solid

⁹ CHT also considers the recommendations of the TNFD in assessing its dependency and impact on nature, which includes evaluating the significance of natural resources to its operations and the adverse effects on the local environment. Through such actions, CHT is able to identify potential nature-related risks and opportunities and take appropriate response measures. Please refer to Chapter V “Nature-Related Risks and Impact Management” for more details.

waste, and electromagnetic radiation. These correspond to drivers of natural change, such as land use change, climate change, resource use, and pollution, which will positively or negatively affect the state of nature, thereby influencing the provision of ecosystem services.



Note: *The construction and maintenance processes may affect the local ecosystem (e.g., vegetation).

Figure 11. Dependencies and Impacts of CHT's Base Stations on Nature

Through collaborative discussions within the taskforce, two base stations near the Shimen Reservoir Water Quality Protection Area and the Chatianshan Nature Reserve were selected as pilot sites for the Evaluate analysis—"Fuxing Central Office Base Station" and "Fuxing Chatianshan Base Station." For these two pilot sites, their dependencies and impacts on nature were identified. Following the recommended quantitative indicators, we collected internal data and referenced publicly available databases from Taiwan government agencies, such as the National Science and Technology Center for Disaster Reduction's 3D Disaster Potential Map. This helped us understand the dependencies and impacts of the pilot sites on nature and determine material impacts for future tracking and management.

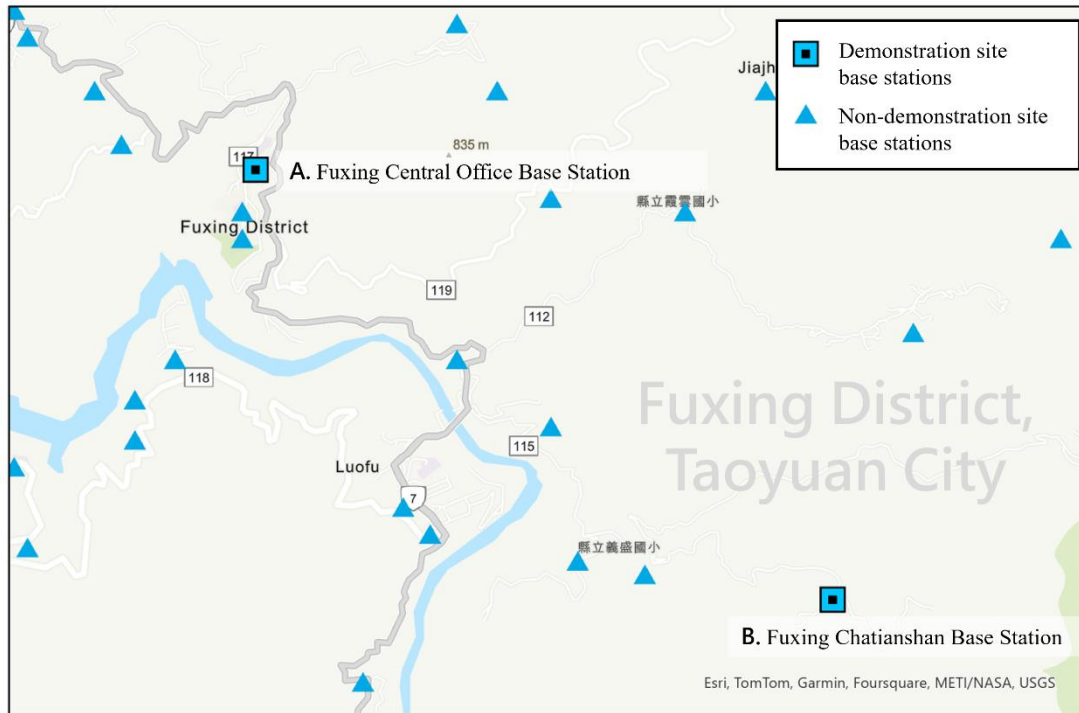


Figure 12. Pilot Site Location Map

The evaluate analysis results revealed that dependencies of both pilot sites include site stability, accessibility of access roads, and electricity. Impacts comprise land use (facilities and access roads), solid waste, GHG emissions and electromagnetic radiation. GHG emissions from electricity use were material impacts for both sites. Regarding Fuxing Central Office Base Station, land use was determined as a material impact due to the projected area of the site exceeding 50m².

Assess: Contextual analysis of nature-related risks and opportunities

The taskforce has gained in-depth understanding of the dependency and impact levels of its operational sites on nature; this has led to the subsequent inclusion of relevant sites into priority management. In addition, with the help of a third-party consultant team, scenario analysis was used to evaluate various factors that may affect overall operations; four analysis scenarios were established for nature-related risks and opportunities, using physical risks (ecosystem services) and transition risks (market drivers) as two major evaluation quadrants. These scenarios are designed to be consistent with CHT’s interaction with nature and the global biodiversity context, using its current status and potential mid to long-term factors as the basis for identification.

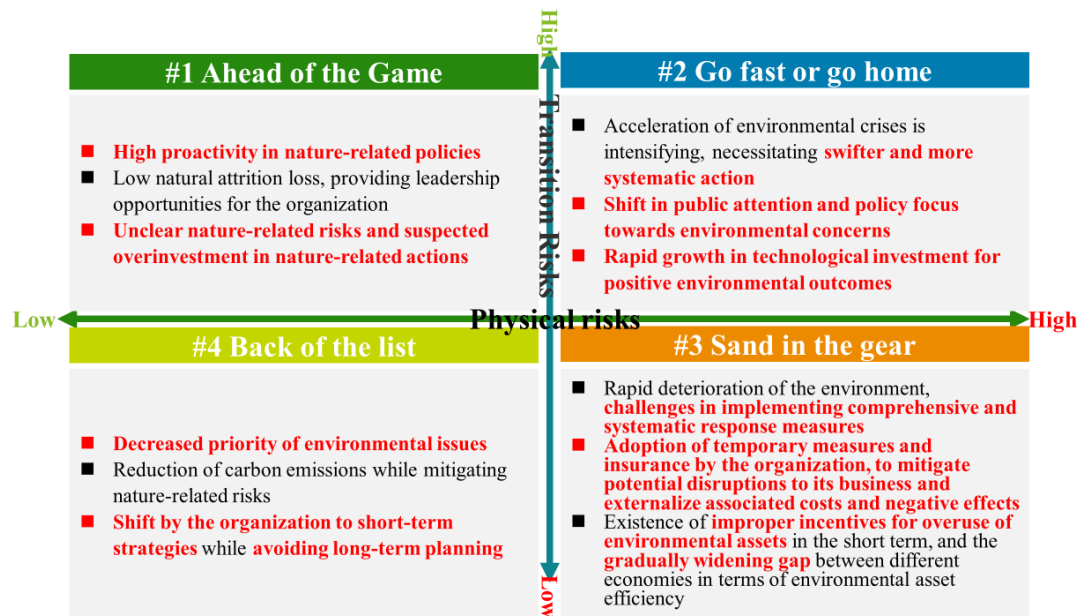


Figure 13. Analysis scenarios of nature-related risks and opportunities

Ultimately, three scenarios were used in CHT’s evaluation and analysis of nature-related risks and opportunities: #1 Ahead of the game, #2 Go fast or go home, and #3 Sand in the gear. These scenarios were integrated with potential future changes in the natural environment, business landscape, and regulatory requirements. At the TNFD Workshop, the taskforce and different business units to identify and assess its nature-related dependencies, impacts, risks, and opportunities.

Process for Identifying Nature-Related Risks and Opportunities

	Process	Items	Description
1	Collection	Set analysis scenario	Analysis scenarios reflect CHT’s interaction with nature and the global biodiversity situation, and are set based on the current environmental situation faced by CHT, as well as potential changes in the medium and long term.
		List nature-related risks and opportunities	Relevant risks and opportunities are identified through scenario simulations and analysis of internal and external data

	Process	Items	Description
2	Identification	Organize TNFD workshops	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.
		Consolidate identification results	The third-party consulting team consolidates nature-related risk and opportunity factors associated with each department’s business.
3	Recognition of significance	Nature-Related Risk/Opportunity Matrix	The probability and impact of nature-related risks and opportunities are assessed, with corresponding matrix diagrams subsequently generated.
4	Response strategy	Develop response strategies	CHT has developed strategies across its various departments to address significant nature-related risks and opportunities.
		Establish metrics and targets	Departments are each responsible for formulating appropriate indicators and goals to assess the implementation of relevant response strategies.
		Manage nature-related policies and relevant work	The Sustainable Development Committee consistently monitors the implementation progress and provides regular reports to the Board of Directors; these reports serve as a reference for tracking performance.

Prepare: Develop strategies and set targets for addressing nature-related issues

After identifying CHT’s nature-related risks and opportunities, the taskforce collaborated with various business units to assess effects on the corporate business model arising from risks and opportunities caused by nature-related dependencies and impacts. Corresponding response strategies were devised based on this assessment, and indicators and targets were established for evaluating and managing nature-related issues. Please refer to Chapter V “Nature-Related Risks and Impact Management” for more details on the identification of nature-related risks/opportunities and the description of response strategies.

V. Nature-Related Risks and Impact Management

(I) Management Planning for Nature-Related Risks and Enterprise Risks

Chunghwa Telecom faces challenges from rapid changes in operations, industry, and technology, including market competition, technological changes, regulations, and climate change. To ensure the company's stable development and sustainable operations, it officially established the "Risk Management Committee" in 2016. In 2023, this committee was elevated to a functional committee under the Board of Directors (the original management-level committee was renamed the "Risk Management Promotion Committee"). This committee now serves as the highest decision-making and supervisory body for risk management under the Board of Directors, with the chairman being an independent director, and more than 50% of its members being independent directors.

Chunghwa Telecom's Board of Directors formulates the risk management policy, framework, and culture. The functional "Risk Management Committee" is established under the Board of Directors to supervise and review the risk management policies, procedures, and framework. At the management level, the "Risk Management Promotion Committee" is established, which is specifically responsible for promoting and executing the company's overall risk control operations. The Audit Department reviews risk incidents, reporting occurred risks to the Audit Committee and imminent or preventive risks to the Risk Management Committee.

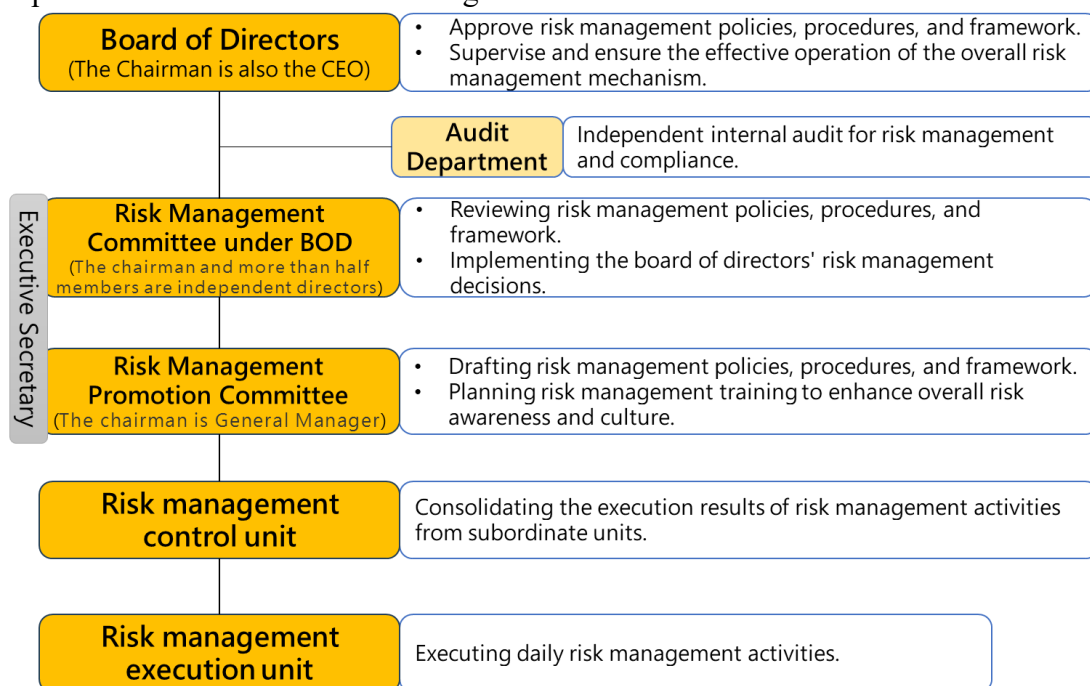


Figure 14. CHT Risk Management Organization Structure

To ensure uninterrupted operations and safeguard the stakeholder interests, CHT analyzes and addresses operational objectives, ensures financial reporting accuracy, and manages high-impact risk events in order to identify and control all operational risks. Currently, CHT manages risks through the Enterprise Risk Management (ERM) system, with future plans to incorporate emerging risks, such as nature-related issues, into the risk management approach. Regarding nature-related risk points, relevant departments collaborates with upstream and downstream partners in the value chain to assess and propose preventive or mitigating strategies, or alternative solutions, to

reduce environmental impact. This joint effort aims to enhance biodiversity and collectively build a resilient value chain.

(II) Identification of Nature-Related Risks and Opportunities

CHT utilizes three analysis scenarios to evaluate nature-related risks and opportunities within its operations and value chain. This process identifies key risks and opportunities, allowing for the subsequent development of a risk and opportunity matrix for nature-related issues.

To engage more stakeholders in environmental matters, CHT distributed online and physical surveys to seven key stakeholder groups to gather their insights, aiming to gain a better understanding of their views and expectations on significant nature-related issues concerning CHT.

Identification of Nature-Related Risks

CHT has identified the following major nature-related risk factors according to the analysis scenarios:

- Occurrence of natural disasters
- Increasingly stringent regulations pertaining to environmental disclosure and assessment
- Transitional requirements for efficient and low-destructive technology

Regarding environmental risks, stakeholders agree that CHT’s identified risks are highly relevant, especially among local communities/indigenous peoples, indicating a strong alignment with CHT’s risk concerns.

Furthermore, CHT incorporates upstream and downstream value chain considerations when identifying natural risks, assessing not only its own risks but also those faced by suppliers and customers to inform its response strategies. To effectively manage nature-related risks and bolster its biodiversity resilience, CHT also evaluates various analytical scenarios and assess the potential outcomes of nature-related risks, including physical risks and transition risks such as regulatory and consumer preference changes; this assessment is used as a basis for prioritizing response strategies.

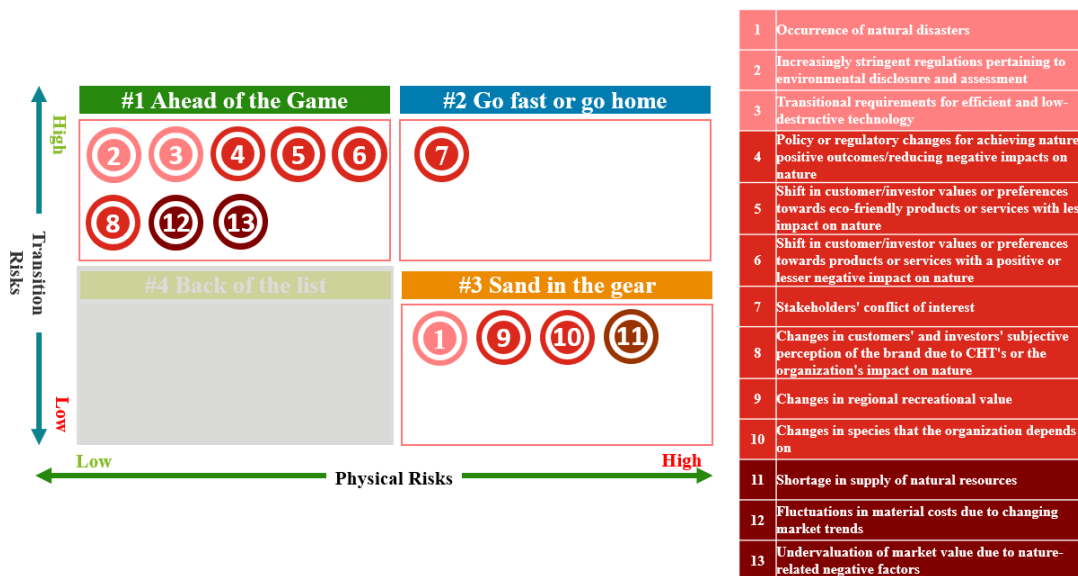


Figure 15. CHT’s Analysis of Four Scenarios and Corresponding Nature-Related Risks

Please refer to “V-3. Analysis of Risks and Opportunities and Response Strategies” for an overview of the risk matrix analysis, impact assessment, response strategies, and financial implications of the three major nature-related risk factors mentioned above, as well as two additional risks identified within the value chain after discussions with the taskforce.

Identification of Nature-Related Opportunities

CHT has identified the following major nature-related opportunities according to the analysis scenarios:

- Entrance into emerging markets
- Engagement with stakeholders to enhance the ecological environment
- Improvements in the utilization of natural resources

Stakeholder surveys reveal that the nature-related opportunities they prioritize are highly correlated with those identified by CHT; this aligns with CHT’s identification process, which consider nature-related opportunities and incorporates the needs and perspectives of stakeholders. With the support of data, CHT’s future strategies for natural mitigation, adaptation, and protection will not only address its operations, but also effectively collaborate with key stakeholders to realize nature-related opportunities, achieving mutual benefits.

At the same time, to effectively manage nature-related risks and bolster its biodiversity resilience, CHT also evaluates various analytical scenarios and assess the potential outcomes of nature-related opportunities against physical risks and transition risks such as regulatory and consumer preference changes; this assessment is used as a basis for prioritizing response strategies.

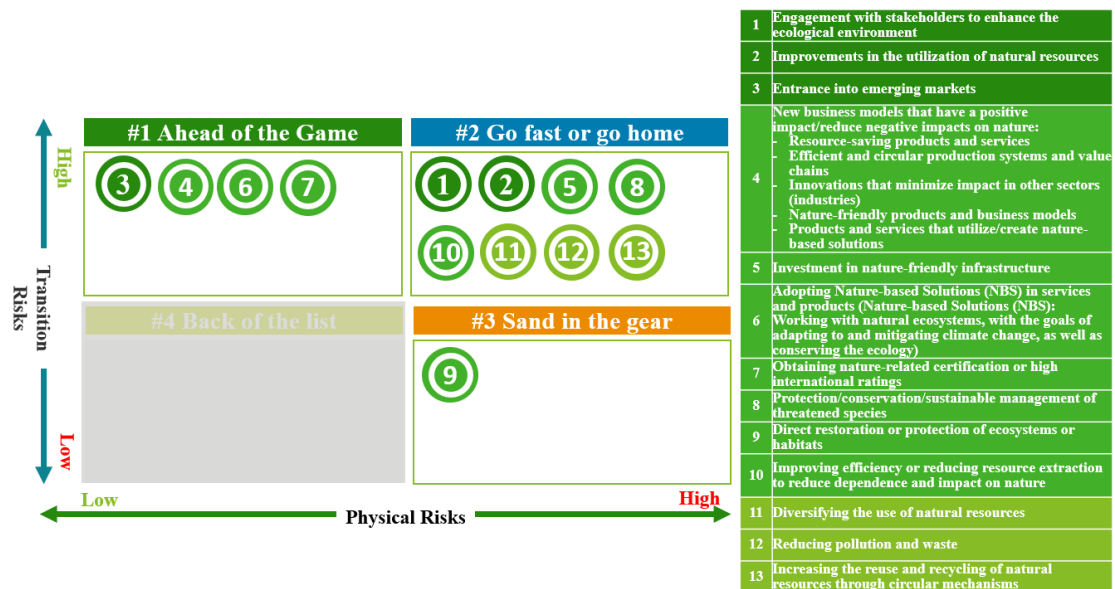


Figure 16. CHT’s Analysis of Four Scenarios and Corresponding Nature-Related Opportunities

Please refer to “V-3. Analysis of Risks and Opportunities and Response

Strategies” for an overview of the opportunity matrix analysis, opportunity description, response strategies, and financial implications of the three aforementioned major nature-related opportunities, as well as the evaluation of corresponding situations and establishment of response strategies.

(III) Analysis of Risks and Opportunities and Response Strategies

Based on identified nature-related risks, CHT evaluates the “Occurrence Frequency” and “Impact Level” of each risk to develop its Nature-Related Risk Matrix. In addition, significant risks with high likelihood and impact, including two major risks in the value chain, have been identified for targeted management.

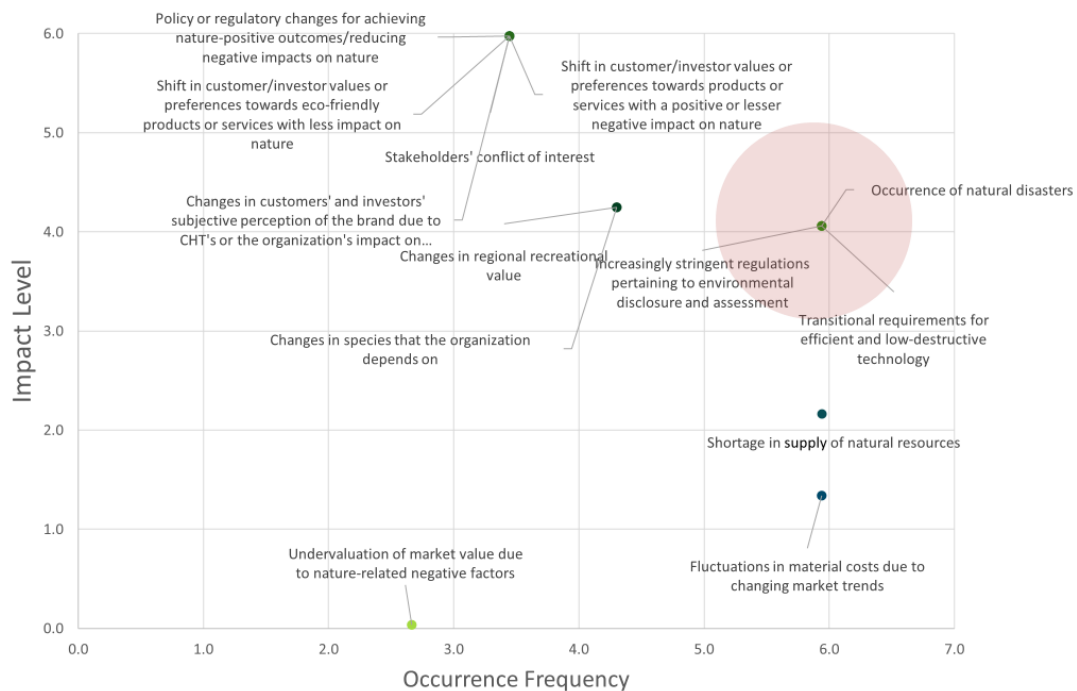


Figure 17. CHT Nature-Related Risk Matrix

Risk 1: Occurrence of natural disasters

Natural disasters such as typhoons and landslides may lead to interruptions in telecommunications network infrastructure services in remote areas, increasing operational costs, affecting brand reputation and customer loyalty, and potentially impacting employees’ physical and mental health and safety. This, in turn, could affect overall CHT operations. Thus, if not addressed promptly, the negative impacts could lead to increased costs, reduced revenue, customer attrition, damaged reputation, and diminished opportunities to acquire capital.

[Risks]	[Response Strategy]
<p>Products and Services:</p> <ul style="list-style-type: none"> Telecommunication network infrastructure in rural areas (e.g. base stations, mountain area telecom cables, and submarine cables) may be damaged by natural disasters, leading to service 	<ul style="list-style-type: none"> Establish a fixed network transmission rescue trailer to quickly restore network services in the event of data center damage, minimizing communication downtime. In response to the need of local

<p>interruptions.</p> <ul style="list-style-type: none"> • Post-disaster repairs and recovery may face safety risks and high-intensity work pressure, leading to the risk of overwork. <p>Reputation:</p> <ul style="list-style-type: none"> • Service interruptions may affect customer confidence, brand reputation, and customer loyalty. <p>Environment and Society:</p> <ul style="list-style-type: none"> • Construction materials used for base stations, such as metal and plastic, are often scattered during disasters, bringing negative impacts on the environment and ecology. • Power outages due to natural disasters require the activation of generators, which may cause air pollution and noise that could affect the environment and residents. 	<p>community and indigenous peoples identified as major stakeholders, our company expand the use of microwave frequency amplification in remote data centers, strengthen network resilience, and provide telecommunication services with high energy efficiency and low latency.</p> <ul style="list-style-type: none"> • Collaborate with diverse suppliers to enhance supply chain stability, reduce the risk of material shortages, and minimize impacts and losses due to communication interruptions. • Conduct environmental impact assessments at base stations, particularly in high-risk areas susceptible to natural disasters, and regularly take countermeasures such as maintaining drainage systems, inspecting equipment and racks, and implementing wind and waterproof measures. • Establish contingency plans, including emergency supplies, personnel training, etc., and conduct regular drills. • Conduct regular risk assessments, identifying risks and implementing appropriate management measures.
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Risk 2: Increasingly stringent regulations pertaining to environmental disclosure and assessment

In light of progressively stringent regulations concerning environmental disclosure and assessment, potential risks to be considered include increased energy consumption, carbon emissions, challenges in electronic waste disposal, noise-related concerns, and obstacles in base station construction. Failing to address these risks promptly could result in higher operating costs, reputational damage, decreased income, and limited opportunities for capital acquisition.

<p>[Risks]</p> <p>Operations:</p> <ul style="list-style-type: none"> • Internet Data Centers (IDCs) require a substantial and stable power supply in order to operate. As a result, coupled with regulations and societal demands, there is a need to utilize more 	<p>[Response Strategy]</p> <ul style="list-style-type: none"> • In order to meet the expectations of the natural major stakeholders – government agencies, investor shareholders, and local community / indigenous peoples, we plan to adopt more efficient equipment and technology to operate more
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<p>efficient equipment to enhance energy efficiency; it is also crucial to increase the adoption of renewable energy to reduce carbon emissions.</p> <p>Environment and Society:</p> <ul style="list-style-type: none"> • IDCs require regular hardware updates, which in turn generate a significant amount of electronic waste; inadequate disposal of this waste can lead to environmental pollution. • Noise generated by the operation of equipment may affect the surrounding environment and community. <p>Reputation:</p> <ul style="list-style-type: none"> • Construction of base stations may be hindered due to public misconception of base stations, affecting signal quality and damaging company reputation. 	<p>applications with fewer hardware resources; implement energy management systems to enhance resource efficiency and reduce energy consumption.</p> <ul style="list-style-type: none"> • Gradually increase the proportion of green electricity usage, with the IDC data center fully utilizing renewable energy by 2030. In the near term, short-term green electricity procurement will primarily focus on solar and onshore wind power. • Establish a comprehensive system for recycling and reusing electronic waste, and implement equipment maintenance and upgrades to prolong the lifespan of existing equipment. • Install soundproofing; conduct maintenance on weekends and holidays to minimize operational noise impact on residents. • Hold seminars to reduce public misunderstanding of electromagnetic waves, and assist the public in measuring data to alleviate concerns.
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Risk 3: Transitional requirements for efficient and low-destructive technology

Facing demands for high-efficiency and low-impact technological transformation, failure from CHT to respond timely to trends in technological innovation and eco-friendly products and services will result in risks such as rising costs, loss of customers, improper supply chain management, decreased product competitiveness, and damage to brand image. In the long run, this could lead to a significant decline in company revenue and profits, loss of market competitiveness, and reduced opportunities to obtain capital.

<p>[Risks]</p> <p>Operations:</p> <ul style="list-style-type: none"> • The dramatic increase in mobile communication needs has led to a rise in station demand, resulting in a surge in equipment investment, power usage, space, and requirements for maintenance manpower. • The addition of modern operational and maintenance 	<p>[Response Strategy]</p> <ul style="list-style-type: none"> • Introduce a new generation smart network that incorporates new technologies, including AI, automation, and energy-saving features, to enhance network intelligence, improve energy efficiency, and increase operational effectiveness. This aligns with the vision of influential advocacy organizations identified as major
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<p>capabilities, such as fault prediction, self-repair, and safety protection, etc., to new generation high-efficiency equipment will result in an increase in operating costs.</p> <ul style="list-style-type: none"> • Failure to achieve technological transformation will lead to limited resources that are unable to support operations, affecting service quality. This can cause user attrition, revenue loss, and an inability to improve operations, resulting in a vicious cycle. 	<p>stake holders of our company, aiming to improve energy efficiency and operational effectiveness.</p>
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Risk 4: Fluctuations in material costs due to changes in environmental protection trends

Trends in environmental protection issues lead to fluctuations in material costs, including risks of impact from increased costs for raw material procurement, product research and development, and supply chain management. If not addressed promptly, CHT could face a multitude of challenges such as supply chain instability, elevated procurement costs, research and development challenges, and damage to the brand image.

<p>[Risks] Operations:</p> <ul style="list-style-type: none"> • Suppliers may increase product prices in response to the growing demand for eco-friendly materials, leading to higher procurement costs. • In order to develop and deploy eco-friendly materials and technologies, there is a need to invest in research and innovation, leading to increased expenses. • In order to meet environmental protection requirements, CHT may incur additional costs in the collaboration with new suppliers and implementation of supplier management policies. 	<p>[Response Strategy]</p> <ul style="list-style-type: none"> • Establishing a diversified supplier base to reduce reliance on a single supplier, enhance bargaining power, and lower procurement costs. Additionally, we will collaborate with suppliers with a commitment to sustainable practices to ensure compliance with environmental product requirements. • Deepen collaboration with suppliers to jointly promote environmental practices and reduce research and development costs through innovation. • Launch the Green Gold Workshop to assist suppliers in integrating sustainable design thinking into company products and services. • Strengthen supplier sustainability management by establishing a supplier sustainability grading system to reduce supplier management costs. Additionally,
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	<p>commission third-party organizations to conduct on-site audits of suppliers, grading their ESG performance. It is expected that from 2027, procurements exceeding NT\$50 million must obtain bronze-level certification before bidding.</p>
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Risk 5: Shift in customer values or preferences towards eco-friendly products or services with less impact on nature

Customers shifting towards purchasing eco-friendly products and choosing competitor services may lead to customer loss, resulting in decreased revenue and damage to brand image.

<p>[Risks] Operations:</p> <ul style="list-style-type: none"> • Due to changes in customer values, there is a shift towards purchasing eco-friendly products. Additionally, competitors continue to promote their products or services with smaller environmental impacts, which may lead to customer attrition, reduced sales volume, and further impact the brand image. • Customers are also concerned about CHT’s supply chain, environment, and social responsibility. If supply chain performance cannot be improved or if relevant performance cannot be disclosed, they may opt for more eco-friendly products from competitors. 	<p>[Response Strategy]</p> <ul style="list-style-type: none"> • Promote carbon footprint certification, obtain carbon footprint labels, comply with DJSI and CDP requirements, and include the information in the sustainability report to improve CHT’s sustainability rating. Not only will this improve corporate sustainability rating, it will also emphasize the significance of managing carbon emissions and enhance brand image. <ul style="list-style-type: none"> ✓ In-store counter services: Obtain ISO 14067 certification and the carbon footprint label from the Ministry of Environment. ✓ Four core telecom services: Obtain ISO 14067 certification and the carbon footprint label from the Ministry of Environment. • Launch an initiative for joint commitment to net-zero emissions with suppliers, incorporating its regulations into procurement conditions and establishing a sustainable supply chain.
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Based on identified nature-related opportunities, CHT evaluates the “Occurrence Frequency” and “Impact Level” of each opportunity to develop its Nature-Related Opportunity Matrix. In addition, significant opportunities with high likelihood and impact have been identified for targeted management.

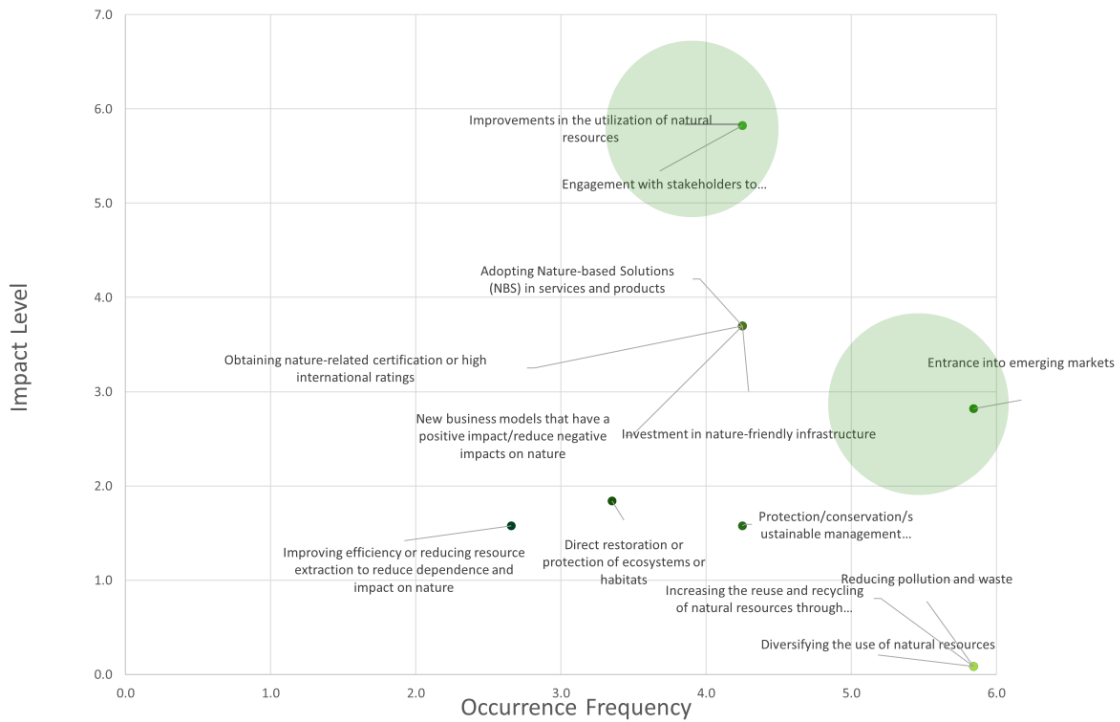


Figure 18. CHT Nature-Related Opportunity Matrix

Opportunity 1: Entrance into emerging markets

By collaborating with technology groups, subsidiaries, and ecological partners to develop net-zero transition solutions, CHT aims to be the leading service provider for government/corporate green transformation. Through enhancing client reputation, reducing client operational costs, and promoting net-zero business strategies, CHT plans to increase revenue and shareholder equity, establish a professional image in sustainable development, enhance brand value, and effectively seize opportunities to increase business income.

[Opportunities]	[Response Strategy]
<p>Operations and Reputation:</p> <ul style="list-style-type: none"> Developing a solution for net-zero transition can assist corporate customers in achieving net-zero transitions, thereby improving CHT’s revenue, shareholder equity, and reputation. Providing carbon footprint assessment products can assist customers in complying with international supply chain regulations, enhancing their competitiveness and improving CHT’s brand reputation. Helping customers reduce carbon emissions and mitigate the impact of carbon pricing on businesses, through 	<ul style="list-style-type: none"> Combine technology groups, subsidiaries, and ecological partners to assist customers in applying low-carbon technologies, disclosing carbon information, meeting the green procurement criteria of large enterprises/brands, and reducing carbon emission costs. Provide energy-saving and carbon reduction solutions for small and medium-sized enterprises, such as offering corporate carbon reduction maps and integrating government subsidy programs, thereby enhancing customer competitiveness.

<p>energy-saving/energy-storage systems, will enhance CHT’s revenue and reputation.</p>	<ul style="list-style-type: none"> Promote energy-saving systems for large electricity consumers, companies with high-energy-consuming equipment, and medium to large-sized enterprises to mitigate the impact of carbon pricing.
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Opportunity 2: Engagement with stakeholders to enhance the ecological environment

CHT may enhance its reputation and image through engagement with stakeholders to improve the ecological environment, with measures such as mandating the use legally sourced and sustainably managed timber by suppliers, or undertaking reforestation measures. If implemented, these initiatives will help protect forest ecosystems and biodiversity and enhance CHT’s sustainability image, thereby increasing the trust of customers and investors, improving corporate competitiveness, and creating opportunities to increase revenue.

<p>[Opportunities] Reputation</p> <ul style="list-style-type: none"> Requiring suppliers to use legal and sustainable timber and obtain the corresponding certification will help prevent illegal logging activities. This initiative aims to reduce forest degradation and ecological imbalance, ensuring the sustainable utilization of forest resources while bolstering our company's reputation and image. Implementing reforestation to protect biodiversity can effectively improve the surrounding environment and enhance the company’s reputation. 	<p>[Response Strategy]</p> <ul style="list-style-type: none"> Request suppliers to use wood from legal and sustainable sources and obtain the necessary certifications, such as FSC certification for leather paper products. Additionally, they should incorporate a specified percentage of recycled pulp in the manufacturing process. For items such as printing paper, wooden office furniture, and construction and renovation timber procured to meet business needs, we plan to gradually adopt purchasing standards that include FSC or PEFC certification. Reforestation efforts have been conducted for state-owned forests and coastal forests through a strong partnership with the Forestry and Nature Conservation Agency of the Ministry of Agriculture. Through the revision of procurement contracts, CHT advocates its no-deforestation policy to suppliers, encouraging the use of eco-friendly materials and guiding suppliers to implement it during a buffer
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	<p>period, with the aim of achieving the NND (No Net Deforestation) goal by 2030.</p> <ul style="list-style-type: none"> Promote short-term highlight projects, we are planning the “Chunghwa Telecom Hundred-Point Restoration Project”. In particular, the project will first be implemented at pilot sites, before gradually expanding to achieve the goal of restoring one hundred sites.
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Opportunity 3: Improvements in the utilization of natural resources

By leveraging digital services, both the use of natural resources and operational costs can be reduced; at the same time, the development of smart agriculture solutions can also yield multiple benefits, including resource conservation, environmental protection, and improved production efficiency. Thus, timely promotion in response to market trends can enhance revenue and reputation, bringing multiple positive outcomes to stakeholders and effectively seizing opportunities to increase business income.

<p>[Opportunities] Operations and Reputation:</p> <ul style="list-style-type: none"> Digitizing customer notification letters can reduce operational costs and the use of nature-related resources (paper). Developing smart agricultural products by utilizing CHT’s expertise in smart technology products and services can contribute to the advancement of smart agriculture. This will create a consistent demand for suppliers and open up opportunities for technical collaboration, ultimately increasing revenue and strengthening CHT’s reputation. 	<p>[Response Strategy]</p> <ul style="list-style-type: none"> Notify the expiration of CHT’s contracts and offers by SMS and voice and gradually implement relevant policies. The SMS notification service for mobile operations was implemented in 2023, with non-mobile operations’ voice notification expected to be implemented by late 2024. This initiative is projected to reduce paper correspondence by approximately 3 million letters. Continuing our commitment to environmental responsibility, our company actively promotes paperless billing services. In 2023, we processed 20.72 million transactions through paperless billing, representing 72.77% of total transactions. Including initiatives to reduce postal mail, we reduced paper usage by 680 million sheets, leading to a carbon footprint reduction of 4,621 metric tons and cumulative savings of NT\$1.49 billion in printing and mailing costs. Our company has collaborated
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	<p>with Future Bank to introduce the "Chunghwa Telecom Empowering Your Sustainable Future" ESG initiative. This partnership leverages the convergence of telecommunications and financial services to broaden our customer reach and promote paperless billing, thereby reducing carbon footprint.</p> <ul style="list-style-type: none"> • Develop smart agriculture solutions, including smart agricultural environmental control systems, AI pest and disease early warning, low-carbon agricultural technology, etc., and provide immediate technical support to farmers.
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The above evaluation of the impact and effects of nature-related risks and opportunities takes into account the difficulty of quantifying natural environment and social values. Currently, the financial impact of nature-related risk and opportunity items has not yet been presented in monetary terms

Overall, CHT values the inclusion of external perspectives and the importance of natural issues in its operations. Therefore, CHT is committed to incorporating feedback collected from natural key stakeholders into future environmental management strategies and actions. This includes enhancing ESG education, training, and promotion for employees, using eco-friendly materials in the decoration and landscaping of operational sites such as base stations, and continuing to collaborate with external parties. Through core business competencies, CHT aims to contribute to the preservation of biodiversity and promote the fulfillment of its commitment to environmental sustainability.

VI. Natural Goals and Action Plans

CHT has established a biodiversity conservation strategy plan guided by two core principles — mitigating nature-related losses and advancing nature positivity which outlines corresponding conservation pathway checkpoints and indicators and takes into account diverse nature-related risks faced by CHT and its value chain including both physical and transition risks. It was formulated to effectively manage nature-related risks and opportunities, improve management practices, enhance positive environmental impact, and ensure sustainable development. In particular, our strategy involves implementing scientific assessments of natural risks, establishing policies to prevent deforestation, and aligning with initiatives that promote environmental benefits and so forth. On the whole, these actions are structured to progressively heighten management efforts, supported by progress-tracking metrics, and ensure the execution of environmental strategies.

In terms of mitigating nature-related losses:

1. We have preliminarily established a Taiwan-based scientific assessment process. Moving forward, with 2030 as the target, we will conduct phased facility inventories and self-assessments based on the levels of "natural sensitivity" and "operational impact," and expand the implementation into our value chain.
2. Following our no-deforestation policy, we will gradually adopt paper products certified by the Forest Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC), and organize relevant seminars to enhance public awareness of no-deforestation principles.

In terms of promoting nature positivity:

1. We will continuously keep track of global trends, evaluate participation in international biodiversity advocacy organizations, exhibit our achievements at relevant expositions, and host forums to advocate for nature-positive concepts.
2. We will progressively expand the Hundred-Point Restoration Project, encouraging employees to engage in stakeholder communication and initiating habitat restoration work to establish a model for a nature-positive approach.

VII. Vision for Future Environmental Action

One of CHT's three major visions is to become a sustainable development-based international benchmark enterprise. Its environmental action plan aligns with the United Nations Kunming-Montreal Global Biodiversity Framework, and aims to reach the 2030 milestone of reversing biodiversity loss, as well as the 2050 vision of realizing human-nature harmony.

In 2023, CHT announced its commitment to achieving Net Positive Impact (NPI) and No Net Deforestation (NND) by 2030. CHT engages external academic experts to assist in planning conservation strategies, collaborates with external organizations, and uses ICT technology to empower biodiversity solutions. In addition, TNFD guidelines and the LEAP methodology are also followed in CHT's analyses of the environmental impact of operational sites, e.g. base stations and data centers, to prioritize management. Furthermore, in acknowledgment of the significance of external perspectives, CHT gathers stakeholder feedback through surveys on natural issues to refine future nature-related risk and opportunity strategies.

In the future, in addition to gradually implementing the conservation pathway, CHT plans to improve its TNFD disclosures with the recognition that the participation of value chain partners is also crucial for biodiversity. Subsequently, the inventory scope is projected to expand from operational sites to the entire value chain, encouraging various industries to collectively focus on environmental and biodiversity issues, and fostering collaboration between businesses and future generations for a sustainable and prosperous future.

Appendix TNFD's Recommended Disclosures

	Recommended Disclosures	Chapter
Governance	Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities.	III-1. Governance Organizational Structure
	Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities .	III-1. Governance Organizational Structure
	Describe the organisation's human rights policies and engagement activities, and oversight by the board and management, with respect to Indigenous Peoples, Local Communities, affected and other stakeholders, in the organisation's assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.	III-2. Stakeholder Communication and Engagement
Strategy	Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium and long term .	V-2. Identification of Nature-Related Risks and Opportunities
	Describe the effect nature-related dependencies, impacts, risks and opportunities have had on the organisation's business model, value chain, strategy and financial planning, as well as any transition plans or analysis in place.	V-2. Identification of Nature-Related Risks and Opportunities
	Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios .	V-2. Identification of Nature-Related Risks and Opportunities
	Disclose the locations of assets and/or activities in the organisation's direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations.	IV-2. LEAP Analysis Method
Risk and Impact Management	Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its direct operations.	V-2. Identification of Nature-Related Risks and Opportunities
	Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s).	IV-2. LEAP Analysis Method
	Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities.	IV-2. LEAP Analysis Method

Recommended Disclosures		Chapter
	Describe how processes for identifying, assessing, prioritising and monitoring nature-related risks are integrated into and inform the organisation's overall risk management processes.	V-1. Management Planning for Nature-Related Risks and Enterprise Risks
Metrics & Targets	Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process.	VI. Natural Goals and Action Plans
	Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature.	VI. Natural Goals and Action Plans
	Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.	VI. Natural Goals and Action Plans

GRI Standards Comparison Table

GRI Standards and Disclosure Items		Chapter
GRI 101-1	Policies to halt and reverse biodiversity loss	I-1. Commitment to Sustainability
GRI 101-2	Management of biodiversity impacts	VI. Natural Goals and Action Plans
GRI 101-3	Acquisition and benefit-sharing	I-4. Streamlining ICT Use in Innovation Ecological Services for Biodiversity
GRI 101-4	Identification of biodiversity impacts	V-2. Identification of Nature-Related Risks and Opportunities
GRI 101-5	Locations with biodiversity impacts	IV-2. LEAP Analysis Method
GRI 101-6	Direct drivers of biodiversity loss	V-2. Identification of Nature-Related Risks and Opportunities
GRI 101-7	Changes to the state of biodiversity	I-3. Biodiversity Conservation Strategy Plan IV-2. LEAP Analysis Method
GRI 101-8	Ecosystem services	III-2. Stakeholder Communication and Engagement I-4. Streamlining ICT Use in Innovation Ecological Services for Biodiversity