

2023 Climate and Nature Report



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About this Report

Welcome to E.SUN Financial Holding Co., Ltd.'s (hereinafter referred to as E.SUN or E.SUN FHC) third Climate and Nature Report. This report is prepared in accordance with the Recommendations of the Task Force on Climate-related Financial Disclosures (hereinafter referred to as TCFD) and the Recommendations of the Taskforce on Nature-related Financial Disclosures (hereinafter referred to as TNFD). E.SUN has commissioned the British Standards Institute (BSI) to conduct a conformity review for TCFD and TNFD standards to enhance the transparency and rigor of our disclosures, ensuring our alignment with international standards.

Climate change and natural environmental degradation are unavoidable challenges for humanity in the 21st century, leading not only to frequent extreme weather events but also to significant impacts on biodiversity, which affect the natural resources and ecosystems upon which we rely. E.SUN, in accordance with the TNFD disclosure framework, assesses the potential impacts of our operations on nature through dependency, impact, risk, and opportunity pathways, as well as the potential effects caused by changes in the natural environment. This approach enables a more comprehensive examination and evaluation of our relationship with the natural environment.

This report introduces the TNFD's LEAP approach, applying the four phases (Locate, Evaluate, Assess, and Prepare) into our analysis of our operations, supply chains, and portfolios. The assessment covers over 35,000 domestic enterprises, integrating a total of 51 operational characteristics and geographical indicators, along with 31 data layers for a comprehensive evaluation of E.SUN's financial impacts in the short, medium, and long terms.

Due to constraints in data availability and accuracy, the data used in this report are produced by various public and private sources mainly for academic research, disaster prevention, and policy-making purposes, and may not fully reflect real-world scenarios. E.SUN extensively collects information and selects the best available data and indicators with better granularity for analysis in order to reduce uncertainty and provide insights with decision-making reference value.

Reporting Period

The report is published annually since 2022. The information disclosure period for this report is for the fiscal year 2023 (from January 1, 2023, to December 31, 2023), covering governance, strategy, risk management, and metrics and targets. In order to present a more comprehensive picture of various projects and campaigns undertaken by E.SUN FHC, the report also discloses activities that occurred prior to January 1, 2023, and after December 31, 2023. The previous version of this report was published in December 2023.

Scope of the Report

The scope of this disclosure focuses on the operating activities and services of E.SUN Financial Holding Co., Ltd. (E.SUN FHC) and its subsidiaries (E.SUN Bank, E.SUN Securities, E.SUN Venture Capital, and E.SUN Investment Consulting) in Taiwan, which accounts for 99.8% of E.SUN FHC's net revenue (excluding E.SUN Bank's subsidiary, Bank Pro). All financial figures are calculated in New Taiwan Dollars, with relevant statistical data based on internationally accepted standard metrics, including the performance of certain overseas branches. Environmental protection projects related to water usage, electricity consumption, and fuel usage are disclosed for E.SUN's Taipei Headquarters Building, Second Headquarters Building, Summit Campus, Hope Campus, Technology Building, Boai Building, as well as overseas and domestic branches and subsidiaries. Any special meanings pertaining to the above quantitative indicators are explained in separate footnotes.

Reporting Framework

TNFD	Recommendations of the Taskforce on Nature-related Financial Disclosures
TCFD	Recommendations of the Task Force on Climate-related Financial Disclosures

Standard of Information

Data Category	Standard and Reference	Certifying Organization
Sustainability Data	Recommendations of the Task Force on Climate-related Financial Disclosures TCFD	BSI Taiwan
	Recommendations of the Taskforce on Nature-related Financial Disclosures TNFD	
Financial Data	Annual Financial Report	Deloitte
Environmental Data	ISO 14064-1 2018 Greenhouse Gas Inventory	SGS Taiwan
	ISO 14046 2014 Organizational Water Inventory	
	Statement of Assurance Engagements Standards 3410 Case of Assurance on Greenhouse Gas Statement (Scope 3 Investment and Financing Portfolio Financial Carbon Emissions)	PwC Taiwan

Letter from the Chairman and President



Together we can do great things.

The impact of climate change on the world cannot be addressed solely by a few industries; it is a challenge that we all must confront together. Creating sustainable solutions helps unite businesses and fosters collaboration. Although the path to Net Zero is challenging, we firmly believe that "A journey of a thousand miles begins with a single step." With each step we take, we draw closer to our goals. E.SUN long embedded sustainability into its management philosophy. Through direct operations, energy management, financial products, and customer engagement, we aim to expand our impact beyond our core business. As Mother Teresa once said, "Together we can do great things." E.SUN stands alongside our customers and industry peers to confront this daunting challenge and build a beautiful home for future generations.

Implementing Transition Management

E.SUN achieved remarkable emissions reduction results in 2023. The targets for Scope 1 and 2 were initially set for a 12.6% reduction from the 2020 baseline; we successfully achieved an 18.5% reduction, surpassing our goals, while also aligning with SBT targets for Scope 3 emissions. As sustainability and net zero trends have become clearer in recent years, we are embarking on the next phase of our transition plan. This involves setting short-, medium-, and long-term goals, as well as designing a carbon management mechanism aligned with our business development. To strengthen the foundations for carbon management, E.SUN has developed a financed emissions management system that significantly reduces the time required to generate data and increases the frequency of updates. All emission data and methodology logic are documented, enhancing the quality of information. The team can also quickly adjust their actions based on the results, broadening the scope and effectiveness of management and allowing for an immediate response to potential risks and opportunities.

Promoting Nature-Based Solutions to preserve biodiversity

E.SUN took the lead in creating the first report that combined the TCFD and TNFD frameworks in 2021. This report further achieved the first third-party conformity review for TNFD, disclosing climate and nature-related risks and opportunities. E.SUN's Chief Sustainability Officer, Mr. Louis L.Y. Chang, participated in the New York Biodiversity Summit for the second time, delivering a speech titled

"Revitalizing Indigenous Ecosystems through PPP Framework", where he shared insights on the E.SUN Malawi Project. This project, initiated in 2014, collaborates with local organizations and farmers to provide funding support for organic farming. After ten years of effort, it has not only protected the culture of the indigenous Bunun people and contributed to local economic development but has also significantly preserved the local environment and biodiversity. Additionally, E.SUN actively supports eco-friendly agriculture through its core financial operations. At the production level, we assist farmers in applying for certifications through the "Leopard Cat Loan Project." At the consumer level, we provide exclusive financial services for restaurants that obtain sustainable certifications, linking the supply chain and creating a friendly "Farm to Table" value chain that showcases E.SUN's commitment to protecting biodiversity.

Commitment to a Sustainable Future

On the road to sustainability, it is essential for everyone to move together. E.SUN's commitment to sustainability is reflected not just in corporate operations but is also integrated into our culture and core values. Moving forward, we will continue to innovate, combining our financial expertise to realize a net-zero transition and safeguard biodiversity, ensuring that this beautiful homeland can be sustained for future generations.

E.SUN FHC / Bank
Chairman

Joseph Huang

E.SUN FHC
President

James

Targets and Achievements

Targets		2023 Achievements	
Net Zero by 2050 according to 1.5°C SBT standards	Sustainability Linked Loans account for 13% of the total credit outstanding by 2030	NT\$80.9 billion Green Loan outstanding	Selected for the DJSI for 10 consecutive years
100% renewable energy use for all global locations by 2040	Sustainability Bond outstanding NT\$42 billion by 2030	NT\$60.1 billion Sustainability-linked loan outstanding	AAA rating in MSCI ESG Ratings for 2 consecutive years
Fully divest from coal industries by 2035	Obtain Green Building certification for 100% of owned buildings by 2027	NT\$29.4 billion Sustainability Bond outstanding	Frontrunners in Sustainalytics ESG Region and Industry Group Risk Ratings for 2 consecutive years
42% reduction of operation emissions by 2030 (with 2020 as the baseline)	E.SUN–NTU ESG Centenary Project: 100,000 trees planted by 2032	18.5% reduction of operation emissions (with 2020 as the baseline)	CDP climate change scored Leadership A Level
Green Loan outstanding total NT\$130 billion by 2030			

Climate and Nature Action Milestones

E.SUN adheres to the TNFD disclosure framework, which encompasses four major areas: Governance, Strategy, Risk and Impact Management, and Metrics and Targets. We have established a vision of achieving nature-positive growth by 2030 and the goal of reaching net zero by 2050. Through scientific methodologies and robust risk management, we are making steady progress toward net-zero emissions and fostering harmonious coexistence with nature.

Initiatives Joined

2014

The first financial institution in Taiwan included in DJSI

2015

Adopted the Equator Principles

2017

First Taiwanese signatory of TCFD

2022

- First FI in Taiwan to receive validation of Science Based Targets (SBT)
- Joined TNFD, RE100, PCAF
- Appointed by the FSC as a member of Movers and Shakers on Sustainable Finance

2023

- Joined the Partnership for Biodiversity Accounting Financials (PBAF)
- Joined TNFD Early Adopters

2024

Joined Asian Transition Finance Study Group

E.SUN's Climate and Environmental Actions

2019

- Quantified transition risk of fossil fuel industry
- Stopped providing project financing to coal-fired power plants
- Issued carbon-neutral credit cards

2018

Conducted business inventory and risk identification based on climate change

2017

Established climate change management mechanisms and set up a dedicated taskforce

2021

- Set Net Zero by 2050 target
- Established sustainable finance policy
- Launched E.SUN ESG Sustainable Advocacy Action

2020

- Expanded measurement of the impact of high-climate risk industries
- Compiled GHG inventory for finance and investment portfolio

2022

- Established climate and environmental risk management policy
- Expanded E.SUN ESG Sustainable Advocacy Action to over 100 outstanding companies
- Published our first Climate and Environmental Report

2023

- Appointed as convener of the "Financial Industry Net Zero Working Platform - Policy and Guideline Working Group", completed financed emissions and target setting guidelines
- Signed the first climate and biodiversity sustainability-linked loan in Taiwan

2024

- Built financed emissions management system, providing real-time, automated Scope 3 emissions management
- Appointed as chair of the Coalition of Movers and Shakers for Sustainable Finance
- Held 4th consecutive E.SUN ESG Sustainable Advocacy Action

Reaching Across Nations, Sectors, and Domains Together Towards Net-Zero Transition

2024 E.SUN ESG Initiative

For four consecutive years, E.SUN has hosted the "E.SUN ESG Sustainable Advocacy Action", bringing together over 160 distinguished companies and medical institutions from Taiwan and overseas to set sustainability goals for net-zero transition together. Vice President Hsiao Bi-khim, Executive Yuan Deputy Premier Cheng Li-chun, FSC Chairperson Peng Chin-lung, and Minister of Environment Peng Chi-ming attended the event to show their support. Representatives from the Polish, British, and Canadian offices in Taipei, as well as the India Taipei Association and the Japan-Taiwan Exchange Association also participated, making this a unique multinational and cross-sector sustainability initiative in Taiwan.

This year a total of 165 partners participated, including industry leaders, hidden champions, overseas Taiwanese businesses, 26 medical institutions, and large international companies from Denmark, Greece, the United States, Singapore, Japan, and more. In addition to organizing the initiative, E.SUN is also expanding its Sustainability Transition Platform, integrating best available resources to provide net-zero solutions for enterprises.

Vice President Hsiao inscribed her blessing on a sky lantern, "A brighter Taiwan for a sustainable future", and expressed gratitude to E.SUN and the participating companies for rallying like-minded partners and uniting efforts to implement sustainability practices, thereby showcasing Taiwan's sustainable competitiveness to the world. Environment Minister Dr. Peng also noted that Taiwan's carbon fee system encourages businesses to invest resources in reducing emissions. He expressed hope that banks would support the green funding required for this process to facilitate the net-zero transition and the growth of small and medium-sized enterprises.

E.SUN invited leading experts, including Matt Christensen, the Global Head of Sustainable and Impact Investing at Allianz; Tsung-Tsong Wu, Chairman of the Industrial Technology Research Institute; and James C. F. Huang, Chairman of the Taiwan External Trade Development Council, to engage in discussions addressing international trends, policy directions, net-zero technologies, and other key issues, fostering lively interactions with attendees.

E.SUN FHC Chairman Joseph N.C. Huang stated, "A good ESG strategy is a good business development strategy." The global focus on climate, environmental, and social issues, along with the aspiration for transformation, has made ESG an essential component of sustainable business practices. By diligently working within their respective fields and collaborating towards a shared goal, we can create meaningful positive impacts for Taiwan and the world.

E.SUN will continue to align itself with international standards, combining the strengths of government, industry, and academia to enhance the value proposition for climate and environmental actions and provide integrated solutions for finance and sustainability, collaborating with like-minded partners towards a new future of net-zero transformation.



From Taipei to New York, from Net Zero to Nature Positive

Climate Week NYC is held every September and is one of the world's largest annual climate events, coinciding with the United Nations General Assembly. The event features over a hundred activities organized by policymakers, international organizations, and private enterprises, collectively promoting global sustainable transition. E.SUN's Chief Sustainability Officer, Mr. Louis L.Y. Chang, led a team to New York to gain insights into the latest international trends in climate and biodiversity.

The World Biodiversity Summit (WBS), held during Climate Week, focuses on nature and this year's theme was "Fostering Partnerships and Investment for a Nature-Positive Future". The summit echoes the "Kunming-Montreal Biodiversity Framework", emphasizing the integration of climate and biodiversity and promoting nature-based solutions and nature-positive investments. Attendees included representatives from the U.S. Environmental Protection Agency, industry and finance leaders, advocacy organizations, and indigenous groups who shared their latest perspectives on environmental issues.

Mr. Chang was invited by the WBS and delivered a speech titled "Revitalizing Indigenous Ecosystem through PPP Framework", and presented a film on E.SUN's Malavi Project at the summit. He highlighted how E.SUN collaborates with the government, local communities, and NGOs to create positive economic, cultural, and environmental benefits. He explained how E.SUN leverages its financial expertise to link sustainable agriculture across the value chain, facilitating the sustainable transformation of food and agriculture.

Mr. Chang emphasized that E.SUN is dedicated to integrating traditional aboriginal knowledge to develop nature-based solutions aimed at creating positive economic, social, and environmental impacts. Since its launch in 2014, the Malavi Project has continuously assisted aboriginal farmers in transitioning to organic farming. After a decade of effort, more than half of the local fields have transitioned to organic farming,



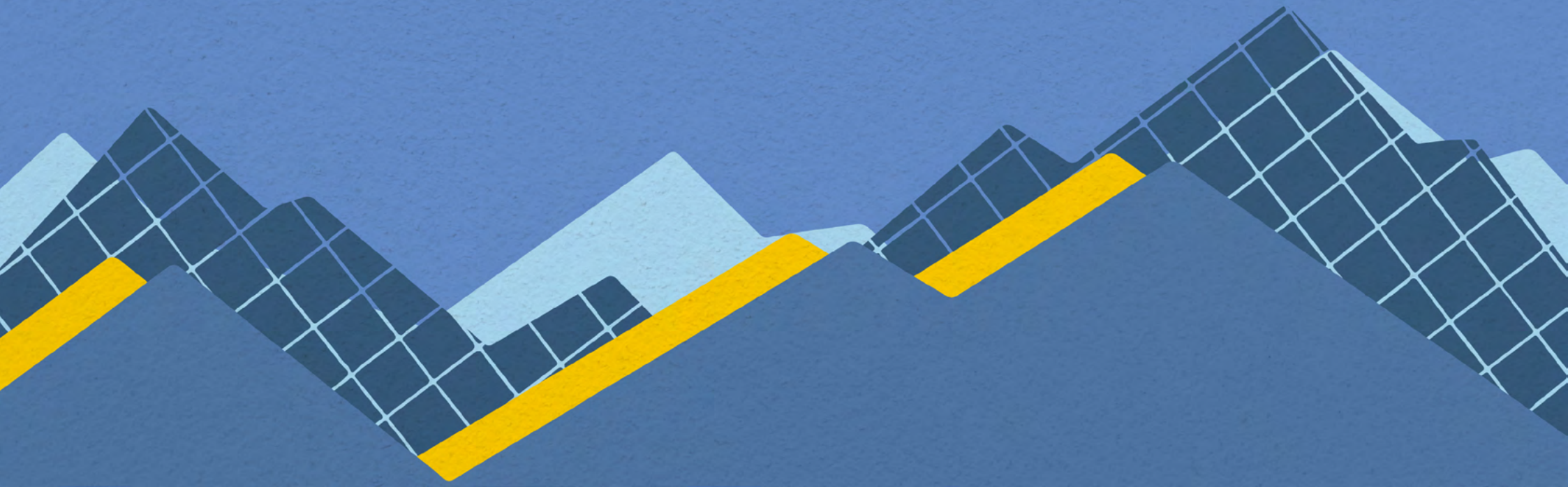
making Malavi a proud local brand in Hualien. Moreover, organic rice and traditional Bunun grains have been incorporated into the local elementary school lunch system, aiding in the passing down of traditional culture to future generations. Local farmers, with government support, have begun documenting their agricultural ecology and creating ecological habitats, becoming significant contributors to ecological restoration. The ongoing commitment has transformed the Malavi fields into a thriving habitat for the near endangered species "Kikuchi's Minnow (*Aphyocypris kikuchii*)".

Building upon this foundation, E.SUN launched the "Farm to Table" project, integrating financial operations and professional consulting services to assist the agriculture and food industry from production to consumption.

E.SUN believes that "A good ESG strategy is a good business development strategy." Climate issues and net-zero emissions have become clear international trends, and maintaining Earth's biodiversity is crucial for stable economic development and the preservation of our planet. As a pioneer in sustainable finance, E.SUN will steadfastly advance on the path of sustainability, collaborating with like-minded partners to move towards a future characterized by climate resilience, ecological harmony, and net-positive impacts.

CH1 Governance

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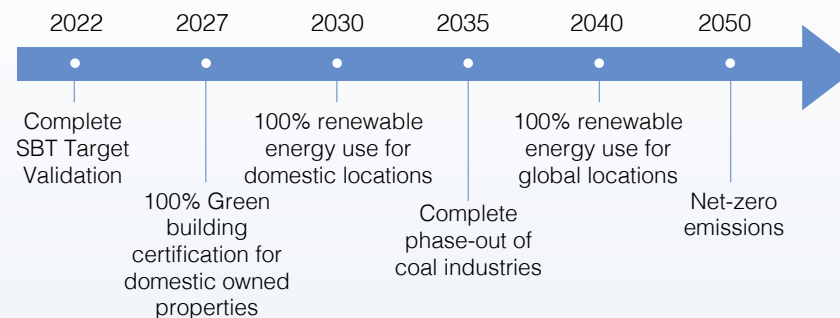
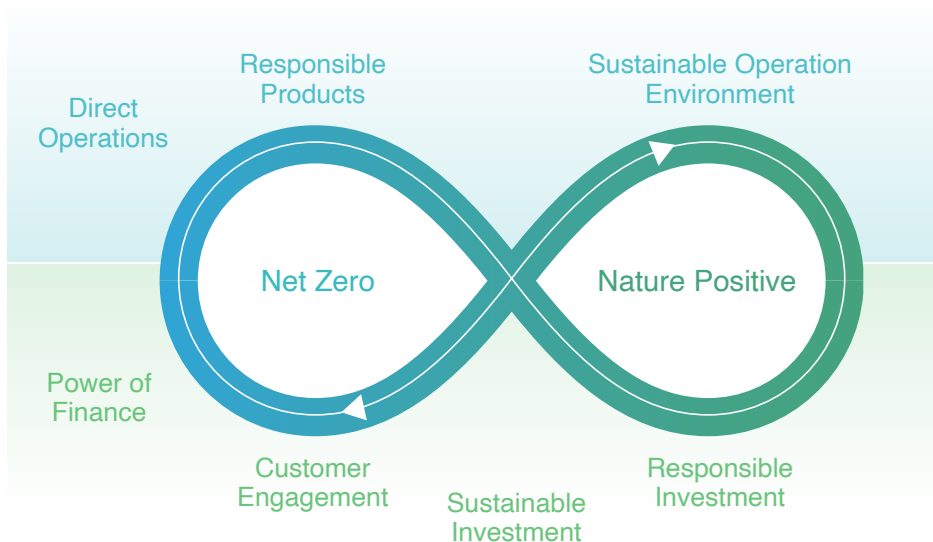
1.1 Our Vision for Climate and Nature

E.SUN has made a promise of becoming a world-class corporate citizen since its founding. We are determined to become the best-performing and most respected company. E.SUN is committed to moving towards net-zero emissions and nature-positive development, aligning with the frameworks proposed by TCFD and TNFD, and taking corresponding actions internally.

Vision

*E.SUN's employees become world-class citizens,
E.SUN becomes a world-class corporate citizen*

Target



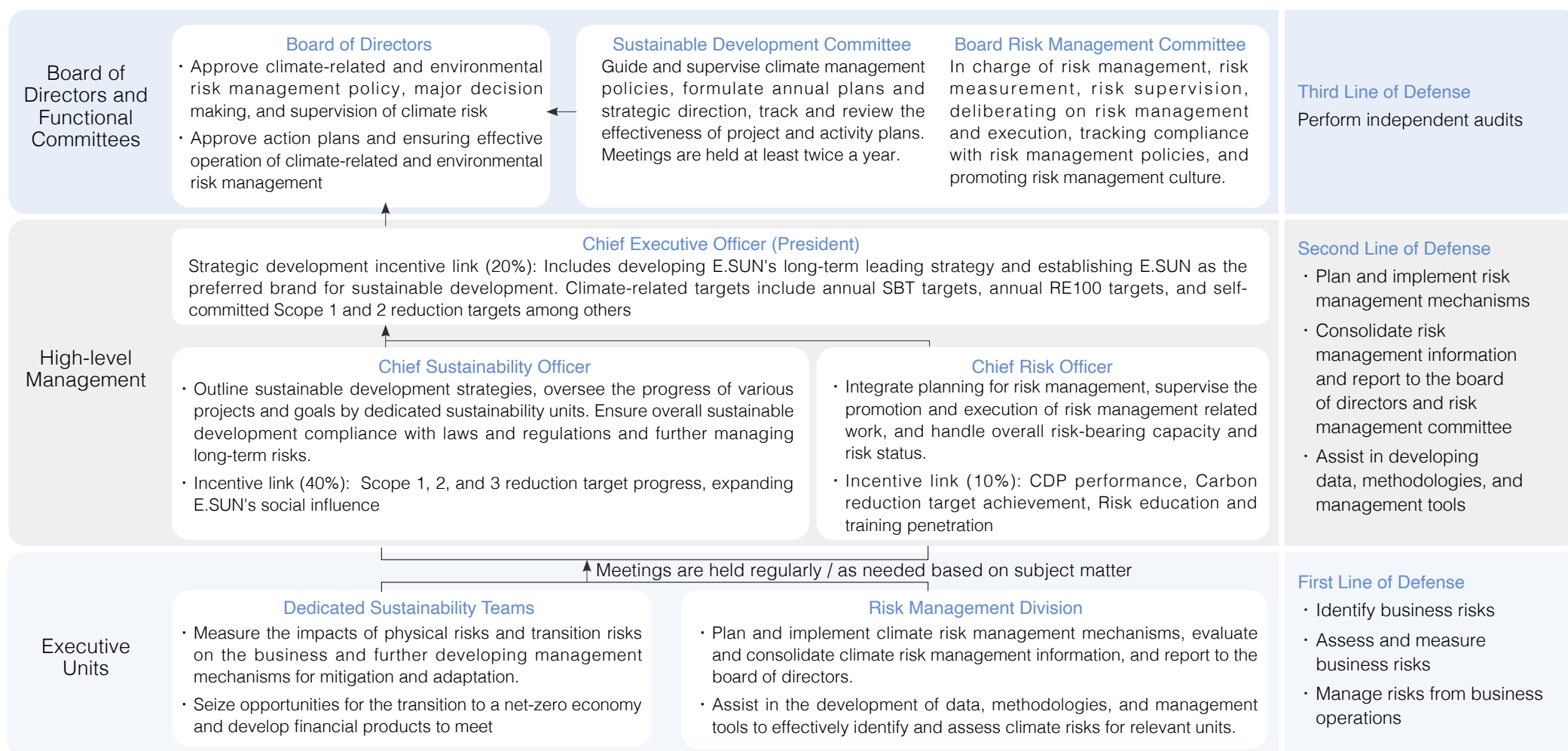
Action Plan

- 1. Positive Impact - Leverage Financial Influence**
 - Finance Transition
 - Sustainable Operation
 - Establish Partnerships
- 2. Sustainable Innovation - Innovative Finance Models**
 - Develop Green Products and Services
 - Cultivate Sustainable Talent
 - Improve Process Intelligence
- 3. Resilient Organization - Build Resilience**
 - Align with International Best Practices
 - Enhance Scenario Analysis
 - Enhance Operation Resilience

1.2 Governance Structure

Governance Structure

E.SUN implements a top-down management mechanism, establishing a tight-knit governance structure from the Board of Directors through high-level management to executive units. The Board evaluates and supervises policies related to climate and environmental risks, while the Sustainable Development Committee is responsible for overseeing and formulating strategic directions related to sustainability. The Risk Management Committee manages and measures the associated risks. High-level management is closely linked to sustainability performance, and executive units carry out actions and risk management to ensure that targets are achieved. Regular and ad-hoc reports are made to management to maintain transparency in strategy execution.



Sustainable Development Committee

The "E.SUN FHC Sustainable Development Best Practice Principles", approved by the Board of Directors, serve as the highest guiding principles for ESG across the entire company. The Board has established a Sustainable Development Committee, comprising the Chairman, three independent directors, and one additional director, with the Chairman serving as the convener. This committee is the highest guiding unit for the company's sustainable development. According to the organizational regulations of the Sustainable Development Committee, the company holds at least two meetings annually and may convene additional meetings as needed. In 2023, the Committee held three meetings in January, June, and November. The Committee appoints a Chief Sustainability Officer to coordinate sustainability-related departments. To further integrate sustainability into overall business development, dedicated sustainability units were established within the main departments of subsidiaries in 2023, ensuring the stable promotion of foundational sustainability projects and innovative products.

1. 2023 Work Plan and Achievements

2023 Work Plan		2023 Achievements
Environmental	Follow SBT and RE100 targets, implementing energy-saving and carbon reduction in scopes 1 and 2. Promote biodiversity with systematic conservation actions.	<ul style="list-style-type: none"> Achieved CDP leadership level A grade. Continued reduction of Scope 1, 2, and 3 carbon emissions. Joined the TNFD pioneers and continued to encourage local agricultural transformation to organic and friendly farming practices.
Social	Create an equal, diverse, friendly, and safe workplace environment. Continue to promote initiatives in academic education, social participation, sports development, and cultural arts.	<ul style="list-style-type: none"> Employee engagement reached 88.1%, and the second Sustainable Finance Management Training Program was held. Promoted academic education with over 200,000 World Card members participating, completing a total of 180 E.SUN libraries.
Governance	Based on the Corporate Governance 3.0 "Sustainable Development Blueprint" and the "Green Finance Action Plan," continue to strengthen governance, cybersecurity protection, anti-money laundering, and fair customer treatment.	<ul style="list-style-type: none"> For the ninth time, ranked in the top 5% of the Corporate Governance Evaluation; Subsidiaries E.SUN Bank and E.SUN Securities were also selected among the top 25% in the FSC's fair customer treatment evaluation.

2. 2024 Work Plan

- (1) Climate Change:** Strengthen the management mechanism for investment and financing carbon emissions and track carbon reduction results according to the guidance of regulatory authorities, the Partnership for Carbon Accounting Financials (PCAF), and the Science Based Targets (SBTi)
- (2) Environmental Sustainability:** Evaluate the dependencies and impacts on biodiversity from operations according to the Taskforce on Nature-related Financial Disclosures (TNFD) guidelines. Collaborate with relevant partners to implement biodiversity conservation actions using a systematic approach, promoting harmonious coexistence with nature.
- (3) Sustainable Finance:** Actively engage with high-carbon customers and provide sustainability consulting services, assisting enterprises in transitioning to net-zero and achieving emission reduction goals. Support energy transformation through green finance services and actively aid the industry in establishing renewable energy installations.
- (4) Friendly Work Environment:** Build a diverse, equitable, and inclusive workplace, promoting innovation and gender equality among a diverse talent pool and creating a more flexible and positive work environment.
- (5) Fair Customer Treatment:** Implement the spirit of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) to promote financial equality, enhancing friendly financial service measures to ensure equal and reasonable access to financial services for elderly and disabled customers.

1.3 Capacity Building & Internal Policies

1.3.1 Policy and Culture Building

To better integrate climate and nature sustainability considerations into organizational decision-making, management, and business operations, E.SUN has established a Sustainable Development Committee at the board level and created dedicated units within each major division. Starting from the governance level, we are committed to putting E.SUN's climate and environmental culture into practice, formulating a long-term sustainability blueprint, and embedding it into our daily operations. We emphasize nurturing talent and align our development strategies to support our climate and nature vision. E.SUN supports the Universal Declaration of Human Rights and the UN Declaration on the Rights of Indigenous Peoples. Human rights issues are incorporated into our governance policies to ensure communication and participation with Indigenous peoples, local communities, and affected stakeholders, creating a just and sustainable society for the future.

E.SUN FHC			
Sustainable Development Best Practice Principles	Risk Management Policy and Guiding Principles		E.SUN FHC Human Rights Commitment
Climate-Related and Environmental Risk Management Policy			
Sustainable Finance Policy			
Sustainable Development Engagement Guidelines	Guidelines for the Phase-Out of Coal and Unconventional Oil & Gas	Corporate Social Responsibility Guidelines for Suppliers	E.SUN FHC Human Rights Due Diligence Process
E.SUN Bank Climate-Related and Environmental Risk Management Policy		E.SUN Securities Sustainable Development Policy	

Establish a Climate & Nature Management Culture

- Established the Sustainable Development Committee with the Chairman as convener
- Established climate and environment-related policies and procedures, and regularly report on progress¹
- Arrange external climate and nature education training for the Board and Senior Management annually, such as the transformation of the world economy driven by environmental challenges and sustainable finance, discussions on sustainable risk trends and response strategies, trends in sustainable development and governance, the impact of CBAM on industry supply chains and responses, and sustainable finance management certifications. Additionally, participation in events like the World Biodiversity Summit, World Climate Summit, and COP28 is included to assist the governance team in understanding global trends through multiple channels².

Governance Unit	No. of members with competence on nature-related issues	Total	Ratio
Strategy Committee	12	12	100.0%
Sustainable Development Committee	11	13	84.6%
Board Risk Management Committee	6	7	85.7%
Related high-level management ³	7	7	100.0%

Cultivate Climate & Nature Finance Talent

- Collaborated with TAISE to hold the "Sustainable Finance Manager Development Program" to enhance ESG and climate-related skills, with a total of 237 participants across three years
- Internal education and training integrate ESG-related topics by introducing climate and environment risk management courses in a hierarchical training program that covers senior managers, mid-level managers, specialists in all divisions, and new employees. Additionally, environmental consensus is fostered through online courses and monthly educational materials.
- Members of relevant project teams have accumulated international certifications such as SCR⁴, CFA ESG⁴, ISO 14064-1,2,3, ISO 14067, PAS 2060, etc.

Enhance Climate & Nature Risk Assessment Ability

- Collaborate with external consultants to establish nature-related risk assessment methodologies, evaluating dependencies and impacts through quantitative and qualitative measures, and building a nature-related scenario analysis to explore financial impacts from declines in nature.
- Establish an internal financed emissions management system, automating data processing according to PCAF methodology and providing real-time management capabilities.

Note 1: For information on climate-related government results for the Board and senior management, please see E.SUN FHC 2023 Annual Report pg.29-33

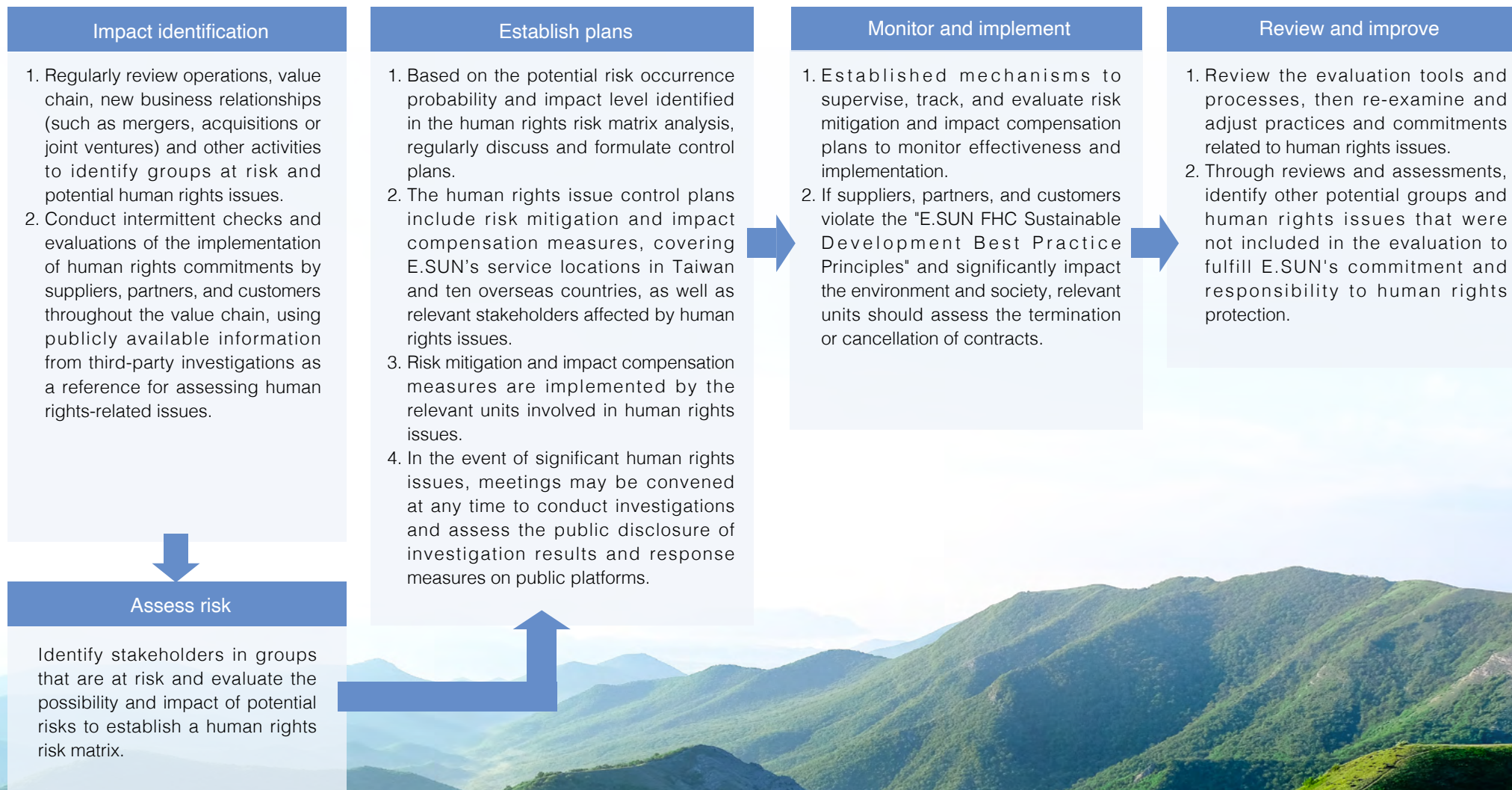
Note 2: For information on climate-related education training for the Board and high-level management, please see E.SUN FHC 2023 Annual Report pg.45-47

Note 3: Includes the Chairman, FHC/Bank President, CSO, and CRO

Note 4: SCR*, Sustainability and Climate Risk. CFA ESG*, Certificate in ESG Investing

1.3.2 Human Rights Governance and Protection

E.SUN's Sustainable Development Committee regularly identifies and assesses groups facing risks and potential human rights issues annually, develops human rights issue control plans, and continues to monitor and improve these initiatives.



1.4 ESG Sustainable Finance Cultivation Program

1. Building a Sustainable Talent Supply Chain for E.SUN

Objective:

E.SUN is committed to becoming the leading brand in sustainable finance. In line with this vision, the company has adopted the approach of "Cultivating talent first, then operating the business." To achieve this, E.SUN has integrated ESG elements into its career training system. In addition to inviting external professionals to give lectures, the company has also arranged members of the "E.SUN Sustainability Committee" to serve as course instructors. Through a variety of training methods, E.SUN is guiding its employees to focus on international sustainability issues, develop expertise in sustainable finance, and build a sustainable talent supply chain for E.SUN.

Target: All E.SUN employees

Cultivation Direction:

The courses begin with "Building Literacy" and progress through "Connecting Expertise," "Practicing Innovation," and "Sustainable Management." This structured approach aims to cultivate the common literacy and expertise of E.SUN employees and assist E.SUN in moving toward sustainable management.

	Core Abilities	Cultivation Direction
Leadership Team	Inheritance and sustainable management	Sustainable corporate culture
Mid-level Officers	Sustainable practice and innovation	Sustainable innovation and value creation Exerting influence
Employees from all departments	Strengthen the connection between sustainability and professionalism	Best practices in corporate management Sustainable finance business and development
Front-line staff	Establish corporate citizenship	Sustainable corporate culture Introduction to sustainability and trends

2. The Best Partner for Corporate Sustainability Transition

Objective:

The financial industry plays an important role in the sustainable transition, and E.SUN aims to be the "best partner" for corporate sustainability efforts. By cultivating expertise in "Responsible lending and investment," "Responsible products," and "Sustainability consulting," E.SUN assists enterprises in finding sustainable solutions and establishes the E.SUN Sustainability Platform to create a "preferred for preferred" model.

Target: All E.SUN employees, E.SUN Sustainability Committee

Cultivation Direction:

All professional courses in each division include relevant education and training content. For example: for Corporate Banking we use in-person courses to teach the "Sustainable Finance and Responsible Lending" business scope and process management. For Consumer Banking, we use monthly video conferences to convey professional knowledge and precautions for "Sustainable Consumer Finance Products". The Sustainability Units use a monthly electronic bulletin to update all colleagues on trends related to issues such as climate change and environmental sustainability.

3. Nurturing the Seeds of E.SUN's Sustainable Development - Sustainable Finance Manager

Objective:

E.SUN is committed to becoming a benchmark enterprise for sustainable development and has pledged to achieve net-zero emissions by 2050. The "Sustainable Finance Manager Training Program" is an important part of E.SUN's plan to cultivate the seeds of sustainable development. Through professional courses and practical operations, the program helps employees accumulate knowledge and skills in sustainable finance, encourages them to apply what they have learned to their work, and become part of the new Sustainability Committee.

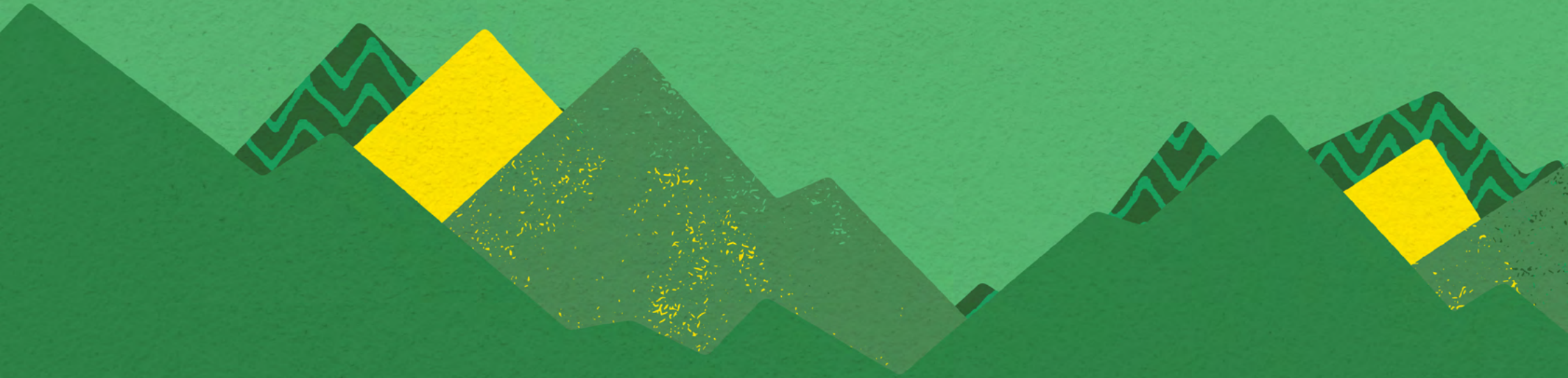
Target: Dedicated Sustainability Teams, Employees highly involved in ESG-related business

Cultivation Direction:

In 2023, E.SUN established a new Sustainability Committee, creating dedicated core and supporting units, and linked their performance to sustainability metrics to accelerate E.SUN's ESG development. At the same time, we launched a training program to cultivate "Sustainable Finance Managers". The curriculum is designed around four main themes: "Sustainable Finance Trends and Policies," "Investment, Financing Insurance, and Value Chain", "ESG Information Disclosure and Assessment," and "Climate Finance and Management Practices," deepening employees' expertise in sustainable finance. From 2022 to 2023, we have trained 154 individuals, with plans to train an additional 83 to become "Sustainable Finance Managers" in 2024.

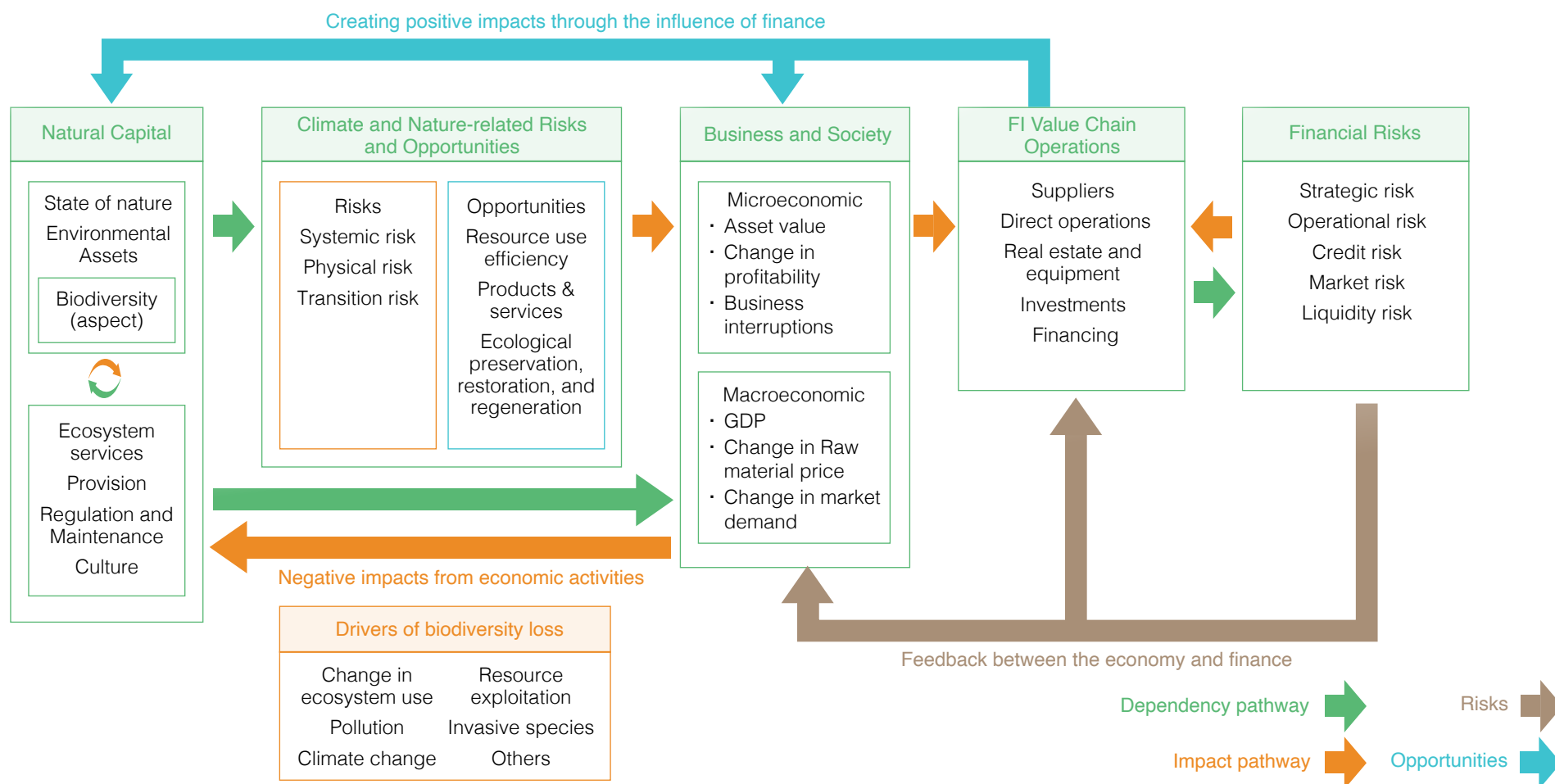
CH2 Strategy

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2.1 Dependency, Impact, Risk, and Opportunity Transmissions Pathways

The business activities of companies depend on and impact natural capital and ecosystem services, encompassing the entire value chain from procurement to investment and financing. Financial institutions, in addition to their own commercial activities, also participate in the activities of customers and their value chains through investments and loans. Therefore, E.SUN needs to understand its customers' dependencies on and impacts regarding natural capital and ecosystem services, enabling the management of the climate and nature-related risks that arise. There exists a complex interaction between climate change and the natural environment. E.SUN aspires to approach environmental issues with a broader perspective, addressing risks while also seizing opportunities for sustainable transition and green finance.



2.2 The LEAP Approach Process

E.SUN is committed to building our capacity for assessing nature-related financial risks and enhancing disclosure transparency in accordance with the LEAP approach of the TNFD. This framework consists of four phases: Locate, Evaluate, Assess, and Prepare, which are used to comprehensively evaluate nature-related risks and opportunities. E.SUN utilizes the LEAP approach to systematically assess its dependencies, impacts, risks, and opportunities arising from nature, both in our value chain and in our direct operations. Based on this framework, E.SUN has designed a concrete assessment process:

Locate

The interface with nature

- Collect location data and industry-related information for E.SUN's operations, supply chains, and portfolios
- Prioritize and assess direct operations, supply chains, and portfolio activities to identify Priority Locations, such as water resources and key biodiversity areas
- Conduct geospatial information analysis by integrating data from direct operations, supply chains, and portfolios with indicators related to the identified Priority Locations

Evaluate

Dependencies & impacts

- Follow international frameworks such as TNFD and ENCORE to establish quantitative indicators and metrics for the impact and dependency of business activities on nature See Appendix IV for details
- Assess operational characteristics and behaviors of companies to create indicators for evaluation
- Consider whether the business location is situated in sensitive areas, using localized data from Taiwan, such as "Land Conservation Areas," "Marine Resource Areas," and other nature-related data in Taiwan for comprehensive evaluation of dependencies and impacts
- Geospatial indicators are primarily categorized into four groups: "Ecological Sensitive Areas," "Key Biodiversity Areas," "Water Resources," and "Forest Resources"

Assess

Risks & opportunities

- Assess the nature-related risks and opportunities for E.SUN itself as well as its investment and financing portfolios
- Regularly conduct scenario analysis/stress testing for physical risks and transition risks
- Nature scenario analysis builds upon climate scenario analysis by further considering the impact of water stress on business operations and its effects on E.SUN's finances
- Implement in phases, aligning business development with carbon reduction and nature strategies, and introduce into long-term transition plan

Prepare

To respond & report

- Strengthen the disclosure of nature-related information
- Enhance internal expertise through education and training, internal bulletins, and activities
- Continuously develop data and methodologies to improve the ability to assess dependencies, impacts, risks, and opportunities
- Present a climate and environmental risk effectiveness report to the board of directors at least every six months
- Increase customer and societal awareness of relevant issues through products, services, initiatives, engagement, and promotions

2.2.1 Operational Scope and Business Model

The business models and value chain activities of companies are closely related to the natural environment of their locations. In addition to focusing on the impacts of carbon emissions on global climate change, there is also a need to enhance understanding of how operational activities affect nearby areas, particularly the interactions between their own operations and supply chains with biodiversity areas and freshwater resource areas.



E.SUN Finance Ecosystem

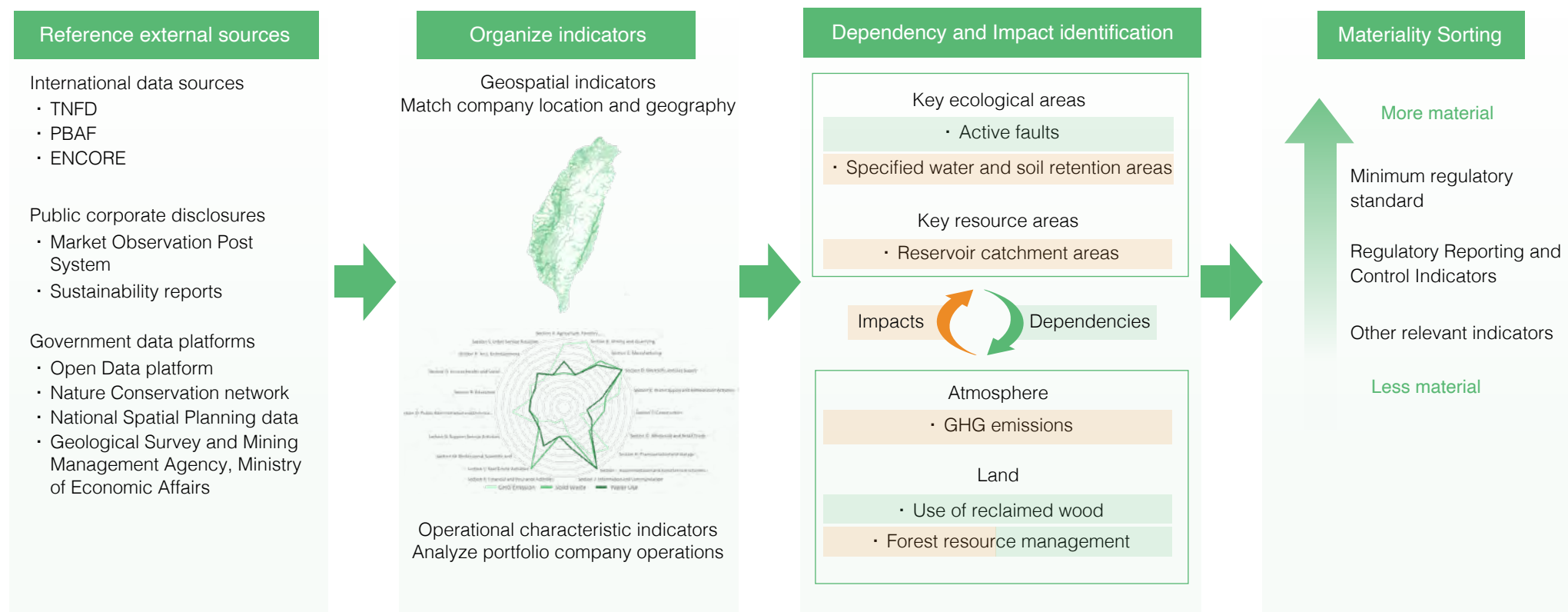


As of December 2023, the service locations of E.SUN FHC and its subsidiaries in Taiwan included 139 branches of E.SUN Commercial Bank and 17 branches of E.SUN Securities. E.SUN currently operates 31 offices in 10 countries and regions, including financial centers in the Asia Pacific, Greater China, and ASEAN countries. Through strategic deployment and cross-border integration, E.SUN provides seamless services across jurisdictions for our customers with various financial needs.

Taiwan	Overseas	Virtual Channels	Products and Services
<ul style="list-style-type: none"> 130 branches 17 securities branches 12 corporate banking regional centers 8 consumer banking regional centers 1,306 ATMs 	<ul style="list-style-type: none"> Subsidiaries: E.SUN Bank (China) 5 operating sites, Cambodia UCB with 14 operating sites Overseas branches: USA, Hong Kong, Singapore, Vietnam, Australia, Myanmar, Japan, Thailand, Malaysia. Total 31 operating sites. 	<ul style="list-style-type: none"> E.SUN e-Services, including 24-hour customer service hotline, smart customer service, Internet phone and Online visitor message board Personal internet banking E.SUN Corporate Online Banking Mobile Banking APP E.SUN Wallet WebATM E.SUN Securities A+ mobile services 	<p>Banking Consumer financing, corporate financing, wealth management, trust services, financial products, online banking, mobile financing, and other banking services</p> <p>Securities Brokerage, derivative financial products, credit transactions, fixed revenue products, e-commerce, and other securities services</p> <p>Venture capital Services provided for companies at the startup stage and expansion stage, and secondarily for companies at the mezzanine stage</p>

2.2.2 Establishing Localized Nature Indicators and Evaluation Process

E.SUN acknowledges that the natural environment is significantly influenced by geographical factors. Therefore, we categorize assessment indicators into "Operational Characteristics" and "Geospatial" factors as the basis for our evaluations. We identify "Priority Locations" within the value chain that have significant nature-related dependencies, impacts, risks, and opportunities. Additionally, we consider the sectors of companies to identify sensitive locations (e.g., areas with water supply gaps and ecologically sensitive regions). Since E.SUN's operations and portfolios are primarily located in Taiwan, our evaluation will prioritize domestic areas for analysis. In terms of operational characteristics, we focus on the sector categories each company belongs to, beginning with the "Impact Drivers" and "Ecosystem Services" indicators published by the TNFD, while integrating localized data related to natural resources. Regarding geospatial factors, we consider the locations of enterprises' operations and factories, incorporating relevant land functionality zoning layers along with domestic ecological and disaster-related data layers for a thorough analysis.



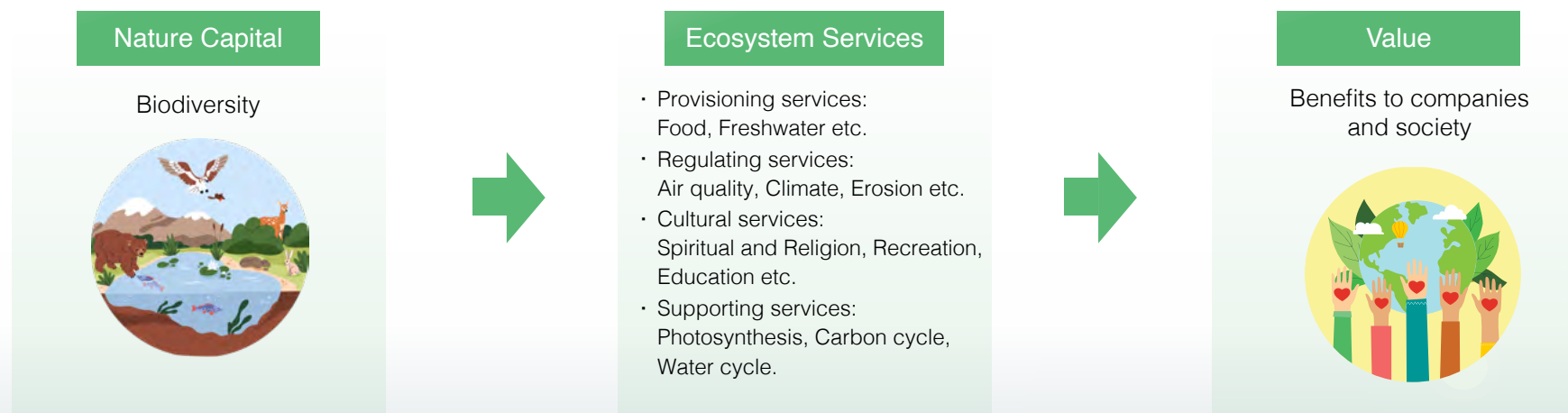
Note 1. Minimum Regulatory Standards: These are the baseline compliance requirements set for specific regions or activities. For example, reservoir catchment zones and nature reserves.

2. Regulatory Reporting and Control Indicators: These indicators are used to monitor and assess compliance status, strengthening control over business activities or resource usage in specific areas. Geospatial indicators, for example, include protection zones for drinking water and national parks, while operational characteristic indicators encompass air pollution prevention and resource utilization.

3. Other Relevant Indicators: These are nature-related indicators that do not yet have specific regulatory or standard provisions, such as soil quality and renewable energy usage. These indicators can provide reference for enterprises' dependencies and impacts beyond existing policies

2.3 Natural Capital and Ecosystem Services

Natural capital refers to the renewable and non-renewable natural resources on Earth, including plants, animals, air, water, soil, and minerals, which enhance value and well-being for businesses and society through ecosystem services or abiotic services. However, studies have indicated that human activities are also one of the primary sources of degradation of natural capital, resulting in the decline of natural ecosystems, altering landforms, negatively impacting the oceans, and leading to the loss of wetlands and tropical rainforests.



Source : Adapted from the Natural Capital Protocol

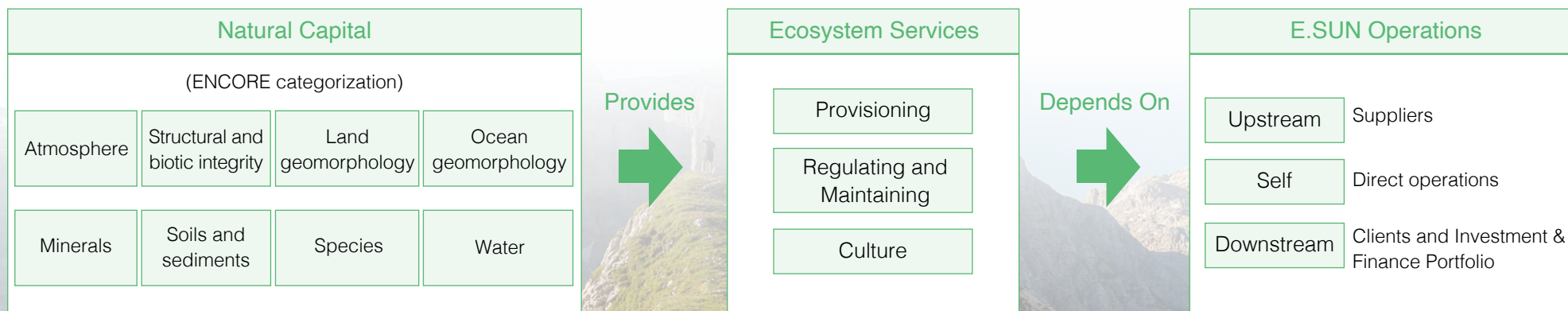
Human-induced impacts have caused significant declines in ecosystem services and natural capital				
About 25% of species face the threat of extinction	75% of the world's land is altered	66% of oceans affected by human activities	85% of wetlands have been lost	100 million hectares of tropical rainforest lost between 1980 and 2000

Source: IPBES, Global Assessment Report on Biodiversity and Ecosystem Services

2.4 Dependency Identification

Dependency on Natural capital

Dependency on nature refers to the reliance of an organization on natural capital and the ecosystem services it provides to operate. Research by the WEF indicates that 55% of global GDP, equivalent to about US\$58 trillion, depends on natural capital and its ecosystem services. Given the close relationship between business operations and the natural environment, it is crucial to understand the natural capital and ecosystem services that business operations rely on to facilitate appropriate responses and management measures. By identifying and assessing the dependency of business operations on natural capital and ecosystem services, we strengthen our understanding of the nature-related risks and opportunities that the organization may face. In the analysis of E.SUN's investment and financing portfolio, significant dependencies identified include landforms, the supply of water resources, and the integrity of regional ecosystem services (see Chapter 3.7 for details).

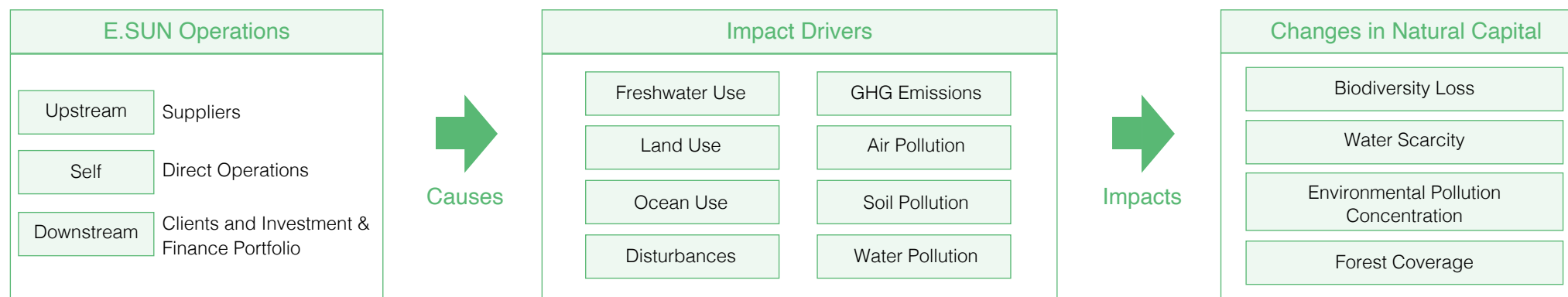


"Managing nature risks: From understanding to action (2023), PwC"

2.5 Impact Identification

Impacts on Natural capital

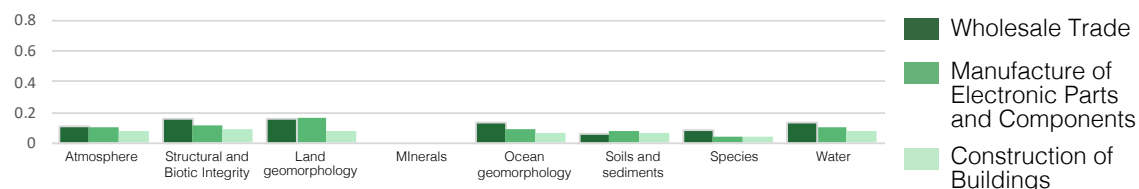
The impact on natural capital refers to the changes in the state of nature caused by business operations, which alter the benefits of ecosystem services for society or the economy. These impacts can be either positive or negative, and their sources may stem from business operational activities or indirectly from the use of products and services. This includes any stage in the value chain such as raw material extraction, processing, manufacturing, transportation, consumption, disposal, or recycling, and can vary depending on the industry type, supply chain level, and geographical location of operations. E.SUN identifies that our value chain has a more significant impact on water resources and biodiversity through our analysis of business operation locations and the categorization of key metrics, which will serve as a direction for subsequent evaluations.



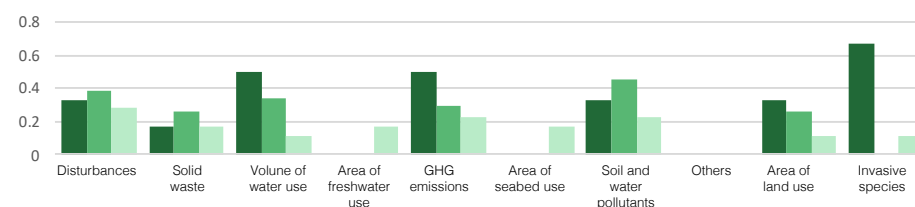
Evaluating dependencies and impacts according to sector characteristics

E.SUN's dependency and impact on nature stem not only from our direct operations but also primarily from our suppliers and investment and financing portfolio. E.SUN has conducted an evaluation of dependency and impact levels using the ENCORE (Exploring Natural Opportunities, Risks, and Exposure) tool developed by UNEP-WCMC and UNEP-FI. The results indicate that the industries in E.SUN's portfolio with higher levels of dependency and impact include wholesale trade, electronics manufacturing, and construction. The ecosystem components that these industries have higher dependencies on are structural and biotic integrity, water, and land geomorphology. The highest impacts include water use, greenhouse gas emissions, soil and water pollution, and human disturbances. Therefore, taking into account factors with high dependence and impact, the subsequent assessments will focus on biodiversity and water resource-related issues.

Dependency Level and Ratio of Investment and Financing Balances in Companies



Impact Level and Ratio of Investment and Financing Balances in Companies



2.6 Assessment of Value Chain Dependency and Impact on Nature

E.SUN conducts dependency and impact analysis of its operations, suppliers, and investment positions in accordance with TNFD recommendations. Given the limitations in data availability and quality factors, we have chosen to focus on water resources and biodiversity issues highlighted by the TNFD as our primary analysis metrics.

Key Metrics

Dependency Metrics

According to research data from the World Resources Institute (WRI), Taiwan is classified as a region with low to moderate water stress, which could potentially ease under future climate change scenarios. E.SUN estimates changes in water demand by 2036 in alignment with the "Basic Plan for Water Resources Management in Every Region of Taiwan" established by the Executive Yuan in 2021. Assuming a lack of active investment in water infrastructure, it is predicted that water shortages will occur in various counties and cities by 2036, which defines the Water Supply Gap. E.SUN's analysis indicates that industries with high sensitivity to nature have a significant reliance on water resources (see Section 3.7 for details). Therefore, the analysis focuses on localized data regarding groundwater areas, reservoir catchment areas, and river zones to assess the reliance of E.SUN's operations, supplier locations, and investment positions in Freshwater Resource Areas¹.

Additionally, considering Taiwan's mountainous terrain and limited plains, it is important to be aware of slope disasters. Operation sites and mortgage clients have a higher dependency on ecosystem services related to soil retention and erosion prevention. E.SUN evaluates these factors to identify which Developable Sloped Areas² need attention and to implement appropriate management and disaster prevention measures.

Impact Metrics

Taiwan has up to 6,929 km² of land encompassing 53 different areas recognized as Key Biodiversity Areas (KBA) by the Key Biodiversity Areas Partnership. Considering Taiwan's geographical characteristics, E.SUN first screens these areas based on minimum regulatory requirements, and then integrates localized biodiversity data, including national ecological focus areas, significant wildlife habitats, and biodiversity hotspots for a comprehensive impact assessment of Key Biodiversity Areas.

Furthermore, given that water resources are crucial to nature, E.SUN takes into account both the dependence on and the impact of business operations on surrounding water sources. Thus, we also use Freshwater Resource Areas as an impact metric for analysis.

Note 1: "Freshwater Resource Areas" is defined as the regions covered by the national primary regulated groundwater areas, reservoir catchment areas, and river zone maps.

Note 2: "Developable Sloped Areas" is defined as areas with a slope of grade six or above, excluding lands defined as landslide and geological hazard sensitive areas according to the "Guidelines for Geological Survey and Safety Assessment of Geologically Sensitive Areas."

Joining carbon emissions and nature, Assessing every dollar's impact on the environment

As global awareness of climate issues continues to rise, there has been a significant increase in market attention on carbon emissions, prompting the financial industry to focus on carbon emissions associated with investment and financing activities. While the scope of nature is broader than that of climate, the resources and technical requirements for assessing and calculating natural impacts are more complex, making it challenging for most companies to conduct comprehensive quantitative assessments of nature.

E.SUN has completed a natural impact assessment analysis for its domestic investments, enabling us to not only focus on carbon emissions from investment and financing but also to understand the financial impact of these activities and their potential effects or opportunities for the natural environment.

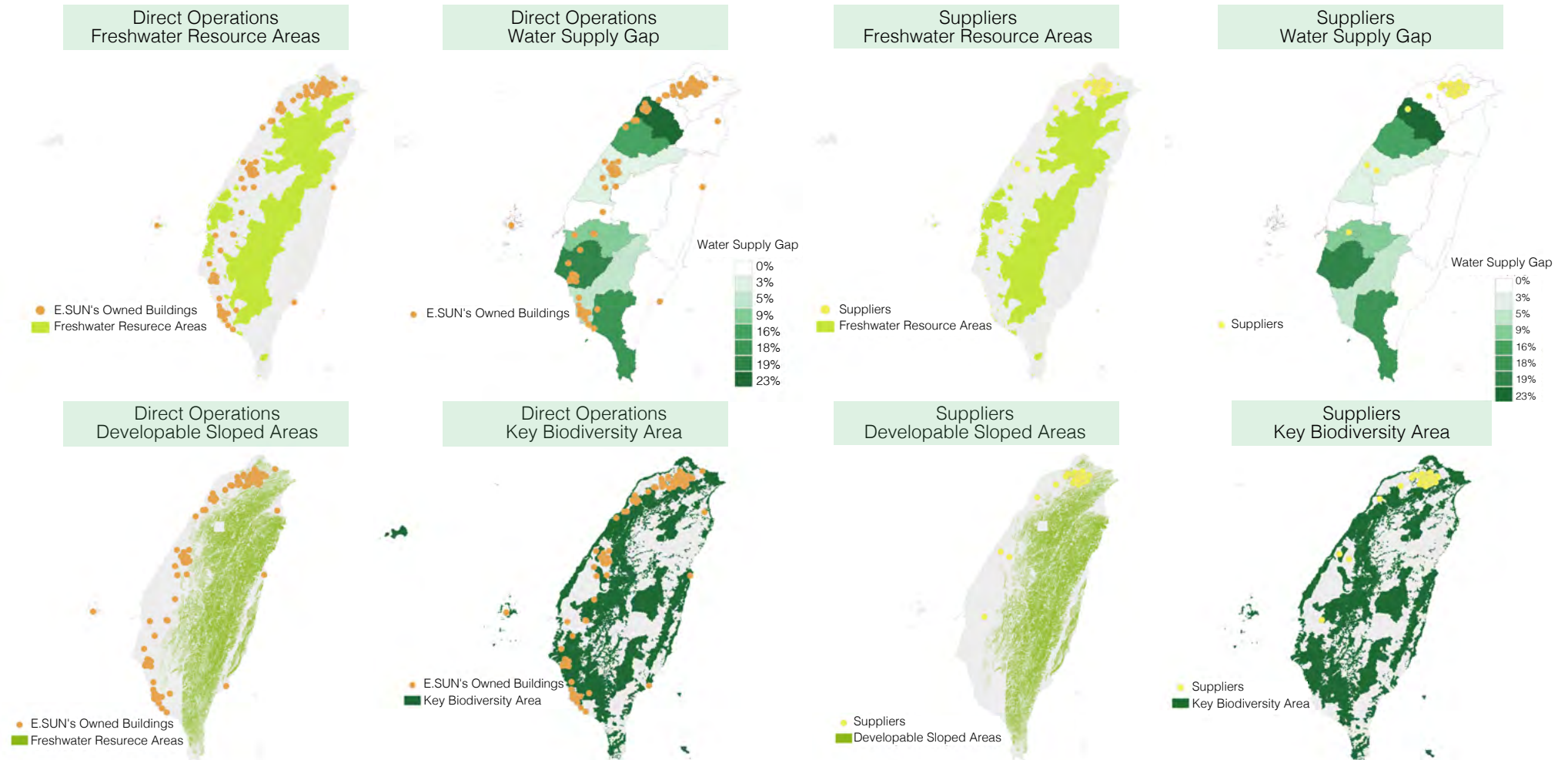


Direct Operations

In terms of E.SUN's direct operations, approximately 17% of the operational locations are situated in areas where the Water Supply Gap exceeds 10%, and none are located in Developable Sloped Areas. Concerning impacts, no operational locations are situated in Freshwater Resource Areas, and over 90% of the locations do not lie within Key Biodiversity Areas. Since water shortages do not have a substantial impact on E.SUN's operations, internal assessments conclude that it does not have significant dependence on or impact on the aforementioned natural capital.

Suppliers

Regarding E.SUN's suppliers, there is only one supplier location in an area with a Water Supply Gap greater than 10%, accounting for 0.4% of total procurement value. In terms of impacts, no suppliers are located in Freshwater Resource Areas; only three suppliers are found within Key Biodiversity Areas, comprising 0.5% of the total procurement value. Internal assessments conclude that suppliers do not have significant dependencies on the aforementioned natural capital.

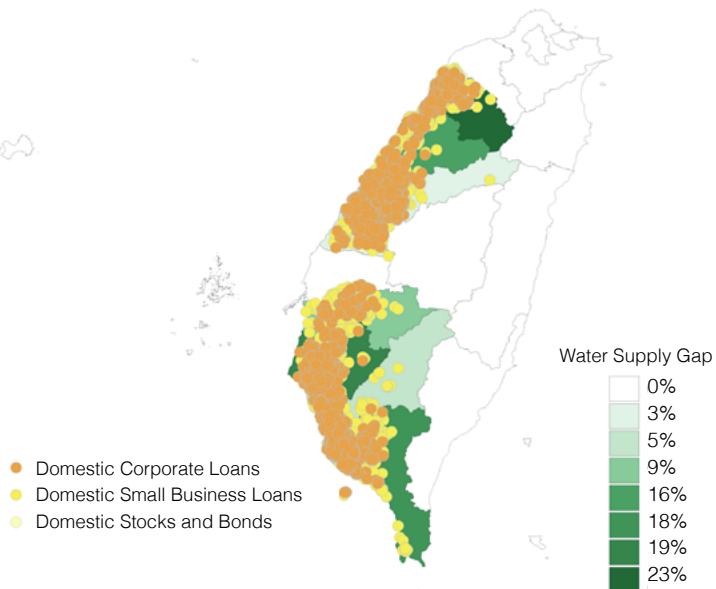


Note: The blank square on the map indicates a military zone, and therefore, data is unavailable.

Financing and Investment Portfolio

In evaluating the dependencies of E.SUN's investment and financing portfolio, companies located in areas with a Water Supply Gap of more than 10% account for 15.7% of the total credit balance, while the number of mortgage collaterals situated in Developable Sloped Areas is 0.2% of the total mortgage balance. Regarding impacts, the total amount of investment and financing in Key Biodiversity Areas accounts for approximately 20.7% of the total balance. This reflects Taiwan's unique characteristics of being densely populated with numerous mountains and few plains, which often leads to business operation sites overlapping with biodiversity-rich areas near the foothills. A sample analysis was conducted across Taiwan, covering over 94,000 registered companies, where 30.34% of the factories are located within the Key Biodiversity Areas defined in this report. This figure is roughly equal to the number of factories within E.SUN's investment and financing portfolio. Based on these analysis results, E.SUN plans to continue focusing on biodiversity issues related to its investment and financing activities and is committed to exploring opportunities to leverage its financial influence.

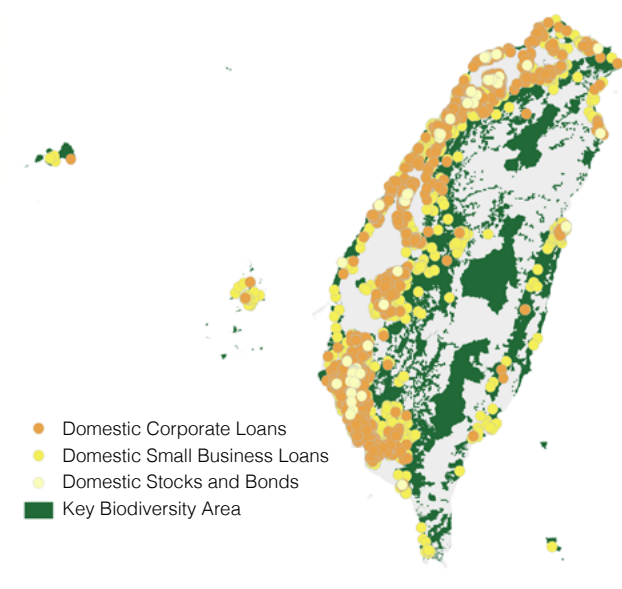
Finance and Investment Positions
Water Supply Gap



Finance and Investment Positions
Developable Sloped Areas



Finance and Investment Positions
Key Biodiversity Area

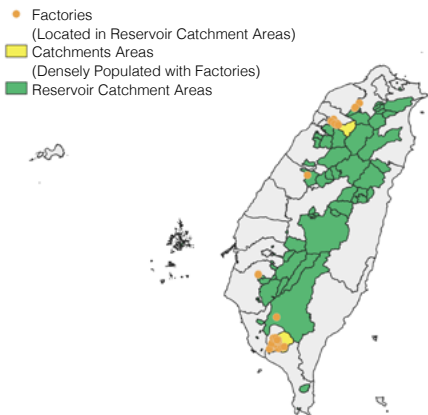


Considering the government's increasing awareness of water resource management, we have analyzed investment and financing targets whose operational sites are located in Freshwater Resource Areas, "Groundwater Control Areas", and simultaneously in "Groundwater Recharge Geological Sensitive Areas", as well as those situated in "Reservoir Catchment Areas". Given the growing focus on future water resource management and environmental sustainability, current operational practices may not necessarily align with the impending demands of stricter policies and eco-conscious public opinion. E.SUN plans to enhance its understanding of water resource issues to strengthen management in the future.

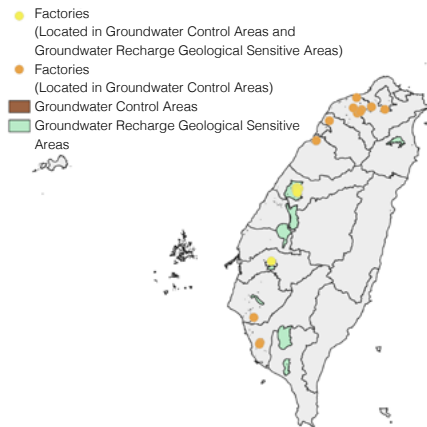
Finance and Investment Positions Freshwater Resource Areas



Reservoir Catchment Areas



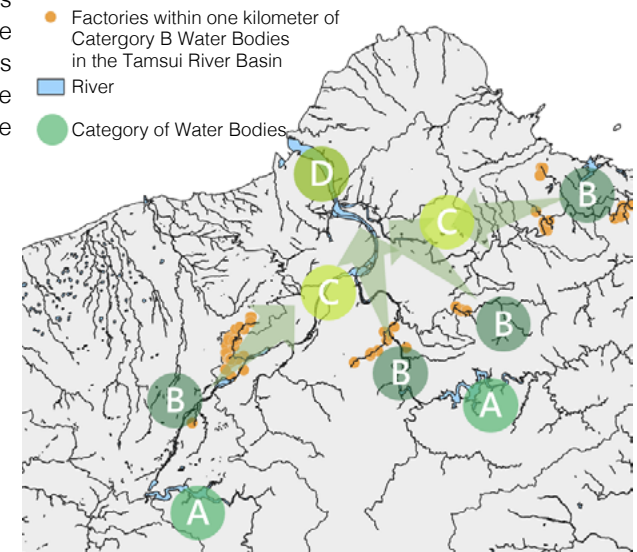
Groundwater Areas



Example of creating positive impacts:

Do One Thing for the Tamsui River

E.SUN recognizes the importance of water resources as vital natural capital and has participated in the "Do One Thing for the Tamsui River" initiative led by CSR@Commonwealth Magazine, collaborating with over 400 corporate partners in conservation efforts for the Tamsui River. Businesses rely on stable and sufficient water resources to maintain operations, and their operational activities can also impact the health of water resource environments. E.SUN evaluates the interconnections of its value chain within geographical space to amplify the benefits of nature governance. According to our evaluation results, none of the factories within E.SUN's investment and financing portfolio are located within 1 kilometer of Category A water bodies of Tamsui River system. However, 74 companies have factories located within 1 kilometer of Category B water bodies of the Tamsui River system. This provides future opportunities for collaboration with customers to extend the positive impact on water resources to the downstream of the Tamsui River and to more enterprises.



Note 1: According to the Ministry of the Environment, "Surface Water Classification and Water Quality Standard," Category A water bodies are water sources that have been disinfected and can be used as public water supplies. Category B water bodies are water sources that must undergo commonly-used purification methods, such as coagulation, sedimentation, filtration, and disinfection, etc., before they may be used as public water sources.

Dependency and Impact Evaluation Conclusion

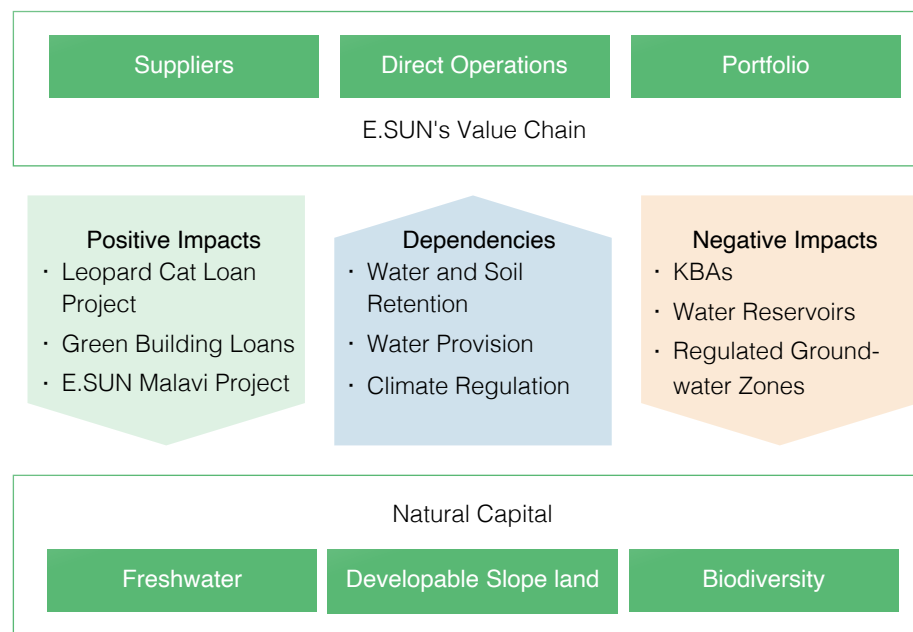
E.SUN applies the LEAP framework, first identifying the upstream and downstream value chain as well as its direct operational sites, followed by an assessment of the Water Supply Gap impact on nature and ecosystem services. We adhere to TNFD recommendations and take into account Taiwan's geographical characteristics and existing data limitations to carry out detailed assessments using localized data metrics. E.SUN acknowledges that the natural environment is constantly changing, and we plan to continuously update and maintain our metric data in collaboration with government bodies and academic institutions to monitor changes in Taiwan's natural environment.

- For our direct operations, evaluation results show no significant impact or dependence on nature.
- For suppliers, evaluation results similarly indicate no significant impact or dependence on nature.
- In our investment and financing portfolio, companies situated in areas designated by the Executive Yuan as having a water supply gap of over 10% account for 5.7% of the total portfolio. We plan to further enhance our understanding of water resource issues to improve future management.
- Given Taiwan's geomorphological characteristics, E.SUN's investment and financing portfolio has a relatively high proportion situated in Key Biodiversity Areas, which can be leveraged to develop relevant products and services, thereby maximizing our positive impacts on biodiversity.
- Chapter 3 will further explore E.SUN's investment and financing portfolios in high-risk areas for extended analysis.

Sensitive locations	Material locations
<ul style="list-style-type: none"> • Key Biodiversity Areas • Freshwater Resource Areas • Counties and cities with more than 10% water supply gap in the future per the Executive Yuan 	<ul style="list-style-type: none"> • Location of companies within the list of priority sectors as published by the TNFD, and with a significant proportion of E.SUN's investment and financing (see Chapter 3.7.2) • Location of companies with a higher dependence and impact on natural capital and operates in sensitive locations

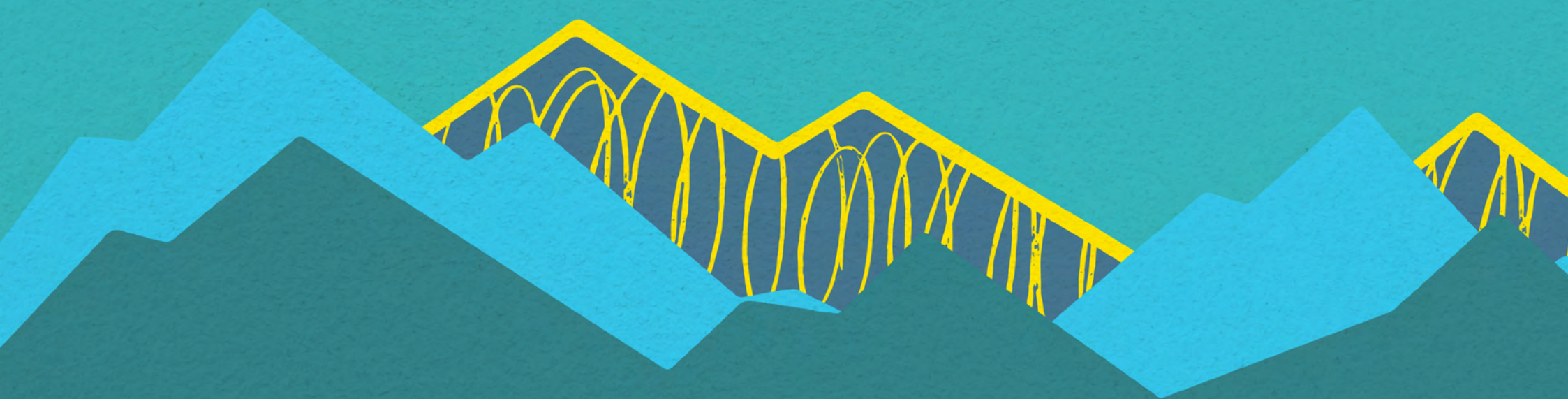
Dependency and Impact Response Actions

- Implement differentiated management measures to enhance management for clients in hazardous slope land or those penalized in cases for environmental pollution.
- Support sustainable agriculture to maintain biodiversity; over 90% of the financing targets for E.SUN's Farm to Table loan program are located within national conservation areas and biodiversity hotspots, which can positively impact local ecological conservation.
- E.SUN's Malawi Project promotes the transition to organic farming in Namuan village, Hualien County, which is located in a Key Biodiversity Area. This initiative protects local ecosystem services and biodiversity, creating positive impacts for nature.
- To strengthen our positive impacts on climate and nature, E.SUN has issued sustainability bonds, with total issuances exceeding NT\$25 billion as of June 2024.



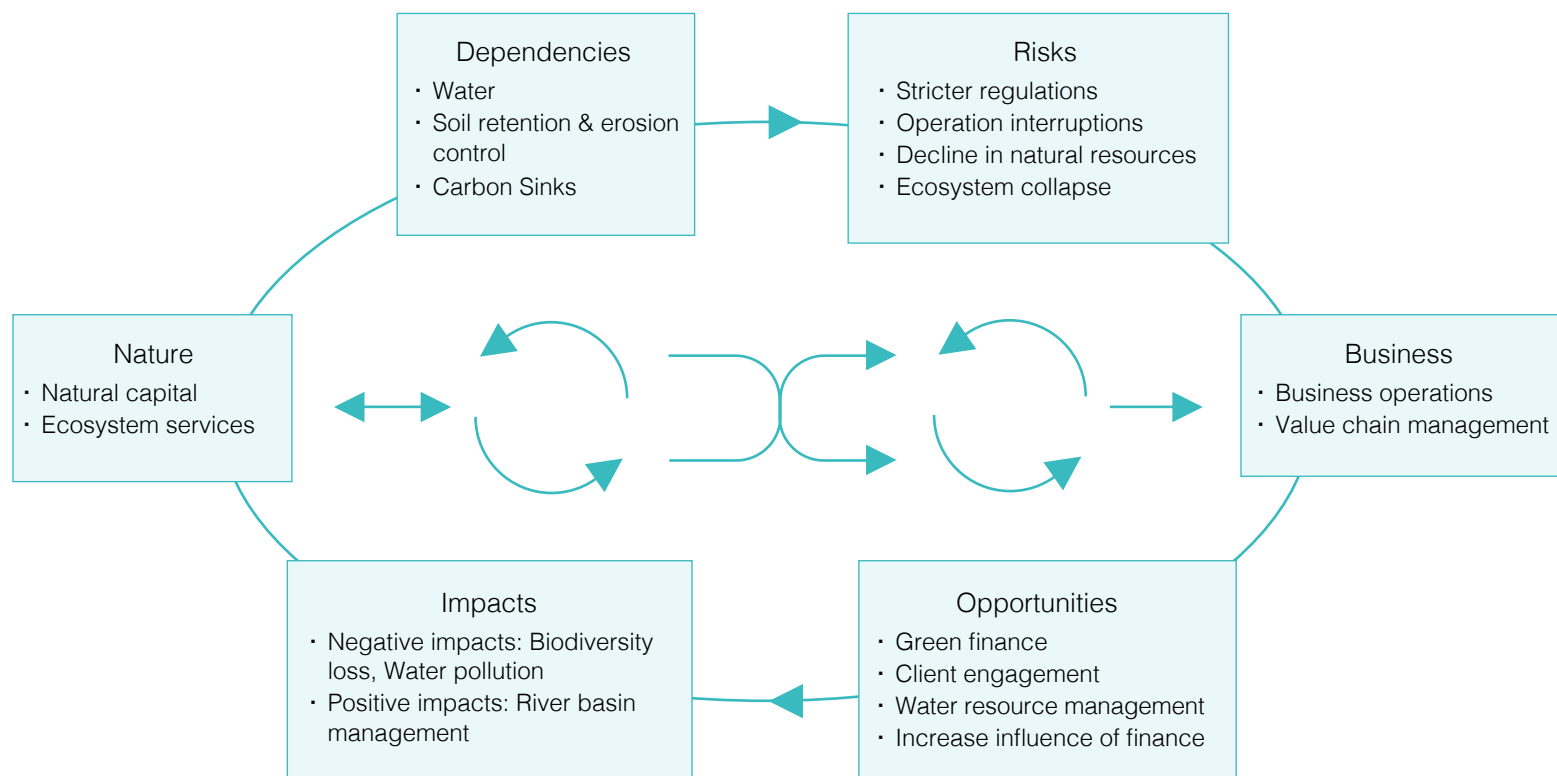
CH3 Risk and Impact Management

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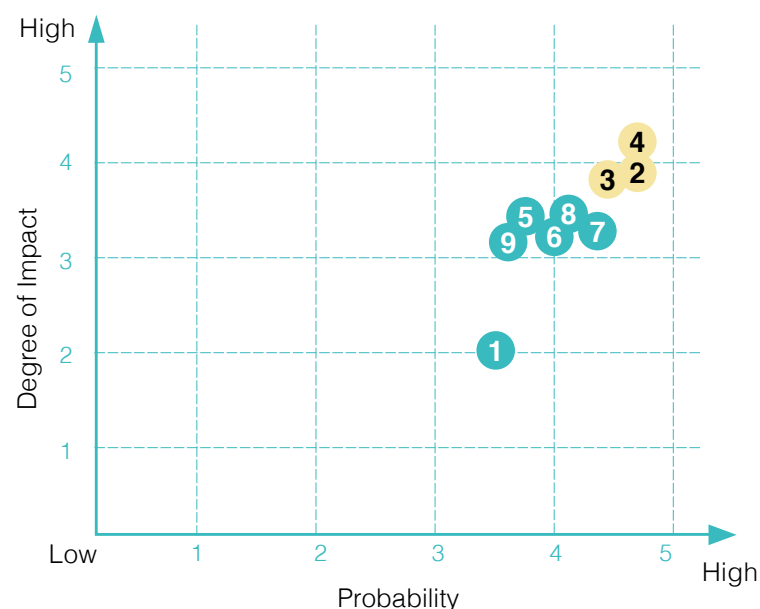
3.1 From Dependency and Impacts to Risk and Opportunities

E.SUN deepens its understanding of nature-related risks and opportunities associated with our operations by analyzing the dependencies and impacts of our investment and financing portfolio. Nature-related risks for financial institutions arise from changes in natural conditions, alterations in the flow of ecosystem services, and the negative impacts of business on nature. For example, environmental pollution caused by investees could damage E.SUN's reputation. Nature-related opportunities for financial institutions stem from an increase in positive impacts on nature or a decrease in negative impacts. This can be achieved by avoiding, reducing, or managing nature-related risks through our operations, or through transformations in products, services, and investments. E.SUN collaborates with external consultants to adopt methodologies proposed by international initiatives such as TNFD, PBAF, and NGFS to jointly develop nature-related scenario analyses, enhancing our operational resilience while also increasing our capacity for natural governance.



3.2 Opportunity Identification

E.SUN actively seeks out opportunities by assessing the dependencies and impacts on natural capital throughout our operations, supply chains, and portfolios. In the context of climate change and nature, issues such as carbon reduction, resource efficiency, and supply chain management are becoming increasingly important. For example, the EU plans to implement the Carbon Border Adjustment Mechanism (CBAM) starting in 2026, placing significant pressures on international supply chains for a low-carbon transition. The financial industry must exert a positive influence by promoting sustainable development through investments and financing, directing funds toward environmentally friendly industries to achieve net-zero emissions and foster positive growth for nature. E.SUN actively supports national policies by engaging in green finance and related businesses, facilitating low-carbon transitions and promoting sustainable technologies while also creating growth through sustainable finance for the company.



Opportunities		Potential financial impact(s)	Impact Period
Resource use efficiency	1.Green, low-carbon operation	Green buildings and environmentally friendly measures save water, conserve energy, minimize waste, and reduce operating costs.	Medium
	2.Process digitalization	Digitalization of processes enhances operational efficiency, reduces the consumption of natural resources, and minimizes environmental impacts.	Short
Products and Services	3.Green products and services	Develop green financial products and services to direct funds into sustainable sectors, assist clients in transition, and create business opportunities.	Medium
	4.Digitalized customer service	Digitalized financial services reduce paper use, increase customer satisfaction, and lower service costs.	Medium
Market	5.Expand sustainable client base	Expand the client base through innovative green financial products, engagement, and assistance in low-carbon transition, such as helping businesses adopt circular economy models.	Medium
	6.Capital market participation	Diversify financial assets (such as green loans, sustainability-linked loans, and sustainability bonds) and identify related investment and capital acquisition opportunities.	Medium
Operation Resilience	7.Enhance influence of finance	Establish systems to enhance ESG performance, meet stakeholder expectations, promote environmental sustainability, and improve reputation and long-term performance.	Long
	8.Cultivate sustainability talent	Cultivate sustainable finance talent to enhance climate and environmental change response capacity.	
	9.Operation resilience management	Strengthen supply chain management, increase sustainable procurement, and establish climate disaster response measures to enhance operational resilience.	

are items considered to be more material

Note 1: Time period definitions: less than 1 year is considered short-term, up to 2030 is medium-term, and up to 2050 is long-term.

Note 2: Assessment of opportunity materiality includes ratio of sustainability assets, decreased operational costs, and the percentage of affected employees, among other factors, that exhibit higher levels of impact and probability

Note 3: Credit products are categorized as follows: short-term (maturity of less than 1 year), medium-term (more than 1 year but less than 7 years), and long-term (more than 7 years). Mortgage loans typically have a maturity period of 30 years, while corporate banking provides suitable products based on customers' needs. The product strategy operates on a 5 to 10-year cycle, with annual management reviews and adjustments made depending on management needs.

3.3 Opportunity Response Strategy

Based on the identification of significant climate and nature-related opportunities, E.SUN has formulated strategies and actions related to operations, products, and financial planning. Additionally, annual and long-term financial performance targets have been set for climate and nature-related products (see [Chapter 5.4](#) for details) as well as direct operation environmental targets, allocating resources towards a green and low-carbon future.

Benchmarking	Material opportunities	Internal strategies and targets	Current actions
<ul style="list-style-type: none"> Paris Agreement Taiwan 2050 Net-zero Emissions Pathway Taiwan Green Finance Action Plan Corporate Governance 3.0 – Sustainable Development Blueprint Science-based Targets initiative (SBTi) Principles for Responsible Investment (PRI) Principles for Responsible Banking (PRB) TCFD TNFD EU Deforestation Regulation (EUDR) 	Green, low-carbon operation	<ul style="list-style-type: none"> Reduce absolute carbon emissions of Scopes 1 and 2 by 42% by 2030 compared to the 2020 baseline¹ Reduce water consumption by 20% and waste by 50% by 2030 compared to the 2020 baseline¹ 	Resource allocation <ul style="list-style-type: none"> Install rainwater recycling and water-saving devices, and promote the concept of correct water usage to conserve water resources. Implement waste sorting and recycling management, and promote a paperless environment. Replace high-energy consumption air conditioning and lighting equipment. Implement ISO 50001 standard to strengthen energy management. Purchase green energy and install solar panels on E.SUN-owned buildings to increase the proportion of renewable energy use.
	Process digitalization	<ul style="list-style-type: none"> 100% renewable energy use at all of E.SUN's operating locations by 2040 	
	Green products and services	<ul style="list-style-type: none"> E.SUN aims to be the choice sustainability partner for small-medium enterprises and other customers by 2030 	Capacity Utilization <ul style="list-style-type: none"> Support customers that have a positive impact on the environment and society, including green projects such as renewable energy, as well as enterprises with clear ESG development goals. Deepen connections with customers and sustainable partners through engagement, ESG sustainable initiatives, and consulting services.
	Digitalized customer service	<ul style="list-style-type: none"> Continue to deepen scope and scale of green products in line with Taiwan's 2050 net-zero emissions pathway and strategies. 	
	Expand sustainable client base	<ul style="list-style-type: none"> Target NT\$130 billion in green loans by 2030 Target Sustainability Linked Loans account for 13% of all corporate loans by 2030. 	
	Capital market participation		
	Enhance influence of finance	<ul style="list-style-type: none"> Benchmark international standards (such as CDP, DJSI, etc.) and continuously improve, reaching net-zero emissions by 2050 	Resource allocation <ul style="list-style-type: none"> Establish a financed carbon emissions management system to enhance management capability. Build a physical risk database to improve physical risk identification and management capabilities of real estate collateral. Achieve green building certification through new construction and improvements to existing buildings. Cultivate internal talent in sustainability and climate change, and plan support for related certifications.
	Cultivate sustainability talent	<ul style="list-style-type: none"> Actively participate in government and international organizations' sustainability and climate and nature-related initiatives to strengthen response capabilities Collaborate with TAISE to establish a Sustainable Finance Manager certification to enhance ESG and climate-related skills Internal education and training incorporates ESG-related issues, and climate risk management training is introduced into the orientation program. Establish internal management systems to strengthen risk and opportunity management 	Capacity Utilization <ul style="list-style-type: none"> Establish mechanism to revise internal management climate and environment-related regulations, integrating them into daily operations and business development, enhancing risk and opportunity management. Participate in climate-related projects with regulatory bodies and associations to help establish relevant standards. Collaborate with NTU on "E.SUN–NTU ESG Centenary Project", setting a goal to plant 100,000 trees over 10 years. Develop a no-net-deforestation commitment, promoting and encouraging suppliers and customers to participate in biodiversity and forest conservation.
	Operation resilience management		

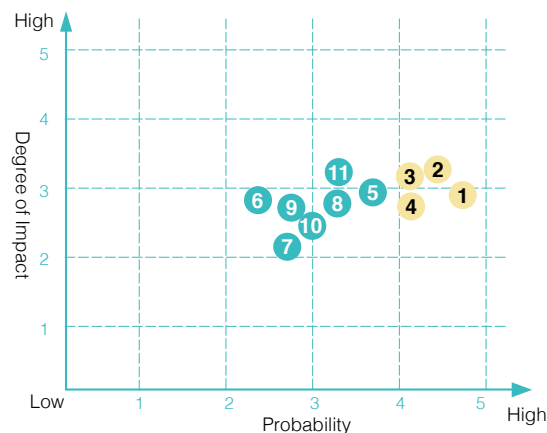
Note 1: See [chapter 4.6](#) for details on target progress.

3.4 Risk Identification

Socioeconomic activities fundamentally rely heavily on the natural environment. Research from the World Economic Forum (WEF) indicates that more than half of the global economic value output is moderately or highly dependent on natural capital³. The 2024 Global Risks Report also points out that extreme weather, environmental changes, and ecological degradation will be the most significant risks in the next decade. The identification of risks related to climate, biodiversity, and natural capital spans areas which not only may impact E.SUN's direct operations but also could affect investment and financing clients. For instance, a customer's operations may be impacted by natural environment risks related to climate change, leading to a depreciation of E.SUN's asset values or price volatility.

Identification of climate, biodiversity, and natural capital risks

As climate and natural environmental changes occur, along with the societal transition to a low-carbon economy, different degrees of impact will manifest over various time frames, subsequently affecting existing risks, such as credit, market, and operational risk. E.SUN considers its business management mechanisms and product life cycles to conduct climate and nature-related risk assessments for the short, medium, and long term. These assessments are integrated into the current risk management framework and are reviewed regularly to develop response plans.



are items considered to be more material

Risks		Potential financial impact(s)	Impact Period
Policies and Regulations	1. Carbon tax / Fee	Financial impacts on the company and clients from carbon taxes and fees.	Short
	2. Stricter climate and nature regulations	Environmental regulations and supervision become more stringent, increasing compliance and production costs.	Short
Technology	3. Climate and nature-sensitive assets	Replacement of existing products and services with low carbon and environmentally friendly products may increase the uncertainty of operations and investment and financing assets	Medium
Market	4. Raw material prices	Rising prices of water, electricity, and raw materials, which rely on natural capital, increase costs.	Medium
	5. Changing consumer preference	Changes in consumer preferences requires consideration of climate and nature impact factors in business decisions, in response to climate and environmental issues	Medium
Reputation	6. Negative news / Litigation risk	Negative behaviors related to its direct operations or those of customers may generate negative news and even pose litigation risks	Medium
Liability	7. Penalty risk	Tightening anti-greenwashing and environmental regulations increases compliance costs and the risk of penalties.	Short
Acute	8. Natural disasters	Natural disasters such as typhoons, floods, and earthquakes can cause operational disruptions, leading to impairments in value	Medium
	9. Depletion and deterioration of natural capital	The depletion or deterioration of natural resources relied upon, such as water, forests, and biodiversity impacts operations	Long
Chronic	10. Deterioration of climate and natural environment	Climate change and the loss of biodiversity impact the economy, affecting the operations of the company and its customers, resulting in costly asset impairments or premature replacement	Long
Systemic	11. Irreversible degradation of the climate and environment	Global warming exceeding 1.5 or 2°C leads to irreversible degradation of nature, causing significant larger-scale impacts on the economy, resulting in systemic risks	Long

Note 1: Time period definitions: less than 1 year is considered short-term, up to 2030 is medium-term, and up to 2050 is long-term.

Note 2: Assessment of risk materiality includes potential losses or cost increases, revenue growth margins, and the percentage of affected employees, among other factors, that exhibit higher levels of impact and probability

Note 3: Source: Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy. (2020)

3.5 Risk Assessment

E.SUN further identifies the impact of significant risks identified in Section 3.4, focusing on the degree of impact related to the main risks faced:

Business Category	Correlation between Physical Risks and Traditional risks				
	Impact Description	Primary Risk Category	Risk Impact Level		
			Short-term	Medium-term	Long-term
Investment and financing products and services (Including Investment in research and development, Acquisitions or divestments)	<ul style="list-style-type: none"> Climate change or natural environmental factors (such as typhoons, heavy rain, landslides, and water stress), leading to impairments in the value of collateral or disruptions in the supply chain that impact customer operations. The degradation of climate and natural resources affects macroeconomic factors (such as GDP, unemployment rate, and shortages of natural resources) or physical risk events, which can result in adverse impacts on investment targets (such as revenue decline, additional operational costs, and supply interruptions), causing price volatility in the investment portfolio. 	Credit risk	Low	Moderate	Moderate
		Market risk	Low	Moderate	Moderate
Direct Operations (Including Adaptation and mitigation activities)	<ul style="list-style-type: none"> Operational locations affected by extreme weather and natural resource factors (such as typhoons, heavy rain, and water stress), leading to damage to facilities and equipment, or negative impacts on operations. 	Operational risk	Low	Low	Moderate
Suppliers	<ul style="list-style-type: none"> Natural disasters and environmental factors may affect the operation of infrastructure (such as electricity and internet), potentially impacting service delivery. 	Operational risk	Low	Low	Moderate

Business Category	Correlation between Transition Risks and Traditional risks				
	Impact Description	Primary Risk Category	Risk Impact Level		
			Short-term	Medium-term	Long-term
Investment and financing products and services (Including Investment in research and development, Acquisitions or divestments)	<ul style="list-style-type: none"> The imposition of carbon taxes/fees and carbon tariffs negatively impacts the finances of high-carbon industries, companies unable to reduce carbon emissions, and their related supply chains. Environmental assessment factors may affect the development or operation of production sites, or companies may face boycotts. Environmental assessment and land use regulations may restrict the development and operation of facilities near sensitive areas, increasing costs associated with the use of natural resources and waste processing. Nature related Regulations and policies, such as the EUDR and the Nature Restoration Law, may increase operational costs for companies or expose them to penalties, impacting finances, and potentially affecting the reputation of investment and financing institutions 	Credit risk	Low	Moderate	Moderate
		Market risk	Low	Moderate	Moderate
Direct Operations (Including Adaptation and mitigation activities)	<ul style="list-style-type: none"> The imposition of carbon-related costs and increase in investments for energy conservation and carbon reduction will require greater resource allocation. Stricter energy efficiency standards may apply to residential and commercial buildings, including mandatory disclosure obligations for carbon emissions. When assessing policy and regulatory risks, it is essential not only to consider the potential direct impacts on operations but also to further evaluate the indirect impacts on the supply chain. Reputation risk is closely related to customers' or the general public's perception of whether a company is committed to low-carbon transition and its environmental sustainability commitments. If a company fails to fulfill its commitments, it may affect perceptions of the company, leading to impacts on reputation, which could result in losing support from customers, consumers, or suppliers, and may even affect the company's ability to secure funding or recruit and retain employees. 	Operational risk	Low	Low	Moderate
Suppliers	<ul style="list-style-type: none"> Vendors may pass on the investment and carbon-related costs arising from their low-carbon transition, or may need to adjust their service models due to regulatory restrictions, resulting in increased costs 	Operational risk	Low	Low	Low

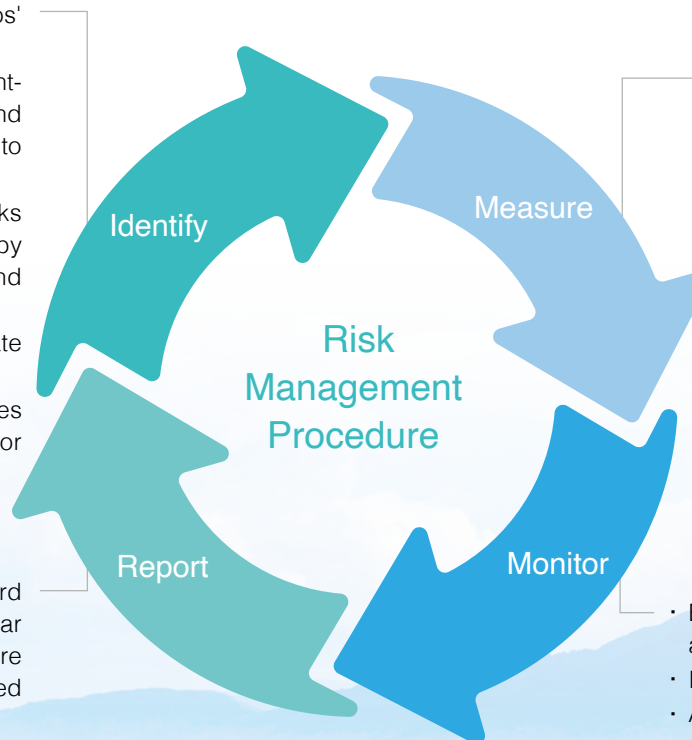
Low impact: Slight increase in costs with minimal impact on finances.

Moderate impact: Increased risk of delinquency and asset price volatility, which may affect revenue growth.

High impact: Increased risk of default on credit assets, price volatility of investment assets, and operational impacts on locations due to extreme weather events, which may lead to a risk of revenue decline.

3.6 Risk Management Procedure

- Regularly analyze the company's operations and portfolios' dependencies and impacts on natural capital.
- Identify potential impacts of climate and natural environment-related risks on the company's operations and portfolios, and regularly monitor relevant laws, guidelines, and literature to enhance the thoroughness of identifications.
- Establish the materiality of climate and environmental risks and opportunities through the indicators recommended by TCFD and TNFD, relevant laws, guidelines, literature, and internal experts.
- Enhance the identification of enterprises with high climate and natural environmental risks in the lending process.
- Incorporate climate change-related risks and opportunities into the management and decision-making processes for securities investment and underwriting business.



- Inventory greenhouse gas emissions of investments and financing activities.
- Assess the proportion of climate and nature-sensitive assets.
- Regularly conduct scenario analysis and stress tests on physical risks, transition risks and systemic risks to inform strategy development and risk management.

- Present climate and environmental risk reports to the board of directors at least every six months and conduct regular risk reporting for senior management to assess the exposure and management of climate and natural environment-related risks.
- If climate and environmental risk impacts threaten overall operations or business conditions, take appropriate management actions immediately and report to the board of directors.
- Follow climate change-related guidelines for information disclosure.
- Introduce IFRS S1 and S2 standards, and report progress to the board regularly.

- Establish indicators that connect climate and nature factors and monitor.
- Implement Science-Based Targets (SBT).
- Adopt risk-based and differentiated management measures based on the results of climate and nature-related risk assessments.

3.7 Climate and Nature Sensitive Assets

Business activities and the natural environment mutually influence each other. E.SUN conducts further analysis on industries and operational regions that are subject to high climate and nature risks based on the identified dependencies on and impacts from climate and nature in our direct operations and portfolios. This approach aims to comprehensively understand the potential impacts that climate and environmental changes may bring, enhance the identification of nature-related risks, and take proactive response measures.

3.7.1 Dependency and Impact Assessment

Based on the TNFD recommendations, E.SUN has established localized nature assessment indicators for Taiwan using international tools and local data, while also considering industry characteristics and geographical locations. This effort has culminated in a comprehensive evaluation of E.SUN's entire value chain. The following will outline the assessment framework and results.

Assessment Framework

Considering that the operational activities of portfolio companies may have varying degrees of dependencies and impacts from natural capital depending on industry characteristics and locations, it is necessary to further distinguish operational characteristics and geographical distribution profiles to enhance the assessment of dependence and impact levels.

Operational Characteristics Indicators

Based on the assessment of industry characteristics in Taiwan, agriculture, forestry, animal husbandry, and mining & quarrying industries have a higher degree of dependencies on natural capital, while agriculture, forestry, animal husbandry, mining and quarrying, manufacturing, electricity and gas supply, and the accommodation and food service sectors have a greater degree of impacts. The dependence and impact of E.SUN's investment and financing portfolios are generally at a moderate to low level.

Section	Industry Types	Section	Industry Types
A	Agriculture, Forestry, Fishing and Animal Husbandry	J	Information and Communication
B	Mining and Quarrying	K	Financial and Insurance Activities
C	Manufacturing	L	Real Estate Activities
D	Electricity and Gas Supply	M	Professional, Scientific and Technical Activities
E	Water Supply and Remediation Activities	N	Support Service Activities
F	Construction	O	Public Administration and Defence; Compulsory Social Security
G	Wholesale and Retail Trade	P	Education
H	Transportation and Storage	Q	Human Health and Social Work Activities
I	Accommodation and Food Service Activities	R	Arts, Entertainment and Recreation
		S	Other Service Activities

Dependencies



Industries with a higher proportion of risk exposure

Impacts

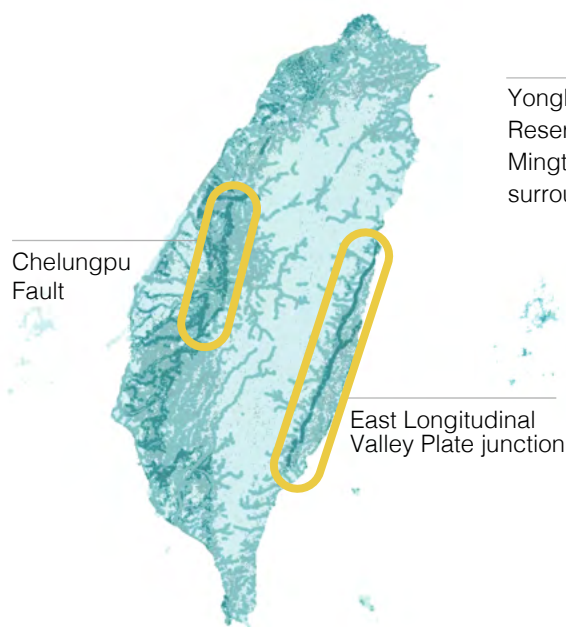


Industries with a higher proportion of risk exposure

Geospatial Indicators

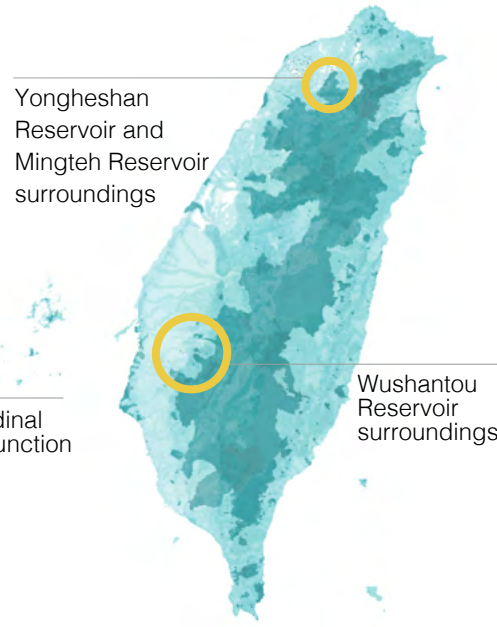
Integrating the "Land Conservation Areas," "Marine Resource Areas," and ecological and disaster data within Taiwan's land use zoning, this analysis encompasses 31 data layers. The degree of dependency or impact is evaluated based on the level of overlap among these layers; areas with more overlapping layers, represented by deeper colors, indicate a greater degree of dependency or impact, while areas with fewer overlaps show lighter colors. The assessment results are as follows: areas near river zones and active fault lines exhibit a higher degree of dependency, displaying a linear distribution. In contrast, mountainous areas demonstrate more significant impacts, whereas plains generally exhibit a lower level of impact. Among these, the regions with the highest impact index are the overlapping areas of land conservation and water resource areas, such as the water quality conservation zones of Yonghe Mountain Reservoir, Mingde Reservoir, and Wushantou Reservoir.

Analysis of Dependencies



low high
Degree of dependencies

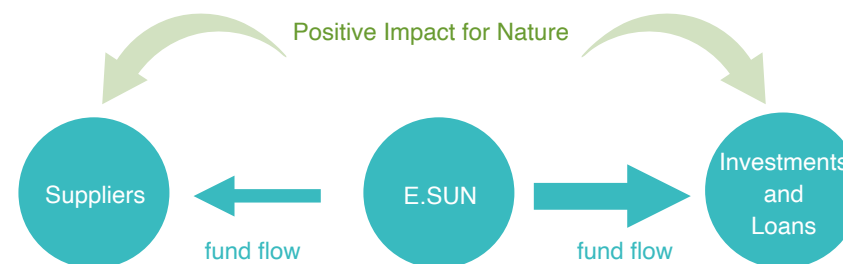
Analysis of Impacts



low high
Degree of impacts

Supply Chain Assessment Overview

Considering that changes in natural capital may pose risks or opportunities for the entire market and supply chain, E.SUN not only exerts its influence as a financial institution but also plays the role of a consumer for our suppliers. This connects the upstream and downstream supply chains, maximizing E.SUN's positive influence. Based on the aforementioned assessment framework, considering operational space indicators and geospatial indicators, the results show that the top ten suppliers of E.SUN have a "Low" impact on natural capital, accounting for 81% of the total procurement amount. The greatest level of dependency on nature is observed in suppliers from the "Other Manufacturing" industry.



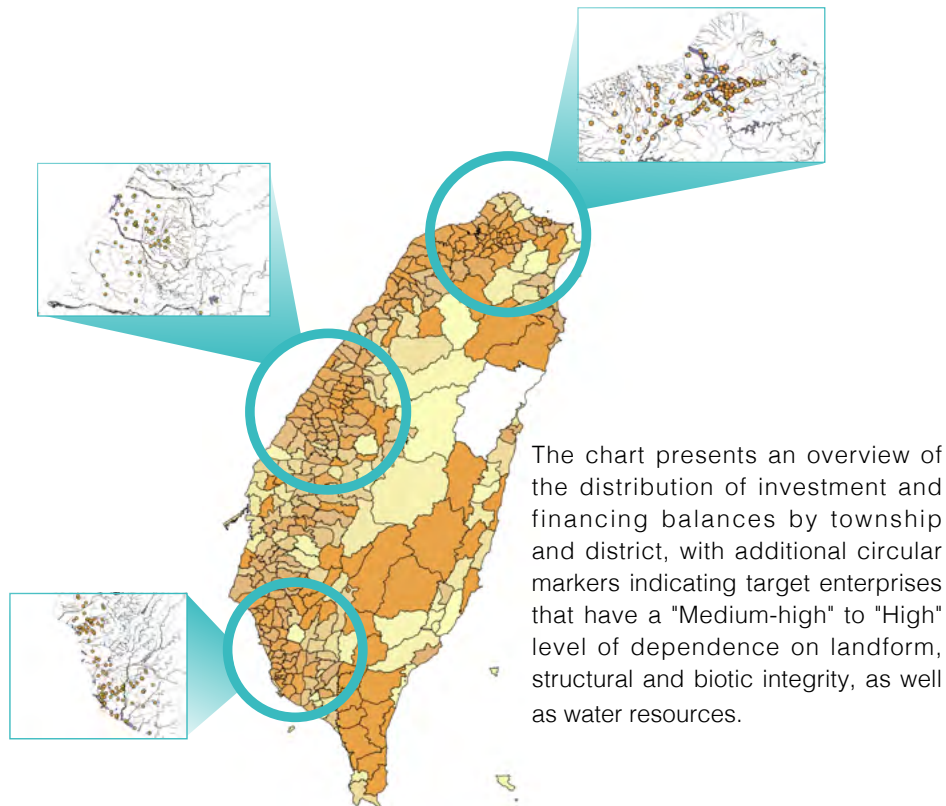
Supplier Classification	Number of Suppliers	Proportion of Total Procurement	Degree of Dependence	Degree of Impact
Power Generation	3	2.61%	Low	Low
Manufacturing	3	0.58%	Low	Medium-low
Construction, Agriculture, Fishing, and Other Non-Specific Industries	18	12.40%	Low	Low
Service (Finance, Real Estate, etc.)	120	84.42%	Low	Low

Assessment of Investment and Financing Portfolio Overview

Considering that industries with high sensitivity to climate and nature have significant dependencies and impacts on the natural environment compared to other industries, a more in-depth assessment is necessary. As of the end of 2023, E.SUN has evaluated the geographical distribution of its domestic corporate loan portfolio, identifying metropolitan areas as the primary risk zones, which include the Greater Taipei metropolitan area, Taichung metropolitan area, Tainan, and Kaohsiung metropolitan area.

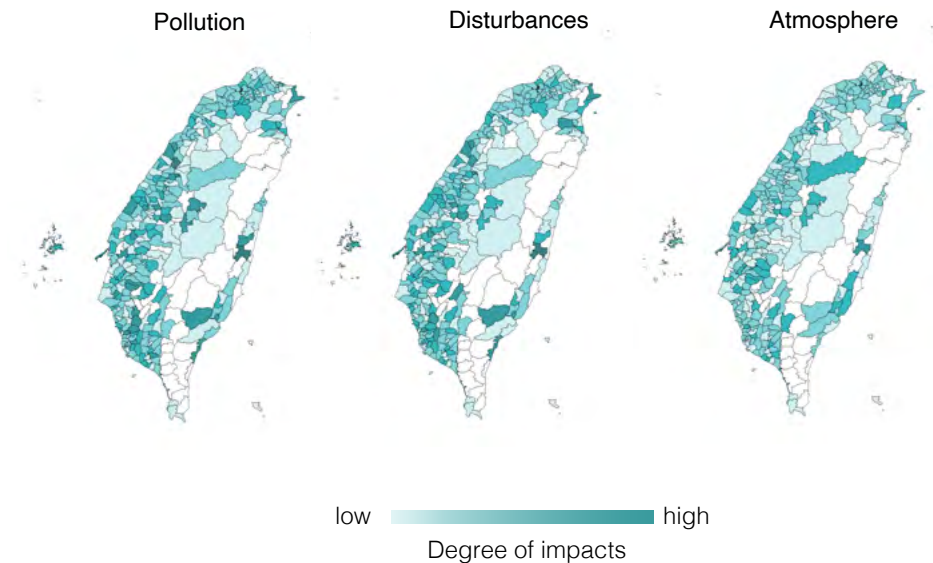
Further examination reveals that financing targets with a higher degree of dependence on factors such as land geomorphology, structural and biotic integrity, and water resources are largely concentrated in the middle and upper reaches of rivers in the northern and central regions. In contrast, in the southern region, they are mostly located in the middle and lower reaches of rivers.

Analysis of dependencies of E.SUN's investments and loans



In terms of impact, factors such as pollution, human interference, and air quality were analyzed. Overall, densely populated metropolitan areas exhibit a higher degree of impact. However, upon reviewing the impact levels of individual target companies, there are no enterprises assessed as having "Medium-high" or "High" impacts across all three factors simultaneously. Further analysis was conducted using a weighted average of towns and the portfolio balance, with the results illustrated in the following figure. Areas in eastern Taiwan, such as Hualien City and Taitung, show significant impact levels in terms of pollution and human interference, indicating that operational activities in these target areas should particularly consider their effects on the local environment.

Analysis of impacts of E.SUN's investments and loans



3.7.2 Climate and Nature-sensitive Industries

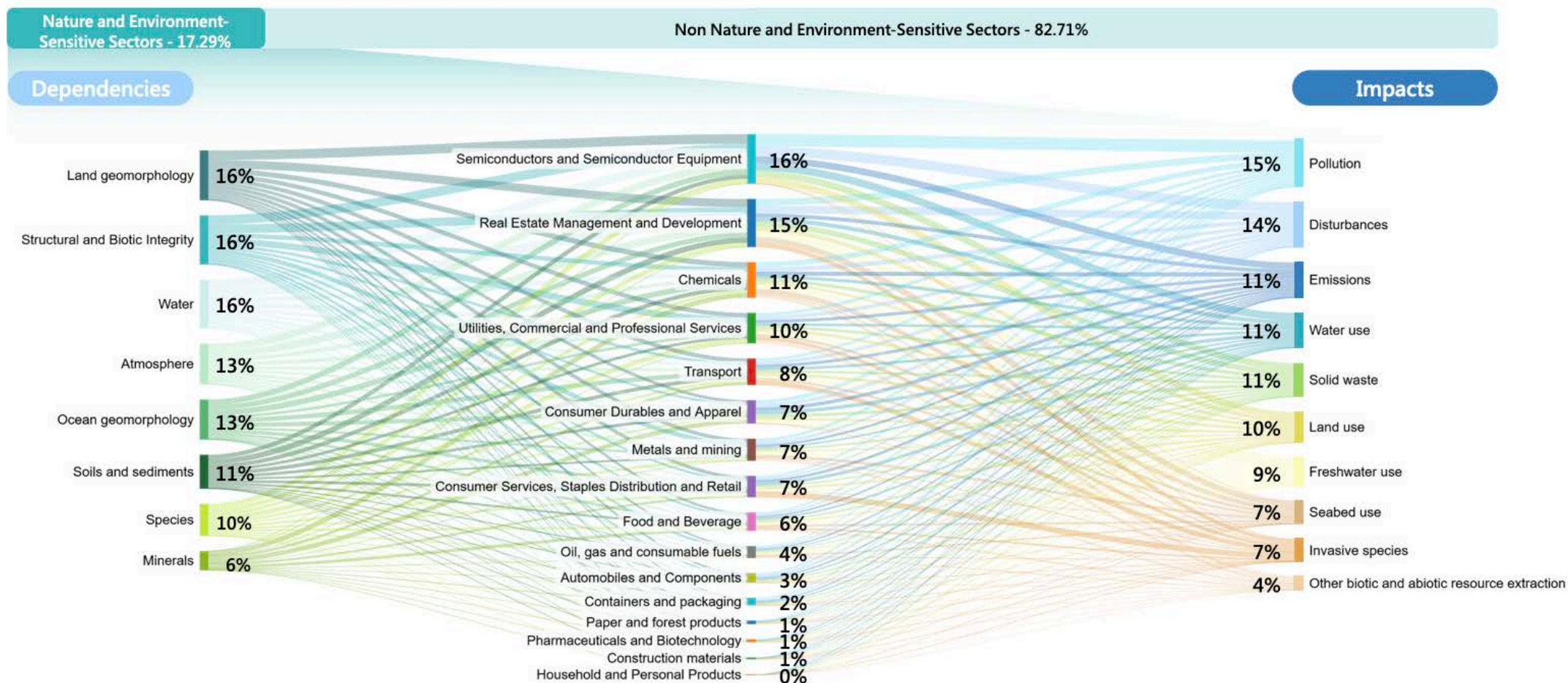
Identification of Sensitive Industries

E.SUN refers to the list of environmentally sensitive industries recommended by TNFD, as well as relevant risk management guidelines from domestic and international sources (such as UNEP FI and SASB). This is combined with the ENCORE tool from the Natural Capital Finance Alliance and the environmental issues from the Science Based Targets Network (SBTN). Industries that are more susceptible to the impacts of climate and environmental changes are reviewed every six months, serving as a reference for external disclosures and internal risk decision-making.

	Dependencies								Impacts										Percentage of Total Financing and Investment (%)
	Atmosphere	Land geomorphology	Minerals	Ocean geomorphology	Soils and sediments	Species	Structural and Biotic Integrity	Water	Land use	Freshwater use	Seabed use	Water use	Emissions (non-GHG air pollutants)	Pollution	Solid waste	Disturbances	Invasive species	Other biotic and abiotic resource extraction	
Automobiles and Components																			0.53%
Chemicals																			1.96%
Construction materials																			0.11%
Consumer Durables and Apparel																			1.29%
Consumer Services, Staples Distribution and Retail																			1.18%
Containers and packaging																			0.41%
Food and Beverage																			1.02%
Household and Personal Products																			0.02%
Metals and mining																			1.22%
Oil, gas and consumable fuels																			0.66%
Paper and forest products																			0.20%
Pharmaceuticals and Biotechnology																			0.17%
Real Estate Management and Development																			2.65%
Semiconductors and Semiconductor Equipment																			2.74%
Transport																			1.46%
Utilities, Commercial and Professional Services																			1.67%
Nature and Environment-Sensitive Industries																			17.29%
Non Nature and Environment-Sensitive Industries																			82.71%
Total																			100%

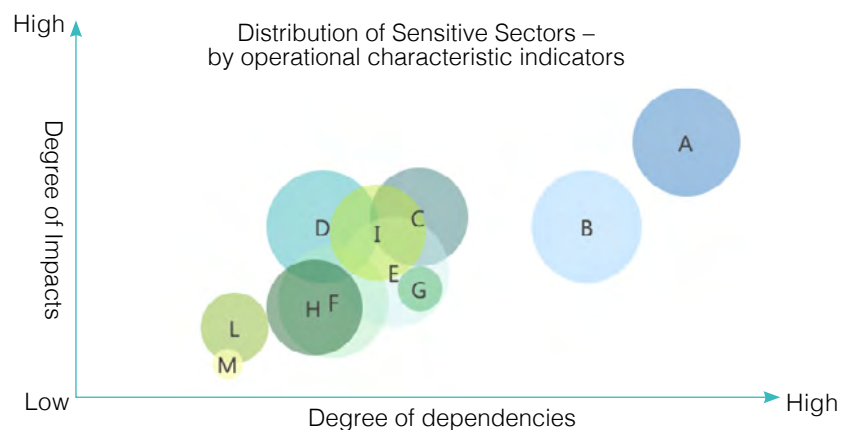
Very High High Medium Low Very Low No data

As of June 2024, the following table shows the industries with high sensitivity to climate and nature and level of exposure. The total proportion of investment and financing in sensitive industries is 17.29%, with higher shares primarily in semiconductor, real estate, and the chemical industry. Under the assessment, there is a higher dependence on natural capital factors such as land geomorphology (soil quality regulation, storm protection, etc.), structural and biotic integrity (supply, habitat, biological control, etc.), and water (water supply, water quality, climate regulation, etc.). Regarding impact, the degree of impact is higher for pollution, human disturbances, and water use.



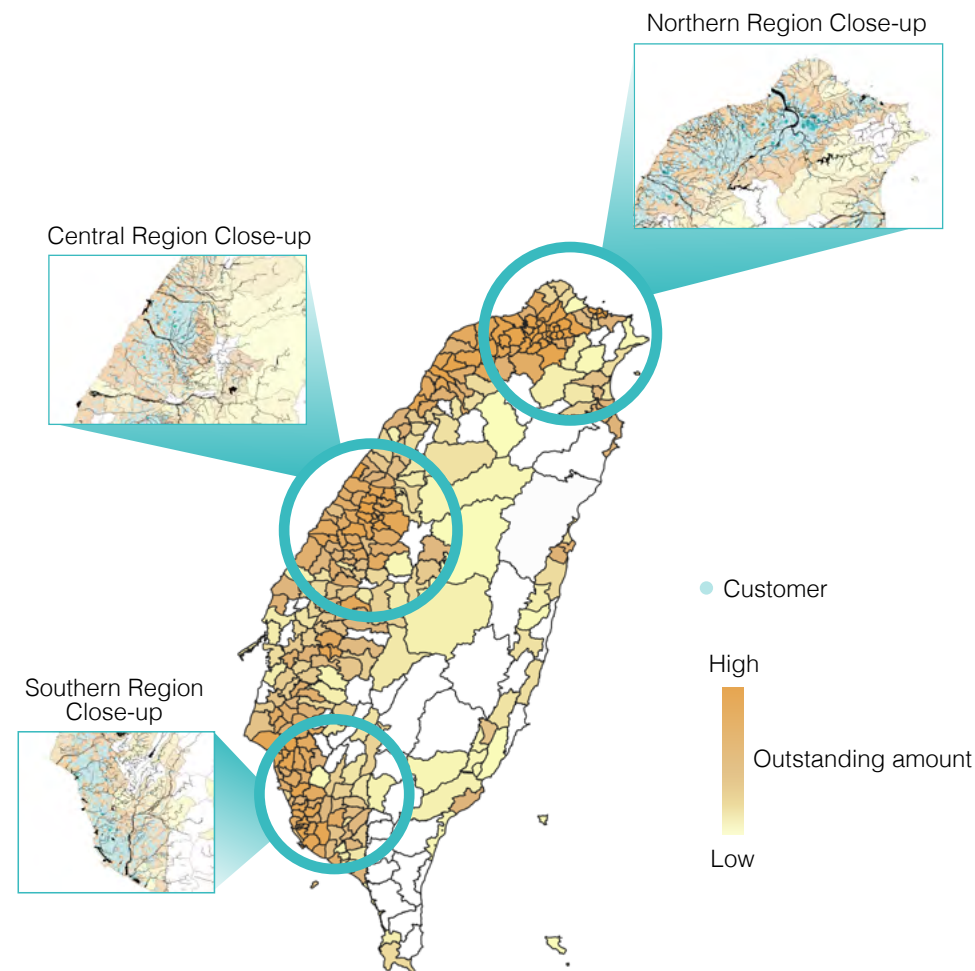
Assessment of Dependency and Impact Levels of Sensitive Industries

Based on the identification results of sensitive industries, the distribution of their dependency and impact levels in relation to operational characteristics indicators is illustrated in the following figure. The circles in the figure represent the proportion of exposure in sensitive industries, categorized by major industry Sections by the Directorate-General of Budget, Accounting, and Statistics. The larger the circle, the higher the exposure amount; the closer the distribution is to the upper right corner, the



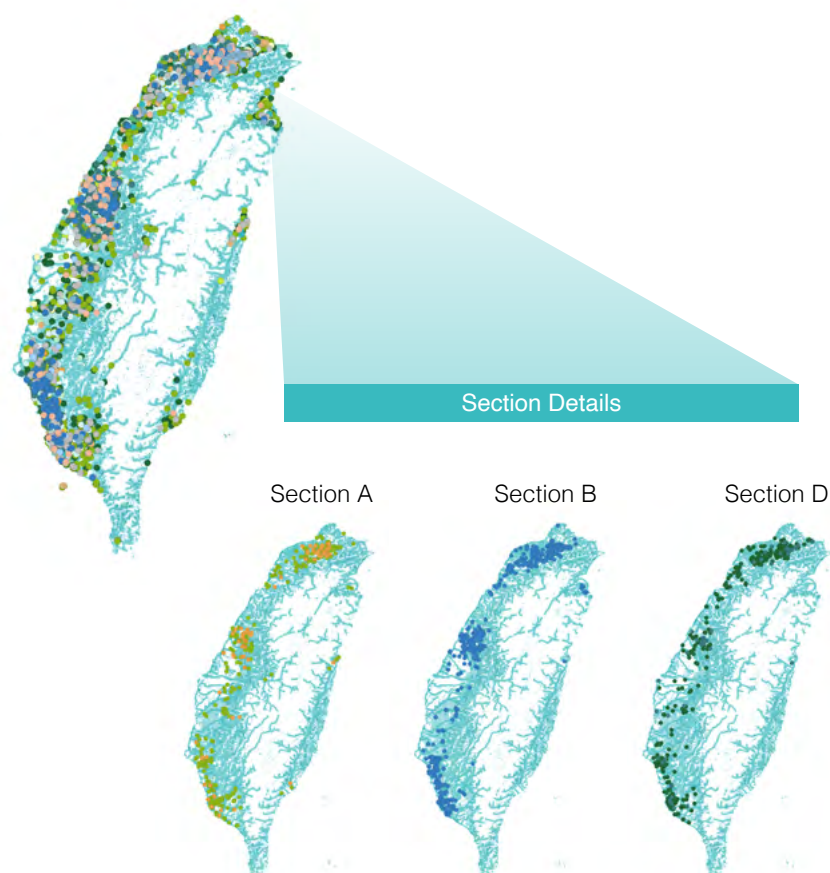
Section	Industry Types	Section	Industry Types
A	Agriculture, Forestry, Fishing and Animal Husbandry	J	Information and Communication
B	Mining and Quarrying	K	Financial and Insurance Activities
C	Manufacturing	L	Real Estate Activities
D	Electricity and Gas Supply	M	Professional, Scientific and Technical Activities
E	Water Supply and Remediation Activities	N	Support Service Activities
F	Construction	O	Public Administration and Defence; Compulsory Social Security
G	Wholesale and Retail Trade	P	Education
H	Transportation and Storage	Q	Human Health and Social Work Activities
I	Accommodation and Food Service Activities	R	Arts, Entertainment and Recreation
		S	Other Service Activities

higher the dependency and impact levels of that industry. The assessment results show we have higher proportions in Section A (Agriculture, Forestry, Fishery, and Animal Husbandry), Section B (Mining and Quarrying), and Section D (Electricity and Gas Supply). Among these, Section A and B also represent the industries with the highest levels of dependencies and impacts, indicating a consistent trend between the identification results of sensitive industries and the operational characteristic indicators.

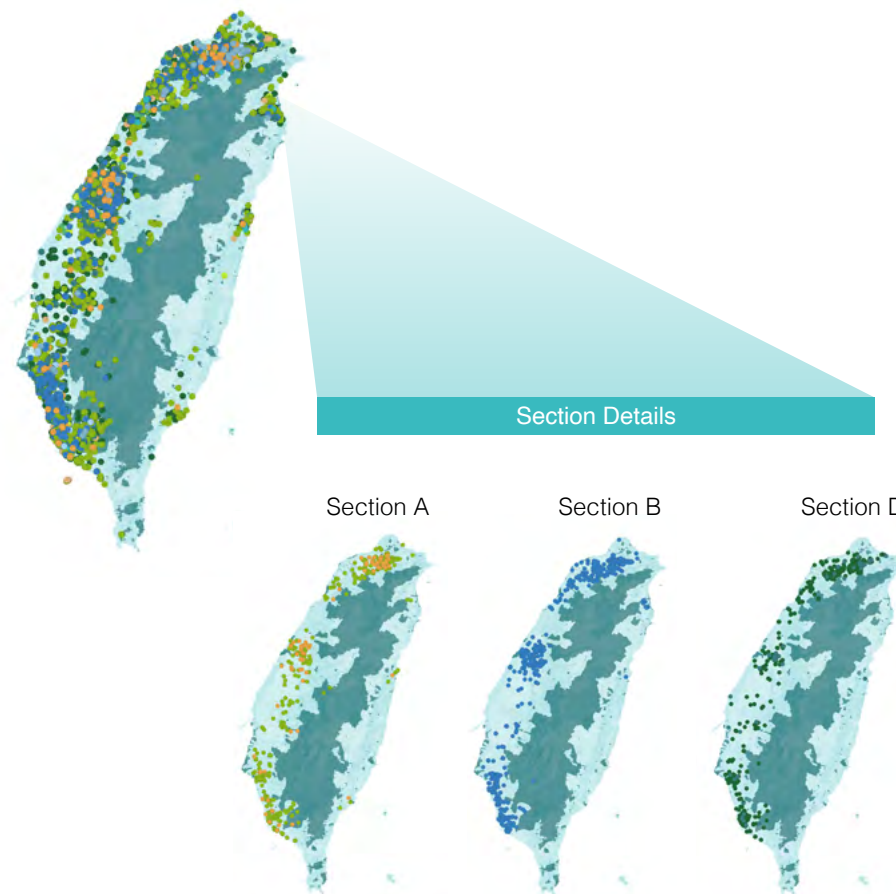


Further examination of the distribution of sensitive industries within Section A, B, and D reveals that industries in Section A and B are primarily distributed along river basins and are largely concentrated in the middle and upper reaches of rivers, resulting in a higher degree of dependence. However, the impact level is lower because they are not located in mountainous areas. In contrast, the Section D industries do not show any significant distribution trends. E.SUN will continue to strengthen our assessment capabilities to enhance the comprehensiveness and granularity of risk identification.

Distribution of sensitive industries based on dependency levels of geospatial indicators



Distribution of sensitive industries based on impact levels of geospatial indicators



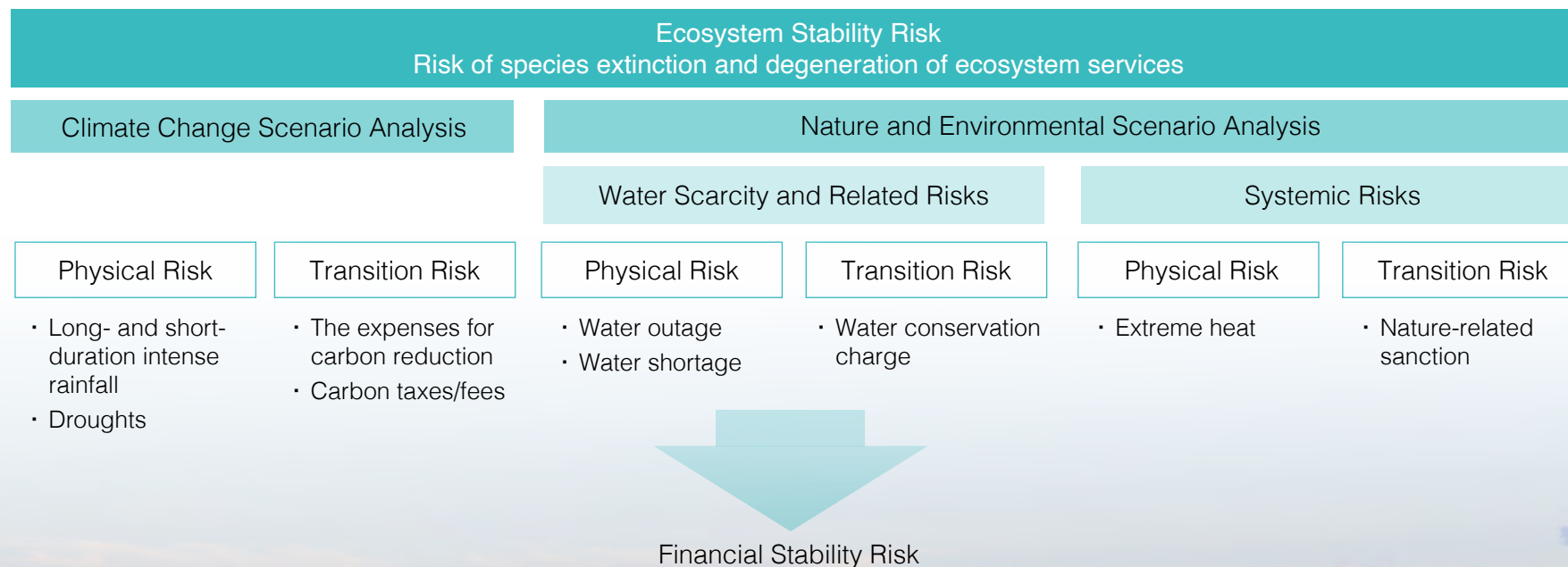
3.8 Differentiated Management

Natural environment-related risks are closely linked to the operational characteristics of industries and geospatial factors. For example, corporate activities in upstream river basins can affect water quality, potentially leading to changes in the water that businesses downstream rely on. E.SUN prioritizes material locations and industries with high environmental sensitivity or natural dependence, adopting differentiated management strategies, as summarized in the table below. E.SUN actively manages the carbon emissions of financial assets, increases green assets, and reduces gray assets within its portfolios. E.SUN will continue to improve its differentiated management based on spatial characteristics.

Management Measures	Description
Avoid	<ul style="list-style-type: none"> According to "E.SUN Financial Holding Co., Ltd. Sustainable Finance Policy," companies involved in illegal logging, harming endangered wildlife, developing coal mines, or setting up new coal-fired power projects should be avoided According to "Guidelines for the Phase-Out of Coal and Unconventional Oil & Gas of E.SUN Financial Holding Company," enhance management and set plans to phase-out of high GHG emitting coal companies and unconventional oil & gas companies. Real estate collateral listed in the "Soil and Groundwater Pollution Remediation Act" should be avoided
Enhanced Management	<ul style="list-style-type: none"> Companies involved in tobacco, gambling, mining, and leather and fur-related activities should be carefully evaluated and regularly monitored E.SUN has signed the Equator Principles, and according to Equator Principles 4.0, climate change has been designated as a necessary item for project financing assessments. For project financing tied to power, oil and gas, petrochemicals, and infrastructure projects above a certain scale, implement risk classification management under the Equator Principles, carefully assessing whether project development processes are fulfilling social responsibilities and properly establishing monitoring and improvement plans for environmental and social impacts. Analyze climate-related physical and transition risks, environmental pollution, biodiversity, and other material issues for each project financing case. Develop specific differentiated measures in enhanced due diligence process to address industry-specific climate and environmental risks, including carbon emissions, climate risks, biodiversity, toxic substance management, and water resources Incorporate the hazard and vulnerability of climate risk factors into real estate collateral zoning standards to manage credit business climate risks within jurisdiction divisions Strengthen the review process for cases in areas with high landslide risk. Establish mechanisms to encourage customers with environmental pollution penalties to address their issues.
Actively Support	<ul style="list-style-type: none"> Support social innovation and local economic revitalization industries by providing customized financial services, financial counseling, and marketing resources, thereby enhancing the drive towards SDGs in Taiwan. Increase investment and financing in forward-looking economic activities aligned with the key strategies outlined in the National Development and Reform Commission's 2050 net-zero emission pathway. This includes sectors such as renewable energy, hydrogen energy, power systems and energy storage, energy conservation, carbon capture utilization and storage, vehicle electrification and decarbonization, resource recycling and zero waste, and natural carbon sinks.

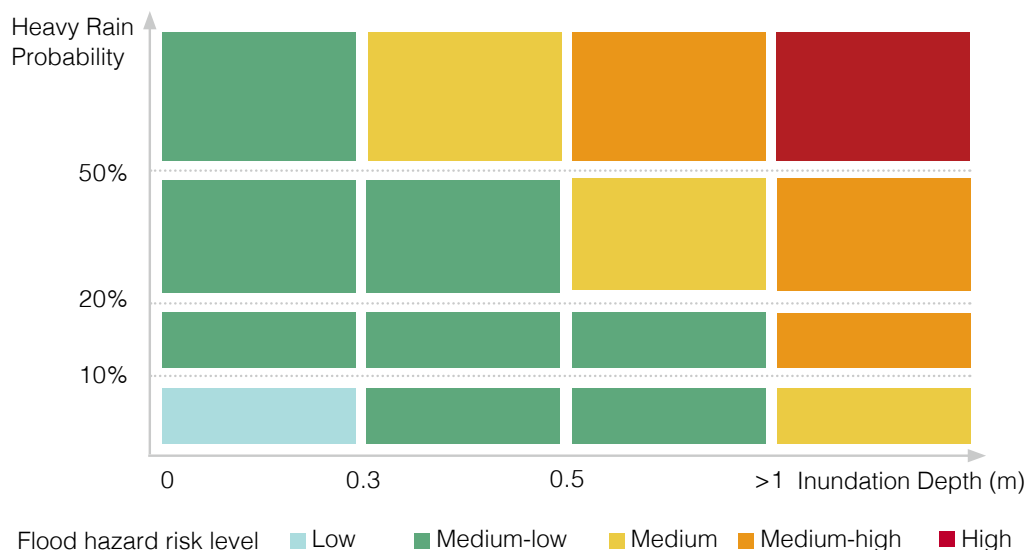
3.9 Climate and Nature Scenario Analysis

Scenario analysis is the process of identifying and assessing potential impacts related to future conditions that may arise. Climate change and nature scenario analysis, which includes stress testing and sensitivity analysis, entails both quantitative and qualitative assessments of climate change and nature-related risks to understand their potential financial impacts on business activities. The results are then integrated into governance strategies and risk management processes. The impacts of climate and natural environmental changes extend beyond physical and transition risks as they can also significantly affect the resilience of ecosystems. This year, based on the climate change scenario analysis, further analysis has been conducted on the potential financial impacts that changes in the natural environment may have on the investment and financing portfolios. This effort aims to explore potential business developments to strengthen risk management and transparency of information disclosures, thus enabling the assessment of climate and nature-related risks and opportunities.

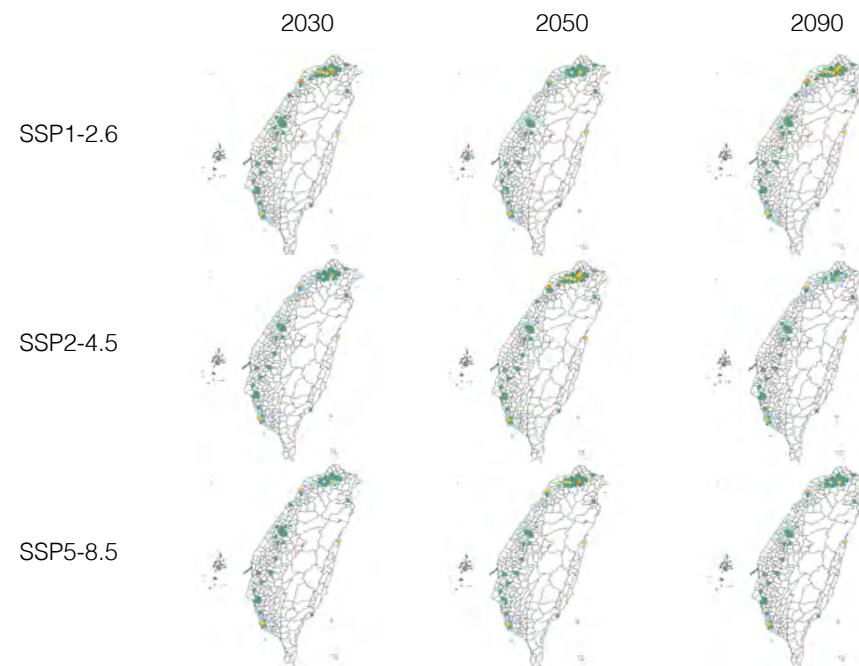


3.9.1 Climate Scenario Analysis of Direct Operations

The primary climate risks for the financial sector stem from investment and financing portfolios. The transition risks affecting internal operations mainly involve rising water and electricity costs and regulation compliance costs, resulting in relatively minor financial impacts. However, physical risks could hinder operations and impact service to customers and revenue; thus, the scenario analysis of direct operations focuses primarily on physical risks. Based on the IPCC Sixth Assessment Report (AR6) and insights from internal experts, the analysis employs factors such as hazard level, vulnerability, and the location of facilities (exposure) to assess the risk levels of flooding disasters, as shown in the table



below. Considering the life cycle of facility and operational activities, the analysis focuses on scenarios including SSP1-2.6 (sustainable development, net-zero transition), SSP2-4.5 (intermediate pathway), and SSP5-8.5 (failure to transition), evaluating scenarios for the years 2030, 2050, and 2090. The analysis results indicate that there are no high-risk locations in all scenarios for 2030 and 2050. However, under the SSP5-8.5 scenario in 2090, approximately 3% of operational locations are classified as having a high flood risk level.



Unit: Percentage of locations

Scenario	SSP1-2.6			SSP2-4.5			SSP5-8.5		
Time	2030	2050	2090	2030	2050	2090	2030	2050	2090
High Risk	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.09%
Medium-high Risk	0.00%	1.85%	0.00%	0.00%	1.23%	0.00%	0.00%	2.47%	4.32%
Medium Risk	3.70%	4.94%	3.70%	3.70%	3.09%	3.70%	3.70%	2.47%	5.56%
Medium-low Risk	9.26%	6.17%	9.26%	9.26%	8.64%	9.26%	9.26%	8.02%	0.00%
Low Risk	87.04%	87.04%	87.04%	87.04%	87.04%	87.04%	87.04%	87.04%	87.04%

Prevention and Response Measures for Direct Operations

Typhoon Prevention Measures

In response to climate change extremes, particularly during the typhoon season, to prevent potential damage from strong winds and heavy rainfall, when the Central Weather Administration issues a typhoon land warning, E.SUN's internal system alerts all employees to remain vigilant against risks such as flooding, power outages, and falling objects.

Pre-Typhoon Prevention

- Clear debris from rooftops, balconies, and surrounding drainage areas to ensure proper drainage. For low-lying areas prone to flooding, prepare sandbags or assemble waterproof barriers to prevent water ingress and damage.
- Remove items that could fall and relocate plants indoors or secure them
- Move important documents and equipment to higher ground and unplug devices. Close windows and doors before leaving the premises.
- To prevent unplanned power outages, ensure that generators are operational and refill them to at least 80% capacity to extend response time
- Establish internal and inter-property emergency contact points and methods to promptly monitor the situation and coordinate disaster response

During the Typhoon

- Stay updated on the latest typhoon warnings and avoid going out unless necessary
- Stay clear of flooded areas to prevent electric shock injuries
- Minimize exposure in open areas to reduce the risk of lightning strikes

Post-Typhoon Warning and Reporting

- Continuously monitor the risk of falling objects, avoid touching downed power lines, and check for damage to doors, windows, and signage.
- Provide timely care to colleagues and, if safe, send personnel to inspect the premises. Report any abnormalities to the headquarters immediately

Flood Risk Mitigation Measures for High-Flood-Potential Branches

E.SUN utilizes the third-generation flood risk map from the Water Resources Agency to analyze potential flood depths. To prevent disruption of operations due to flooding, waterproof barriers have been installed at branches where potential flood depths exceed 0.5 meters. Currently, a total of 10 branch locations are equipped with these barriers

Emergency Response Measures for Flooding

To ensure uninterrupted operations, E.SUN regularly conducts typhoon preparedness drills with branch staff. In the event of significant disasters like flooding, emergency response and recovery measures will be activated for affected sites, and on-site personnel are trained to adapt and minimize branch damage.

Emergency Response Plans and Recovery Measures

- Immediately arrange for administrative staff to assess on-site damage
- Depending on the affected unit's condition, promptly dispatch relevant professional contractors for support and repairs
- Ensure that power and information networks remain operational and unobstructed
- For critically damaged operational equipment, implement necessary reinforcement or repairs immediately to ensure operational safety
- If damage is severe and regular operations cannot proceed, urgently seek an appropriate location to handle business and implement adequate recovery actions

3.9.2 Investment and Financing Portfolio Scenario Analysis

The climate change scenario analysis is based on the FSC's "Domestic Bank's Application of Climate Change Scenario Analysis" guidelines and methodology. We conduct separate analyses for our subsidiaries, E.SUN Bank and E.SUN Securities, focusing on domestic and international corporate credit, domestic and international bonds, equity investments, and personal loans. The analysis employs advanced methodologies to assess the spatial potential impacts of climate-related risks based on the geographical coordinates of the investment and financing portfolios, allowing for a more accurate identification of the potential financial impacts of climate change.

Scenario Settings

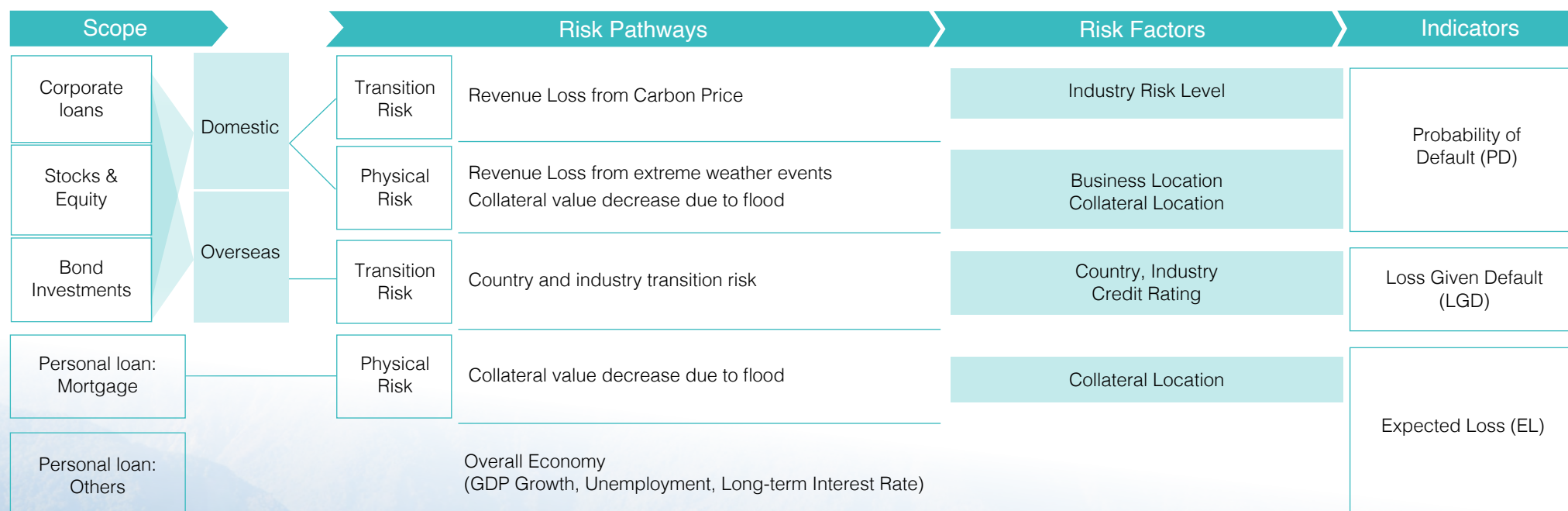
The scenario settings follow climate scenarios published by international organizations, including the Network for Greening the Financial System (NGFS) and the Intergovernmental Panel on Climate Change (IPCC). Three scenarios are established: Orderly Transition, Disorderly Transition, and No Policy scenarios, with 2030 and 2050 serving as the timeframes for our scenario analysis.

Scenario	Orderly Transition	Disorderly Transition	No Policy
Scenario Description	Orderly transition to achieve net-zero emissions by 2050.	Delayed initiation of the transition but still required to achieve net-zero emissions by 2050.	Climate change resulting from the lack of transition policies.
Transition Risks	Consideration of the carbon emission intensity of the country and industry, as well as the financial impacts of carbon pricing.		
	NGFS "Net Zero 2050" scenario	NGFS "Delayed Transition" scenario	NGFS "Baseline" scenario
Physical Risks	IPCC AR5 RCP2.6 scenario	IPCC AR5 RCP4.5 scenario	IPCC AR5 RCP8.5 scenario
Macroeconomics	Consideration of changes in GDP growth rate, unemployment rate, and long-term interest rates under NGFS scenarios		

Note: The RCP2.6 scenario represents an increase in radiation intensity of 2.6 watts/m² in 2100, while the RCP8.5 scenario represents an increase of 8.5 watts/m².

Analysis Method

Climate change-related risks are divided into transition risks and physical risks based on their sources. Transition risk refers to the risk from low-carbon transition regulations, which may negatively impact operations or revenues as companies must bear costs related to carbon reduction expenditures and to comply with carbon taxes/fees. This risk primarily considers two factors: industry type and country. Physical risk refers to direct damage or loss caused by extreme weather events, leading to asset value depreciation or operational interruptions. According to the statistics on natural disaster losses provided by the Ministry of the Interior's National Fire Agency and future rainfall trends estimated by the Taiwan Climate Change Projection and Adaptation Knowledge Platform (TCCIP), the main physical risk hazards in Taiwan are hydrological-related disasters. Therefore, subsequent analyses will focus on the risks posed by prolonged heavy rainfall leading to work stoppages, short-duration heavy rainfall causing flooding, and droughts.

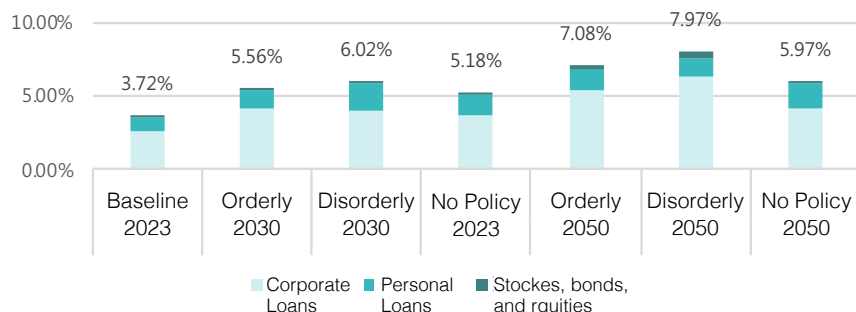


Analysis Results

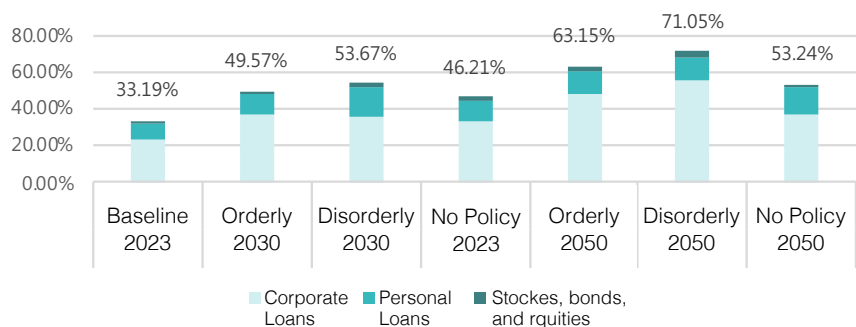
Overview of Transition and Physical Risk Exposure in Portfolios

The climate scenario analysis on E.SUN FHC's net value and pre-tax income combines the risks associated with the bank and securities portfolios with those of general enterprises, personal exposures, bonds, and equity investments. Notably, E.SUN Bank and E.SUN Securities account for over 99% of E.SUN FHC's assets. Based on the analysis results, the maximum expected loss is projected to occur in the 2050 disorderly transition scenario, representing approximately 7.97% of E.SUN FHC's baseline net value (for the year 2023) and approximately 71.05% of pre-tax income.

Expected loss as percentage of FHC net value



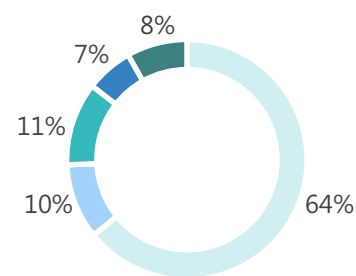
Expected loss as percentage of FHC pre-tax income



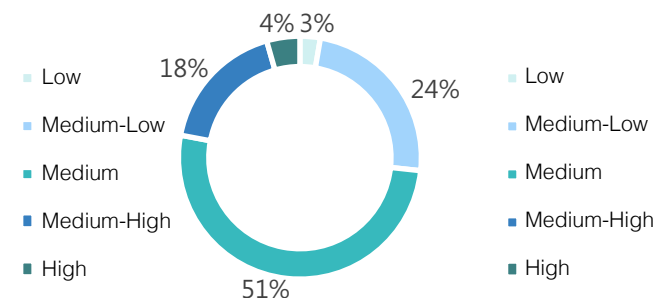
Transition Risk Analysis

The assessment of transition risks involves analyzing the credit exposure of domestic and international enterprises, bonds, and equity investment portfolios. The analysis categorizes the risks by industry and country, grouping the risks into levels of "Low," "Medium-low," "Medium," "Medium-high," and "High." The higher the risk level, the greater the impact of carbon prices on revenues. From the results of the transition risk exposure, it is observed that the impact of carbon pricing on domestic corporate loan customers' revenue is concentrated in the 1-5% range, accounting for approximately 60% of the total exposure. Additionally, around 10-20% of the exposure is affected by carbon pricing with revenue ratio ranging from 5% to 50%. In the 2050 Orderly and Disorderly scenarios, there is a small number of clients whose revenue ratios affected by transition risks may exceed 100%.

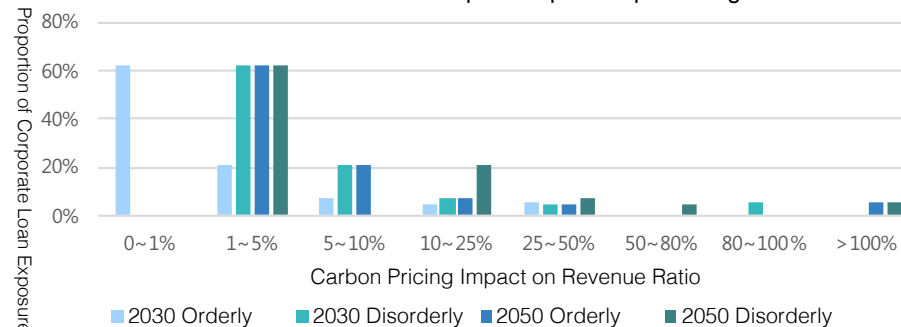
Industry transition risk level group



National transition risk level group



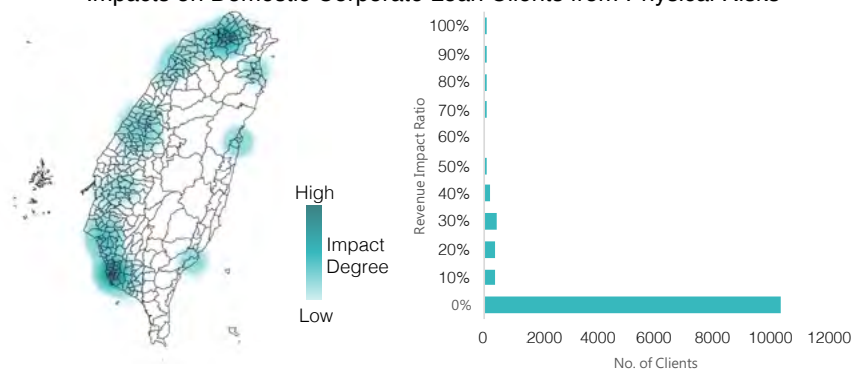
Transition risk distribution: Carbon price impact as percentage of revenue



Physical Risk Analysis

Physical risk primarily considers the physical operating locations and personal credit collateral locations of clients and the potential operational impacts or value depreciation due to physical risks. The assessment consolidates domestic corporate loans, bonds, and equity investment portfolios, revealing that the potential revenue loss ratios due to physical risks are highest under the 2050 Disorderly Transition scenario. As shown in the figure below, over 97% of banking portfolios are affected by physical risks, with revenue impact ratios below 1%, indicating that the overall risk remains manageable. For personal credit, the assessment focuses on mortgage portfolios. Utilizing third-generation flood risk maps, the analysis examines the impact of varying flood depths on the depreciation of collateral values. The highest impact is under the 2050 No Policy scenario which shows depreciation rates ranging from 0% to 41.5%, with the most severe effects concentrated in the southwestern coastal areas. Comparing the 2030 and 2050 No Policy scenarios, the ratios of collateral value impacted by physical risks in the major metropolitan areas of the north, central, and south will increase, with the maximum increase projected at around 4.83%.

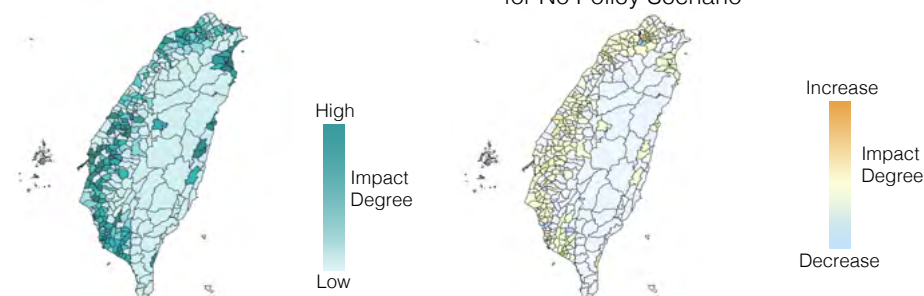
2050 Disorderly Transition – Impacts on Domestic Corporate Loan Clients from Physical Risks



Impacts on Personal Mortgage Collateral from Physical Risks

2050 No Policy

Changes in Impact Levels from 2030 to 2050 for No Policy Scenario



E.SUN Securities: Transition and Physical Risk Analysis

E.SUN Securities accounts for approximately 0.4% of the total analyzed portfolios, including proprietary trading and underwriting. In examining the distribution of risks under transition risks, 98.72% fall into the low to medium-low risk categories, with a significant proportion attributed to the trading services and electronic manufacturing sectors. In the 2050 Disorderly Transition scenario, the average revenue impact ratio due to carbon pricing is approximately 12.90%. Under physical risks, 80.50% of the risk distribution falls into the low to medium-low risk categories. In the 2050 Disorderly Transition scenario, the average revenue impact ratio due to physical risks is about 2.53%. To further understand the risk distribution profile, an analysis of the geographic distribution of the operational locations of target companies was conducted, with the results illustrated in the figure below. Higher risk levels are observed in areas such as Taipei, Hsinchu, and the coastal regions of central and southern Taiwan.

Transition risk distribution

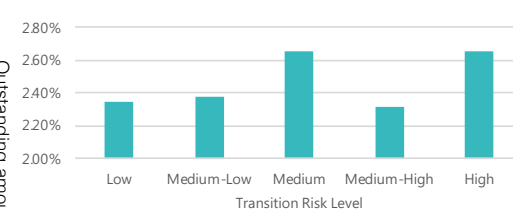
	Non Electronic Manufacturing	Electronic Manufacturing	Services Industry	Construction Industry
Low				
Medium-low				
Medium				
Medium-high				
High				

High

Outstanding amount

Low

Average PD under 2050 No Policy Scenario



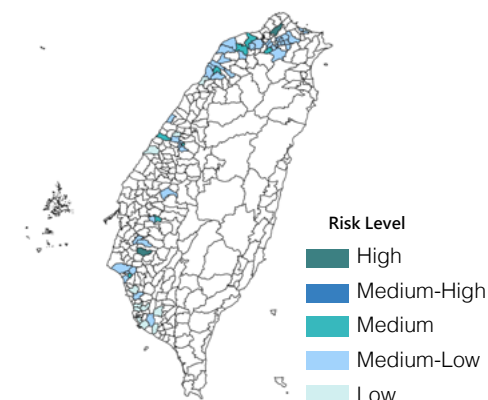
Physical risk distribution

	Non Electronic Manufacturing	Electronic Manufacturing	Services Industry	Construction Industry
Low				
Medium-low				
Medium				
Medium-high				
High				

High

Outstanding amount

Low



Scenario Analysis of High Energy Consumption and High Carbon Emission Industries

Analysis of Six Major Energy-consuming Industries

High energy consumption and high carbon emission industries are the six major energy-consuming industries (semiconductors, electronics, steel, cement, textiles, and paper making) announced by the Ministry of Economic Affairs according to the "Energy Administration Act", classified according to the Directorate-General of Budget, Accounting, and Statistics. Countries have set goals for "Net Zero by 2050" and proposed various carbon reduction measures and policies, which may significantly impact the operations and revenues of high energy consumption and high carbon emission industries, affecting companies' repayment abilities and thereby increasing default risks. Therefore, it is essential to analyze high energy consumption and high carbon emission industries to implement climate risk management. Using the credit exposure of domestic and international enterprises as the analysis subject, the results are summarized in the table below, showing that approximately 10.33% of the exposure falls within high energy consumption and high carbon emission industries, with the electronics industry representing the largest share at 7.78%. Under various scenarios, the expected loss as a proportion of E.SUN FHC's 2023 baseline net value is highest under the 2050 Disorderly Transition scenario, totaling 0.73%.

Unit: Percentage (%)

Six Major Energy-consuming Industries	Exposure percentage	Expected loss as percentage of FHC net value				
		Baseline	2030		2050	
			Orderly	Disorderly	Orderly	Disorderly
Petrochemicals	0.64	0.03	0.05	0.04	0.06	0.08
Electronics	7.78	0.18	0.37	0.45	0.47	0.49
Steel	0.77	0.03	0.04	0.04	0.05	0.07
Cement	0.08	0.01	0.01	0.01	0.01	0.02
Textiles	0.58	0.01	0.02	0.02	0.03	0.04
Paper making	0.48	0.01	0.02	0.02	0.02	0.03
Total	10.33	0.27	0.50	0.57	0.65	0.73

Businesses Required to Inventory and Verify GHG Emission Sources

According to the "Climate Change Response Act," industries such as power generation, steel, petroleum refining, cement, semiconductors, and thin-film transistor liquid crystal display (TFT-LCD) are required to publicly disclose their greenhouse gas emission information if their annual emissions reach 25,000 metric tons (classified as major carbon emitters). The manufacturing sectors falling under Scope 1 and Scope 2 must also comply with this requirement.

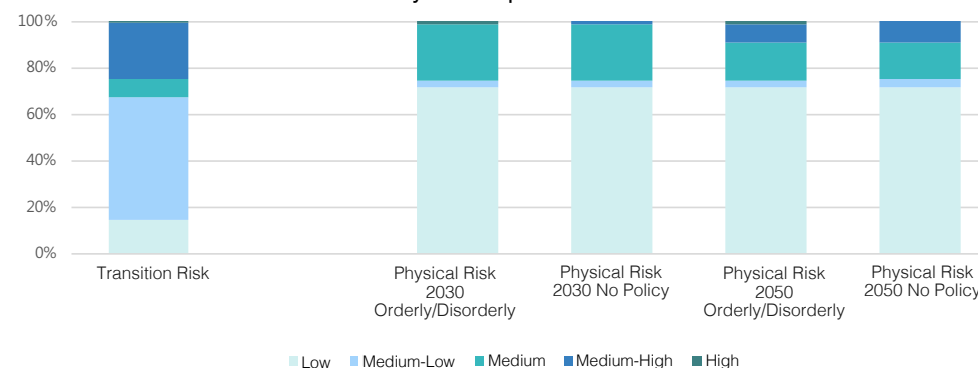
According to the Ministry of the Environment's analysis of the current inventory registration status in 2022, there are 550 domestic companies classified as registration subjects. As of December 2023, E.SUN has a total of 92 domestic loan customers that are subject to inventory registration, predominantly from the electronics manufacturing sector (approximately 50%), with the total exposure amount accounting for about 2.19% of the domestic corporate loans portfolio.

Climate change scenario analysis assessments were conducted for the aforementioned clients, and the results are summarized in the table below, indicating that the expected loss under the 2050 Disorderly Transition scenario is the highest, reflecting the most significant impact from climate-related risks.

Unit: \$NTD million

	Baseline	2030			2050		
		Orderly	Disorderly	No Policy	Orderly	Disorderly	No Policy
Expected Loss	402.76	615.89	643.93	577.61	795.44	958.94	659.40

Distribution of Transition and Physical Risk of Enterprises that are required to conduct inventory and inspection of GHG emissions



3.9.3 Nature-related Scenario Analysis

Building on the Disorderly Transition scenario of the climate scenario analysis, the nature-related scenario analysis combines systemic risk with water scarcity and water management risks. This analysis focuses on ecosystem stability and water resource management, emphasizing the dependencies and impacts along the upstream and downstream supply chains to enhance the comprehensiveness and integrity of risk identification.

Scenario Settings

The analysis references the "Delayed Transition" scenario published by NGFS and the IPCC AR5 "RCP2.6" scenario. It assumes a global delay in initiating the transition but still requires achieving net-zero emissions by 2050. Additionally, it considers nature-related policy regulations and water resource management policies, establishing two scenarios: "Passive Response Scenario" and "No Action Scenario." The analysis uses 2030 and 2050 as the time frames, assessing the potential nature-related impacts that companies may face during these different periods.

Based on the scenario of disorderly transition in climate scenario analysis

Scenario Description: Delayed start but still reaches Net-Zero by 2050

Risk Types :

- Transition Risks: NGFS Delayed Transition Scenario
- Physical Risks: IPCC AR5 RCP 2.6
- Overall Economy: Taking in account GDP growth rate, Unemployment rate, and long term interest rate change in NGFS scenarios

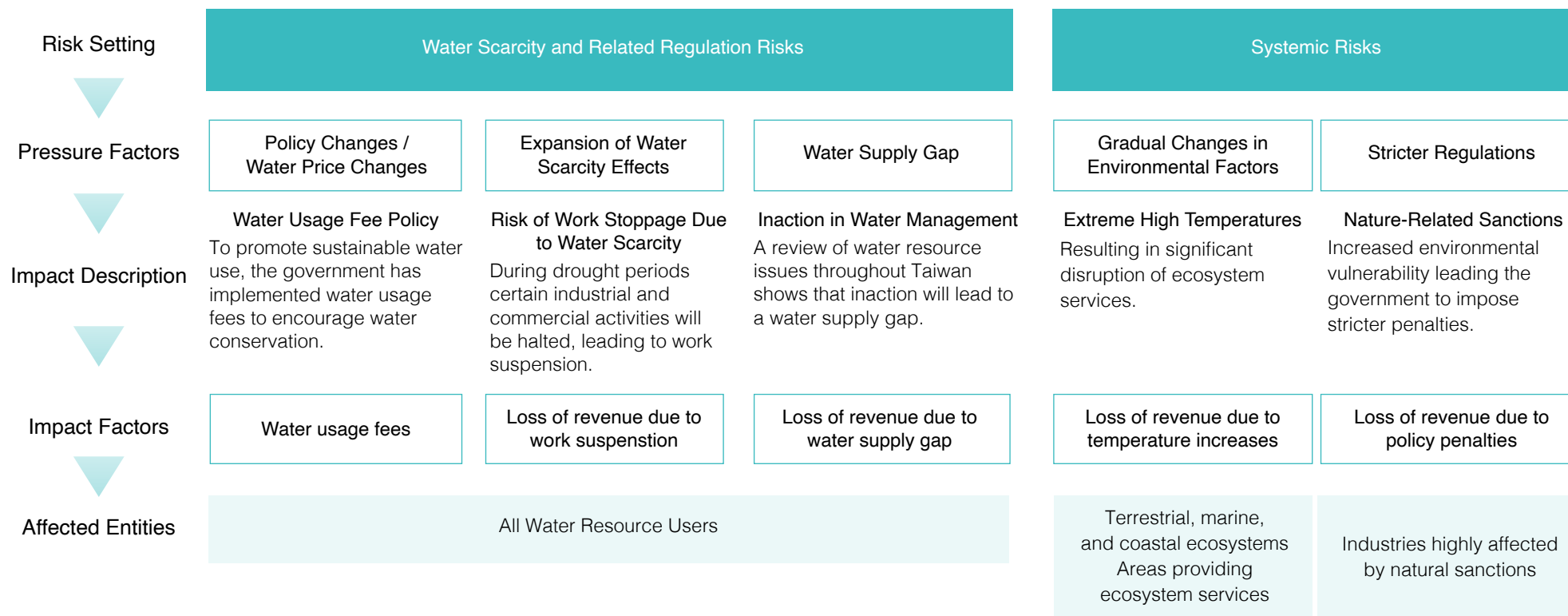
Assessing "Water scarcity and water management risk" and "Systemic risk" to set 2 scenarios

Scenario	Passive Response	No Action
Scenario Description	Establish nature and environmental scenario analysis by taking into account both the severe risks associated with water scarcity and related regulations, as well as the degradation of ecosystems and loss of ecosystem services induced by systemic risks under a disorderly transition scenario in climate scenario analysis.	
Water scarcity and related regulation risks	<ul style="list-style-type: none"> • Cost increases due to the government's imposition of water usage fees. • Losses from work stoppages caused by water shortages. • Companies passively respond to external water pricing and operational water scarcity issues, taking a reactive approach to adaptation. 	<ul style="list-style-type: none"> • Companies have not taken substantial adaptive actions in the context of a known water supply gap.
Systemic risks	<ul style="list-style-type: none"> • Extreme temperature increases exceeding 2°C will significantly disrupt ecosystem services, especially impacting industries or businesses that are heavily reliant on nature. • Environmental vulnerability is on the rise, and the government is imposing stricter penalties in the natural sector, particularly targeting industries that have previously faced nature-related sanctions, as well as businesses operating in areas that meet only the minimum regulatory standards. 	

Note: Water scarcity refers to a situation where prolonged low natural precipitation leads to insufficient water reserves, resulting in an inability to meet the water resource demands of industrial, commercial, and socio-economic activities

Methodology

Natural environment-related risks consider both systemic risks and water risks. Systemic risk refers to the chain reactions caused by severe degradation of biodiversity or ecosystem services, leading to an imbalance within the entire system that cannot revert to its original state, thereby adversely impacting operational activities and collateral values. This analysis primarily considers two risk factors: extreme temperatures and penalties related to environmental policies. Water risk refers to the scarcity risk caused by droughts in water resources, as well as the risks associated with government intervention in water resource management. This includes increased costs resulting from water pricing policies, operational losses due to water shortages, and the widening gap in water supply. For example, countries such as the United States, Australia, and France have begun implementing differentiated pricing strategies for water usage fees. E.SUN references the IPCC Sixth Assessment Report (AR6), the Ministry of Economic Affairs' "Water Usage Fee Collection Regulations," and records of penalties imposed on companies related to nature or emissions between 2019 and 2023. These serve as the basis for setting the impact levels of risks. The pathways of impact under the various risk factors are summarized as follows:



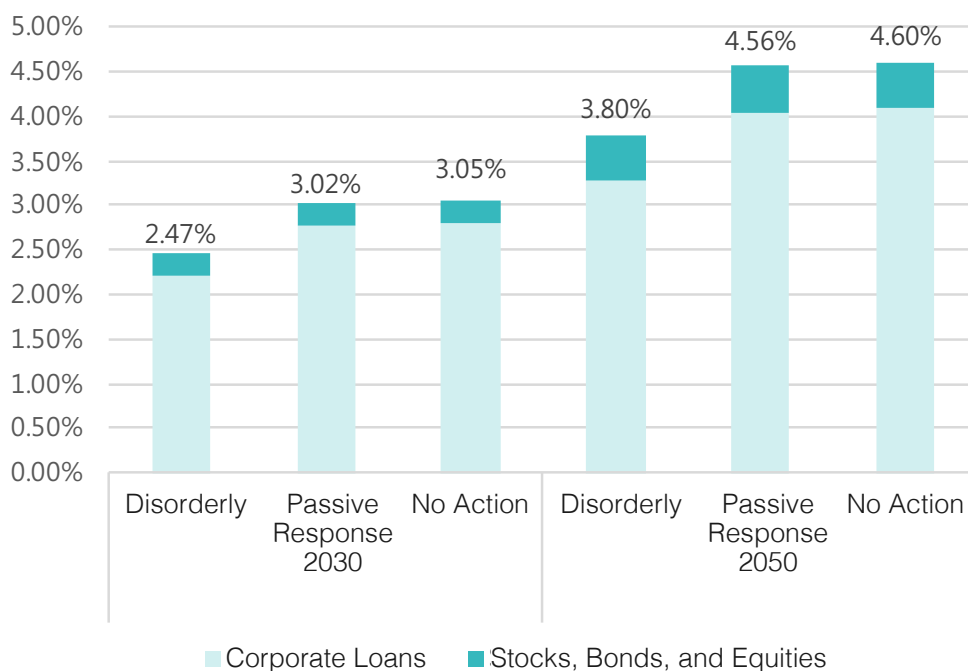
Analysis Results

Analysis of Portfolio Exposure

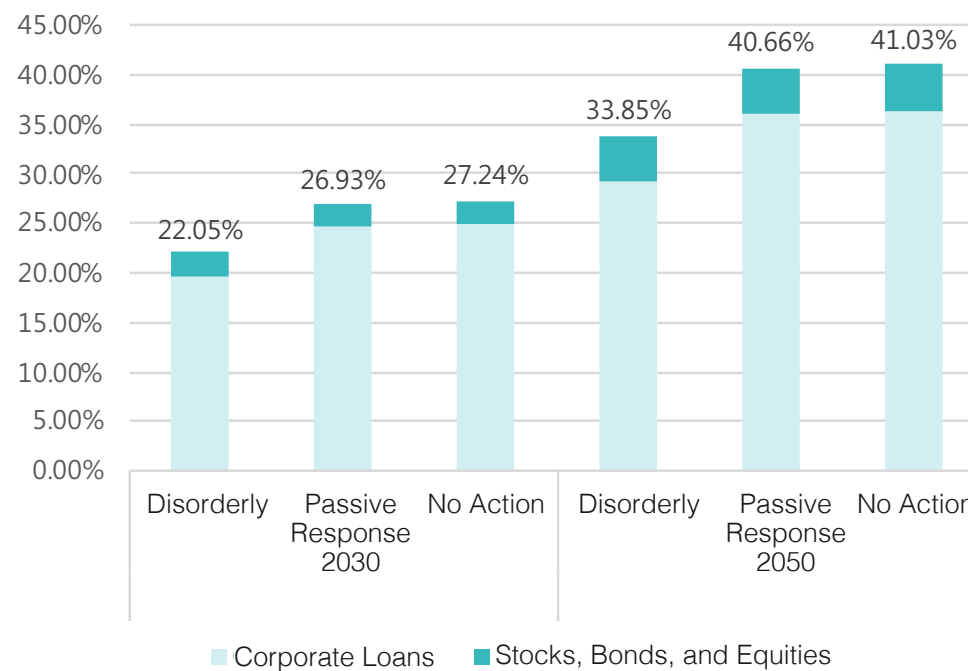
Based on the nature-related scenario analysis of E.SUN FHC's net value and pre-tax income, the analysis focuses on E.SUN Bank's portfolio with domestic general enterprises, bonds, and equity investments, noting that E.SUN Bank accounts for over 99% of E.SUN FHC's assets.

According to the analysis results, the expected loss under the 2050 No Action Scenario is the highest, representing approximately 4.60% of E.SUN FHC's baseline net value (for the year 2023) and about 41.03% of pre-tax income. This loss is 0.8% and 7.18% higher, respectively, compared to the 2050 Disorderly Transition scenario for climate change.

Expected loss as percentage of FHC net value



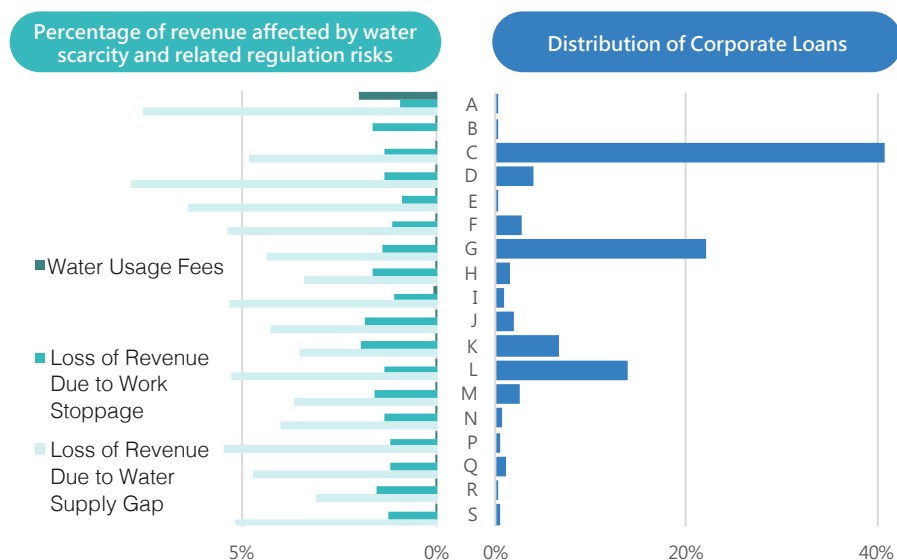
Expected loss as percentage of FHC pre-tax income



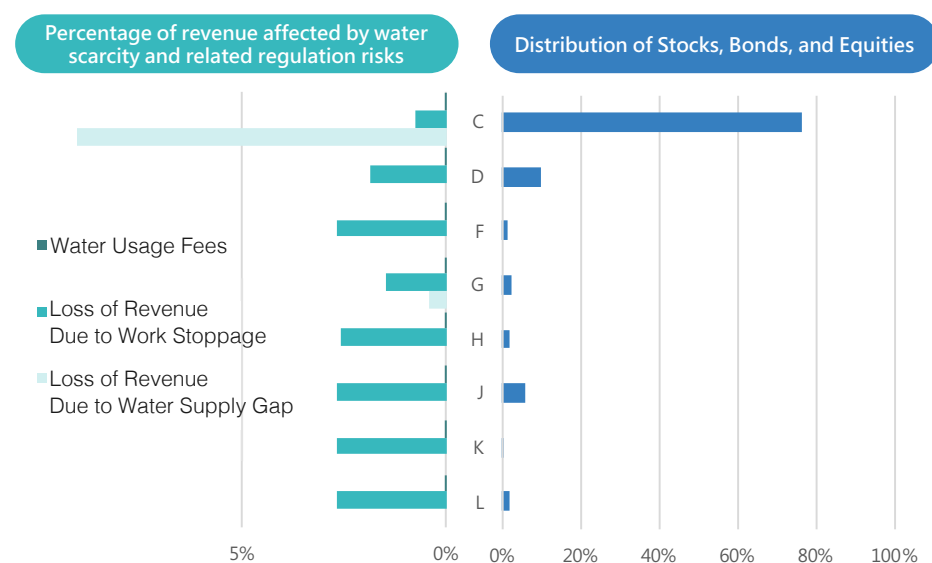
Water Scarcity and Water Management Risks

Under the 2050 Passive Response Scenario, considering the impact of government-imposed water usage fees and operating losses due to water shortages, we divide our assessment between general corporate loans and investment portfolios. For corporate loans, industries in Section A are most affected by water usage fees, with an average impact ratio of approximately 2%. In contrast, the average impact for other sectors is below 0.1%. The average ratio of revenue affected by work stoppage due to water shortages ranges from 0.88% to 1.94%, with industries in Sections C, G, and L experiencing an average impact ratio of about 1.37%. For stock, bond and equity investments, the impact ratio from water usage fees is below 0.06%, with the Section D electricity and gas supply sector facing a slightly higher average impact ratio of approximately 0.05%. The average revenue impact ratio from work stoppage due to water shortages ranges from 0.75% to 2.70%, with Section C's exposure being the highest at about 0.75%, indicating a relatively minor impact compared to other sectors. In the 2050 No Action Scenario, considering revenue losses caused by water supply gaps, the average impact ratio for corporate loans remains below 8%. The impact on stock, bond and equity investments in Section C industries is comparatively higher, averaging around 9.7%, primarily due to the larger proportion of investments in that section.

Distribution of Corporate Loans under Water Scarcity
and Related Regulation Risks in 2050



Distribution of Stocks, Bonds, and Equities under Water Scarcity
and Related Regulation Risks in 2050

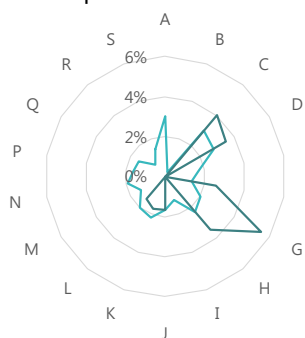


Systemic Risks

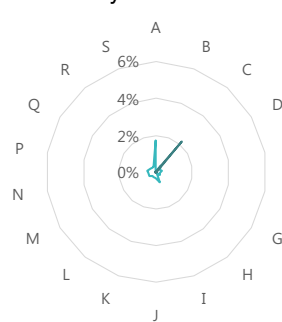
Systemic risk encompasses the significant degradation of ecosystem services caused by extreme warming, leading to biodiversity loss and a serious decline in natural capital. It also anticipates that the government will strengthen regulations for environmental management, resulting in increased penalties.

In the 2050 No Action Scenario, industries in Section C experience the highest average revenue reduction due to extreme high temperatures, specifically a reduction of 3.02% for corporate loans and 4.02% for stock, bond and equity investments. Regarding nature-related penalties, the highest average revenue reduction for corporate loans occurs in Section A at 1.69%, while for stock, bond and equity investments, it is highest in Section C at 2.15%.

Loss of Revenue Due to
Temperature Increases



Loss of Revenue Due to
Policy Penalties

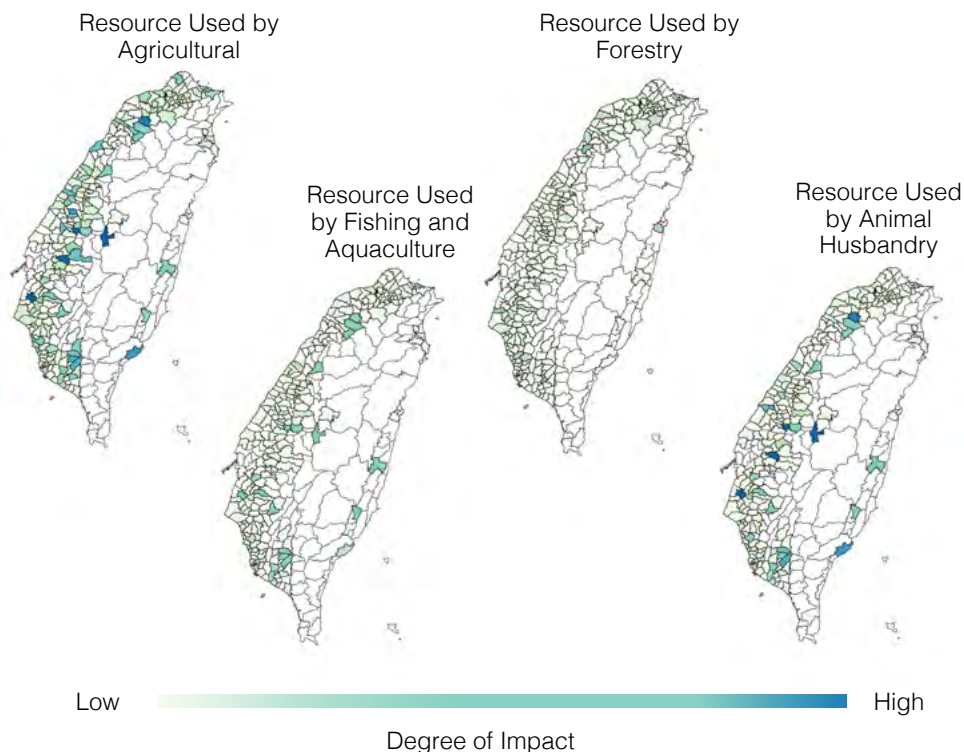


— Corporate Loans — Stocks, Bonds, and Equities

— Corporate Loans — Stocks, Bonds, and Equities

Section	Industry Types	Section	Industry Types
A	Agriculture, Forestry, Fishing and Animal Husbandry	J	Information and Communication
B	Mining and Quarrying	K	Financial and Insurance Activities
C	Manufacturing	L	Real Estate Activities
D	Electricity and Gas Supply	M	Professional, Scientific and Technical Activities
E	Water Supply and Remediation Activities	N	Support Service Activities
F	Construction	O	Public Administration and Defence; Compulsory Social Security
G	Wholesale and Retail Trade	P	Education
H	Transportation and Storage	Q	Human Health and Social Work Activities
I	Accommodation and Food Service Activities	R	Arts, Entertainment and Recreation
		S	Other Service Activities

To further understand the dependencies and impacts of our portfolio on natural capital, E.SUN assesses the substantial disruption of natural capital usage due to severe damage to ecosystem services under extreme high temperatures. The assessment methodology integrates the impact on revenue ratios from physical risks in climate scenario analysis, along with the geographic distributions of the target areas that provide ecosystem services to stress-test revenues. Finally, a weighted evaluation is conducted based on the towns and cities where the companies are located and their respective balances. The results indicate that the impacts on agriculture are the most significant, followed by animal husbandry, with revenue reduction ratios across various sectors ranging from 0.23% to 24.06%. The areas most affected are primarily the central mountainous regions and the plains of southern and central Taiwan.



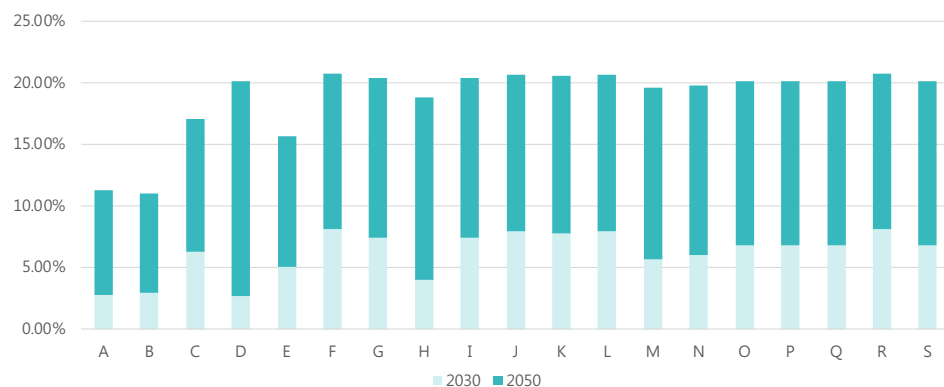
Low High
Degree of Impact

3.9.4 Opportunity Scenario Analysis

Methodology

In response to climate and natural environmental changes, businesses need to enhance resource efficiency and management, and invest in innovations related to green products and services, in order to achieve net-zero emissions and positive nature growth. E.SUN actively partners with customers to facilitate the transition to a low-carbon economy, offering green financial products and sustainable finance to provide funding support for customers, thereby expanding our financial influence and related business opportunities. The "Taiwan 2050 Net Zero Emission Pathway Blueprint," formulated by the Executive Yuan's National Council for Sustainable Development, sets carbon reduction ratios for various industries. Given that 68% of global carbon emissions originate from energy use, with power generation accounting for 26% of global carbon emissions (UNEP, Emissions Gap Report 2024), E.SUN conducts opportunity analysis on the potential funding needs for low-carbon energy transition under various scenarios to more effectively quantify future business development opportunities. We utilize the NGFS Phase IV scenarios GCAM 6.0 assessment model, focusing on Taiwan's low-carbon energy transition investment needs as an indicator to estimate future financing and credit growth opportunities.

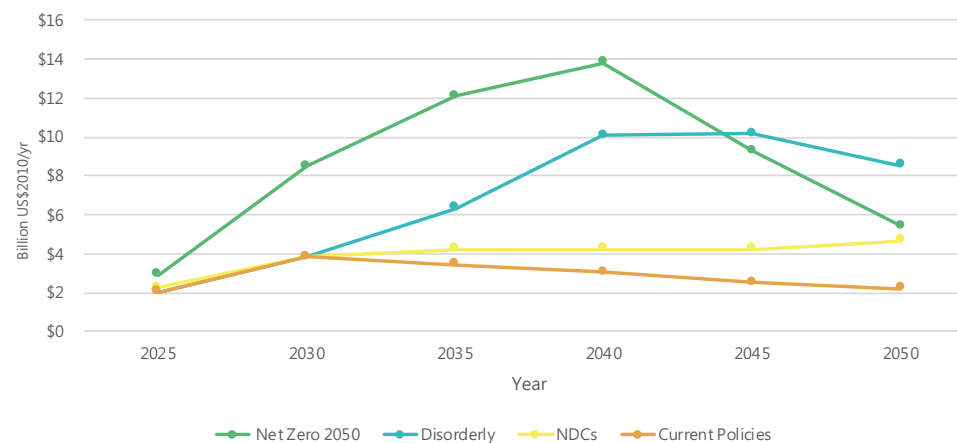
Percentage of Carbon Reduction by Industry



Analysis Results

According to the energy transition investment demand estimated by the GCAM 6.0 model, the 2050 Net Zero scenario indicates that the highest rate of capital investment growth will occur between 2025 and 2030, requiring an annual growth rate of approximately 24%. After reaching a peak in 2040, the demand will begin to slow. Under the Disorderly Transition and Current Policy scenarios, the growth between 2025 and 2030 is more modest, requiring about 14% annual capital growth. After 2030, as net-zero pressures increase, capital demand under the Disorderly Transition scenario will continue to rise until 2045. The funding requirements for corporate transitions show a growth trend for both 2030 and 2050. E.SUN will continue to monitor the transition needs of enterprises and provide green products and services to seize the opportunities presented.

GCAM Energy Transition Investment in Taiwan



3.9.5 Scenario Analysis Conclusion

Results Overview

- Through scenario analysis, we can quantify the transmission pathways of climate, biodiversity, and natural capital risks under different scenarios, as well as their potential impacts on assets, which assist in formulating strategies and management measures.
- Regarding the transition risks caused by carbon-related costs, industries with higher carbon emissions, such as the electricity and gas supply sector, agriculture, and marine transportation, are significantly impacted. If relevant enterprises do not initiate their transitions promptly, they may face greater risks.
- Physical risks depend on the geographical location of facilities. For instance, in areas with a higher flood potential, businesses or collateral located there will face greater risks. Drought risks depend on the probability of extreme rainfall in the region, the supply and demand of water resources, and the industry's reliance on water resources; companies can enhance their operational resilience through adaptation.
- Systemic risks can significantly affect the resilience of ecosystems. For example, extreme high temperatures may impact industries such as agriculture, forestry, fishing, and animal husbandry that have a high dependence on natural capital. Water resource shortages may lead to increased water costs and operational stoppage. If companies do not formulate appropriate response measures, they may face higher risks.
- Scenario analysis is built upon hypothetical scenarios and is not a prediction of the future. Given the complex mechanisms by which climate and nature changes affect ecosystems and the economy, the results of the analysis are uncertain and should be interpreted with caution.

Response Strategies

Resource allocation

- Establish a physical risk database and implement Geographic Information System (GIS) technology to enhance the identification and management of physical risks associated with real estate collateral.
- Develop a financed carbon emissions management system to enhance the capacity for identifying transition risks in portfolios.
- Strengthen internal response capacities by integrating climate and natural environment issues into education and training at all levels

Capacity Utilization

- Increase the proportion of green financial assets to enhance the resilience of the asset portfolio.
- Incorporate ESG factors into investment and financing decision-making process.
- Enhance customer climate and environmental awareness through engagement and assist in their transitions to reduce risks.
- Establish disaster response measures, considering physical risk information and adaptation measures in site selection for operation locations.

Strategy Resilience Review

- Current strategies should align with international trends and assess risks and opportunities, continuing to focus on climate and environmental trends and best practices, thereby strengthening infrastructure and enhancing resilience.
- Current natural assessments focus on key locations within the value chain in Taiwan. We will continuously monitor nature-related information in our overseas operations to expand the positive influence of nature governance.

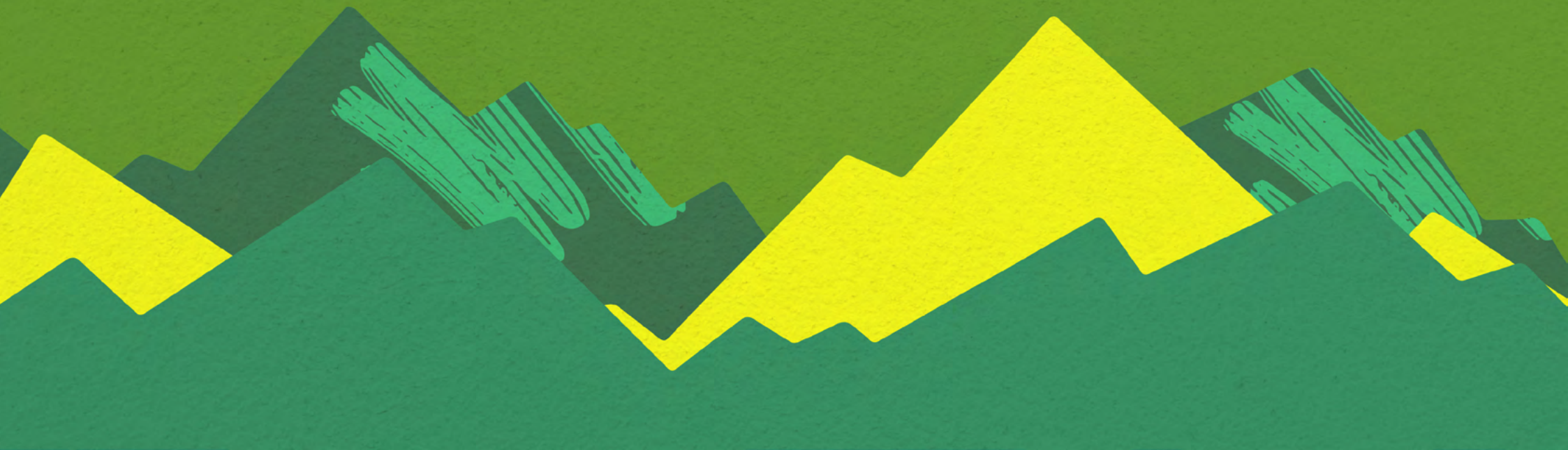
3.10 Risk Management Measures

To mitigate the potential impacts caused by climate and environmental risks and to enhance the organization's operational resilience in responding to climate and natural resource changes, a summary of key management measures and resource investments has been formulated based on the comprehensive assessment results of climate and environmental risks, as well as climate change and natural environment scenario analyses. The key points are summarized in the table below.

Scope	Material Risks	Risk Factors	Management Measures
Low-carbon Transition	1. Carbon tax / fee 3. Climate and nature-sensitive assets	Reduce operation and portfolio-related carbon emissions	Resource allocation <ul style="list-style-type: none"> • Inventory Scope 1 and 2 carbon emissions, and plan mitigation measures (such as installing solar panels, using renewable energy, etc.) • Follow the PCAF methodology for carbon inventory of investment and financing activities • Set targets and reduce carbon emissions according to the SBTi
Investing	5. Changing consumer preference 11. Irreversible degradation of the climate and environment	Bond and equity investments	Capacity utilization <ul style="list-style-type: none"> • Fulfill responsibility as asset owners or managers by considering the ESG performance of investees. • Avoid investing in companies with direct or potential environmental and social impacts, such as coal companies, and implement responsible investment • Promote or assist companies in raising sustainability awareness and implementing ESG actions through engagement.
Financing	1. Carbon tax / fee 2. Stricter climate and nature regulations 3. Climate and nature-sensitive assets 9. Depletion and deterioration of natural capital	Corporate loans	Capacity utilization <ul style="list-style-type: none"> • Support companies in transitioning and responding to climate risks by providing green financing for renewable energy projects, green buildings, and other sustainable expenditures • Link loan terms to performance in ESG or sustainability indices to encourage companies to invest in sustainability Resource allocation <ul style="list-style-type: none"> • Refer to the guidance of the Banker Association's Equator Principles 4.0 for corporate credit approval process • Include ESG considerations in the credit approval process to prevent funds from flowing into high-carbon emitters such as coal-fired power projects
	3. Climate and nature-sensitive assets 8. Natural disasters 10. Deterioration of climate and natural environment	Real estate collateral loans	Capacity utilization <ul style="list-style-type: none"> • Regularly assess and monitor the potential risk of real estate value impairment caused by climate change and continuously improve the database of physical risks, analysis methods, and scenario testing • Incorporate flood risk factors - hazards (e.g., heavy rainfall, increased typhoon frequency) and vulnerability (e.g., whether the area is prone to flooding) into the real estate collateral zoning standards and set lending limits and LTV ratios according to the zoning to control risks • Regularly manage high flood risk cases, make special notes, and carefully assess collateral located in high climate risk areas with high LTV ratios. • Refuse collateral labeled as pollution-related sites or those announced by government agencies as subject to the "Soil and Groundwater Pollution Remediation Act." • Strengthen processes and conditions for collateral in high risk slope land
Direct Operations	8. Natural disasters 10. Deterioration of climate and natural environment	Disaster response	Resource allocation <ul style="list-style-type: none"> • E.SUN utilizes the third-generation flood risk map from the Water Resources Agency to analyze potential flood depths. To prevent disruption due to flooding, waterproof barriers have been installed at branches where potential flood depths exceed 0.5 meters
	4. Raw material prices 8. Natural disasters	Supplier management	<ul style="list-style-type: none"> • Implement sustainable procurement standards for supplier management. • The provision of green-related financial products and services is guided by the "Guidelines for Financial Institutions to Prevent Greenwashing," which outlines design and measures to avoid greenwashing, as well as establishes internal mechanisms for effective management.
	2. Stricter climate and nature regulations 6. Negative news / Litigation risk 7. Penalty risk	Compliance and reputation	Capacity utilization <ul style="list-style-type: none"> • Develop the "Emergency Response and Crisis Management Measures" based on the "Financial Institution Disaster Emergency Response Measures Manual Template" and operational overview to ensure operational continuity and organizational resilience. • The "Continuous Information Service Management Regulation" takes into consideration power supply interruption and regional flooding recovery

CH4 Integration into Business and Operations

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4.1 Corporate Banking

Corporate Banking Climate and Environment Risk Management Mechanisms

(1) E.SUN adheres to our "Sustainable Finance Policy" to develop responsible lending and various sustainable financial products. We identify environmental and social risks and incorporate ESG factors into our lending decision processes to manage these risks effectively. Each loan case is reviewed to determine if it involves pollution or other negative issues. Transactions involving coal-fired power generation, coal mining, illegal deforestation, wildlife endangerment, controversial arms, and adult entertainment are avoided. Business activities in high-risk sectors- including tobacco, gambling, mining, and oil exploration- require careful evaluation and enhanced scrutiny.

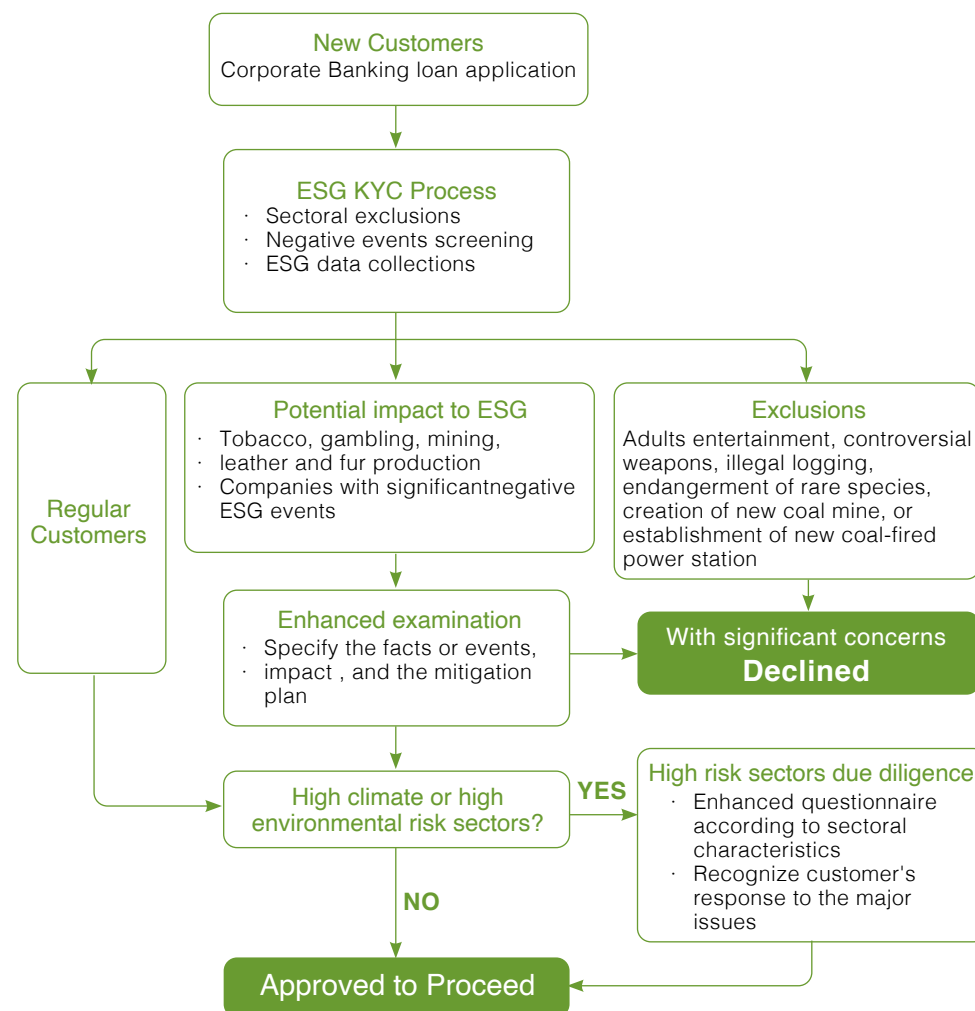
- For high-climate-risk industries, such as coal-related businesses and unconventional oil and gas extraction, E.SUN has established check and control mechanisms in our credit process based on the "Guidelines for the Phase-Out of Coal and Unconventional Oil & Gas". If these activities constitute a certain percentage of the entity's revenue, case-by-case control measures are implemented to divest from such entities.

- E.SUN continues to enhance its climate and environmental risk management mechanisms, encouraging enterprises to disclose information related to carbon emissions, water usage, electricity consumption, and more. We focus on conducting due diligence on industries significantly affected by climate and environmental risks, taking into account the specific characteristics of those industries (as referenced in Ch.3). Throughout the enhanced review process, we design differentiated assessment criteria that include climate risk, biodiversity, and water resources. This is implemented during the credit approval process, strengthening evaluations and explanations to guide business units in recognizing industry-specific ESG issues and to better understand how credit clients respond to related risks.

- Regarding collaterals with climate risks, such as properties in high-flood-risk areas, E.SUN reduces the LTV ratio and requires relevant insurance coverage to ensure effective physical risk management in the credit process.

(2) Environmental and Nature Risk Management for Large Projects

- For project financing in sectors such as power generation, oil & gas, and infrastructure that meet certain scale criteria, E.SUN implemented the Equator Principles beginning in 2015 to conduct tiered project risk management. We carefully assess whether the project's development process fulfills environmental and social responsibilities and establish effective monitoring and improvement plans for impacts. Following the framework of the Fourth Edition of the Equator Principles, we analyze each project financing case for material issues, including climate-related physical and transition risks, environmental pollution, and biodiversity. As of



June 2024, E.SUN has accumulated 58 projects (with 51 completed by December 2023). For more detailed statistics please refer Ch3.1 in the 2023 E.SUN Sustainability Report.

- E.SUN continues to enhance its biodiversity assessment capabilities by utilizing databases such as the International Biodiversity Analysis Tool (IBAT) to identify whether project scopes involve sensitive biodiversity conservation areas and to evaluate impacts on biodiversity
- In addressing climate change and the protection and restoration of natural capital, we recognize the importance of just transitions, particularly for Indigenous peoples and local communities closely connected to nature, who play crucial roles in safeguarding natural resources. In addition to environmental and natural risks, E.SUN follows the Equator Principles to assess human rights-related issues, including reviewing whether project developers have previously been involved in human rights disputes and utilizing third-party due diligence reports to understand the project's impacts. If a project's site involves specific Indigenous areas, E.SUN also focuses on ensuring that the development process does not violate local cultural protections and that communication with local communities is conducted to ensure the project upholds environmental and social responsibilities.

Corporate Loan Carbon Management

E.SUN demonstrates responsible lending practices by incorporating the Partnership for Carbon Accounting Financials (PCAF) methodology in our carbon inventory. We use Science-Based Targets (SBTs) and internal carbon pricing mechanisms to guide this process. We actively monitor carbon-intensive borrowers and support industries and clients in their transition to low-carbon operations.

(1) Science-Based Targets (SBT)

E.SUN follows the Science-Based Targets Initiative (SBTi) guidelines to set medium to long-term carbon reduction goals. Clear carbon reduction pathways and targets are established for three major credit asset categories: project financing for power generation, commercial real estate, and medium to long-term loans for non-SMEs. Carbon-intensive borrowers related to these targets are managed through annual tracking of carbon intensity changes and analysis of target achievements. In addition, we encourage active engagement in low-carbon businesses and increasing dealings with entities with carbon reduction targets.

(2) Internal Carbon Pricing in Credit Process

E.SUN began developing an internal carbon pricing mechanism in 2021, which was officially implemented in July 2022. This mechanism aims to raise awareness among corporate banking business units about the risks associated with transitioning to a low-

carbon economy and the impact of carbon costs. Features such as carbon intensity ratings and estimation tools for carbon emissions assist in credit portfolio management. Implementation results as of June, 2024 are as follows:

- Internal carbon pricing reports reveal the carbon emissions associated with credit borrowers, converting them into more easily understood carbon cost concepts. Management tools aid business units in estimating future carbon emissions.
- International carbon trading mechanisms, including the World Bank's global carbon market-weighted price and international decarbonization pathways, are considered in cost calculations for excess carbon emissions. Incentives are provided through mitigation mechanisms to encourage more green credit and sustainable financing, reflecting the emission reduction achievements of credit borrowers.
- Provide a "Credit Carbon Emissions Calculator" for business units to estimate the carbon emissions of their corporate clients, allowing the estimation of scope 3 carbon emissions that E.SUN may need to bear.

Accelerating Corporate Sustainability Through Direct Engagement

E.SUN's dedicated sustainability team continues to engage in discussions on ESG and climate-related issues with corporate customers. As of June 2024, we have engaged with over 220 companies in sustainability and climate topics, enabling them to proactively address international trends and external requirements. Key issues addressed include carbon border tariffs, energy trends, and domestic and regulations regarding climate and environmental matters around the globe. E.SUN encourages customers to actively reduce carbon emissions and prioritize environmental involvements through sustainability-linked loans and green loans, working together towards the goal of achieving net-zero emissions.

Partnering with International Investors to Balance Solar Energy and Biodiversity

In 2023, E.SUN successfully hosted a syndicated loan project for investment group P to construct and operate a 275MW solar power facility, which is located across various counties and cities in Taiwan. E.SUN assisted investors in securing construction funding and revitalizing existing assets for reinvestment in Taiwan's solar energy initiatives. Some of the project sites are situated on salt flats, where the construction design incorporated ecological surveys to reserve land for ecology detention basins. Additionally, annual monitoring of aquatic life and bird populations is conducted to minimize operational impacts on local species, thereby maintaining a balance between solar energy generation and biodiversity.

4.2 Investment

Referencing the Principles for Responsible Investment (PRI), E.SUN incorporates environmental, social, and governance (ESG) issues into its equity and bond investment analysis and decision-making processes. E.SUN has established the "Securities Sustainable Investment Management Principles" to create a management mechanism for companies with high ESG risks. Investments can only be made if it is assessed that they do not have significant adverse impacts. E.SUN has also developed the ESG Sustainable Investment Assessment Model, which includes ESG indicators from both domestic and international organizations in our investment screening standards. These indicators are weighted and integrate considerations of Science-Based Targets (SBT) and carbon pricing, categorizing scores into seven ratings. E.SUN will continue to enhance our assessment model by collaborating with data providers and incorporate additional quantitative indicators. This will facilitate more thorough evaluations and improve investment decisions, further guiding investee companies towards sustainable goals and exerting financial influence on businesses, society, and the environment.

Investment Analysis and Decision Process

Divestment from Coal and Unconventional Oil and Gas Industries

E.SUN adheres to the "Guidelines for the Phase-Out of Coal and Unconventional Oil & Gas" to strengthen control over coal and unconventional fossil fuel industries associated with high greenhouse gas emissions and to propose a phase-out plan.

Exclusion of Controversial ESG Industries

- Direct impact: E.SUN avoids engaging with industries involved in adult entertainment, controversial weapons, illegal logging, endanger of rare species, coal mining, or project finance of coal-fired power plants.
- Potential impact: E.SUN conducts diligent evaluations and periodic monitoring of industries involved in tobacco, gambling, leather and fur production, and mining, among others.

Investment Targets Selection

- E.SUN established its own ESG sustainable investment evaluation model, assigning investment targets into seven ratings from AAA to CCC.
- Consideration of External ESG Indicators
 - DJSI
 - S&P Global ESG Score
 - Sustainalytics ESG ratings
 - Taiwan Corporate Governance Evaluation
 - MSCI ESG ratings
 - Bloomberg ESG ratings
 - Components of the Taiwan Sustainable Index
- Investment targets must achieve a rating of BBB or higher based on E.SUN's ESG evaluation model.

Monitoring and Management

- In cases where invested companies have significant negative impacts on ESG, E.SUN verifies with the companies or engages with the management team.
- Regular and ad hoc communications for information disclosure with invested companies.
- Disclosure of voting information at shareholder meetings.
- E.SUN Bank participated in voting for 52 portfolio companies in 2023, addressing a total of 240 proposals, of which 13 were attended in person, and 39 were voted electronically, resulting in a voting rate of 100%.

Establishment and Implementation of Sustainability Plans

- Set and periodically review SBTs (Science Based Targets) for companies in securities investment.
- Elevate investment strategies from ESG integration goals to a focus on sustainability and impact.
- Encourage companies to respond to initiatives and take action to promote environmental sustainability.

Issuance of Sustainability Bonds to Support Biodiversity

On April 10, 2024, E.SUN issued its first sustainable bond focused on renewable energy, biodiversity, and forestry conservation. This marks the first time that biodiversity issues have been incorporated into the investment projects funded by bond proceeds in Taiwan, aligning the promotion of sustainable investment with actions for biodiversity protection and restoration.

Following the issuance of the first green bond in Taiwan in 2017, E.SUN has issued sustainability bonds annually. As of June 2024, the total issuance amount has exceeded NT\$25 billion, making E.SUN the largest issuer of sustainability bonds among Taiwan's domestic banks in terms of both scale and number of issues. By continuously extending the scope of fund utilization and expanding environmentally and socially responsible execution plans, E.SUN demonstrates its commitment to deepening and broadening sustainable finance.

- 2017

 - In May 2017, E.SUN issued green financial bonds, which were the first priced sustainable development bonds in Taiwan
 - Since 2017, E.SUN has participated in the issuance of sustainable bonds every year
- 2023

 - In 2023, in response to the FSC's "New Wealth Management plan", E.SUN issued three foreign currency structured financial bonds, becoming the first domestic bank to link financial products suitable for high-net-worth customers to ESG
- 2024

 - In 2024, E.SUN issued its first sustainability bonds that encompass renewable energy, biodiversity, and forestry conservation.

Sustainability bond investments towards nature	
Green Projects	Social Projects
<ul style="list-style-type: none"> • Renewable energies and technology development • Conservation of Agricultural and Forestry Resources • Biodiversity conservation 	<ul style="list-style-type: none"> • Basic service needs • Affordable housing • Programs to create jobs and alleviate or prevent unemployment caused by socioeconomic crises • Socioeconomic development and rights protection

Newest inclusions	Corresponding E.SUN projects	Related SDGs
Conservation of Agricultural and Forestry Resources	E.SUN-NTU ESG Centenary Project "Plant a Tree, Plant a Life" Project	SDG 11 (Sustainable Cities and Communities) SDG 13 (Climate Action) SDG 15 (Life on Land)
Biodiversity Conservation	E.SUN Malavi Project	SDG 14 (Life Below Water) SDG 15 (Life on Land)

4.3 Consumer Banking

Climate and Nature-related Products and Services

"Encouraging Customers to Install Solar Power Systems for Net-Zero Transition"

Sunlight Roof Loan Project

According to the "Taiwan's Pathway to Net-Zero Emissions in 2050" announcement by the Executive Yuan, the target for renewable energy usage in 2050 is set at a high of 60% to 70% to achieve the decarbonization of electricity supply. In response to government policies and to promote clean energy, E.SUN not only encourages large enterprises to promote energy transition but also encourages individual households and small businesses to install rooftop solar power generation equipment. Through financial resources, E.SUN actively assists households and enterprises in reducing carbon emissions, working hand-in-hand with customers to achieve environmental sustainability.

"Promoting Environmentally Friendly Green Buildings for a Green Living Transformation"

Green Building Mortgage & Building Energy-Efficiency Rating Project

Green buildings consume fewer resources and produce minimal waste throughout their life cycle, aligning with the principles of "Ecology, Energy conservation, Waste reduction, and Health." They represent an important trend toward sustainable development. E.SUN has launched the "Green Building Mortgage & Building Energy-Efficiency Rating " program to facilitate low-carbon transformations in collaboration with customers. This initiative aims to improve building energy efficiency through green buildings that coexist with nature, utilizing building energy management tools to help achieve Taiwan's goal of net-zero buildings by 2050.

"Supporting Low-Carbon Transportation Environment for Energy Efficient Travel"

Electric Vehicle Loan Project

To support Taiwan's 2050 net-zero emissions pathway and achieve the goal of 100% electric vehicle (EV) sales by 2040, E.SUN launched an EV loan program in November 2022. This program simplifies the collateral setting process, allowing customers to apply with only an EV purchase contract without the need for the vehicle as collateral, significantly accelerating the review process. Additionally, the program includes an interest rate reduction measure to further enhance customers' willingness to choose EVs. E.SUN joins hands with customers to practice sustainable green living and continues to support Taiwan's long-term goal of net-zero carbon emissions with concrete actions, fulfilling its corporate social responsibility. E.SUN collaborates with customers to practice sustainable green living and continues to support Taiwan's long-term goal of net-zero carbon emissions through concrete actions.

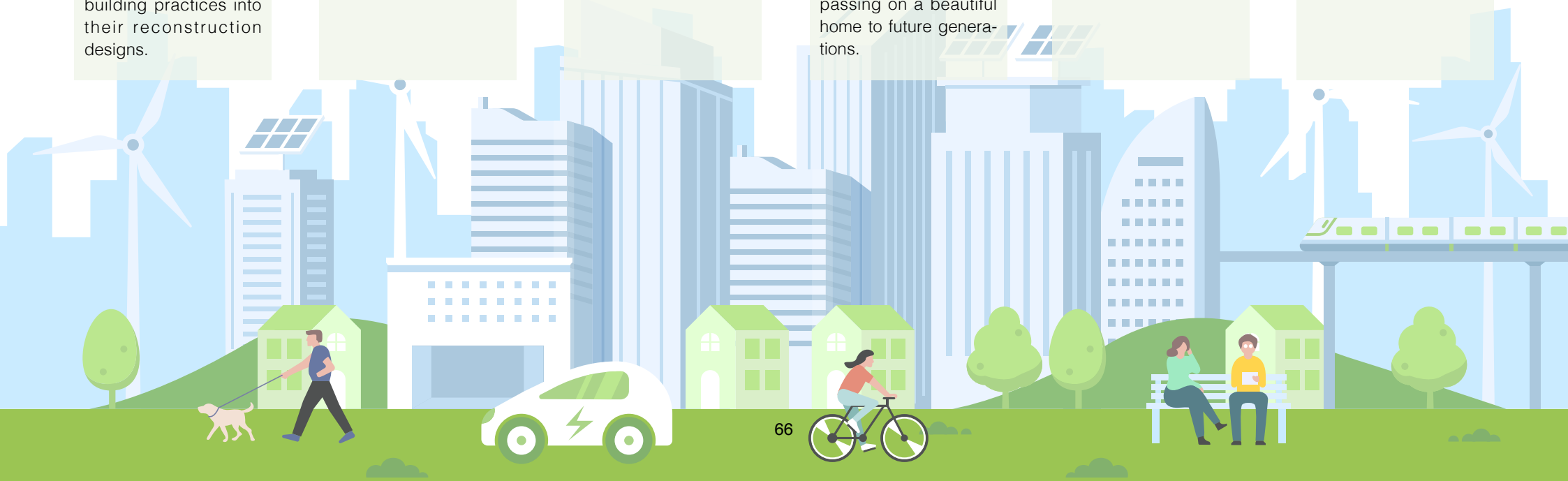
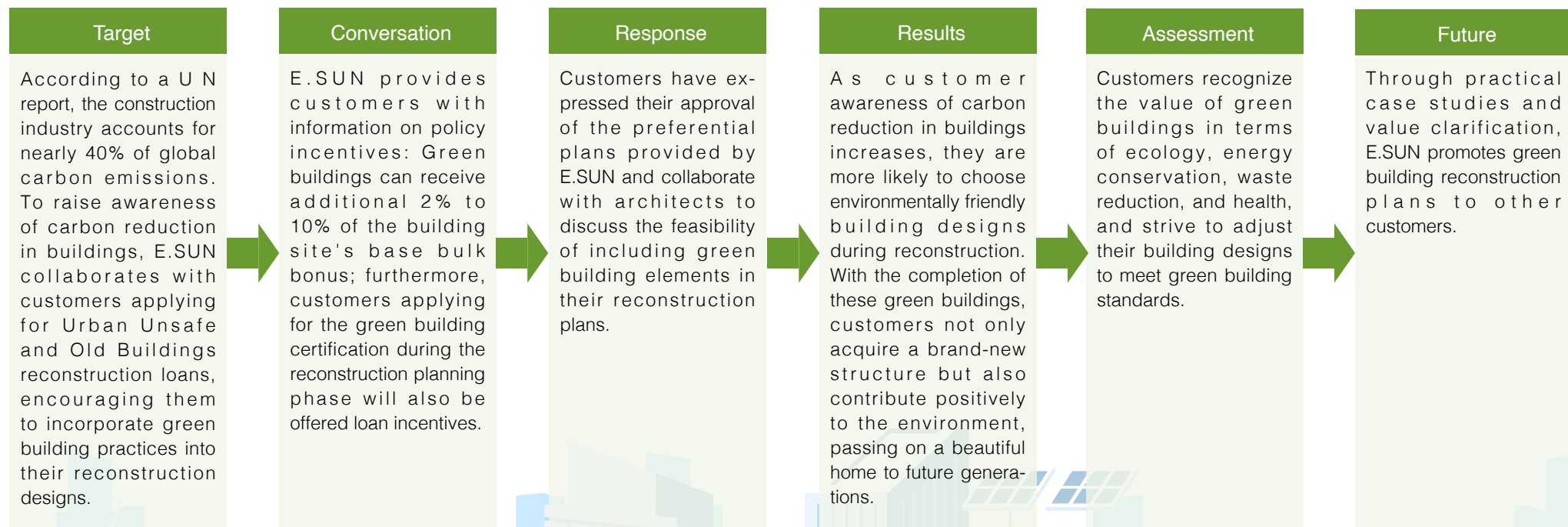
Partnering with the Franchise Industry to Drive Sustainable Transformation and Achieve Net-Zero Emissions

FamilyMart Franchise Loan Program

E.SUN has collaborated with external partners to positively impact franchise businesses in their sustainable transformation. In 2023, we jointly launched the "FamilyMart Franchise Dream Loan" with FamilyMart, applying sustainability-linked loans to the franchise industry. We also negotiated sustainability performance targets with FamilyMart's headquarters and its franchisees, linking the Ministry of Economic Affairs' energy intensity indicator for power-intensive industries to credit terms. Franchisees who achieve their energy-saving targets during the loan period can enjoy preferential interest rates. To date, nearly 80 franchise locations have joined the program, collectively contributing to environmental sustainability in Taiwan.

Customer Engagement Example

Incorporating Green Building Planning into Reconstruction of Urban Unsafe and Old Buildings



Nature-related Product Highlight - "Supporting the sustainable foods value chain to create a positive impact on nature"

Transformation in Food Production to Promote Harmony Between Agriculture and Nature — Farm to Table Loan Program

In 2023, E.SUN partnered with the Agricultural and Food Agency and the Corporate Synergy Development Center to launch the "Traceable Agricultural Products (TAP) Loan Project", which connects support and funding resources to promote sustainable agricultural development. Sustainable farming practices can reduce the environmental disruptions caused by conventional farming and help preserve biodiversity in agricultural areas.

In 2024, E.SUN further expanded its sustainable services by incorporating organic and green conservation certifications into the existing "TAP Loan Project," upgrading the initiative to the "Leopard Cat Loan Project." This project aims to encourage more agricultural producers to join the sustainable transformation effort. The project is named after Taiwan's only native cat species, the Leopard Cat, symbolizing our commitment to protecting native biodiversity. As of the end of September, over 90% of the financing clients under the "Leopard Cat Loan Project" are located within areas of the National Land Green Network and biodiversity hotspots. This implies that if agricultural activities are conducted in these areas without adopting friendly farming practices, they may easily impact the environmental ecosystem. The eligibility criteria for the project are being collaboratively discussed with the Ministry of Agriculture, and will be incorporated into the sustainable taxonomy for agriculture and forestry. The "Leopard Cat Loan Project" thus supports sustainable agriculture and helps maintain rich biodiversity regions, creating positive impacts on the ecosystem.



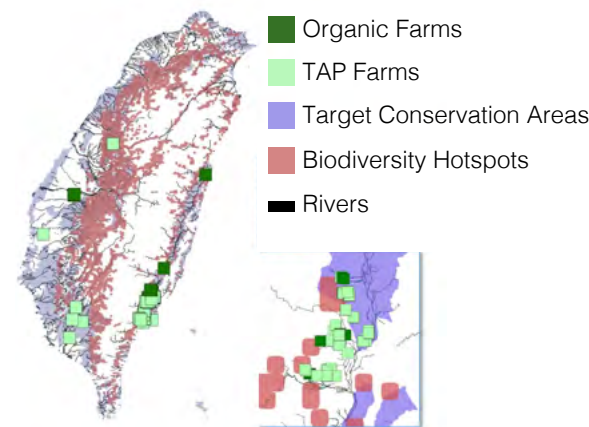
E.SUN is awarded by the Agricultural and Food Agency for contributions to biodiversity and sustainable agriculture



Invited employees to support environment-friendly agriculture and leopard cat conservation

To continue the spirit of living in harmony with nature, E.SUN encourages those in food production to engage in environmentally friendly practices through the "Leopard Cat Loan Project." On the consumer side, we provide specialized financial services for sustainable certified restaurants, urging the restaurant and hospitality sectors to adopt organic and traceable ingredients. By connecting sustainable production and consumption, we aim to create a "Farm to Table" sustainable value chain that promotes mutual benefits for both the industry and the environment.

In addition to providing financial services to support sustainable agriculture, E.SUN also promotes environmentally friendly agricultural products through direct procurement. We established an ESG webpage to showcase selected sustainable products available for employee purchase. Furthermore, this year, we organized an internal fair to sell a variety of environmentally friendly foods. We invited the leopard cat mascot of the Taiwan Biodiversity Research Institute to join the event, allowing participants to learn about topics such as sustainable farming practices and leopard cat conservation while supporting sustainable agricultural products, encouraging sustainable living from farms to our tables.



Around 93.35% of Leopard Cat Loan Project client farmland are located within National Forestry and Nature Conservation areas



4.4 Consumer Banking - Payment

To make daily spending more environmentally friendly, E.SUN actively leverages the influence of green finance and collaborates with partners from different industries to develop green spending initiatives. We provide exclusive rewards for green spending to encourage customers to choose green in their daily lives so they can also contribute to the planet's sustainability while they shop. E.SUN hopes that by taking small steps to change consumption habits, we can significantly contribute to a sustainable Earth and build our vision of a green payment ecosystem with our customers.

ESG Credit Cards

E.SUN Visa Signature Tree Planting Project

Tree planting helps in carbon sequestration to mitigate climate change, increases vegetation, and provides habitats for wildlife. To enhance Taiwan's forest biodiversity, E.SUN launched the "E.SUN Visa Signature Card" that combines environmental conservation and public welfare. In cooperation with the Forestry Bureau, E.SUN initiated the "Plant a Tree, Plant a Life" program, allowing cardholders to contribute to the project through everyday purchases. For customers who opt for electronic or mobile bills, E.SUN donates 0.2% of their general consumption amount for tree planting. Over 50,000 native tree seedlings have been planted in total, putting in action to protect our forests together with E.SUN cardholders.

Black Bear Affinity Card - A Public Welfare Credit Card with Conservation and Environmentally Friendly Concepts

Taiwan's black bears' habitat gradually diminished as our economy developed, leading to a survival crisis. E.SUN partnered with the Taipei Zoo to contribute 0.2% of customers' general consumption amount to the Taipei Zoo Animal Conservation Fund. E.SUN has accumulated over NT\$11 million in donations, supporting initiatives such as black bear conservation, habitat protection, native animal recovery, and environmental education. In addition, cardholders of this card can enjoy triple reward points when donating to the Taipei Zoo, the Animal Protection Association of the ROC, and the Taiwan Environmental Information Association.

Digital e-Card

In response to the trend of digitization and to reduce paper use, E.SUN launched the Digital e-Card in 2022, the first entirely virtual card on the market. No physical card is provided, and the application process is 99.5% online. This reduces carbon emissions from card production by 1,100 grams per card, equivalent to an annual reduction of

17.5 metric tons of carbon emissions. E.SUN collaborates with green merchants to provide exclusive rewards for designated green spending. Over 90,000 cardholders have already adopted sustainable living practices.

Putting carbon reduction into action with E.SUN cardholders

Carbon Accounting Account

To encourage low-carbon living among cardholders, E.SUN has pioneered the "Carbon Accounting Account" service, providing practical carbon reduction information. Additionally, we have partnered with EasyCard Corp. to launch the first carbon calculation service for public transportation. The GHG inventory management system developed by EasyCard Corporation is the world's first electronic ticket carbon accounting system verified by BSI, enhancing the credibility of their data. E.SUN cardholders can activate their Carbon Accounting Account through the E.SUN Wallet App and use E.SUN credit or debit cards with EasyCard functionality to take designated public transportation (such as MRT, buses, Youbike, etc.), allowing them to view their transportation carbon reduction data. This makes daily carbon reduction efforts more tangible. In 2023, cardholders totaled approximately 3,217 kilograms of transportation carbon reductions, lessening the carbon burden on our planet.



4.5 FinTech and Innovation

E.SUN is committed to the development and application of financial technology. With more than 1,300 technology professionals forming a technology team responsible for overall digital development, AI applications, IT research, and information security management. Through cross-team collaboration, E.SUN has improved the efficiency of digital financial technology. E.SUN has made significant achievements in AI, inclusive finance, and scenario-based finance. We are the first bank in Taiwan to deeply integrate AI into various business and the first bank to build our core system using cloud-native technology and microservices architecture. In recent years, in addition to introducing agile practices and exploring cloud applications, E.SUN has also established the XDC (Experience Design Center) to optimize customer experience across digital channels. As of the end of June 2024, the percentages of business completed through digital channels are as follows:

99% of Foreign exchange transactions	93% of Loan applications	96% of Transfer transactions
94% of Mutual fund investments	86% of Credit card applications	55% of Deposit account openings

Services Supported

A Digital Foundation

Capitalizing on the technological capacity of E.SUN, we continue to develop infrastructures for digital transformation and endeavor to fulfill our sustainability commitments by adopting eco-friendly practices, conserving energy, and creating the value of environmental sustainability.

Topics	Strategy Direction
AI Technology	E.SUN's proprietary MLaaS (Machine Learning as a Service) platform currently hosts over 100 AI services, allowing for rapid and flexible deployment and utilization of AI model APIs. It has become a vital bridge connecting mature AI models with business systems.
	The establishment of the GENIE platform provides E.SUN staff with a single interface for utilizing generative AI. In the wave of emerging technologies, it ensures information security, compliance, and budget management.
Operational Resilience	E.SUN proactively prepares for potential extreme scenarios in the future by leveraging the advantages of the cloud. In 2023, we promoted the backup of critical system data to the cloud.
	To enhance the availability of overseas information systems and reduce the impact on services in our overseas branches, E.SUN completed the migration of servers in our Singapore branch to the public cloud by 2023. We will continue to plan and promote the migration of servers to the public cloud in other overseas branches.
Resource efficiency	To achieve optimal allocation of information resources, we provide services through virtualized environments and private clouds. We also implement monitoring and management tools to collect and analyze resource usage trends for flexible resource scheduling.
	To increase productivity, we implement collaboration platforms in the development process and utilize digital tools.
	To enhance resource utilization efficiency, we have implemented a new form of wide area network (WAN) connectivity architecture called SD-WAN (Software-Defined Wide Area Network). We have adjusted the existing network infrastructure in our overseas branches and strengthened the integration and utilization of the current network connections.
Agility and Resilience	We have expanded the usage of container platforms since 2022. In addition to providing flexibility in leveraging public clouds, this expansion will enable rapid application delivery, automated deployment, and operations. Container technology also allows for automated scaling to enhance system reliability, ensuring uninterrupted application services.
	Cloud services has diversity and high availability, and complement with on-premises services. More information service requests will be achieved by using both cloud and by using both cloud and on-premises service. At the same time, the security of using cloud services is ensured through a security management framework.
Security Monitoring	E.SUN continues to benchmark the supervisory configuration rules proposed by the competent authorities to expand the scope of abnormal behavior detection, and utilize automatic threat intelligence collection to improve the efficiency of the threat intelligence process, further reducing manual processing costs and increasing risk identification

Financial Innovation Applications - Digital Process Optimization, Service Without Interruption

Unified Application Platform	<p>E.SUN launched the new generation "Unified Application Platform" in December 2023. Customers only need to fill out their information according to their needs and complete up to 7 financial service applications simultaneously. This includes applications for TWD and foreign currency accounts, credit cards, personal loans, mortgage loans, securities accounts, and sub-brokerage accounts. The platform also automatically completes account linking and settlement, eliminating the need for repetitive applications or in-person visits, saving time on tedious and redundant application processes. Furthermore, the platform provides digital account opening services and has received ISO 14067 certification for product carbon footprints and PAS 2060:2014 certification for carbon neutrality. This initiative is estimated to save 750,000 sheets of paper each year, helping to protect the planet alongside our customers.</p>
Corporate Online Application Platform	<p>E.SUN has created the "Corporate Online Application Platform" to enhance the digital loan experience for businesses. Business owners and enterprises can fill out credit application forms, agree to credit inquiries, and apply for credit guarantee fund loans through a variety of identity verification mechanisms. The platform is also integrated with business registration services, reducing the need for customers to input redundant information and addressing pain points in the application process. Subsequently, cases are automatically assigned to the corresponding account managers based on the attributes of the businesses. This integration of virtual and physical channels reduces the cost of manual operations for employees</p>
Real Estate Collateral Valuation	<p>To optimize our customers' digital mortgage experience, E.SUN developed the "Real Estate Collateral Valuation" feature. Customers can estimate property prices and available loan amounts online, as well as access information about nearby schools, transportation facilities, hospitals, and comparable property transaction data. This feature complements existing loan amount and interest rate assessment services, providing a comprehensive digital experience.</p>
Embedded Financial Services	<p>By linking with preferred partners such as convenience stores, communities, and chain brands, E.SUN integrates banking services into customers' daily life scenarios, enhancing the customer service experience. As the end of June, 2024, a total of 6 scene integrations were completed, including data sharing with PLUSPay for "personal loans and account opening services," "account opening and linking services" with PLUSPay and PXPAY, integration of account payment for management fees through the Smartdaily App, embedding the E.SUN foreign currency balance inquiry in the PLUSPay travel section, and providing exchange rate inquiry services. Utilizing data sharing in the iPASS app to bring customer ID and birthday into the account opening page, allowing customers to access financial services in daily life scenarios without visiting a branch. With a customer-centric approach, E.SUN utilizes API modules to create a micro-financial service and scenario ecosystem.</p>
Mobile Banking	<p>Integrating multiple innovative services within the bank, E.SUN Mobile Banking has obtained multiple patents and has an active user base of around 70%. In 2023, we continue to focus on enhancing the customer experience and providing diverse services, including:</p> <ol style="list-style-type: none"> (1) Diverse Authentication Modules: To ensure the security of customer transactions, E.SUN provides 12 authentication methods, including FIDO authentication (added in 2023), voice OTP, SIM card authentication, ATM verification codes, and facial/fingerprint recognition. E.SUN has obtained 2 invention patents and 5 utility model patents. In 2023, it was also approved by the government for financial innovation investment deduction. Customers can choose suitable authentication according to their own needs, providing a more flexible and secure service experience (2) Upgrade of Foreign Exchange Services: In 2023, the foreign currency trading interface was integrated, and a new service for reserving foreign currency transactions was added. Additionally, there are 15 types of foreign currency available for online buying and selling services 24/7. Customers who need to travel or go on business trips can exchange currencies at any time, enjoying a simpler, smoother, and more considerate digital financial experience. The overall proportion of online foreign exchange transactions has exceeded 99%. (3) Diverse Digital Wealth Management Services: E.SUN Mobile Banking has added new features for insurance member registration, travel insurance purchase, and overseas bond subscription and redemption services. Customers can now conveniently purchase travel insurance anytime and anywhere, with various options available, such as premium and budget plans, allowing customers to select insurance products based on their needs before traveling. The overseas bond service offers subscription and redemption options with a minimum investment of just USD\$1,000, further expanding our customer service.

4.6 Direct Operations Management

Sustainable Operation Goals (Using 2020 as the baseline)



2030 Target

Reduce total carbon emissions by **42 %**



2030 Target

Reduce water usage by **30 %**



2030 Target

Reach **100 %** renewable energy use for all domestic locations



2030 Target

Reduce waste generation by **78 %**

(Using 2016 as the baseline)

4.6.1 Internal Carbon Pricing

Direct operations (Scope 1, 2) carbon price

To align with Taiwan's goal of achieving net-zero emissions by 2050, E.SUN is intensifying its efforts to promote energy conservation and carbon reduction. Starting in 2023, we are planning and implementing an internal carbon pricing mechanism for Scope 1 and Scope 2 emissions. The first step is to establish a carbon price, incorporating the concept of carbon cost into the cost-benefit analysis of energy conservation. Through GHG inventory analysis, we will assess the carbon emissions and cost information for each department. In 2024, we will implement internal carbon pricing across all domestic locations, integrating carbon costs into daily operations. This initiative aims to raise awareness about the need to consider carbon emissions as a cost, thereby guiding us towards establishing effective carbon management practices.

- The carbon price will be determined based on market trends, taking into consideration pricing mechanisms in the EU, average international prices, projected prices in Taiwan, penalty pricing, and pricing models used by representative industries. Combining this information with our carbon reduction cost per unit, the carbon price is set at 100 USD per ton of CO₂e.
- We are continuously improving our infrastructure to establish a carbon emissions database. This includes deploying a data collection pipeline for energy consumption in buildings and creating a consistent framework for electricity usage. These efforts aim to enhance our ability to monitor and manage carbon emissions effectively.

- By incorporating the concept of carbon pricing and reevaluating the cost-benefit analysis of energy conservation and carbon reduction, we can reassess the payback period and enhance the benefits of replacements. This approach allows us to shorten the time required to recover the initial investment, resulting in improved cost-effectiveness.
- To cultivate a carbon cost management mindset in each department, we will implement transparency through the use of a "shadow price." Departments will be informed of their estimated annual carbon costs through a billing system that reflects these charges. This serves as a reminder for departments to budget for carbon costs in the upcoming year.
- We will disclose the carbon reduction achievements of each department. This incentivizes departments to take action to lower carbon costs and, in turn, encourages behavior change among our staff. By emphasizing the relationship between carbon emissions and costs, we aim to foster a culture of proactive carbon reduction throughout.
- In the future, we will continuously adjust the carbon cost structure based on actual carbon reduction expenditures, domestic and international carbon pricing trends, and relevant regulations. By implementing a carbon cost management mechanism, we aim to accelerate our progress towards achieving net-zero emissions. This dynamic approach allows us to adapt our pricing strategy in response to changing circumstances and optimize our reduction efforts for maximum effectiveness.

4.6.2 Low-carbon Operation

E.SUN aligns with international standards by establishing science-based carbon reduction targets, continuously working towards the goal of limiting global warming to 1.5°C by 2050 and the net-zero emissions target for 2050. For 2023, E.SUN set a 12.6% reduction goal based on a 2020 baseline. The actual carbon reduction achieved was 18.5%, surpassing the set target.

Headquarters Building

After more than 30 years of use, the E.SUN headquarters building underwent a major renovation in 2022. During the renovation, over 90% of green building materials were used, along with energy efficient appliances and low-water consumption fixtures. The project also focused on indoor air quality and creating a well-lit and spacious environment. In addition, the building gained additional clean energy by installing solar power equipment on the roof and utilizing renewable energy throughout. Charging stations were also installed in the parking lot, combining green electricity with green transportation. In 2023, the building achieved three green building certifications: U.S. Green Building LEED Platinum, Zero Energy, and Zero Carbon.

Renewable Energy Measures

E.SUN is committed to enhancing its energy management while actively promoting renewable energy initiatives. In 2022, we joined RE100, pledging to use 100% renewable energy at all locations worldwide by 2040. This effort can be broken down into three main areas:

Renewable Energy Adoption

We have signed seven renewable energy supply contracts, with a procurement amount reaching 30.5 million kWh, equivalent to 61% of our total annual electricity consumption. Currently, renewable energy is supplied to 8 office buildings and 93 designated sites. By 2023, E.SUN utilized 12.02 million kWh of renewable energy, achieving RE 24.5, which corresponds to a reduction of 5,950 tons of CO2 emissions

Solar Panel Installation

We completed the installation of solar panels at 27 locations, with a cumulative installed capacity of 352.6 kW. This is expected to generate approximately 422,000 kWh annually, resulting in a carbon reduction of 208.8 tons. E.SUN aims to fully equip all its owned buildings with solar power facilities by 2025, with a current completion rate of 61.8%

Purchase of Renewable Energy Certificates

For seven consecutive years, E.SUN has purchased renewable energy certificates to support government policies and promote renewable energy development. In 2023, we purchased 859 national renewable energy certificates (T-REC), which correspond to 859,000 kWh of energy, reducing emissions by approximately 425 tons. These efforts have been verified by a third party, SGS, and are included in our greenhouse gas inventory results

Water and Energy Saving Measures



2023 Target

Reduce water usage per unit revenue by **9** %



2023 Outcome

Reduce water usage per unit revenue by **23** %



2024 Target

Reduce water usage per unit revenue by **12** %



2030 Target

Reduce water usage per unit revenue by **30** %

Air Conditioning Energy Savings

- Upgraded outdated air conditioning equipment
- Regular maintenance and installed additional circulation fans
- In 2023, our air conditioning energy-saving efforts resulted in approximately 33,000 kWh

of annual electricity savings, equating to a reduction of 16.4 tons of carbon emissions. Initially, R-22 refrigerant was widely used in air conditioning, but in response to the ozone layer depletion issue and aligned with international policies, we have been gradually replacing it with R-410A refrigerant and utilizing energy-efficient air conditioning units. We also assess conditions for old air-cooled chiller units and replace them with high-efficiency Variable Refrigerant Volume (VRV) systems that adjust operations without compromising service.

Lighting Energy Savings

- Outdated lighting equipment has been replaced with LED lighting and motion-sensor lighting systems
- In 2023, our lighting upgrade efforts saved about 429,000 kWh of electricity, which translates to a reduction of 212.4 tons of carbon emissions. E.SUN initiated a plan to replace all branch lighting with LED fixtures by 2025, expecting to save 30,000 kWh annually, or about 6% of the total annual electricity consumption
- For seven consecutive years, we've voluntarily turned off signage lights during peak summer electricity usage. In 2021, we increased the number of days from 100 to 130 days, saving a cumulative total of 496 MWh over 7 years, which corresponds to a reduction of 252.2 tons of carbon emissions

Introduction of "Micro-Hydropower Faucet"

In 2023, we introduced a water-saving certified "micro-hydropower faucet". This faucet uses the potential energy of water flowing through it to generate electricity, which is stored in batteries to maintain daily operations, effectively saving both water and electricity

Rainwater Harvesting System

E.SUN has installed rainwater harvesting systems at its main office buildings - Second Headquarters Building, Summit Campus, and Hope Campus. The system filters out larger debris through rainwater diversion points, collecting rainwater and surface runoff. The collected water is treated through a filtration system and subsequently used for irrigation and landscape ponds. In 2023, this initiative resulted in a reduction of 9.286 megaliters of water.

Waste Reduction Measures



2023 Target

Reduce waste per unit revenue by **39** %



2023 Outcome

Reduce waste per unit revenue by **42** %



2024 Target

Reduce waste per unit revenue by **45** %



2030 Target

Reduce waste per unit revenue by **78** %

Eco-plastic Envelopes

Envelopes are one of the most used resources for banks. In 2021, E.SUN Bank made a significant change by replacing the non-recyclable BOPS (Biaxially Oriented Polystyrene) window film on commonly used envelopes with PLA (Polylactic Acid) bioplastic, which earned official certification from the USDA Biobased program. The PLA used in these bioplastic films is derived from non-edible plant starch, and its production process significantly reduces carbon emissions. Using PLA does not result in significant GHG emissions and does not produce toxic substances when incinerated. These environmentally friendly envelopes are estimated to reduce carbon emissions by 13.1 metric tons annually with E.SUN's monthly usage of approximately 1.563 million envelopes (equivalent to about 416.8 kilograms). E.SUN actively selects eco-friendly materials, aiming to minimize environmental impact. Through the common item of envelopes, they hope to promote environmental awareness throughout society. With their corporate influence, they strive to contribute to a sustainable future with the spirit of "One love leads to more love," making every effort to create a more sustainable future.

Creating an Eco-friendly Canteen

E.SUN actively responds to the Taipei City Government's policy of "banning single-use and Styrofoam utensils." Starting from 2020, the entire company has implemented plastic reduction measures, and electronic posters have been placed around our headquarter buildings to promote reusable bags instead of plastic. Additionally, reusable mugs replaced disposable cups at all events. In response to the Green Living Initiative by the Ministry of Environment, E.SUN's headquarter buildings have established green employee canteens. By replacing 10,000 disposable meal boxes and utensils with eco-friendly alternatives, the initiative has led to the reduction of approximately 600,000 paper containers, amounting to a total waste reduction of 16.3 tons. This practice not only protects the health of our employees but also demonstrates our commitment to waste reduction and environmental protection while creating a culture of healthy and environmentally friendly dining.

Low-carbon Operation Certifications

Green Buildings

- A total of 14 locations have obtained LEED certification, of which 8 are Platinum-level certifications. The Platinum-certified branches in Nanzih and Linyuan have been recognized for their outstanding energy-saving performance as models of low-energy buildings globally and was featured in the renowned Journal of Building Engineering, issue 80, in 2023. Additionally, 6 locations have received Gold-level certification, including the Hope Building, the mechanical room of the Technology Building, E.SUN Human Resources Development Center, Building A of the Second Headquarters, as well as the Chiayi and Dali branches.
- Ten locations have obtained EEWH certifications, including three Gold certifications (E.SUN Second Headquarters building A and B, and the Rende branch) and seven Qualified certifications (Chiayi, Daya, Yuanlin, Toufen, Anan, East Tainan, and Shalu branches).

Carbon Neutral Branches

E.SUN's owned buildings, after implementing energy-saving improvements, incorporating green building practices, installing solar power systems, and utilizing renewable energy, select certain sites annually to offset their remaining carbon emissions through the purchase of carbon credits. In 2023, E.SUN completed carbon neutrality for six locations, including the Headquarters Building, Chiayi, Daya, Toufen, Nanshan Plaza, and Taichung Central Branch.

Management and Certifications

- E.SUN has implemented ISO 14001 Environmental Management, ISO 50001 Energy Management, and ISO 46001 Water Resource Efficiency Management systems. These frameworks help us establish comprehensive goals and propose improvement plans, continually practicing environmentally friendly and energy-saving measures in a systematic and planned manner to meet international standards and verification.
- We conduct data analysis on annual energy consumption, carbon emissions, and water usage Through ISO 14064 GHG inventory and ISO 14046 water footprint assessments. This allows us to verify energy-saving effectiveness and track the completion of our goals. The results, verified by third parties, are disclosed in various publications and domestic and international evaluation projects.

4.6.3 Supplier Management

As a financial institution, E.SUN follows the "E.SUN Bank Supplier Management Guidelines" to ensure that suppliers fulfill corporate social responsibility and promote sustainable development. As of the end of 2023, the number of cooperating suppliers has reached 1,494. These suppliers cover various types, including information software and hardware, construction and mechanical equipment, labor services, and office equipment, with no significant changes.

Sustainable Procurement

To establish a supply chain that protects the environment, human rights, safety, and sustainable development, E.SUN continues to adopt the ISO 20400 Sustainable Procurement Standard. We review the performance of suppliers based on common procurement specifications and specific regulations and conduct regular assessments through external audits to ensure compliance with the standard requirements. The common procurement specifications provide clear guidelines for environmental, social, and economic considerations, while specific procurement specifications are tailored for particular categories (such as information software and hardware, construction, and mechanical equipment). As a member of the Movers and Shakers in Sustainable Finance, E.SUN responds to government policy and incorporates the spirit of circular procurement into its own practices. Prioritizing local suppliers also aligns with the requirements of the Sustainable Development Goals (SDGs); in 2023, 97% of our procurement was conducted locally.

Sustainable Supply Chain Engagement

In 2023, we continued to hold supplier conferences to leverage our influence and invited energy management consultants to discuss carbon management trends and share their experiences in joining the social innovation platform. We expect suppliers to contribute alongside E.SUN in addressing climate change and the transition to Net Zero. We will also explain the criteria for evaluating excellent suppliers, working together to create sustainable value. Through supplier visits, we will confirm their corporate operations, internal management, safety, health, and environmental standards, as well as discuss ESG development directions and potential risks. We encourage suppliers to join us early on in reducing environmental impact. For suppliers engaged in higher-risk tasks, such as renovation projects, we require compliance with occupational safety and health laws. The responsible person from the vendor and E.SUN staff must provide job safety and health education and hazard prevention training for the workers, ensuring they are aware of job risks and minimizing the harm they may encounter during operations.

Supplier Climate Risk Analysis

To understand the potential impact of climate risks on suppliers and grasp the indirect impacts on E.SUN, assessments have been conducted on the operational locations of key suppliers.

Physical Risks

To assess the impact of climate change on suppliers and understand the upstream impacts on E.SUN's supply chain, we conducted scenario testing for our key suppliers in Taiwan, specifically focusing on the risk of flooding. The hazard severity is based on IPCC AR6 scenario data, analyzing the impacts under low, medium, and high emissions scenarios. Professional climate consultants then translated this data into localized extreme rainfall probabilities. The vulnerability is evaluated using the 3rd generation flood potential map from the Water Resources Agency, matched with flood potential information using geographic information system (GIS) technology. The two factors are integrated to assess the sensitivity (risk) levels. The results are shown in the table below

Scenario Description	SSP1-2.6		SSP2-4.5		SSP5-8.5	
	Low Emission Scenario:		Medium Emission Scenario:		High Emission Scenario:	
	Global temperature increase in 2030: 1.5°C Global temperature increase in 2050: 1.7°C		Global temperature increase in 2030: 1.5°C Global temperature increase in 2050: 2.0°C		Global temperature increase in 2030: 1.6°C Global temperature increase in 2050: 2.4°C	
	2030	2050	2030	2050	2030	2050
High Risk	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Medium-High Risk	0.00%	0.69%	0.69%	0.69%	0.00%	1.39%
Medium Risk	1.39%	2.08%	0.69%	0.69%	1.39%	1.39%
Medium-Low Risk	2.78%	1.39%	2.78%	2.78%	2.78%	1.39%
Low Risk	95.83%	95.83%	95.83%	95.83%	95.83%	95.83%

Response to Physical Risks

Based on the assessment results, most of the physical climate risks identified under the three scenarios have minimal impact on our supply chain. At most, only 4% of suppliers may be affected. E.SUN will propose flood prevention measures and the installation of flood control equipment to suppliers with higher flood risk through.

on-site inspections and supplier conferences. Although the assessed impact of suppliers on E.SUN's operations is minimal, E.SUN will continue to evaluate the impact of climate risks on each supplier. If necessary, alternative procurement sources will be identified to ensure resilience and mitigate the risks associated with climate change.

Transition Risks

In order to understand the impact of carbon cost conditions on the prices of suppliers working with E.SUN, we assessed the potential scenarios of carbon fee collection. The main consideration for transition risks is the factor of suppliers passing on carbon-related costs to increase E.SUN's procurement costs. In the short term, we considered the climate law carbon fee collection scenario, and in the medium to long term, we referred to the IEA and NGFS scenarios. The analysis is based on the revenue carbon emission coefficient of each industry and estimated the carbon emissions borne based on the procurement amount. The impact of carbon fee-related costs transferred by suppliers was estimated based on the carbon price of each scenario, and the evaluation results are shown in the table on the right. In order to reduce the risk of future carbon fee transfers, we will promote training, communication, and encourage suppliers to establish response strategies as early as possible, thereby reducing costs and promoting the sustainable development of suppliers on a mutually beneficial basis.

Response to Transition Risks

If suppliers pass on all additional carbon fees to E.SUN, it is expected that procurement costs will increase in the short, medium, and long term scenarios. In order to reduce future risks of carbon fee transfers, we promoted exchanges on domestic and international net zero policies and regulations, the EU CBAM, and the promotion of supply chain greening goals by international corporations in the 2023 Supplier Conference. We also encourage suppliers to establish response strategies early, ensure industry competitiveness, and promote the sustainable development of suppliers on a mutually beneficial basis.

Scenario Description		Carbon Fee Collection for Climate Change Response Law (Short-term) ¹	IEA 2050 Net Zero Scenario (Medium to Long-term) ²		NGFS 2050 Net Zero Scenario (Medium to Long-term) ³	
		Carbon Fee NT\$4,305 (US\$140)/t	Carbon Fee NT\$7,688 (US\$250)/t		Carbon Fee NT\$4,797 (US\$156)/t	Carbon Fee NT\$13,439 (US\$437)/t
		2025	2030	2050	2030	2050
Transfer Amount (NTD Thousands)	Manufacturing	117	1,195	3,004	1,331	5,252
	Service (Financial, Services, Real Estate)	867	8,831	22,210	9,840	38,822
	Construction (Repair, Construction, Engineering)	41	418	1,052	466	1840
Carbon Fee Transfer Amount as a Percentage of Procurement Amount		0.02%	0.24%	0.59%	0.26%	1.03%

Note 1: The short-term scenario assumes carbon fee collection based on emissions, and the medium to long-term scenario assumes carbon-related costs calculated in the form of carbon trading (reduction of 29% by 2030, 100% reduction by 2050), with the shortfall being supplemented by the carbon price.

Note 2: The IEA carbon fee reference uses the GEC Model 2022: Net Zero Emissions by 2050 Scenario Advanced economies with net zero emissions pledges, which applies to all industries in the energy-related sector

Note 3: Using NGFS MESSAGEix-GLOBIOM 1.1 Net Zero 2050 Taiwan for carbon price

4.7 Nature and Biodiversity Contribution Activities

E.SUN supports the Convention on Biological Diversity globally and aims to promote sustainable ecological development and achieve the United Nations Sustainable Development Goals (SDG 13 Climate Action, SDG 14 Life Below Water, SDG 15 Life on Land). In 2022, we proactively joined the TNFD and became one of the first companies globally to join as a TNFD Early Adopter in 2023. Our strategy for the natural environment and biodiversity development focuses on four main pillars: Species Conservation, Habitat Preservation, Environmental Sustainability, and Employee Participation. We also reference the AR3T* corporate nature action framework proposed by SBTN to align our activities accordingly. Together with like-minded partners, we strive to contribute to the beautiful nature of Taiwan.

Positive Impacts on Nature	Avoid	Reduce	Restore	Regenerate
Summer Solstice Lights Off Saving a total of 495,650 kWh, equivalent to 252.2t of emissions over 7 years				
E.SUN-NTU ESG Centenary Project 12,680 native trees planted in 2023				
E.SUN Malawi Project Over half of fields (17.8 ha) converted to organic				
Millet Cultivation Revival Plan Revived 28 native millet species				
Plant a tree, Plant a life 50,000 native tree seedlings planted				
Formosan Black Bear Conservation Project Totalled NT\$11 million in donations				
Sea Turtle Conservation & Education Project Rescued 81 and released 11 turtles in total				
Beautiful Taiwan, Smiling E.SUN Environment Cleanup Environmental Cleanup 161 events held				
Adopting trails in Yushan National Park 16 consecutive years				
Polar Bear Environmental Education Project				
Resource Circulation Charity Auction 8,370 items donated				

* The AR3T framework is developed by the SBTN includes four types of actions: Avoid, Reduce, Restore, and Regenerate in order to reach the goal of Transformation

E.SUN Malavi Project – A Decade of Protecting the First Acre at the Foothills of Mt. Yushan

E.SUN initiated the "E.SUN Malavi Project" in 2014 out of our love for the beauty of this land. This project is grounded in the United Nations Sustainable Development Goals (SDGs) and has further expanded into the realms of net-zero sustainability, ecological conservation, and sustainable procurement. This project promotes the transition to organic farming in Namuan Village, Hualien County, advocating for the use of nature-based solutions and integrates traditional knowledge from the local aboriginal Bunun people to protect the environment and enhance biodiversity of the area, aiming to achieve the vision of "Living in harmony with nature" as outlined in the United Nations Convention on Biological Diversity. The E.SUN Malavi Project not only achieves the goal of organic transition but also unites the efforts of businesses, government, and academia gradually restoring the biodiversity of Namuan.

The project is named "Malavi", the Bunun word meaning "come along" or "go together," in hopes of promoting harmony between humanity and nature through the collaboration of corporate and public support. The project introduces public-private partnerships (PPP) and collaborates with various stakeholders, with E.SUN providing funding support, Yushan National Park Management Office inviting Tse-Xin Foundation for guidance, and Yin-Chuan Organic Farm for purchasing and marketing the rice. The project creates a positive impact on the local environment, aligning closely with the goals of the Forestry and Nature Conservation Agency. By encouraging local farmers to transition to organic-friendly farming and maintain ecological habitats, biodiversity in the Namuan farming area has gradually recovered, with species such as pangolins, the Chinese box turtle, and the endangered fish species Kikuchi's Minnow returning, in addition to helping

farmers improve rice quality. Conservation fields and a community seed bank have also been established in Namuan to help preserve traditional crops, including the collection of various traditional Bunun beans and grains, to preserve climate resilient crops for the future.

In the summer of 2024, E.SUN returned to Namuan to hold a harvest festival with the group of organic pioneers, commemorating the fruitful outcomes of a decade of hard work. The Chairman, together with E.SUN founder Mr. Yung-Jen Huang, led E.SUN's leadership team and volunteers back to the fields they pledged to protect so many years ago, experiencing the joy of harvesting rice firsthand. The golden stalks of rice contrast beautifully with the green field ridges, creating a stunning backdrop for the celebration. Farmers happily pointed out all the flora and fauna to the community children, passing on their knowledge of the land to the next generation.

With everyone's support over the years, sustainable agriculture has successfully taken root in Namuan. E.SUN continues to showcase our ESG spirit through the promotion of the Malavi Project, sharing this invaluable experience domestically and taking it to the international stage. At the World Biodiversity Summit during New York Climate Week in 2024, we presented Taiwan's beauty and achievements to the world. To further promote sustainability to other agricultural areas, E.SUN leverages the successful experiences from the Malavi Project to develop a series of financial products under the "Leopard Cat Loan Project." E.SUN hopes that through continuous cooperation, the Malavi Project can not only progress into the next decade but also lead Taiwanese agriculture toward a bright and sustainable future.



Sea Turtle Conservation Project

E.SUN has collaborated with the National Museum of Marine Biology and Aquarium (NMMBA) for five consecutive years on the "Sea Turtle Conservation Project." A total of 81 turtles were treated, and 11 turtles were released back into the wild over the course of the project. Figures in the past five years are as follows:

Species \ Year	2023	2022	2021	2020	2019
Green turtle	1	2	1	1	3
Hawksbill turtle	-	-	-	-	1
Olive ridley sea turtle	-	-	-	-	2
Total	1	2	1	1	6

Injured Sea Turtle Rescue

Since 2020, we have continuously supported the establishment of sea turtle injury treatment stations, providing medical supplies and covering food expenses to ensure that injured sea turtles receive comprehensive care.

Sea Turtle Wildlife Release

In 2023, a critically endangered green sea turtle was released back into the wild at Tianfu Fishing Port in Xiaoliuqiu, Pingtung. The turtle was discovered entangled in discarded fishing nets, and its right front flipper was injured by a fish hook. During the care and treatment process, it was found that the turtle had ingested nylon ropes and other synthetic materials. After being carefully treated by experts at the marine center, the turtle was deemed fit for release. On the day of release, in addition to marine center staff and the Coast Guard, 46 members of the public, including E.SUN volunteers and 11 families, enthusiastically participated. The release took place at the conservation beach of Houbihu in Kenting, where everyone witnessed the moment the turtle returned to the ocean.

Sea Turtle Ecological Education

We invite school groups, social welfare organizations, and families to participate in our educational programs. Activities include visits to the sea turtle rehabilitation center, observing the care provided to sea turtles in artificial environments, veterinarian explanations at the marine center on how to handle stranded or injured sea turtles, parent-child interactive workshops, beach cleanups, and environmental conservation activities.

Polar Bear Environmental Education Project

Every year on February 27th, which is International Polar Bear Day, E.SUN collaborates with the National Museum of Natural Science to launch a series of polar bear conservation activities. Over the past five years, we have organized a total of 40 events, with nearly 3,700 participants. The activities in 2024 included Polar Bear Environmental Education Talks, the Polar Bear and Friends Challenge Activity, and museum tours. Through these initiatives, we aim to raise public awareness about the importance of environmental conservation and wildlife protection.

Formosan Black Bear Conservation Project

The Formosan black bear is Taiwan's only native bear species. Preserving this species in Taiwan not only ensures their survival but also helps protect the integrity of Taiwan's forest ecosystems and overall biodiversity. Since 2012, E.SUN has collaborated with Taipei Zoo to promote a series of black bear conservation activities. In 2014, we launched the Black Bear Affinity Card, inviting our customers to support the conservation of Taiwan's native species.

E.SUN's Conservation and Environmental Concept Card - "Black Bear Affinity Card"

E.SUN Bank partnered with Taipei Zoo to issue E.SUN's first credit card that incorporates environmental conservation concepts—the "Black Bear Affinity Card." With each transaction made using this card, 0.2% of the amount goes to an animal conservation fund. This fund has amassed NT\$11 million in donations to Taipei Zoo, which has been used for black bear conservation, habitat protection, the restoration of Taiwan's native species, and environmental education programs. Additionally, customers who use the card to make donations to Taipei Zoo, the Taiwan Black Bear Conservation Association, the Animal Protection Association of the ROC, and the Taiwan Environmental Information Association receive bonus points.

The first animal conservation specialty branch in Taiwan "Black Bear Branch"

E.SUN Bank's Hualien Branch utilizes unique local features and is dedicated to promoting animal conservation and biodiversity. The branch lobby features an audiovisual section that plays a documentary about black bears produced by the Yushan National Park Administration. Additionally, there is a black bear knowledge corner that offers extensive information on the conservation of Formosan black bears. The ATMs are adorned with charming pictures of the bears, with the hope of raising awareness about animal conservation among customers and the local community.

Promotion of Formosan black bear conservation education

For 12 consecutive years, E.SUN has collaborated with Taipei Zoo to promote the conservation of Formosan black bears. The activities include the Formosan Black Bear - Let's Go Summer Camp, Black Bear Conservation Little Square House, and Earth Day 422 - Investing in Our Planet and Living in Harmony with Nature - Million Green Actions to Reverse Endangered

Species Trends, among others, totaling 82 events. In 2023, we partnered with the zoo and the Taiwan Black Bear Conservation Association for a special Formosan Black Bear - Let's Go Summer Camp. Through lively and engaging activities such as dancing, sports, black bear DIY projects, and storytelling, preschool children were able to deepen their understanding of black bear conservation through interactive teaching methods.

Millet Revitalization Project

In collaboration with NTU, we have launched a three-year initiative named the "Millet Revitalization Project." This project involves establishing demonstration areas for millet cultivation and organizing workshops to provide stable native millet seeds and professional planting expertise, encouraging more local residents to engage in millet farming. Additionally, the project will work with schools and indigenous cultural experts to incorporate traditional millet rituals, ancient millet stories, and cultivation methods into the school curriculum. This approach aims to convey the significance and value of millet to indigenous culture and foster a reconnection between millet and the land.



E.SUN-NTU ESG Centenary Project

In partnership with NTU, we will plant native conifers such as the Taiwan Red Cypress, Formosan Hinoki, Cryptomeria-like Taiwania, Taiwan Incense Cedar, and Formosan China-fir in the Yushan mountain range. An estimated 100,000 trees are expected to be planted over a 10-year period starting in 2022, covering a total area of 50 hectares. The forest is projected to absorb 242,000 tons of CO₂ over a century. After selective thinning, 25,000 trees will be retained to grow over the century, laying the foundation for soil and water conservation, as well as creating carbon sequestration and circular economy benefits. In 2023, a total of 12,680 trees were planted.



"Plant a tree, Plant a life"

E.SUN Tree Planting Project

E.SUN has been jointly promoting the "Plant a Tree, Plant a Life" initiative for five consecutive years in collaboration with the Ministry of Agriculture. In 2023, we adopted 6.01 hectares of national and coastal forests and planted 10,965 native tree saplings, such



as Formosan Ash, Formosan Sweet Gum, Formosa Acacia, and Taiwan Gordonia, bringing the total to over 50,000 trees planted from 2019 to 2023. In March and October 2023, E.SUN volunteers planted seedlings in the state-owned forests of Shilin District, Taipei City, and the coastal forests of Shimen District, New Taipei City, contributing to local biodiversity and environmental sustainability.

"Beautiful Taiwan, Smiling E.SUN" Environment Cleanup Activity

We have organized environmental cleanup and beach cleanup activities for 14 consecutive years since 2010. In support of World Cleanup Day, we organized street cleaning around our business locations and beach cleanups from September to November. We held a total of 161 events with 7,419 volunteers, taking action to reduce plastic waste and protect our beautiful homeland.

Adopting Trails in Yushan National Park

E.SUN has adopted and maintained 260 km of trails in Yushan National Park for 16 consecutive years. We use this opportunity to promote conservation and environmental education while encouraging E.SUN employees to participate and work together to protect the environment.

130 Days Lights Out

For the past seven years, we have turned off our lights during peak energy hours in summer. From June 21 to October 29, 2023, all 139 branches across Taiwan shut down their signage lights, exterior wall lights, and television displays for the entire day. Over the past seven years, a total of 495,650 kWh has been saved, equivalent to a reduction of 252.2 metric tons of carbon emissions.



CH5 Towards a Better Future

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5.1 Carbon Emissions Structure

E.SUN began taking a carbon inventory of its service locations according to the ISO 14064 standard in 2014. In 2017, we expanded this to include 100% of our locations. The inventory covered Scope 1 direct GHG emissions (such as emissions from electric generators, natural gas, company vehicles, and firefighting equipment) and Scope 2 indirect GHG emissions from electricity use. The largest source of emissions for the financial industry originates from its financing and investment activities.

In 2023, E.SUN conducted an assessment of its financing and investment carbon emissions using the Partnership for Carbon Accounting Financials (PCAF) Second Edition standards, utilizing data from ESG reports and CDP data from its financed and invested entities. The results of this assessment have been independently verified (see 2023 Sustainability Report, p.209). In addition to total emissions, intensity indicators such as Carbon Footprint and Weighted Average Carbon Intensity (WACI) are used to analyze the carbon emissions profile of financial assets. This information serves as a reference for financing and investment decisions. The Carbon Footprint represents emissions per unit of financing and investment exposure, providing insights into whether the investment portfolio is moving toward carbon reduction. The Weighted Average Carbon Intensity is calculated based on the carbon emissions per unit of revenue from the financed and invested entities, accounting for the proportion of E.SUN's financing and investment. This indicator helps interpret changes in the carbon emissions of the financing and investment portfolio. By systematizing carbon emissions information, E.SUN closely monitors changes in the carbon-related indicators of its assets and continues to work toward its mission of achieving Net Zero.

Emissions Timeline

	2020	2021	2022	2023
Scope 1	2,399	1,858	1,844	2,161
Scope 2	22,299	22,105	20,294	17,959
Scope 3: Financed Emissions	4,710,269	3,672,612	4,945,550	5,355,042
Scope 3: Others	53,713	49,181	56,015	46,436
Total	4,788,679	3,745,755	5,023,7039	5,421,5985

Note: Scope 2 emissions are calculated using the market-based method

Scope 3 Portfolio Emissions Inventory

	2020	2021	2022	2023
Financed Emissions (t-CO ₂ e)	4,710,269	3,672,612	4,945,550	5,355,042
Carbon Footprint (t-CO ₂ e/\$M)	2.44	1.73	2.10	2.14
Weighted Average Carbon Intensity (t-CO ₂ e/\$M)	-	6.23	4.77	5.09
Inventory Coverage (%)	73.69%	75.27%	76.53%	77.62%

Note 1: Emissions from investment and financing activities for 2023 have been estimated based on the changes in our total assets reported in our financial statements

Note 2: Carbon Footprint = GHG emissions from investment and financing companies / inventoried balance of investment and financing companies

Note 3: Inventory Coverage = inventoried balance of investment and financing companies / sum of FVPL, FVOCI, AC, loans, and discounted items

Note 4: Inventory coverage for 2023 using PCAF methodology is 100%

5.2 Financed Emissions Analysis

E.SUN analyzes the GHG emissions of its investment and financing assets based on asset types, industry, and regions. We have set different decarbonization goals for different asset types according to SBT targets and plan control mechanisms for high-carbon industries. We also engage with customers and encourage staff to increase interaction with low-carbon companies or investment targets. We hope to leverage our financial influence to help achieve net-zero emissions.

Corporate Loans

54.5%

Sovereign Bonds

19.0%

Stocks and Corporate Bonds

12.5%

Mortgages

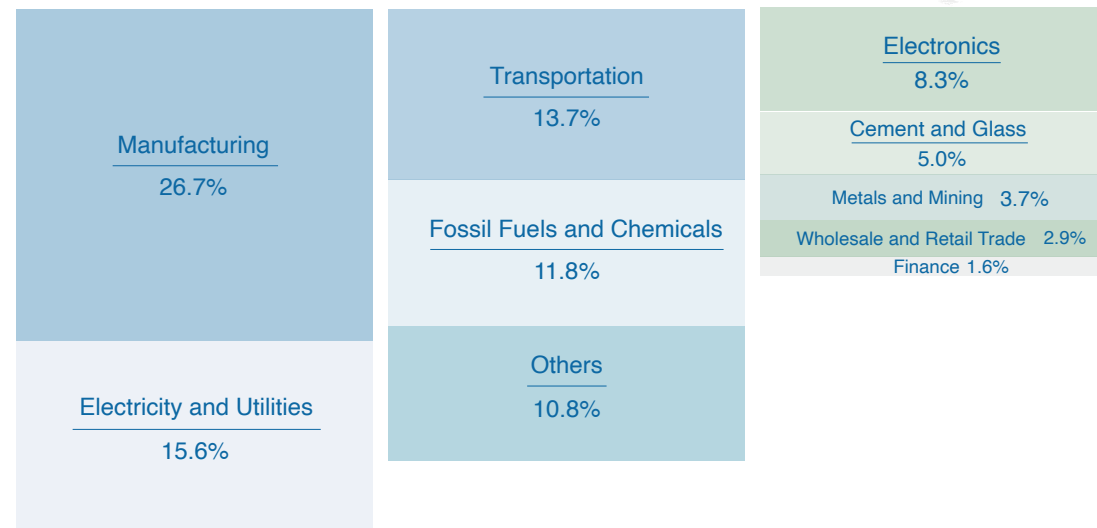
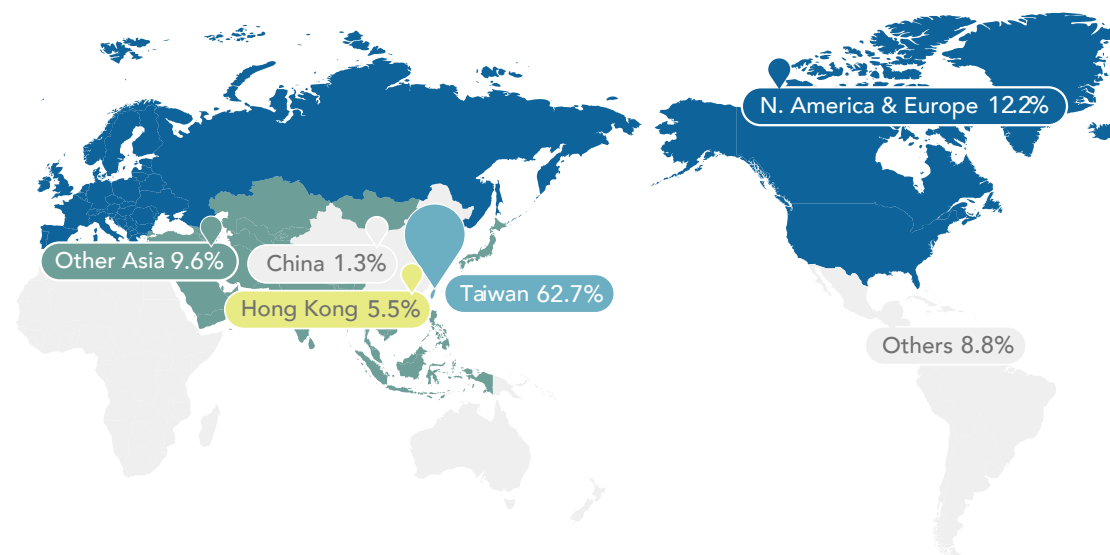
7.5%

Power Generation Project Finance

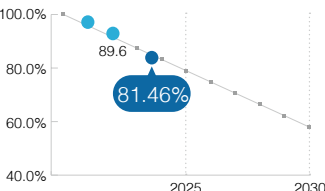
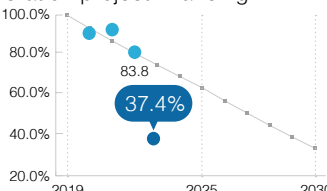
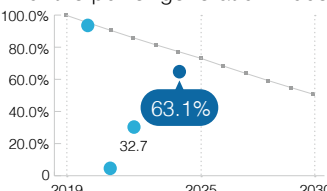
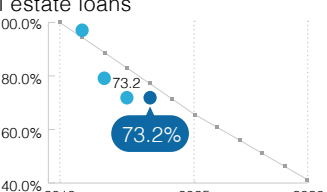
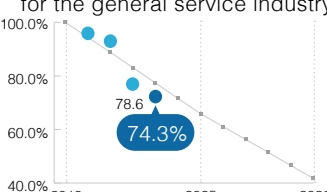
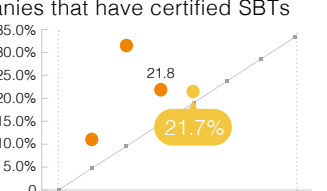
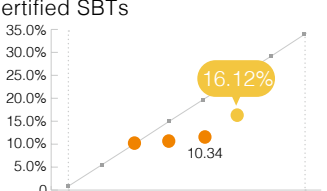
3.5%

Commercial Real Estate Loans

3.0%



5.3 Our Path to Net-Zero

Category	Emission Factors	SBT Targets	Net-Zero Actions
Scope 1	<ul style="list-style-type: none"> Use of Company vehicles, refrigerants, natural gas Base year: 2020 	Emission reduction percentage 	<ul style="list-style-type: none"> Install solar panels, ensuring that 100% of E.SUN's owned buildings are equipped with solar facilities by 2025, and achieve 100% use of renewable energy in all domestic branches by 2030. Purchase renewable energy certificates in accordance with government energy policies. Replace energy-consuming equipment by updating old lighting and air-conditioning systems with energy-saving products. Ensure that 100% of E.SUN-owned buildings obtain green building certification by 2027.
Scope 2	<ul style="list-style-type: none"> Operating locations and building electricity consumption Base year: 2020 		
Scope 3	<ul style="list-style-type: none"> Investment and Financing (based on PCAF methodology) Base year: 2019 	(1) Emission intensity of the power generation project financing 	<ul style="list-style-type: none"> As of 2021 to now, there have been no outstanding financing balances related to coal-fired power generation projects. E.SUN is gradually divesting from coal-related business activities, adhering to a principle of not initiating new transactions by the end of 2030, with the aim of fully exiting these activities by the end of 2035. As of 2023, there have been no investments or financing related to companies involved in unconventional fossil fuel extraction. In 2022, we introduced internal carbon pricing to our business portfolio, combining E.SUN's attributed emissions with trusted international carbon pricing to create an accessible carbon cost concept and use it as a reference for business development. E.SUN will continue to drive sustainable development through financial initiatives and products, increasing its engagement with clients that have adopted SBTs, as well as through investments in green energy and green building projects to help customers reduce their carbon footprint.
		(2) Emission intensity of long-term loans for the power generation industry 	
		(3) Emission intensity of commercial real estate loans 	
		(4) Emission intensity of long-term loans for the general service industry 	
		Percentage of loans to manufacturing companies that have certified SBTs 	
		Percentage of invested companies with certified SBTs 	
	Other (procurement process, credit card manufacturing and disposal process, employee travel, waste disposal, etc.)		<ul style="list-style-type: none"> Reduce carbon emissions from credit cards by utilizing carbon neutralization strategies and researching renewable card materials. Collaborate with suppliers to implement local and green procurement practices.

Note 1: SBTs use increase in reduction rate compared to baseline as the target. To make the information more instinctual, we chose to present our results as a reduction percentage.

Note 2: (1)(2) carbon intensity (t-CO₂e/MWh) reduction

Note 3: (3)(4) carbon intensity (t-CO₂e/m²) reduction

5.4 Empowering Finance Towards Sustainability

Personal Banking

Carbon Neutral Credit Cards

- E.SUN Bank's entire range of credit cards are now carbon neutral
- Over 6.46 million cards have been issued in total

Innovative Inclusive Financial Services

- E.SUN promotes going paperless and reducing GHG emissions by switching to online platforms and electronic bills/statements

Smiling Polar Bear Series Loan

- Individuals who purchase energy-saving home appliances, electric vehicles, and install green energy power generation equipment, etc., are offered financial service discounts
- For mortgage collaterals that have the Green Building Mark issued by the Taiwan Architecture and Building Center, interest rates or fees are discounted. A total of 1,181 loans with a balance of approximately NT\$19.28 billion have received these incentives. The target for average annual growth rate of disbursed funds is 8% over 3 years

Corporate Banking

Green Loans

- Assisting in the development of green projects, such as renewable energy, energy storage, green building, and energy-saving equipment
- Balance reached NT\$96.8 billion as of Jun., 2024 (NT\$80.9 billion in 2023)
- Target balance NT\$130 billion by 2030

Sustainability Linked Loans

- Encouraging companies to establish and achieve ESG development goals by providing financial service incentives
- Balance reached NT\$71.2 billion as of Jun., 2024 (NT\$60.1 billion in 2023)
- Target to reach 13% of total corporate loans by 2030

Sustainability Initiative

- Inviting like-minded corporate partners to focus on sustainability and jointly reduce carbon emissions, building a sustainable ecosystem through practical action
- From 2021 to September 2023, the "E.SUN ESG Sustainability Initiative" was held with 243 companies joining the initiative.

Sustainability Consulting Services

- Combining internal expert teams with external professional consultants to provide advisory services that assist corporate clients in ESG development
- As of Jun. 2024, engaged with a total of 220 companies on sustainability and climate-related issues, including recommending steps for carbon reduction and encouraging and assisting companies in implementing GHG inventories

Medium and Large Enterprises / Financial Institutions

Sustainable Bond investments

- The balance of investments in certified green bonds, social bonds, and sustainability bonds is NT\$33.8 billion
- The target balance is NT\$42 billion by 2030

Sustainable Bond Issuance

- Channeling funds to environmentally and socially friendly industries
- Total issuance reached NT\$25.1 billion

Sustainable Bond Underwriting

- In 2023, E.SUN Securities acted as a co-underwriter for 9 companies in sustainable industries, with a total underwriting amount of NT\$223 million. As of Jun. 2024, 2 more companies with a total of NT\$12 million were added
- Supporting companies in raising funds for sustainability causes and assisting them in issuing sustainability bonds. Underwriting balance reached NT\$26.5 billion

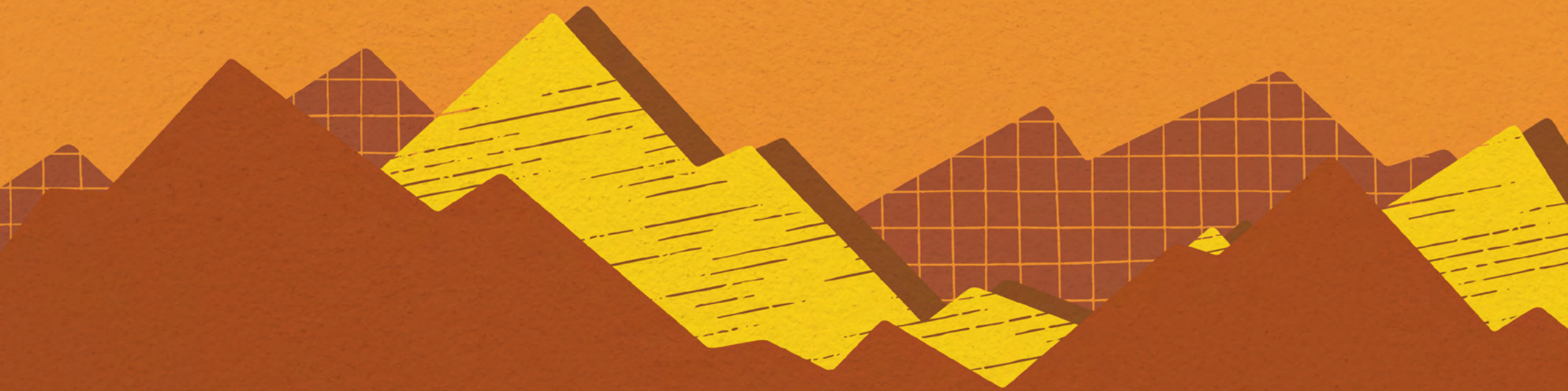
Hedging and Consultation Services for Sustainability-related Projects

- Supporting environmentally friendly projects with our services by providing hedging and consultation services for sustainability-related projects, e.g., financing for offshore wind power projects and solar power projects.
- The hedging services provided amounted to NT\$32.3 billion

CH6 Conclusion

6.1 Looking Forward

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6.1 Looking Forward

Global Warming is Our Reality; Adaptation Actions Must Happen Now

We are at a time where temperature rise will exceed the 1.5°C threshold, while simultaneously facing declining ecosystem stability. Addressing the impacts of climate change and the deterioration of nature has become a priority. Countries around the globe have begun to take action, but without considering the protection and restoration of nature, the chances of achieving the 1.5°C target become increasingly unlikely. In this age of numerous unknown challenges, each of us—from individuals to businesses and society at large—must strengthen our resolve to confront these issues together.

Managing Carbon Emissions and Protecting Nature

In a world where climate change and natural ecosystems are interdependent, merely addressing climate change is insufficient to mitigate the risks arising from the natural environment. The assessment of dependencies, impacts, risks, and opportunities related to nature and biodiversity remains a foreign and challenging field. However, we cannot afford to delay our actions and must act as soon as possible to prevent irreversible damage to nature. The impacts from financial institutions primarily arise from their investment and financing activities rather than their direct operations. Therefore, we must comprehensively understand the measures our clients have taken regarding climate and nature to track and assess their effectiveness, set ambitious positive impact goals, and avoid or mitigate negative impacts.

Forging Sustainability Capabilities; Exerting the Influence of Finance

E.SUN firmly believes that a comprehensive ESG strategy is not only essential for stable and resilient operations but also a key element in addressing our current climate and environmental crisis. Addressing changes in nature is still an unfamiliar and challenging territory that we must resolutely pursue. E.SUN has created a sustainable development blueprint to serve as an example, leveraging the influence of finance to become a frontrunner among financial institutions. Through capacity building and innovation, we continue to strive toward our targets of Net Zero by 2050 and living in harmony with nature.

From Zero to One: Moving Towards Living in Harmony with Nature

In the historic "Kunming-Montreal Global Biodiversity Framework" established in 2022, Target 15 emphasizes that businesses should assess, disclose, and reduce biodiversity-related risks and negative impacts. E.SUN upholds the principle of public and transparent disclosures, aspiring to lead by example and foster growth and learning within society. When confronted with such a monumental challenge, success on the first attempt is unlikely. The journey from zero to one is always the most difficult, but if we do not take that first step, we will never advance. Through this report, we hope not only to make responsible disclosures regarding climate and nature issues but also to unite like-minded partners to make meaningful contributions toward sustainability around the world.



Appendix I TCFD Disclosure Recommendation

	Recommended Disclosures	Chapters
Governance	Describe the board's oversight of climate-related risks and opportunities	1.2 / 1.3 / 3.6
	Describe management's role in assessing and managing climate-related risks and opportunities.	1.2 / 1.3 / 1.4 / 3.6
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	3.1 / 3.2 / 3.4
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	3.3 / 3.5 / 5.4
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	3.3 / 3.9 / 4.6
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks	3.4 / 3.6
	Describe the organization's processes for managing climate-related risks	3.6 / 3.7 / 3.8 / 3.10 / 4.1 / 4.2
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	3.8 / 3.10 / 4.1 / 4.2 / 4.3
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	3.3 / 3.7 / 4.1 / 4.2 / 4.3 / 4.4 / 4.6 / 5.4
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	5.1 / 5.2 / 5.3
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	3.3 / 4.1 / 4.2 / 4.3 / 4.6 / 5.2 / 5.3 / 5.4

Appendix II TNFD Disclosure Recommendations

	Recommended Disclosures	Chapters
Governance	Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities	1.2 / 1.3 / 3.6
	Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities	1.2 / 1.3 / 1.4 / 3.6
	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	1.2 / 1.3
Strategy	Describe the nature-related dependencies, impacts, risks and opportunities the organization has identified over the short, medium, and long term	2.4 / 2.5 / 2.6 / 3.2 / 3.3 / 3.4 / 3.5
	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	2.1 / 3.5
	Describe the resilience of the organization's strategy to nature-related risks and opportunities, taking into consideration different scenarios	2.6 / 3.9 / 3.10 / 4.6
	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	2.6 / 3.7
Risk & Impact Management	(i) Describe the organization's processes for identifying, assessing and prioritizing nature-related dependencies, impacts, risks and opportunities in its direct operations	2.1 / 2.6 / 3.7
	(ii) Describe the organization's processes for identifying, assessing and prioritizing nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s)	2.1 / 2.2 / 3.7 / 4.1 / 4.2
	Describe the organization's processes for managing nature-related dependencies, impacts, risks and opportunities	3.6 / 3.7 / 3.8 / 3.10 / 4.1 / 4.2
	Describe how processes for identifying, assessing, prioritizing and monitoring nature-related risks are integrated into and inform the organization's overall risk management processes	3.7 / 3.8 / 4.1 / 4.2
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.	2.6 / 3.3 / 5.4
	Disclose the metrics used by the organization to assess and manage dependencies and impacts on nature	2.6 / 3.7
	Describe the targets and goals used by the organization to manage nature-related dependencies, impacts, risks and opportunities and its performance against these	3.3 / 4.6 / 4.7 / 5.4

Appendix III Financed Emissions Structure

Asset Class Distribution

Asset Class Distribution			Financed Emissions (t-CO ₂ e)	Carbon Footprint (t-CO ₂ e/\$M)	WACI (t-CO ₂ e/\$M)	Physical Emission Intensity ²	Physical Emission Intensity Units ²	Data Quality	Inventory Coverage
Investment	Stocks and Corporate Bonds ¹		672,112	49.27	144.77			3.15	50.17%
	Sovereign Bonds	Excluding LULUCF	1,017,788	240.59	240.59			1.00	
		Including LULUCF	925,642	218.81	217.00			1.00	
Crediting	Corporate Loans		2,918,240	101.65	149.77			3.76	93.28%
	Power Generation Project Finance		186,931	121.70		0.11	t-CO ₂ e/Power Generated (MWh)	3.06	
	Commercial Real Estate Loans		160,552	57.86		0.11	t-CO ₂ e/Floor Space (m ²)	4.00	
	Mortgages		399,419	13.16		0.04	t-CO ₂ e/Floor Space (m ²)	4.00	
	Motor Vehicle Loans		-	-	-	-	t-CO ₂ e/km	-	
Total	Excluding LULUCF		5,355,042	65.91	156.53			3.60	77.62%
	Including LULUCF		5,262,897	64.78	-			3.60	

Geographical Distribution

Geographical Distribution	Financed Emissions (t-CO ₂ e)	Carbon Footprint (t-CO ₂ e/\$M)	WACI (t-CO ₂ e/\$M)
Taiwan	3,140,494	53.17	163.30
N. America & Europe	655,654	65.50	53.82
Other Asia	558,060	113.48	156.84
Others	555,881	114.40	278.93
Hong Kong	396,865	199.24	318.60
China	48,089	134.95	129.36
Total	5,355,042	65.91	156.53

Note 1: Due to PCAF 2nd Edition not yet having set guidelines for calculating Scope 3 GHG for sustainable bonds, such as green bonds, sustainability bonds, and social bonds, the carbon emissions from these types of bonds have been excluded from the investments in stocks and corporate bonds. The excluded emissions amount to 39,834 t-CO₂e. If the elements above are included, the overall inventory coverage will increase to 78.45%

Note 2: Physical Emissions Intensity refers to the efficiency of total carbon emissions from specific activities within an industry per unit of output.

Note 3: Currency shown in \$USD, calculated using USD/TWD exchange rate of 12/31/2023.

Industry distribution

Industry distribution	Financed Emissions (t-CO ₂ e)	Carbon Footprint (t-CO ₂ e/\$M)	WACI (t-CO ₂ e/\$M)
Manufacturing	1,051,005	163.47	159.92
Electricity and Utilities	613,580	281.20	1,766.76
Fossil Fuels and Chemical	463,116	247.91	454.53
Transportation	540,763	283.53	459.76
Electronics	327,248	81.47	106.41
Others	424,580	45.94	91.95
Cement and Glass	197,443	1,120.28	3,752.48
Metals and Mining	145,813	359.94	390.56
Wholesale and Retail Trade	113,156	19.87	13.22
Finance	61,131	4.15	9.53
Total	3,937,835	84.39	148.23

Appendix IV TNFD Core and Additional Disclosure Metrics

Core Disclosure Indicators and Metrics for FIs

	Metric no.	Category	Metric Description	Value Chain Stage	Figures
TNFD Core Global Metrics	C7.0	Risk	Value of assets, liabilities, revenue and expenses that are assessed as vulnerable to nature-related transition risks ¹	Portfolio	About NT\$22.4 billion (2.87%)
	C7.1		Value of assets, liabilities, revenue and expenses that are assessed as vulnerable to nature-related physical risks ²		About NT\$13 billion (1.67%)
	C7.2		Description and value of significant fines/penalties received/litigation action in 2023 due to negative nature-related impacts	Direct Operations	NT\$0
	C7.3	Opportunities	Amount financing and investment that conforms to the Taiwan Sustainability Taxonomy	Portfolio	About NT\$100.2 billion
	C7.4		Amount of products and services producing positive impacts on nature (Green loan balance + Sustainability linked loan balance + Sustainability bond balance)	Portfolio	About NT\$170.4 billion
TNFD FI Core Metrics	FI.C0.0	Exposure to sectors	Total exposure percentage to nature-sensitive sectors categorized by the TNFD	Portfolio	17.29%
	FI.C0.1	Exposure to sensitive locations	Percentage of portfolio within Minimum Regulatory Standards ³ areas	Portfolio	4.3%

Note 1: Quantitative assessments are conducted based on 40 impact-related "operational characteristic" and "geospatial" indicators. After adjusting for weighting, the resulting scores represent the top 1% of companies within our portfolio in Taiwan.

Note 2: Quantitative assessments are conducted based on 15 impact-related "operational characteristic" and "geospatial" indicators. After adjusting for weighting, the resulting scores represent the top 1% of companies within our portfolio in Taiwan.

Note 3: The indicators considered in the Minimum Regulatory Standards area include nature reserves, wildlife protection areas, natural conservation areas, drinking water source quality protection zones, national-level significant wetland areas, specific soil and water conservation areas, hot spring outcrops, and reservoir catchment areas, totaling 8 indicators.

Recommended Disclosure Indicators and Metrics for FIs

	Metric no.	Driver of nature change	Indicator / Metric description	Value chain stage	Figures / Explanation
TNFD core global metrics	C1.0	Land / freshwater / ocean-use change	Total spatial footprint ¹	Suppliers	3.49 km ²
				Direct Operations	0.05 km ²
				Portfolio	890.73 km ²
	C1.1		Extent of land / freshwater / ocean-use change (Farm to table project farmland)	Portfolio	2.39 km ²
	C2.0	Pollution / pollution removal	Pollutants released to soil split by type	Direct Operations	Less involvement with this indicator
	C2.1		Municipal wastewater discharged		218,675 tons
	C2.2		Waste generation and disposal ²		692 tons General waste: 518 tons General waste target: 545 tons
	C2.3		Plastic pollution		Less involvement with this indicator
	C2.4		Non-GHG air pollutants		Less involvement with this indicator
	C3.0	Resource use / replenishment	Water withdrawal and consumption from areas of water scarcity according to WRI categorization	Suppliers	0 tons
				Direct Operations	0 tons
				Portfolio	0 tons
	C3.1		Quantity of high-risk natural commodities sourced from land/ocean/ freshwater	Portfolio	No data available
	C4.0	Invasive alien species and other	Measures against unintentional introduction of invasive alien species	Direct Operations	Less involvement with this indicator
	C5.0	State of nature	Total endangered plants habitat area according to the Endemic Species Research Institute's Taiwan Biodiversity Network (TBN) that intersects with portfolio companies	Portfolio	60.72 km ²
TNFD Additional Metrics	A2.1	Waste minimized, reused or recycled	Amount of household and office waste recycled ²	Direct Operations	174 tons
	A3.0	Driver of nature change: resource use and replenishment	Total water consumption and withdrawal the water consumption of E.SUN Bank is entirely sourced from third-party water suppliers defined by GRI, namely Taiwan Water Corporation and Taipei Water Department. It does not include water from surface water, groundwater, seawater, or recycled water sources ³ .	Direct Operations	Total water use: 242,972 tons

Note 1: Data calculated S&P's Ecosystem Footprint database and does not cover entire portfolio due to data limitations

Note 2: Percentage of measured and estimated data are 95% and 5% respectively

Note 3: The disclosed data is based on information as of December 31, 2023. For historical data and targets, please refer to the 2023 Sustainability Report, p.203

Appendix V TCFD / TNFD Conformity Statement

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Conformity Statement

Climate related Financial Disclosure

This is to conform that:

E. SUN Financial Holding Co., Ltd.	玉山金融控股股份有限公司
14F., No. 117 & 1F., No. 115	臺灣
Sec. 3, Min Sheng East Road	台北市
Songshan Dist.	松山區
Taipei City	民生東路三段
105402	117 號 14 樓及 115 號 1 樓
Taiwan (R.O.C.)	105402

Holds Statement Number SRA-TW-812273

As a result of BSI TCFD/TNFD conformity check procedures, the following conclusions were drawn:

- E. SUN Financial Holding Co., Ltd. follows the Recommendations of the Task Force on Climate and Nature-related Financial Disclosures (TCFD/TNFD) Guidance to disclose Climate and Nature-related financial information which is clear, comparable and consistent against its organizational risks and opportunities as well as its financial impacts. The disclosure covers the four core elements of the TCFD/TNFD and is prepared based on the guiding principles for effective disclosures.
- The maturity model for the Climate-related Financial Disclosures is **Level 5+: Excellence** grade.
- 與氣候相關的財務揭露的成熟度模型為【第五級 Plus：優秀】等級。
- The maturity model for the Nature-related Financial Disclosures is **Level 5: Excellence** grade.
- 與自然相關的財務揭露的成熟度模型為【第五級：優秀】等級。

For and on behalf of BSI

Peter Pu

Managing Director BSI Taiwan, Peter Pu

Latest issue: 2024-11-14 Expiry date: 2025-11-13

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Statement number: SRA-TW-812273

Location:	Conformity Check Overall Result:
E. SUN Financial Holding Co., Ltd. 14F., No. 117 & 1F., No. 115 Sec. 3, Min Sheng East Road Songshan Dist. Taipei City 105402 Taiwan (R.O.C.) 玉山金融控股股份有限公司 臺灣 台北市 松山區 民生東路三段 117 號 14 樓及 115 號 1 樓 105402	<p>The maturity model for the Climate-related Financial Disclosures is Level 5+: Excellence grade.</p> <p>與氣候相關的財務揭露的成熟度模型為【第五級 Plus：優秀】等級。</p> <p>The maturity model for the Nature-related Financial Disclosures is Level 5: Excellence grade.</p> <p>與自然相關的財務揭露的成熟度模型為【第五級：優秀】等級。</p>

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