Eink

2023 NATURE AND CLIMATE REPORT

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Stop frying your eyes.

Most computer and phone screens emit light that over long periods of screen time can permanently damage eyes. E Ink's paper-like screens are different.

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About this Report

The World Economic Forum releases the "Global Risks Report" annually, identifying the uncertain events or conditions that pose significant risks to countries or industries worldwide. In the 2024 report, five environmental risks are listed among the top ten global risks for the next decade. Notably, "Extreme Weather Events" has risen to the number one position, alongside "Critical Changes to Earth Systems" and "Biodiversity Loss and Ecosystem Collapse" as the top three most severe long-term global risks. The risks posed by nature and climate change have become impossible to ignore. In light of the uncertainties of nature and climate change and the global energy transition, E Ink Holdings Inc. (hereafter referred to as E Ink) has integrated economic development, environmental protection, and sustainable development policies into its response strategies. The Company actively implements energy-saving, carbon-reduction, and water-saving projects, identifies and mitigates risks related to nature and climate change, develops energy-efficient products and services, and strengthens resilience against natural and climate-related risks while fostering a culture of environmental sustainability.

E Ink identifies nature and climate-related risks and opportunities based on the frameworks of the Taskforce on Nature-related Financial Disclosures (TNFD) and the Task Force on Climate-related Financial Disclosures (TCFD). The company deepens its understanding of the impacts brought by nature and climate change through risk and opportunity assessment tools. Relevant departments analyze risks and opportunities based on various factors, including policies and regulations, international initiatives and trends, technological development, market shifts, reputational risks, and short-, medium-, and long-term physical risks. Scenario analysis is introduced to set effective management measures and develop adaptation and mitigation strategies. With the support and participation of senior management, E Ink aims to enhance its resilience in addressing nature and climate change.

Editing Principles

This report references the frameworks of the Taskforce on Nature-Related Financial Disclosures (TNFD) and the Taskforce on Climate-Related Financial Disclosures (TCFD) to disclose information related to nature and climate risks and opportunities. It also utilizes the LEAP (Locate, Evaluate, Assess, and Prepare) approach as analytical methodology for identification.

Reporting Scope and Period

The report covers the operations and production of E Ink and the Company's subsidiaries, which include the Taiwan (Hsinchu, Linkou, Zhongli), China (Yangzhou), and the US (Billerica, Fremont, and South Hadley), with 100% coverage. Sales offices in other regions, including Tokyo, Japan; Seoul, South Korea; Shenzhen, China; and Eindhoven, Netherlands, do not have significant impacts on the Company's nature and climate aspects. Any additional information from other regions will be specifically noted in the report.

This report discloses E Ink's corporate management strategies, risk and opportunity identification, as well as related goals and action plans concerning nature and climate for the year 2023 (from January 1 to December 31, 2023).

Reporting Information Compilation Process

This report is E Ink's first Nature and Climate Report. The information presented in this report is collected by respective departments and reviewed by department heads, then submitted to the E Ink Corporate Sustainability Committee for data consolidation, compilation, and internal auditing. Upon completion, the report undergoes final review and approval by the Chairman before publishing.

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NATURE AND CLIMATE REPORT ➡

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CEO's Message

ESG sustainability has become a major global trend promoted by governments, organizations, and companies. Over a decade ago, E Ink began the journey from practicing CSR to fully integrating ESG into its operations, focusing on environmental, social, and corporate governance aspects. Through years of learning and improvement, the Company is honored to be continuously listed as a member of the Dow Jones Sustainability World Index (DJSI-World) and the Dow Jones Sustainability Emerging Markets Index (DJSI-Emerging Markets). In 2023, the Company achieved significant results in the corporate sustainability domain.

With green ePaper technology and products, E Ink is dedicated to sustainable development across all aspects, including product design, green production, supply chain management, corporate governance, enterprise care, and social inclusion. This unwavering mission guides the Company, and despite a constantly changing engagement, E Ink remain steadfast in implementing sustainable practices step by step.

Embracing the Sustainable Trend, Pioneering the Future

In addition to monitoring the impact of external environmental, social, and economic factors on its operations, E Ink, adhering to the principle of Double Materiality, also emphasizes the interaction between its operations and the external environment, as well as the enhancement of positive externalities.

E Ink adopted the Task Force on Climate-related Financial Disclosures (TCFD) framework in 2019 to proactively assess and address climate-related risks and opportunities. This approach has enabled the Company to identify potential financial implications and strategic advantages. In 2021, E Ink further demonstrated its commitment by becoming a TCFD Supporter.

To broaden its focus to include natural and environmental aspects, E Ink not only began conducting preliminary disclosures in 2022 based on the pilot version of the Taskforce on Nature-related Financial Disclosures (TNFD) framework but also joined as a TNFD Early Adopter in 2023. Furthermore, E Ink completed its first Nature and Climate Report in 2024.

Prioritizing Climate, Minimizing Impact

With the global average temperature in 2023 reaching 1.45° C above pre-industrial levels, marking the warmest year on record, the environmental changes caused by climate change are intensifying the challenges of business operations. This has further reinforced E Ink's commitment to its "Climate First" philosophy, driving the company to make even greater efforts to mitigate the environmental impact of climate change.

E Ink is dedicated to delivering high-energy-efficiency, low-carbon ePaper products. According to the FTSE Russell Green Revenues 2.0 Data Model, 99% of the Company's product sales are classified as Green Revenue. E Ink is also continuously working to reduce the carbon footprint of its products; for instance, the carbon footprint of the 6.8-inch ePaper module was reduced by 29% in 2023 compared to the previous year.

E Ink has committed to achieving 100% renewable energy use by 2030, reducing Scope 1 and Scope 2 greenhouse gas emissions by 80% compared to 2021, and reaching net-zero carbon emissions across Scopes 1, 2, and 3 by 2040. The Science Based Targets initiative (SBTi), a leading international initiative on climate change, has not only approved these targets but also recognized E Ink's net-zero goal as the most ambitious one validated through the SBTi process to date.

Through relentless efforts in setting and achieving climate goals, E Ink is actively addressing the critical challenge of climate change. By the end of 2023, E Ink had already achieved 36% renewable energy use globally, surpassing its original target of 30% by 2024. Scope 1 and Scope 2 greenhouse gas emissions were reduced by 31% compared to the 2021 baseline, significantly exceeding the SBTi target. Additionally, E Ink doubled its energy productivity in 2022 compared to the baseline year, achieving the EP100 Energy Productivity Commitment's goal of doubling energy productivity by 2040 well ahead of schedule.

Innovative Technology, Lower Emissions

Low-carbon ePaper can be utilized in smart cities, smart retail stores, and personal digital reading devices, creating sustainable digital products. Based on the 64,000 digital bus stops in Taiwan, comparing the carbon emissions of ePaper Bus Stop and TFT-LCD Bus Stop over five years, ePaper Bus Stop generate zero carbon emissions as they can be powered by solar energy systems, whereas TFT-LCD Bus Stop generate 200,000 metric tons of carbon emissions.

In global retail stores, a comparison of the power consumption of 30 million 10-inch ePaper tags versus TFT-LCD tags and the associated carbon emissions over the past five years reveals that ePaper tags can reduce carbon emissions by 12,000 times. When compared to the paper consumption of traditional paper tags, ePaper tags can reduce carbon emissions by 60,000 times.

Considering 130 million eReaders used worldwide, if each eReader downloading 10 books per year, a comparison of the carbon emissions of eReaders and TFT-LCD tablets over the past five years shows that ePaper used in eReaders can reduce carbon emissions by 50 times compared to the power consumption of TFT-LCD tablets.

Grounded in Nature, Honoring Biodiversity

The 1987 publication of the United Nations' "Brundtland Report" established the foundational concept of sustainable development: "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Establishing sustainable development policies is in the common interest of all nations, and safeguarding the natural environment upon which humanity depends is as crucial as addressing the severe challenges of climate change.

E Ink places great importance on the preservation of the natural environment and proactive action. The Company has established a Biodiversity and Non-Deforestation Commitment, collaborating with value chain and ecosystem partners to maintain and enhance the integrity of the biosphere. E Ink participates in the Business for Nature, advocating for government policies that support environmental action, and has joined the Science Based Targets Network (SBTN) to begin setting nature-related targets. The Company is also a member of the Taiwan Nature Positive Initiative (TNPI), engaging in discussions and actions on biodiversity conservation. Additionally, E Ink sponsors the Taiwan Environmental Information Association, providing substantial support for environmental trust operations and habitat restoration. Internally, E Ink organizes the "Environmental Protection Festivals" to promote nature conservation and encourage environmental volunteerism.

In terms of core products, E Ink's ePaper technology, which displays images using ambient light without emitting its own light, has become the first globally recognized by the International Dark-Sky Association as a light pollution-free display technology. This feature ensures that digital information displays do not disrupt communities or ecosystems, thus supporting biodiversity. Through its sustainable actions in product design, green manufacturing, green supply chain management, and environmental stewardship, E Ink is driving efforts to create a positive impact on the natural environment.

Steadfast Sustainability, Advancing Forward

E Ink firmly believes that integrity, transparency, and a robust management framework are essential foundations for the sustainable development of the Company. E Ink has established a governance and management mechanism centered around four core elements – governance, strategy, risk management, and metrics and targets – to address critical sustainability issues such as nature and climate change. This approach enables the company to not only manage risks but also seize opportunities while responding to the needs of investors and stakeholders. Within this sustainable management framework, E Ink is steadily advancing towards its short-, medium-, and long-term goals, contributing to the sustainable development of the environment, society, and economy.

Johnson Lee, CEO

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01 Natural and Climate – Vision and Milestones

Photo credit: TEIA

1-1 Foundation - Establishing a Comprehensive Governance Mechanism and Team Management

Organizational Structure

The Board of Directors formulates strategies and sets annual targets for addressing nature and climate change, oversees the implementation of these strategies and targets, and evaluates the performance of nature and climate-related initiatives, linking these performances to executive compensation. The Corporate Sustainability Committee, chaired by the CEO, is responsible for driving execution and reports to the Board twice a year. Governance and risk management related to nature and climate change are primarily driven by the Green Production sub-committee of the Corporate Sustainability Committee, which continuously assesses and manages the impact of nature and climate change on operations. This sub-committee also coordinates meetings with various departments to discuss annual action plans and promote sustainable development. Additionally, nature and climate-related material risks and opportunities are integrated into the company's risk management mechanism, enabling the Risk Management sub-committee of the Corporate Sustainability Committee to conduct comprehensive corporate risk management.
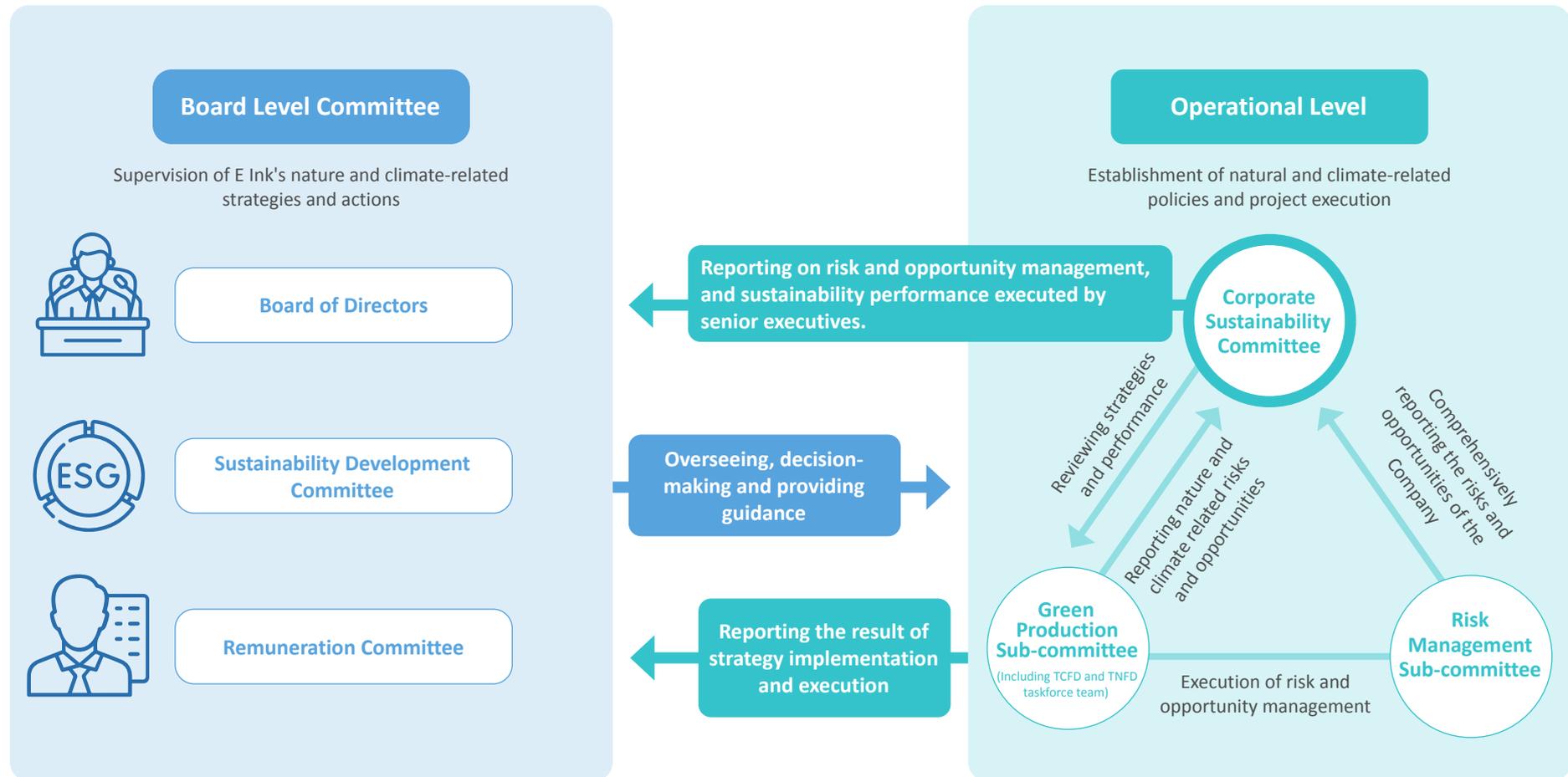
Board Level Committee

Supervision of E Ink's nature and climate-related strategies and actions

Board of Directors

Sustainability Development Committee

Remuneration Committee

Operational Level

Establishment of natural and climate-related policies and project execution

Reporting on risk and opportunity management, and sustainability performance executed by senior executives.

Overseeing, decision-making and providing guidance

Reporting the result of strategy implementation and execution

Corporate Sustainability Committee

Green Production Sub-committee
(Including TCFD and TNFD taskforce team)

Risk Management Sub-committee

Reviewing strategies and performance

Reporting nature and climate related risks and opportunities

Comprehensively reporting the risks and opportunities of the Company

Execution of risk and opportunity management

	Committee	Convener / Team Leader	Governance Responsibilities	Reporting Frequency
Board Level Committee	Board of Directors	Chairman	The Board of Directors of E Ink is the highest governing body for risk management, regularly approving management strategies for nature and climate-related risks and opportunities while overseeing the effectiveness of the overall risk management mechanism.	Twice a year
	Sustainability Development Committee	Chairman	Reviews nature and climate-related risk policies and procedures, approves risk tolerance levels and risk control priorities, makes decisions on material nature and climate-related issues, and allocates resources to ensure effective risk response.	Twice a year
	Remuneration Committee	Independent Director	According to the Senior Executive Remuneration Policy, the remuneration and bonuses of senior executives are evaluated and implemented based on "guaranteed compensation" and "variable compensation." The evaluation metrics for variable compensation are linked to the achievement of sustainability and risk management targets and goals[Note].	Once a year
Operational Management Level	Corporate Sustainability Committee	CEO	Acts as a cross-departmental communication platform for vertical integration and horizontal coordination, reviewing the corresponding strategies and long-term goals of sub-committees, coordinating, and allocating resources, and tracking execution performance to ensure that sustainability strategies are fully implemented in the Company's daily operations.	Reports to the Sustainability Development Committee twice a year; reports to the Remuneration Committee and the Board of Directors once a year.
	Risk Management Sub-committee	CFO	The Risk Management sub-committee responsible for the Company's risk management executes its duties by following risk management policies and procedures. It proactively maintains the risk management mechanism related to nature and climate change, defines risk control priorities, and assists in and supervises the execution of risk management activities across various departments.	Reports on implementation progress to the Corporate Sustainability Committee at least once a year.
	Green Production Sub-committee	Operation Center Vice Presidents	The Green Production sub-committee implements and manages actions related to nature and climate change risks and opportunities. Responsibilities include identifying and evaluating these risks and opportunities, analyzing strategic and financial impacts, formulating management guidelines based on significant nature and climate-related risk items, setting objectives and indicators, and reviewing execution status and future plans.	Reports on implementation progress to the Corporate Sustainability Committee at least twice a year.

Note: For detailed information on the Senior Executive Remuneration Policy, please refer to Chapter 2, Corporate Governance, in the 2023 Corporate Sustainability Report.

Governance and Management Practices

E Ink adheres to its "Biodiversity and Non-Deforestation Commitment," "Safety, Health, Environment, and Energy Management Policy," and "Risk Management Policy and Procedures" to establish effective governance policies and management systems for nature and climate change. By aligning these policies and commitments with E Ink's sustainability vision, strategy, and management core, the company actively promotes initiatives such as native species conservation, climate change mitigation, greenhouse gas reduction, waste and wastewater management. These efforts aim to minimize the environmental impact of human activities and stabilize the development of natural ecosystems.

Moreover, E Ink's core product-ePaper-offers both environmental and visual benefits. As AI and IoT continue to thrive, various sectors are integrating smart devices to enhance management and operational efficiency. However, the increased use of AIoT devices also leads to higher overall energy consumption. For example, when national parks introduce electronic displays to enhance visitor communication experiences, conventional light-emitting displays, such as Thin Film Transistor Liquid Crystal Displays (TFT-LCD) and Organic Light-Emitting Diode (OLED) displays, emit artificial light that can disrupt the natural state of wildlife habitats, potentially causing harm to these environments. In contrast, ePaper, featuring sustainability, offers energy efficiency, low power consumption, and does not emit light, providing both environmental and visual benefits. To further enhance the sustainability of ePaper, E Ink has introduced a "Sustainable Product Management Policy," aiming to maximize the energy-saving and carbon-reducing benefits of ePaper technology and products from design to manufacturing.

Building on its governance of nature and climate change, E Ink aligns the management of these issues with its sustainable management[Note] framework, encompassing four sustainability foundations, six sustainable actions, and nine sustainability topics, setting specific goals and actions related to nature and climate change.

E Ink will continue to integrate its core ePaper business with biodiversity projects, advancing the smart management of natural environments while preserving the original characteristics of natural habitats and species.

Note: For more information about E Ink's sustainable management, please refer to 2023 Corporate Sustainability Report.
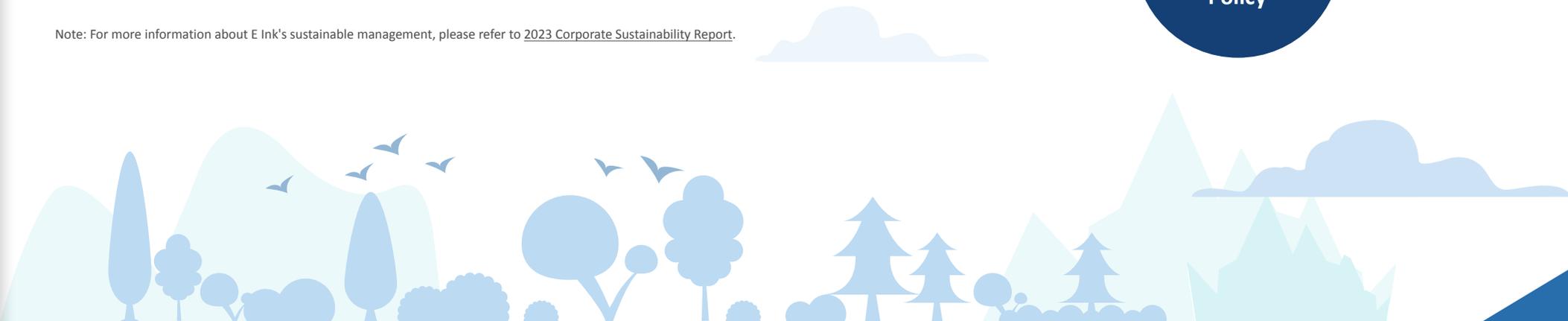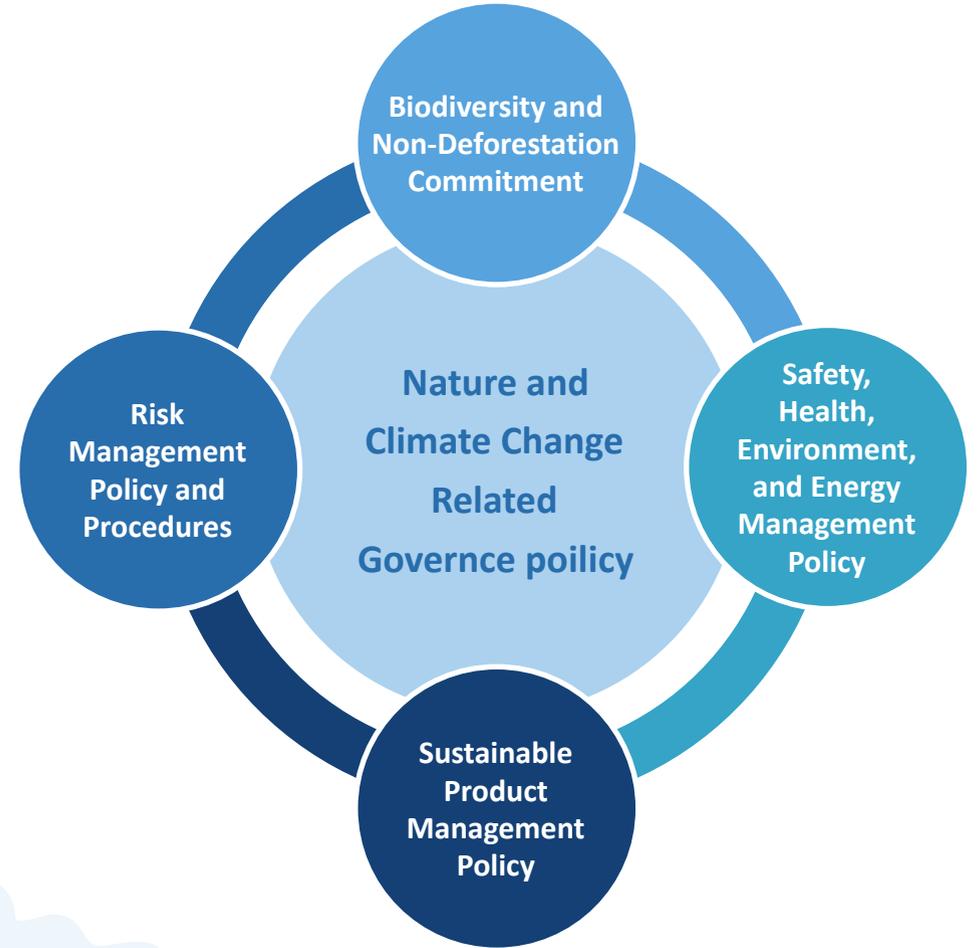
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In 2023, E Ink reported 7 proposals to the Board Level Functional Committees-the Sustainability Development Committee-and 7 proposals to the Board of Directors. All reported proposals were processed in accordance with the procedures. The reported proposals are listed in the table below:

Categories	Sustainability Actions	Sustainable Topics	Summary of Key Reporting items
Green Production	• Transformation Path to Net Zero • Environmental Impact Mitigation	• Climate Change Mitigation and Adaption * • Energy and Greenhouse Gas Management * • Water Resource Management • Resource Management and Circular Economy	• Report on the Greenhouse Gas Inventory and Verification Plan for E Ink and its subsidiary • Report on "Safety, Health, Environment, and Energy Management Policy" (Including Environmental Safety and Health, Climate Change, Water Resources, Waste, and Energy Management Policies) • Reports twice on sustainability-related goals, KPIs, and result by the Green Production Sub-committee • Risk Management- Sustainable Products
Sustainable Products	• Product Realization and Technology Innovation • Expansion of Low Carbon Products	• Product Research, Development and Innovation * • Market Expansions * • Business Partnership Management	• Reports twice on sustainability-related goals, KPIs, and result by the Sustainable Products Sub-committee • Risk Management- Sustainable Products
Sustainable Supply Chain	• Developing a Green and Low-Carbon Supply Chain	• Sustainable Supply Chain Management *	• Reports on sustainability-related goals, KPIs, and result by the Sustainable Supply Chain Sub-committee • Risk Management- Supply Chain
Social Engagement	• Caring for Ecological Restoration and Friendly Environments	• Environmental Conservation	• Reports on sustainability-related goals, KPIs, and result by the Social Engagement Sub-committee • Reports on stakeholders, areas of concern, and the results of communication and responses

Note 1: The above is an excerpt of related to nature and climate change to the Board of Directors in 2023. For a comprehensive list of the key decisions made by the Board of Directors in 2023, please refer to the "Operation of the Board of Director Meetings" in the 2023 Annual Report.

Note 2: *Indicates a Material Topics of sustainability management. For details, please refer to 2023 E Ink Corporate Sustainability Report.

1-2 Accumulation - E Ink's Key Milestones in Nature and Climate

Since 2017, E Ink has gradually engaged in the management of nature and climate change issues. By 2023, the company has actively participated in both international and domestic initiatives, collaborating with multidisciplinary experts from industry, government, academia, and research institutions to promote relevant measures and regulations. In addition to working with various stakeholders to protect natural ecosystems and mitigate the impact of climate change on the environment, E Ink has been recognized with 12 international and domestic awards and certifications, acknowledging its efforts in the governance and management of nature and climate change.

Nature and Climate Accomplishments

Initiative and Advocacy

Science Based Targets Network (SBTN)
Corporate Engagement Program.

Science Based Targets initiative (SBTi)
Setting carbon reduction targets and achieving net-zero carbon emissions in a scenario where global temperature rise is limited to 1.5° C.

Business For Nature
A global alliance of influential organizations and forward-thinking businesses, pooling efforts to advocate for ambitious policies and urging governments to take action to halt and reverse the loss of nature by 2030.

RACE TO ZERO Campaigns
E Ink has committed to achieving net zero carbon emissions before 2040.

Low Carbon Initiatives
by the European Chamber of Commerce Taiwan

Taskforce on Nature-related Financial Disclosures (TNFD) Early Adopter
Adopt the TNFD framework to manage and disclose nature-related risks and opportunities.

EP100
E Ink has joined the EP100 (Energy Productivity) climate action initiative launched by the Climate Group.

The first company to join the initiative in electronics industry in Taiwan.

The Climate Pledge
Initiative to achieve net zero carbon emissions before 2040.
The world's first display manufacturer to join this initiative.

The United Nations Global Compact, UNGC
Since 2018, the US sites have joined the organization as signatories for their commitments to sustainable development and outstanding performance.

Taiwan Nature Positive Initiative
Jointly respond to global nature goals.

Task Force On Climate-Related Financial Disclosure (TCFD) Supporter
Initiative for voluntary Climate-Related Financial Disclosures.

RE100
The Global Renewable Energy initiative has committed to achieving 100% use of green energy before 2050.
E Ink has committed to achieving 100% use of renewable energy (RE100) by 2030.

Temperature Rising Index for Pathways
In cooperation with industry and academia, CommonWealth Magazine has launched Taiwan's first carbon disclosure platform. E Ink is a collaborative partner committed to carbon reduction targets.

Certification, Evaluation and Awards Recognitions

Member of Dow Jones Sustainability Indices, 2023
· DJSI-World
· DJSI-Emerging Markets

MSCI ESG Rating
A

Green Revenue
99.9%

At the annual RE 100 Leadership Awards hosted by the international renewable energy initiative RE100, E Ink was honored with the Best Newcomer award. This award recognizes new members of RE 100 who have made significant strides in reducing carbon emissions, whether through increasing the use of renewable energy within their operations or collaborating with suppliers to lower their carbon footprint and implement sustainable strategies.

2023 Carbon Disclosure Project (CDP)
A- Leadership of Climate Change
B Management of Water Security

2023 Carbon Disclosure Project (CDP)
Supplier Engagement Leader

The Taiwan and Yangzhou sites have obtained ISO 50001 Energy Management System certification.

E Ink collaborated with the Harvard School of Public Health on a peerreviewed study to examine the effects of display screens on human retinal cells. The research revealed:

- The light spectrum emitted by backlit or front-lit displays is a primary cause of stress on retinal cells.
- Retinal cells stressed by blue light produce reactive oxygen species (ROS), which accumulate during prolonged viewing, leading to photo-oxidative retinal damage.
- ePaper devices equipped with E Ink ComfortGaze™ front light exert three times less stress on retinal cells compared to LCD devices.
- The color temperature setting affects the stress level on retinal cells, and adjusting the color of an LCD to day or night mode is less effective than using a lighting solution designed for eye safety.
- ePaper devices without front light do not emit blue light, thus avoiding retinal cellstimulation.

E Ink's ePaper technology has been awarded the Dark Sky certification by the International Dark-Sky Association (IDA), making it the first display technology globally to receive this recognition. E Ink's ePaper features a reflective display that utilizes ambient light to show images on the screen, without emitting light. When viewed at night, the ePaper display can be illuminated with a small LED light strip, eliminating the need for excessive stray light that could disrupt communities or the environment, thereby conserving energy.

Nature and Climate Action Timeline

2002
- The Hsinchu sites achieved ISO 14001 certification.

2004
- The Yangzhou sites achieved ISO 14001 certification.

2007
- The Hsinchu and Yangzhou sites completed the 2006 greenhouse gas inventory in accordance with ISO 14064-1 and obtained external verification statements.

2008
- The Hsinchu and Yangzhou sites completed the 2007 greenhouse gas inventory and external verification in accordance with ISO 14064-1, including a retrospective inventory of greenhouse gas emissions from 2005, and obtained external verification statements.

2015
- Participated in the Bureau of Energy's Green Power Program for three years and received the Green Power Award.

2017
- Among the first companies to purchase Renewable Energy Certificates (T-REC).
- The Linkou sites completed its first greenhouse gas inventory for 2015 following ISO 14064-1 and obtained an external verification statement.

2019
- Introduced an internal carbon pricing mechanism.
- Disclosed climate-related financial information according to the Task Force on Climate-related Financial Disclosures (TCFD) framework.

2020
- Established the E Ink Renewable Energy Project Team.

2021
- Among the first participants in Power Purchase Agreements (PPA).
- Planned a 2024 net-zero carbon reduction pathway.

2022
- Established the Board Level Functional Committee "Sustainability Development Committee."
- Committed to setting science-based reduction targets (SBT) with a short-term goal for 2030 and a net-zero carbon emission target for 2040.
- Became the first display company to join RE 100, committing to using 100% renewable energy by 2030.
- Became the first electronics company in Taiwan to join EP100, committing to implement ISO 50001 energy management systems across all global manufacturing sites by 2030 and to double energy productivity compared to the 2018 baseline by 2040.
- Submitted the CDP Climate Change Questionnaire for the first time and received a B management rating.
- Completed identification, analysis, assessment, and implementation of climate-related risk and opportunity mitigation measures following the TCFD framework.
- Supported the "Business for Nature" initiative, advocating for government action to halt and reverse nature loss by 2030.
- Integrated and revised the Safety, Health, Environment, and Energy(SHEE) Management Policy, as well as the SHEE Management System Promotion Committee members and sub-committees, to enhance management and execution efficiency.
- Surpassed the 10% renewable energy (RE 10) target ahead of schedule, achieving a milestone of 21% renewable energy usage (RE21).

2023
- Released the "Biodiversity and Non-Deforestation Commitment".
- Short-term, long-term, and net-zero carbon emission targets validated by the Science Based Targets initiative (SBTi) and recognized by SBTi as the most ambitious targets among those currently validated.
- Joined the "Corporate Engagement Program" of the Science Based Targets for Nature (SBTN).
- Participated in the "Taiwan Nature Positive Initiative (TNPI)Note," a nature and biodiversity advocacy platform.
- Managed and disclosed nature-related risks and opportunities based on the 0. 4 Beta Release version of the Taskforce on Nature-related Financial Disclosures (TNFD), and was listed among TNFD Early Adopters.
- Signed a Memorandum of Understanding with the Taiwan Environmental Information Association (TEIA) to actively support environmental trust operations and habitat restoration, contributing to ecological restoration and promoting environmental friendliness.
- Organized the "Environmental Protection Festival " series of activities, encouraging employees to engage in environmental protection actions and raising awareness and influence on natural environment conservation.
- Achieved 36% renewable energy usage (RE36) across global sites.

Note: TNPI was initiated by the Business Council for Sustainable Development Taiwna in 2022, inviting industries to take more proactive actions on nature and biodiversity conservation and to cultivate relevant professional talent, thereby enhancing corporate risk resilience and transparency in opportunity management.

E Ink Collaborates with the Taiwan Environmental Information Association to Protect the Earth

The Taiwan Environmental Information Association (TEIA), established in 2001, is the official representative for "Earth Day" in Taiwan, authorized by the Earth Day Network. Beyond operating environmental media and promoting environmental education, TEIA is actively involved in advocating for and managing environmental trusts. A notable example is their management of Taiwan's first environmental trust, the Nature Valley in Qionglin Township, Hsinchu County, which they took over in June 2014. In January 2022, TEIA was entrusted with the management of the Alibang Ecological Farm in Shimen District, New Taipei City with the specific goal of rehabilitating the Taipei Grass Frog, Hylarana taipehensis, a rare and valuable wildlife species in Taiwan.

During its collaboration with TEIA, E Ink organized a habitat scouting to gain a deep understanding of TEIA's work in habitat protection. This includes ecological restoration, maintaining the natural landscape and facilities, and ensuring the quality and safety of recreational areas, all of which require substantial manpower and capital. Recognizing the significant human and financial resources required for these activities, E Ink donated NTD 600,000 to TEIA in 2023. This donation aims to ensure the continued protection, transparent management, and public engagement at the environmental trust sites, including the Alibang Ecological Farm, while also supporting TEIA's daily operations.

The Alibang Ecological Farm is dedicated to conserving freshwater wetlands and low-altitude secondary forests, with a focus on restoring the habitat of the Taipei tree frog, a protected species. The origins of Alibang Ecological Farm trace back to the late 1990s when Mr. De-Chang Wang initiated the "Saving Nature" project. Since 2022, TEIA has been entrusted by Mr. De-Chang Wang to assemble a team to manage the farm. In addition to continuing the original management philosophy, the team has been working on practical measures and regulations to transform Alibang into an environmental trust site, preserving its original natural forests and wetlands.

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02 Management and Response Strategies for Risks and Opportunities
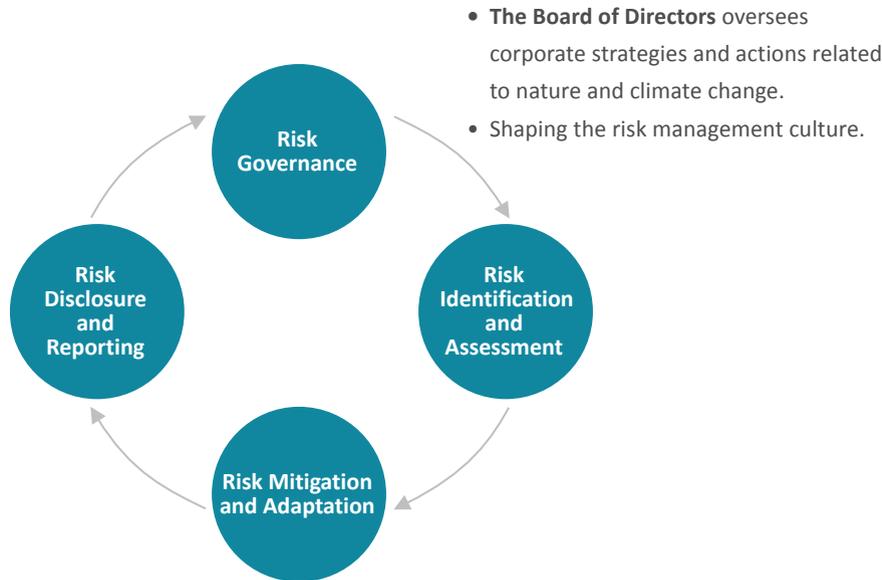
Photo credit: TEIA

E Ink identifies nature and climate-related risks and opportunities based on the TNFD and TCFD frameworks, emerging climate change regulations, industry assessments, and cross-departmental communications. These material risks and opportunities are integrated into the company's centralized enterprise risk management mechanism. The Green Production sub-committee coordinates the planning of adaptation and mitigation responses. Every six months, the Green Production sub-committee reviews the financial and non-financial impacts of material risks of nature and climate and reports the management status to the Corporate Sustainability Committee annually. The scope of managing nature and climate-related risks and opportunities includes not only own operations but also adjacent areas to own operations, upstream and downstream activities.

Corporate Risk Management

- **The Green Production sub-committee** reviews the financial impacts of material risk items of nature and climate every six months and reports the management status to the Corporate Sustainability Committee annually.
- **The Risk Management sub-committee** compiles significant status of risk management, risk assessments, and response measures, and reports to the **Corporate Sustainability Committee**.
- **The Corporate Sustainability Committee** presents a comprehensive report on nature and climate-related risks to the **Sustainability Development Committee**.

- **The Board of Directors** oversees corporate strategies and actions related to nature and climate change.
- Shaping the risk management culture.

Risk Governance

Risk Identification and Assessment

Risk Mitigation and Adaptation

Risk Disclosure and Reporting

- **The Green Production sub-committee** develops control and mitigation management plans for material risk items, reviews implementation status, and ensures continuous improvement.

Risks and Opportunities Identification for Nature and Climate

Risk Identification

- Convene a cross-departmental team responsible for disclosing nature and climate-related financial information.
- Identify short, medium, and long-term nature and climate-related risks and opportunities based on the TNFD and TCFD frameworks.

Risk Analysis

- Analyzing risk value based on the impact and likelihood in the value chain, create a nature and climate-related risk and opportunity matrix, and prioritize accordingly.

Risk Assessment

- Risks and opportunities with a risk value ≥9 are classified as material nature and climate-related risks and opportunities.
- Material nature and climate-related risks and opportunities are integrated into the company's overall risk management mechanism and prioritized for subsequent management.

Note: Impact levels, including various degrees of financial and operational disruption to the Company, are classified into five categories: very low, low, medium, high, and very high. The likelihood over the next few years is also divided into five levels.

2-1 Identification – Material Topics of Natural and Climate

Natural Biodiversity Risk Assessment Organizational Business Activities and Biodiversity Sensitivity

E Ink adopts the recommendations of the TNFD and conducts biodiversity risk assessments based on the Location, Evaluation, Assess, and Preparation (LEAP) analysis. To thoroughly understand the interaction between its overall business activities and biodiversity-sensitive areas, E Ink analyzes its six locations of global operational sites, including the Hsinchu and Linkou sites in Taiwan, the Billerica, South Hadley, and Fremont sites in the US, and the Yangzhou site in China, along with the locations of 67 significant suppliers in relation to ecosystem protection zones. To ensure the accuracy of the research, multiple databases are utilized for analysis. This analysis employs international and Taiwanese biodiversity databases, including the IUCN World Database on Protected Areas and the Biodiversity Database from Taiwan Forestry Bureau, to perform an overlay analysis of biodiversity-sensitive location with locations of global operational sites and significant suppliers.

Based on the analysis results, E Ink's six global operational sites and 67 significant suppliers, covering 89 locations in total, are not located in biodiversity-sensitive areas. Therefore, E Ink's operations do not directly impact the biodiversity of these areas. However, three operational sites (Billerica and Fermont sites in the US, and Linkou site in Taiwan) and 27 significant suppliers are situated within 2 kilometers of national wetlands or Category IV wildlife protection areas.

Therefore, E Ink will carefully manage operational sites near biodiversity-sensitive areas and collaborate with suppliers to enhance monitoring, develop nature conservation plans, and provide training and guidance to ensure that the Company's business activities align with principles of natural sustainability. Furthermore, as the ePaper industry continues to grow steadily, E Ink is expanding its operational manufacturing bases. When selecting new sites, E Ink will not only comply with environmental conservation and pollution prevention regulations in each country and conduct environmental assessments but also consider LEED green building standards in the construction of new sites and office buildings. This approach aims to minimize the negative impact on natural ecosystems and fulfill E Ink's commitment to ecological conservation.

Within 500 meters of a sensitive area
- None

Within 1 kilometer of a sensitive area
- Linkou sites is located near a national-level wetland

Within 2 kilometers of a sensitive area
- Billerica and Fremont sites are near IV-Habitat Species Management Area

Not in a sensitive area
- Hsinchu, Yangzhou, and South Hadley sites

E Ink Operational Sites

Within 500 meters of a sensitive area
- 10 significant suppliers (12 sites) are located near a national-level important wetland

Within 1 kilometer of a sensitive area
- 1 significant supplier (2 sites) is located near a wildlife conservation area

Within/Outside 2 kilometers of a sensitive area
- 13 significant suppliers (13 sites) are located within 2 kilometers of a national-level wetland
- 27 significant suppliers (29 sites) are located outside 2 kilometers of an IV-wildlife conservation area

Not in a sensitive area
- 16 significant suppliers (62 sites)

Key Suppliers Operational Sites
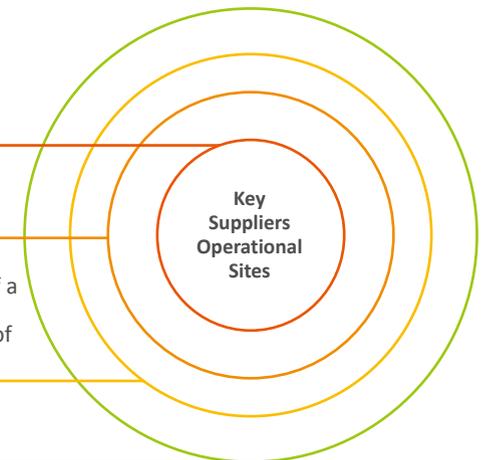
About IUCN Protected Area Categories System

According to the International Union for Conservation of Nature (IUCN) Protected Area Categories System, protected areas can be classified into six categories based on these primary management objectives:

- **Ia Strict Nature Reserve:** Areas established for scientific research, primarily used for scientific studies and environmental monitoring. These areas typically consist of ecosystems that have not been disturbed by human activities.
- **Ib Wilderness Area:** Established to preserve the original state of the wilderness, these areas protect large expanses of untouched natural environments. They maintain their natural condition by restricting human activities, making them suitable for conserving extensive natural landscapes and ecosystems.
- **II National Park:** Established to conserve ecosystems and provide recreational opportunities, these areas protect large natural landscapes. They support ecosystem preservation while allowing for tourism, education, and research activities, along with moderate recreational use.
- **III Natural Monument:** Established to preserve specific natural features, these areas protect unique natural landscapes or landmarks, such as mountains, caves, and waterfalls, that possess distinctive natural or cultural value.
- **IV Habitat/Species Management Area:** These areas are established to achieve conservation objectives through active management. They protect specific habitats or species, often requiring proactive management measures to maintain or restore ecosystems.
- **V Protected Landscape/Seascape:** Established to conserve landscapes and seascapes with significant natural and cultural value, these areas allow for recreational activities. They protect scenic areas and seascapes while permitting traditional land use practices and sustainable resource utilization.
- **VI Managed Resource Protected Area:** Established to ensure the sustainable use of natural ecosystems, these areas combine the protection of natural resources with their sustainable utilization. They support the livelihoods and traditional cultures of local communities while conserving biodiversity.

Based on the analysis results of the LEAP approach, E Ink and its significant suppliers do not have any operational sites in highly ecologically sensitive areas such as Strict Nature Reserves, Wilderness Areas, National Parks, and Natural Monuments. Additionally, the proximity to national wetlands and habitat/species management areas has not negatively impacted these protected habitat/species management areas.

Ecosystem Services Related Material Dependencies and Impacts Identification

E Ink has further utilized the WWF Biodiversity Risk Filter to identify the material dependency and impacts on ecosystem services at its six global operational sites and within the electronics industry. This assessment tool encompasses 8 categories and 33 indicators. The 8 categories include: Provisioning Services, Regulating & Supporting Services - Enabling, Regulating Services - Mitigating , Cultural Services, Pressures on Biodiversity, Environmental Factors, Socioeconomic Factors, and Additional Reputational Factors. According to the identify results, E Ink encounters 8 material dependencies and impacts, which are derived from the Company's dependency on Tropical Cyclones, Extreme Heat, Wildfire Hazard, Air Condition, Water Scarcity, and Landslides, as well as 2 material impact drivers including Pollution and Labor/ Human Rights.

Identification of Nature-Related Risks

WWF Biodiversity Risk Filter Levels

1.0 - 1.8	1.8 - 2.6	2.6 - 3.4	3.4 - 4.2	4.2 - 5.0
Very Low	Low	Medium	High	Very High

Dependecies

Analysis of the Importance of Natural Capital in the Corporate Value Chain			Electronic Industry	Hsinchu	Linkou	Yang-zhou	Billerica	Fremont	South Hadley
Provisioning Services		Water Scarcity	4	2.9	2.9	2.65	3.1	3.3	2.9
		Forest Productivity and Distance to Markets	0	0	0	0	0	0	0
		Limited Wild Flora & Fauna Availability	0	0	0	0	0	0	0
		Limited Marine Fish Availability	0	0	0	0	0	0	0
Supporting Services		Soil Condition	0	0	0	0	0	0	0
		Water Condition	2	2.5	2.5	3	2	2.5	1.5
		Air Condition	2	2.5	2.5	3.5	1.5	1.5	2
		Ecosystem condition	0	0	0	0	0	0	0
		Pollination	0	0	0	0	0	0	0
Regulating Services		Landslides	4	4.5	4.5	3	3	4.5	3
		Wildfire Hazard	3	2.5	2.5	3.5	3	3.5	3
		Plant/Forest/Aquatic Pests and Diseases	0	0	0	0	0	0	0
		Herbicide Resistance	0	0	0	0	0	0	0
		Extreme Heat	3	2.5	2.5	4	3	2.5	3
		Tropical Cyclones	4	4.5	4.5	4.5	4	3	4
Cultural Services		Tourism Attractiveness	0	0	0	0	0	0	0
Additional Reputational Factors		Additional Reputational Factors	1	3	3	3	3	3	3
		Political Situation	2	2.88	2.88	2.88	2	2	2
		Sites of International Interest	2	1.5	1.5	1.5	1.5	1.5	1.5
		Risk Preparation	2	2	2	2	1.5	1.5	1.5

Impacts

Analysis of the Importance of Natural Capital in the Corporate Value Chain		Electronic Industry	Hsinchu	Linkou	Yang-zhou	Billerica	Fremont	South Hadley
Pressures on Biodiversity	Land, Freshwater and Sea Use Change	1	1.5	1.5	2.5	1.75	1.75	2
	Tree Cover Loss	1	2	2	2	1.5	2.5	1.5
	Invasives	0	0	0	0	0	0	0
	Pollution	5	4	4	4.62	3.38	3.5	3.62
Environmental Factors	Protected and Conserved Areas	3	3.5	3.5	2	2.5	3	2.5
	Key Biodiversity Areas	2	3	3	2	1.5	2	1.5
	Other important delineated areas	2	2.5	2.5	2.5	1.5	2.5	1.5
	Ecosystem Condition	2	2.25	2.25	1.75	2.12	2	1.88
	Range Rarity	1	3	3	1.5	1.5	3	1.5
Socioeconomic Factors	Indigenous Peoples (IPs); Local Communities (LCs) Lands and Territories	3	0	0	0	0	0	0
	Resource Scarcity: Food - Water – Air	1	2.5	2.5	2.5	1.6	1.8	1.5
	Labor and Human Rights	2	3.5	3.5	3.5	3.25	3.25	3.25
	Financial Inequality	2	2.5	2.5	2.5	2.5	2.5	2.5

The Five Drivers of Natural Changes from TNFD

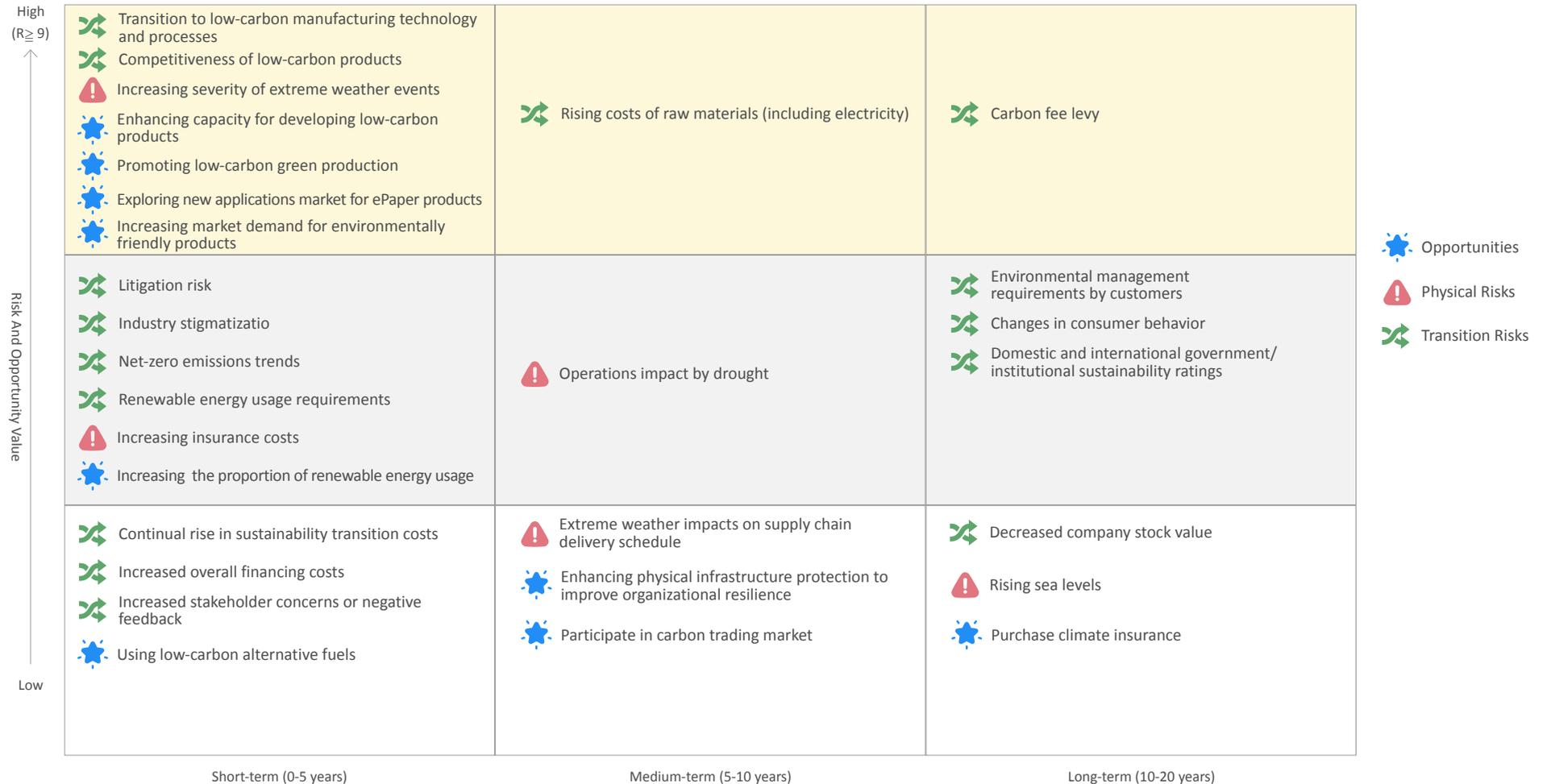| Driving forces	Climate change	Land/ freshwater/ ocean use change	Resource use/ replenishment	Pollution/ pollution removal	Invasive alien species introduction/ removal
Dependency	Wildfire hazard, extreme heat and tropical cyclones	Water scarcity and landslides		Air condition	
E Ink's Dependency	Operations require a substantial amount of energy and raw materials for production, as well as a stable supply chain and infrastructure to maintain operations. With the increase in extreme climate events, the costs and risks for the optoelectronics industry may rise.	Production primarily depends on the development and utilization of natural resources. The degree to which managers oversee resource management and usage affects the stock and quality of natural capital, the functions and services of natural ecosystems, and the well-being and survival of humanity.		The pollution generated from production, such as wastewater, exhaust gases, and waste, relies not only on human treatment but also significantly on the natural purification functions of the environment.	
Impact	Labor/ human rights and pollution				
Impact to nature	The production and manufacturing processes in the optoelectronics industry result in substantial greenhouse gas emissions, which contribute to climate change and global warming.	• Impact on Land: Land use and raw material extraction may reduce biodiversity, affecting natural carbon sinks, hydrological regulation, and other functions. • Impact on Freshwater: The utilization of water resources and the discharge of wastewater can impact the supply and quality of freshwater. • Impact on Oceans: Marine transportation can alter ocean currents, salinity, and temperature, causing significant impacts on marine ecosystems.		• Impact on the Atmosphere: Air pollution, extreme weather events, and the destabilization of climate systems. • Impact on Water: Alterations to water quality and aquatic ecosystems, disrupting the balance of hydrological systems. • Impact on Soil: Decreased soil fertility, increased soil erosion, and loss due to heavy rainfall.	Locations of E Ink's operational sites and significant suppliers are not located in sensitive areas.
Level of impact	Direct	Direct	Indirect	Direct	
Stakeholders[Note] — Internal	Employees				
Stakeholders[Note] — External	Customers, Suppliers/Contractors/ Subcontractors, Society (Community/ Media/NGOs/Educational Institutions), Shareholders, Government Agencies/Industry Associations.	Customers, Suppliers/Contractors/ Subcontractor, Society (Community/Media/NGOs), and Government Agencies/Industry Associations.		Customers, Suppliers/Contractors/ Subcontractors, Society (Community/ Media/NGOs/Educational Institutions), Shareholders, Government Agencies/Industry Associations.	

Note: E Ink integrates natural and climate change issues into its corporate sustainability governance and management. Consequently, the stakeholder classification system is aligned with the corporate sustainability report. For further details on the significance of stakeholders to E Ink and the effectiveness of stakeholder engagement, please refer to the 2023 Corporate Sustainability Report.

Climate Change Risk and Opportunity Assessment

E Ink conducts risk and opportunity assessments based on the TCFD framework, industry-specific climate-related risk and opportunity results, and cross-departmental communication. This involves identifying and evaluating short, medium, and long-term risks and opportunities, as well as potential financial impacts across the Company's value chain (including upstream suppliers, own operations, and downstream customers). Additionally, significant climate-related risks and opportunities are analyzed for their impact on the Company's business, strategy, and financial planning.

E Ink identifies potential risks and opportunities by considering various categories, including policy and regulation (both current and emerging), technology, legal, market, and reputation under transition risks; acute and chronic categories under physical risks; and resource use efficiency, energy sources, market, and resilience under opportunities. In 2023, E Ink identified 15 transition risks, 5 physical risks, and 9 opportunities, totaling 29 climate change factors

Subsequently, the responsible units and the TCFD taskforce team assess the Risk Value (R) for each potential risk and opportunity. A threshold of R > 9 is used for screening, resulting in the identification of 9 material climate-related risks and opportunities. These are then addressed with subsequent climate-related management strategies.


Risk And Opportunity Value (vertical axis): High (R ≥ 9) to Low

High (R ≥ 9) — Short-term (0-5 years):
- Transition to low-carbon manufacturing technology and processes
- Competitiveness of low-carbon products
- Increasing severity of extreme weather events
- Enhancing capacity for developing low-carbon products
- Promoting low-carbon green production
- Exploring new applications market for ePaper products
- Increasing market demand for environmentally friendly products

High (R ≥ 9) — Medium-term (5-10 years):
- Rising costs of raw materials (including electricity)

High (R ≥ 9) — Long-term (10-20 years):
- Carbon fee levy

Middle — Short-term (0-5 years):
- Litigation risk
- Industry stigmatizatio
- Net-zero emissions trends
- Renewable energy usage requirements
- Increasing insurance costs
- Increasing the proportion of renewable energy usage

Middle — Medium-term (5-10 years):
- Operations impact by drought

Middle — Long-term (10-20 years):
- Environmental management requirements by customers
- Changes in consumer behavior
- Domestic and international government/institutional sustainability ratings

Low — Short-term (0-5 years):
- Continual rise in sustainability transition costs
- Increased overall financing costs
- Increased stakeholder concerns or negative feedback
- Using low-carbon alternative fuels

Low — Medium-term (5-10 years):
- Extreme weather impacts on supply chain delivery schedule
- Enhancing physical infrastructure protection to improve organizational resilience
- Participate in carbon trading market

Low — Long-term (10-20 years):
- Decreased company stock value
- Rising sea levels
- Purchase climate insurance

Legend:
- Opportunities
- Physical Risks
- Transition Risks

X-axis: Short-term (0-5 years) | Medium-term (5-10 years) | Long-term (10-20 years)

2-2 Analysis – Natural and Climate Scenario Analysis

Nature Scenario Analysis

E Ink has identified six material natural-climate related risks associated with services provided by natural ecosystems, including water scarcity, air condition, landslides, wildfire hazard, extreme heat, and tropical cyclones, which defined "Natural Ecosystem Services" as a driving forces of transition risk. Additionally, an analysis of the optoelectronics industry's development, operational management, and related sustainability issues has uncovered potential impacts and risks affecting both the financial and non-financial aspects of business operations. As a result, "Trend of Regulatory Requirements" has been defined as a driving forces of physical risk. Following the recommendations of the TNFD framework, E Ink has set 2030 as the timeframe for scenario analysis, constructing four distinct natural scenarios. The company conducted thorough analyses of each scenario to assess their impacts on business activities, potential risks and opportunities, financial implications, risk and opportunity management strategies, and the stakeholders involved.

Description of TNFD Natural Scenario Setting
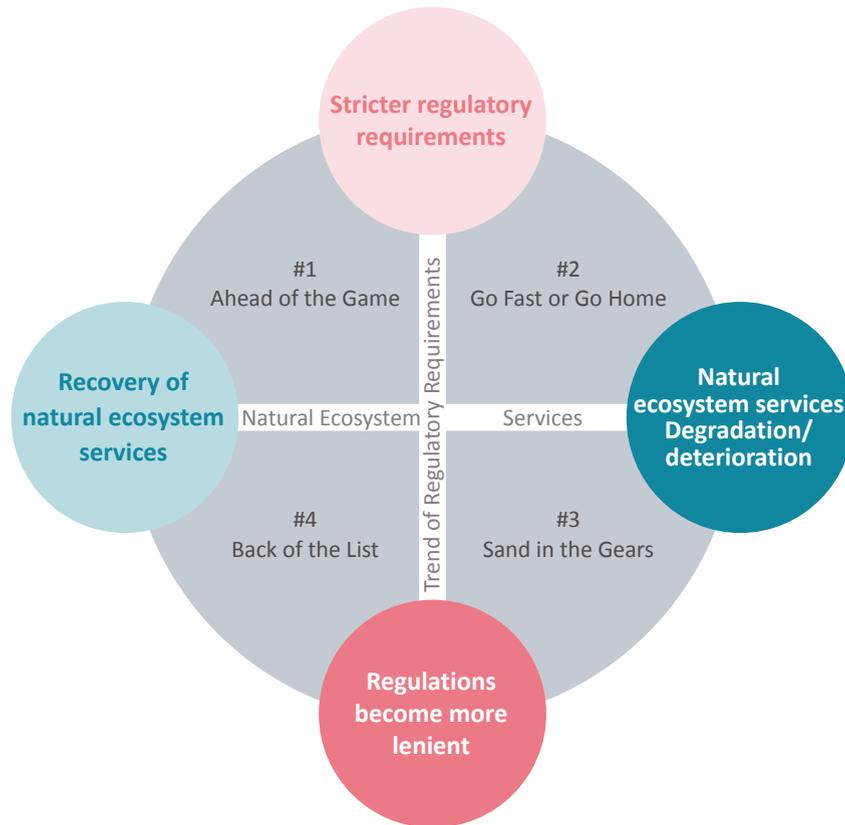
Trend of Regulatory Requirements

- More stringent ecological standards, such as greenhouse gas emission standards, energy efficiency standards, and biodiversity audit standards.
- The " 30 x 30" consensus, which aims to protect 30% of the world's terrestrial and marine natural resources by 2030.
- Increased proportion of green spaces in urban areas.
- Stricter regulations for consumer electronics, including requirements for products to meet low energy consumption standards, increased battery recycling rates, and significantly expanded eco-design regulations for products.

Natural Ecosystem Services

Driving Indicators	Water Scarcity	Air Condition	Landslides	Wildfire Hazard	Extreme Heat	Tropical Cyclones
Assessment Indicators	Number of days with water scarcity/ restrictions	Number/ percentage of days with unhealthy air condition levels	Impact area of potential landslide-prone streams	Frequency of wildfire hazards	Number of days per year with extreme heat (36° c)	Number/ intensity of tropical cyclones per year

Scenario: Ahead of the Game

Scenario Descriptions	Specific Scenario		Impact on Business Activities
Stricter Rregulatory Requirements	• More stringent ecological standards, including greenhouse gas emission standards, energy efficiency standards, and biodiversity audit standards. • The "30 x 30" consensus, which aims to protect 30% of the world's terrestrial and marine natural resources by 2030. • Increased proportion of green spaces in urban areas. • Stricter regulations for consumer electronics, including requirements for products to meet low energy consumption standards, increased battery recycling rates, and significantly expanded eco-design regulations for products.		Market expectations and regulations for businesses are becoming increasingly stringent, aimed at stabilizing natural ecosystems to provide a reliable resource base for the Company. Under increasingly strict economic, social, and environmental regulations, E Ink is transforming its business model to achieve sustainable development. The overall market environment will adopt more policies, measures, and actions, including investing in reducing greenhouse gas emissions, improving manufacturing efficiency, recycling and reusing resources, and conducting ecological assessments of operational sites. These changes will also impact the entire supply chain, requiring E Ink to ensure its suppliers comply with the corresponding regulatory standards. This transition helps mitigate the risks associated with natural disasters and extreme weather events, supporting E Ink in achieving sustainable and stable operations. The continuity of operations and production processes will be less affected by natural climatic factors, thereby enhancing the overall stability of the business.
Recovery of natural Ecosystem Services	Water Scarcity	The Company's operational locations do not face water scarcity.	
	Air Condition	The air condition in the Company's operational locations meets the World Health Organization's Air Quality Guidelines with an annual average PM2.5 concentration below 5μg/m³.	
	Landslides	None of the Company's operational sites are located within area affected by potential landslides.	
	Wildfire Hazard	The Company's operations are not impacted by wildfire hazard.	
	Extreme Heat	The Company's operational locations do not experience any days with temperatures exceeding 36° C annually.	
	Tropical Cyclones	The frequency and intensity of tropical cyclones in the Company's operational locations remain stable.	

Risks /Opportunities	Potential Financial Impact (+Positive / –Negative)	Management Approaches	Stakeholders	
			Internal	External
Transitional Risks: • Manufacture process must comply with regulations concerning economic, social, and environmental aspects. • Suppliers may fail to meet regulatory requirements, leading to supply chain instability. Opportunities: • Stricter regulations provide an advantage for green or low-carbon products.	▬ Increasing procurement costs due to replacing manufacturing equipment to comply with regulations. ▬ Procuring sustainable raw materials has led to increased operating costs. ✚ Improving energy efficiency to reduce operational costs. ✚ Low-carbon products have a competitive advantage, leading to stable revenue growth.	• Implement supply chain risk management through evaluation and audit systems to reduce potential environmental or social impacts from suppliers. • Encourage suppliers to establish carbon reduction targets and utilize renewable energy to collectively minimize environmental impact. • Develop a "Substitute Material Platform" to mitigate the risks associated with single-source suppliers and ensure raw material supply stability. • Increase the proportion of in-house manufactured components or materials to enhance the local procurement rate. • Gradually introduce environmental management systems at all sites to improve energy efficiency in production and operations, and strengthen water resource management to increase the recycling rate of process water. • Plan process improvements by optimizing production inputs and raw material management to reduce excess capacity and material waste, thereby enhancing production flexibility. • Establish a 4R (Reduce, Reuse, Recycle, Recovery) waste management plan to minimize resource usage and reduce waste generation and landfill disposal.	Employees	Suppliers/ Contractors/ Subcontractors

Scenario: Go Fast or Go Home

Scenario Descriptions	Specific Scenario		Impact on Business Activities
Stricter Regulatory Requirements	• More stringent ecological standards, including greenhouse gas emission standards, energy efficiency standards, and biodiversity audit standards. • The "30 x 30" consensus, which aims to protect 30% of the world's terrestrial and marine natural resources by 2030. • Increased proportion of green spaces in urban areas. • Stricter regulations for consumer electronics, including requirements for products to meet low energy consumption standards, increased battery recycling rates, and significantly expanded eco-design regulations for products.		Facing continuous degradation and deterioration of natural ecosystem services and rapidly changing regulatory environments, stakeholders are increasingly pressuring companies regarding their impact on the natural environment. This presents escalating challenges for businesses. E Ink conducted a scenario analysis with timeframe of year 2030 to understand the risks faced by its global operational sites due to the degradation and deterioration of natural ecosystem services. According to the scientific highlights of the IPCC Sixth Assessment Report on climate change and the updated Taiwan Climate Change Assessment Report, Taiwan may experience an increase of 1.8-5.5% in the number of consecutive days without rainfall during the medieval period. An increase in consecutive dry days or a decrease in the number of tropical cyclones could result in insufficient rainfall, affecting available water resources. In response, E Ink is actively and rapidly implementing multiple measures, such as improving manufacturing efficiency, recycling and reusing materials, and conducting ecological assessments of operational sites, to help mitigate the negative impacts on the natural environment.
Natural Ecosystem Services Degradation/ Deterioration	Water Scarcity	The maximum number of consecutive days without rainfall per year in the Company's operational locations has increased by 1.8-5.5%.	
	Air Condition	In the Company's operational locations, air condition PM2.5 levels exceed more than seven times the World Health Organization's Air Quality Guidelines annual average of 5μg/m³.	
	Landslides	The Company's operational sites are located within areas affected by potential debris flow streams.	
	Wildfire Hazard	The incidence of wildfire hazard in the vicinity of the Company's operations has increased by 14%.	
	Extreme Heat	In the Company's operational locations, the number of days with temperatures exceeding 36° C has increased by 6.8-8.5 days annually.	
	Tropical Cyclones	In the Company's operational locations, the number of tropical cyclones has decreased by 15%, while the proportion of intense tropical cyclones has increased by 100%.	

Risks /Opportunities	Potential Financial Impact (+Positive / –Negative)	Management Approaches	Stakeholders	
			Internal	External
Transition Risks: • Adapting to rapidly changing regulations and complying with new regulatory environments. Physical Risks: • Unstable water supply leading to production interruptions. • Frequent climate events (extreme heat and wildfire hazard) causing operational disruptions. Opportunities: • Actions such as improving manufacturing efficiency, recycling, and reusing materials enhance corporate competitiveness.	— Increasing operational costs by investing time, manpower, and resources to adapt to new regulatory environments — Additional investments in water resource management and water-saving technologies, leading to increased expenditure. — Increasing operational costs due to rising insurance premiums, including fire insurance and cargo transportation insurance. ＋ Enhancing resource use efficiency to reduce operational costs.	• Response to climate change by setting net-zero carbon reduction targets, actively participating in domestic and international initiative, and adopting the TCFD framework to identify climate-related risks and opportunities, financial impacts, and assess the effects of climate change (including extreme weather events) on the supply chain and manufacturing processes, while establishing emergency plans. • Establish an environmental management system to enhance resource efficiency in production and operations, strengthen water resource management to increase the recycling rate of process water. • Enhance personnel training on resource management to improve knowledge and skills related to energy conservation, carbon reduction, water conservation, and waste reduction.	Employees	Government Agencies/Industry Associations, Suppliers/ Contractors/ Subcontractors

Scenario: Sand in the Gears

Scenario Descriptions	Specific Scenario		Impact on Business Activities
Regulations Become more Lenient	• Lack of clear natural ecological protection standards, including greenhouse gas emission standards, energy efficiency standards, and biological assessment standards. • Absence of mandatory reporting requirements for nature-related issues. • Lenient penalties and legal liabilities for natural environment violations.		Environmental regulations currently lack explicit provisions for the protection of the natural environment. This reduces compliance costs and pressures for companies, enhances their autonomy in resource utilization, and potentially increases economic benefits. However, the intensification of climate change may lead to the degradation of natural ecosystem services, resulting in unstable natural resource supply and more frequent extreme weather events. Upon assessment, the potential risks in operational areas include damage to facilities and equipment, which may overheat and cease functioning, thereby increasing downtime and maintenance costs. In the era of global trade, high temperatures may adversely affect the supply chain, causing delays in deliveries due to weather conditions or leading to the deterioration or damage of certain products due to heat. In the face of increasingly lenient regulations, the degradation of natural ecosystem services poses challenges such as unstable natural resource supply and frequent extreme weather events. Without comprehensive societal planning, businesses are compelled to address ecological issues independently, often prioritizing short-term challenges over long-term fundamental solutions.
Natural Ecosystem Services Degradation/ Deterioration	Water Scarcity	The maximum number of consecutive days without rainfall per year in the Company's operational locations has increased by 1.8-5.5%.	
	Air Condition	In the Company's operational locations, air condition PM2.5 levels exceed more than seven times the World Health Organization's Air Quality Guidelines annual average of 5μg/m³.	
	Landslides	The Company's operational sites are located within areas affected by potential debris flow streams.	
	Wildfire Hazard	The incidence of wildfire hazard in the vicinity of the Company's operations has increased by 14%.	
	Extreme Heat	In the Company's operational locations, the number of days with temperatures exceeding 36° C has increased by 6.8-8.5 days annually.	
	Tropical Cyclones	In the Company's operational locations, the number of tropical cyclones has decreased by 15%, while the proportion of intense tropical cyclones has increased by 100%.	

Risks /Opportunities	Potential Financial Impact (+Positive / −Negative)	Management Approaches	Stakeholders	
			Internal	External
Physical Risks: • Unstable supply of water resources can result in significant production disruptions. • Frequent climate events, including extreme high temperatures and wildfire hazard, can lead to substantial operational disruptions. Transition Risks: • The absence of comprehensive societal plans for ecological protection makes it challenging for companies to achieve sustainable development. Opportunities • Lenient regulations provide more opportunities for companies to innovate and develop new products. • Green products have a competitive advantage due to consumer interest in ecological protection.	− In the absence of an overall ecological protection plan, companies are forced to face environmental issues on their own, resulting in increased operating costs. − The occurrence of extreme weather events disrupts the normal supply of goods, leading to operational interruptions. − Enhancing employee health care leads to increased operating costs. + Reducing the cost of environmental compliance for products. + Increasing revenue by focusing on green products.	• Establish and adhere to nature and climate-related policies and commitments, both within the company's own operations and in collaboration with value chain and ecosystem partners, to jointly maintain and promote the integrity of the natural ecological system. • Environmental impact mitigation by implementing an environmental management system, optimizing energy use efficiency; strengthen water resource management by improving process water recycling rates. • Response to climate change by setting net-zero carbon reduction targets, actively participating in domestic and international initiative organizations and actions, and adopting the TCFD framework to identify climate-related risks, opportunities, and financial impacts. Evaluate the effects of climate change, including extreme weather events, on the supply chain and manufacturing production, and establish emergency plans. • Natural environment protection education, in collaboration with employees and external stakeholders, promotes awareness of environmental protection and restoration to reduce the impact on the natural environment.	Employees	Suppliers/ Contractors/ Subcontractors, Customers, Community (Community/Media/ NGOs/Educational Institutions)

Scenario: Back of the List

Scenario Descriptions	Specific Scenario		Impact on Business Activities
Regulations Become more Lenient	• Lack of clear natural ecological protection standards, including greenhouse gas emission standards, energy efficiency standards, and biological assessment standards. • Absence of mandatory reporting requirements for nature-related issues. • Lenient penalties and legal liabilities for natural environment violations.		The absence of clear regulations for the protection of the natural environment reduces corporate compliance costs and pressures, enhancing the company's autonomy in resource use and potentially increasing economic benefits. The stability of natural ecosystems provides a stable foundation for E Ink's resource supply. The low risk of natural disasters and extreme weather events aids in achieving sustainable and steady operations, ensuring that production processes, supply chains, and transportation are not disrupted by natural climatic factors, thus enhancing overall business stability.
Recovery of Natural Ecosystem Services	Water Scarcity	The Company's operational location do not face water scarcity.	
	Air Condition	The air condition in the Company's operational location meets the World Health Organization's Air Quality Guidelines with an annual average PM2.5 concentration below $5\mu g/m^3$.	
	Landslides	None of the Company's operational sites are located within area affected by potential landslides.	
	Wildfire Hazard	The Company's operations are not impacted by wildfire hazard.	
	Extreme Heat	The Company's operational location do not experience any days with temperatures exceeding 36° C annually.	
	Tropical Cyclones	The frequency and intensity of tropical cyclones in the Company's operational location remain stable.	

Risks /Opportunities	Potential Financial Impact (+Positive / –Negative)	Management Approaches	Stakeholders	
			Internal	External
Transition Risks: • Excessively lenient regulations may lead to a lack of necessary measures to address potential future environmental changes. • Lenient regulations result in more companies entering the market, intensifying industry competition. Opportunities: • Companies have the opportunity to pursue technological innovation and develop new products. • In the absence of natural disaster threats, companies can establish green supply chains, enhancing overall business stability and reputation.	— Intense industry competition leads to increased innovation and R&D costs. — Intense industry competition results in market share fluctuations. + A stable supply of natural resources enhances production efficiency and increases revenue. + Reducing compliance costs related to environmental regulations for products.	• Establishing the "Sustainable Product Management Policy", actively investing in green and low-carbon ePaper technology and product development to solidify leadership. • Continue investing in cutting-edge ePaper technology research and development, establishing a global intellectual property and patent portfolio to solidify market leadership. • Expanding the ePaper ecosystem with environmentally and visually friendly ePaper technology, exploring applications in education, retail, transportation, and logistics to support the development of sustainable smart cities. • Implementing open innovation by collaborating with external stakeholders, including industry, government, academia, and research institutions, to actively develop related technologies and application products based on ePaper. • Building a sustainable and resilient supply chain to create a green ePaper ecosystem.	Employees	Supply Chain/ Contractors/ Subcontractors, Customers, Society (Communities/ Media/NGOs/ Educational Institutions), Government Agencies/Industry Associations

Climate Scenario Analysis

According to E Ink's climate change risk and opportunity analysis, five risk factors and four opportunity factors have been identified as annual material climate-related risks and opportunities. The five risk factors include the transition to low-carbon manufacturing technology and processes, carbon fee levies, the increasing severity of extreme weather events (such as typhoons, floods, and landslides), the competitiveness of low-carbon products, and rising costs of raw materials (including electricity). The four opportunity factors include exploring new market applications for ePaper products, increasing market demand for environmentally friendly products, promoting low-carbon green production, and enhancing capacity for developing low-carbon products. By incorporating corresponding risk and opportunity scenarios, the company assesses the potential financial impacts of these factors and subsequently develops management strategies and measures to mitigate potential risks.

Risk Factors		Risk Description	Range of Impact	Potential Financial Impact (+Positive / −Negative)	Derived Opportunities	Management Approaches
Market	Rising costs of raw materials, including electricity	The global efforts to curb the development of the fossil fuel industry have led to rising costs of raw materials (including electricity) and freight. Additionally, as temperatures increase, electricity consumption also rises.	Upstream/ Operations	− Increased electricity costs raise operating expenses. − Increased raw material costs raise operating expenses. + Improved energy efficiency reduces operating expenses.	Promote low-carbon green production	• Planning net-zero carbon emissions pathway. • Actively improving the operational efficiency of manufacturing equipment, with an estimated investment of NTD 24 million over the next three years. This is expected to reduce 939 metric tons of CO_2e emissions annually and save NTD 10.07 million in electricity costs each year. • Enhancing the operational efficiency of facility equipment with an investment of NTD 8 million to replace the cooling towers. This is expected to reduce 247 metric tons of CO_2e emissions annually and save NTD 2.65 million in electricity costs each year. • Implementing ISO 50001 energy management systems at all sites to monitor and reduce electricity consumption. This is expected to decrease electricity usage by 1,500 megawatt-hours and save NTD 7.95 million in electricity costs. • Investing NTD 10 million to promote water-saving measures within the facility, achieving an annual water-saving effect of 15,579 metric tons and reducing water costs by NTD 190,000. • An additional investment of NTD 10 million for the new office building to achieve LEED Gold certification for green buildings. Compared to standard buildings, this green building is expected to reduce carbon emissions by 3,719 metric tons of CO_2e annually and save NTD 39.9 million in electricity costs. • Actively purchasing renewable energy, with an additional expenditure of NTD 260 million for renewable energy procurement in 2040. • Continuously monitoring domestic and international carbon trading, with plans to invest over NTD 10 million annually in purchasing carbon credits starting from 2030. • Implementing supply chain management and carbon reduction requirements.
Policy and Legal	Carbon fee levy	According to the Climate Change Response Act, Taiwan is expected to impose a carbon fee on companies emitting more than 25,000 tons of CO_2 per year as early as 2024. Both companies and their supply chains will be subject to regulation. Additionally, with the global consensus on achieving net-zero carbon emissions by 2050, companies may face substantial carbon costs in the future.	Upstream/ Operations	− Carbon levy increases operating costs. − Purchasing energy-efficient equipment increases capital expenditures. + Reducing carbon emissions lowers operating costs.	-	
Acute	Increasing severity of extreme weather events (such as typhoons, floods, and landslides)	Extreme weather events causing sudden disasters could result in damage to facility equipment and buildings, prevent employees from reporting to work, and lead to operational disruptions.	Upstream/ Operations/ Downstream	− Disruptions in the value chain leading to operational interruptions	-	• Conducting regular equipment inspections and enhancing equipment stability. • Managing climate risks within the supply chain. • Restructuring the supply chain to shorten lead times.
Technology	Transition to low-carbon manufacturing technology and processes	Customers have increasingly focused on the energy-saving and carbon-reducing benefits of products. As a result, the company must allocate additional funds toward technology research and development, equipment upgrades, and identifying suitable suppliers.	Upstream/ Operations/ Downstream	− Increasing capital expenditures due to the procurement of software and hardware. − Rising R&D expenses lead to higher operating costs. + Growing revenue driven by the demand for low-carbon products.	• Enhancing capacity for low-carbon product development. • Expanding ePaper products into new market applications. • Growing market demand for environmentally friendly products.	• Collaborating with industry, government, and academia to develop more energy-efficient products, with an estimated investment of NTD 12 million. • Increasing R&D expense annually for product development and integrating ESG principles into product design to sustain the company's market competitiveness. • Adopting ISO 14067 product carbon footprint standards to assess energy consumption hotspots throughout the product lifecycle, providing a foundation for future product optimization. • Investing NTD 1 million to implement UL 2799 landfill waste stream verification. • Continuously increasing the proportion of R&D personnel among employees.
Market	Competitiveness of low-carbon products	The market, driven by sustainability trends, is witnessing increased customer demand for changes in product specifications. Failure to meet these demands may result in missed market opportunities, potentially leading to a decline in order volumes.	Operations/ Downstream	− A decrease in orders leads to a reduction in accounts receivable. + Meeting customer needs results in increased revenue.		

Opportunity Factors		Opportunity Description	Potential Financial Impact (+Positive / –Negative)
Resource Utilization Efficiency	Promoting low-carbon green production	Reducing energy consumption and operational costs through equipment upgrades, implementation of energy management systems, promotion of resource recycling and reuse, automation of production, and adoption of green building standards for new facilities.	✚ Improving energy efficiency to reduce operational costs. ✚ Reducing carbon emissions to lower operational costs.
Products and Services	Enhancing capacity for developing low-carbon products	Collaborating with the value chain to develop energy-efficient and low-carbon products, enhancing product competitiveness.	✚ Demand for Low Carbon Products Increases Revenue.
Market	Expanding ePaper products into new market applications	In response to the trends of low-carbon energy savings and climate change, ePaper displays with low power consumption and energy-saving benefits can replace certain self-luminous displays, such as Thin Film Transistor Liquid Crystal Displays (TFT-LCD) and Organic Light-Emitting Diode (OLED) displays. This substitution can expand the business market and increase revenue.	✚ Demand for Low Carbon Products Increases Revenue.
Market	Increasing market demand for environmentally friendly products	As international companies increasingly set net-zero emission targets, E Ink's products may become a priority choice for these enterprises in the future.	✚ Meeting customer needs increases revenue.

E Ink uses scenarios related to transition and physical risks to evaluate their impact on its value chain and assess specific financial implications. These scenarios include E Ink's 2040 net-zero carbon commitment, the International Energy Agency's (IEA) Net Zero Emissions by 2050 Scenario (NZE) and Stated Policies Scenario (STEPS), as well as the Intergovernmental Panel on Climate Change's (IPCC) SSP1-1.9 and SSP5-8.5 scenarios.

Physical Risk Assessment: Disruption of Daily Operations, Supply Chain Interruptions

Research conducted by the Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP) under the Ministry of Science and Technology of the Executive Yuan indicates that while the frequency of typhoon formation may decrease in the future, the intensity of rainfall associated with each typhoon is expected to increase. This pattern of intensified rainfall could significantly heighten the risk posed by typhoons to operations, potentially resulting in facility flooding, power outages, and possible casualties. Furthermore, transportation may be disrupted due to road collapses and landslides, complicating the delivery of raw materials and components. This could lead to supply chain interruptions both upstream and downstream, and may necessitate operational shutdowns.

E Ink has conducted a physical risk assessment to analysis potential operational disruptions caused by extreme climate events related to climate change. Using the latest Coupled Model Intercomparison Project Phase 6 (CMIP 6) model data provided by the National Science and Technology Center for Disaster Reduction (NCDR), flood and landslide risks in Taiwan were assessed under global warming scenarios of 1.5 °C and 4 °C. By overlaying hazard-vulnerability maps for floods and landslides with the locations of E Ink's upstream suppliers, operational sites (including potential new office buildings and factories), and downstream customers in Taiwan, the risk levels of flooding and landslides were estimated, with levels ranging from one to five, where level five represents high risk. Value chain suppliers located in high-risk areas were then identified to plan subsequent risk mitigation measures.

Based on the analysis results, E Ink assessed flood risks in the value chain under the worst-case climate scenario of a 4° C temperature increase to facilitate early planning of response measures. The analysis targeted three operational sites in Taiwan (including the future planned Guanyin Factory), locations of 49 significant upstream suppliers, and 37 downstream customer. Among these, the percentages of operational sites, suppliers, and customers categorized as high-risk (Level 5) are 0%, 38.8%, and 43.2%, respectively. In contrast, for landslide risk analysis, only 2. 7% of customers are located in high-risk landslide areas.

To mitigate the potential risk of supply chain disruptions due to extreme rainfall and flooding, E Ink reviews the flood response plans of suppliers and customers in high-risk areas. The Company has established contingency plans through its "Business Continuity Management Measures," such as managing product delivery flexibility and setting up emergency response teams to assist suppliers and customers in addressing issues, thereby reducing possible supply chain risks. Additionally, to address the possibility of operational disruptions caused by flooding, E Ink has developed disaster response plans for events with a high impact on operations, such as typhoons and chemical spills. The Company has also planned to install Uninterruptible Power Supply (UPS) systems on critical production equipment and standardized emergency response procedures, supported by regular employee training. Furthermore, E Ink collaborates with external consultants to assess the impact of extreme weather on daily operations, particularly for the locations of new office building construction projects, aiming to reduce the risk of operational interruptions caused by disasters.

Scenario Description

Temperature rise	Scenario	Descriptions
1.5° C	SSP1-1.9	The most optimistic scenario. The world can effectively reduce greenhouse gas emissions, moving towards a sustainable emission trajectory. By achieving net-zero carbon emissions by mid-century or the end of the century, the global temperature rise can be limited to within 1.5° C or 2° C, thereby fulfilling the goals of the Paris Agreement.
4° C	SSP5-8.5	In the worst-case scenario. The failure of global climate policies and greenhouse gas reduction efforts could result in the world experiencing an average temperature rise of 4° C by the end of the 21st century.

Proportion of high-risk disaster items in the value chain in Taiwan

Site (Number of sites)	Temperature rise relative to pre-industrial levels by the end of the century	Proportion (%)	
		Flood	Landslide disaster
E Ink (3)	1.5° C	0	0
	4° C	0	0
Significant suppliers (49)	1.5° C	38.8	0
	4° C	38.8	0
Customers (37)	1.5° C	43.2	2.7
	4° C	37.8	0

Physical Climate Risk Adaptation

In addition to analyzing flood risks in the value chain in Taiwan, E Ink conducts flood potential analyses for its manufacturing sites (including existing and new operations) and associated access roads. This involves reviewing drainage and flood control infrastructure and developing emergency response procedures to enhance resilience and reduce climate risk impacts, ensuring continuous operations management. E Ink has also formulated four measures to mitigate flood risks, aiming to achieve the goal of zero operational disruptions due to flooding in its global manufacturing sites by 2025.

(1) Assessment of rainwater recycling and floodwater etention facilities	(2) Installation of flood gates and barriers	(3) Review of the pumping contingency plan	(4) New site selection plan
Reduce surface runoff and water accumulation from heavy rainfall.	Prevent direct flooding into the underground spaces of the plant.	Ensure smooth drainage in case of flooding.	Select location of low flooding potential and elevate base heights.

Eink

Transition Risk Assessment: Domestic and International Carbon Reduction Trends
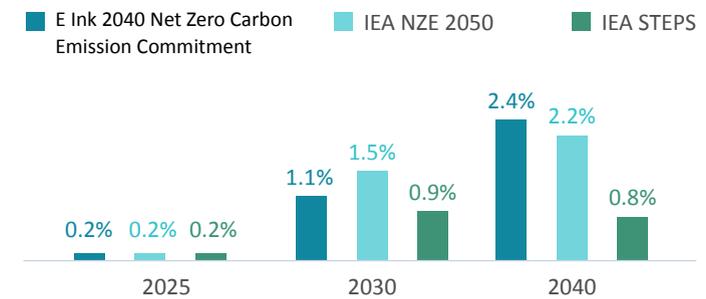
As countries around the world work towards achieving the 2050 net-zero carbon emissions target, many have begun developing carbon trading markets. Under the temperature control goals of the Paris Agreement, global carbon prices will need to rise. According to the International Energy Agency's (IEA) 2023 Energy Report, under the IEA NZE 2050 scenario, it is assumed that all regions will implement carbon pricing, with carbon prices in developed economies expected to reach $250 per ton by 2050. Taiwan also officially announced its 2050 net-zero carbon emissions target in 2022, with plans to start imposing a carbon fee on major emitters with annual emissions exceeding 25,000 tons as early as 2024. The initial carbon fee is estimated to be above USD 10 per ton, with gradual increases expected in the future, posing a significant carbon challenge for companies.

E Ink has already begun assessing the potential financial impacts of its carbon reduction actions, such as green electricity procurement, carbon pricing, equipment upgrades, and energy-saving initiatives across its global operations, under scenarios like its 2040 net-zero carbon commitment, IEA NZE 2050, and IEA STEPS. The assessments focus on the years 2025, 2030, and 2040. Based on scenario simulation results, the potential financial impact of climate-related risks on E Ink's revenue is estimated to range from 0.2% to 2.4%.

To mitigate the potential impact of high carbon prices in the future, E Ink is continuously planning to use low-energy-consumption equipment and develop carbon reduction projects to effectively reduce electricity and energy consumption in its manufacturing processes. In terms of energy use, the company will continue purchasing green electricity and consider expanding the installation of solar panels at its sites to increase the proportion of renewable energy used. This approach aims to reduce carbon emissions while also minimizing environmental impact.

Rising Temperature	Scenario	Calculation	
1.5° C	E Ink 2040 Net Zero Carbon Emission Commitment	Achieving RE100 by 2030. Reducing Scope 1 and 2 emissions by 80% by 2030 compared to 2021. Reducing Scope 3 emissions by 25% by 2030 compared to 2021. Achieving net zero carbon emissions by 2040. The carbon price is NT$ 2,682-6,109 per metric ton of CO_2e.	
	IEA NZE 2050	The global energy sectors are on track to achieve net zero carbon emissions by 2050, with developed economies expected to reach this goal sooner than other countries. The carbon price is NTD 2,682-6,109 per metric ton of CO_2e.	
2.5° C	IEA STEPS	An assessment of emission pathways covering existing climate change measures and specific policies formulated by governments, but with a more conservative likelihood of policy realization. The carbon price is NTD 834-5,215 per metric ton of CO_2e.	

Financial Impact of Carbon Reduction Initiatives (Percentage of Revenue)

Legend:
- E Ink 2040 Net Zero Carbon Emission Commitment
- IEA NZE 2050
- IEA STEPS

2025: 0.2%, 0.2%, 0.2%
2030: 1.1%, 1.5%, 0.9%
2040: 2.4%, 2.2%, 0.8%

Note 1: The International Energy Agency (IEA) is cited for estimating the emissions of each region or country in the STEPS and NZE 2050 scenarios.

Note 2: The NZE 2050 and STEPS scenarios from the IEA World Energy Outlook (WEO) 2023 report are used, with their estimated carbon prices applied to the NZE scenarios for global operation centers. For the STEPS scenario, mainland China uses the STEPS scenario from the WEO report, while Taiwan and the US use the Announced Pledges Scenario (APS) from the WEO report due to the absence of announced carbon prices for these regions.

In addition, to accelerate the Company's low-carbon transition, E Ink adopted an internal carbon pricing (ICP) starting price of NTD 280 per metric ton CO_2e in 2019, based on the "Carbon Pricing Options for Taiwan" report published by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science. This price was set according to Taiwan's policies, regulations, and industry characteristics.

Starting in 2023, E Ink increased the ICP in Taiwan to NTD 600 per metric ton CO_2e, referencing the international carbon trading market and estimated costs of renewable energy procurement. The Company plans to adjust this price regularly to support future low-carbon investments, enhance energy efficiency, and raise employees' awareness of carbon management.

Internal Carbon Pricing in Taiwan

NT$/ton CO_2e
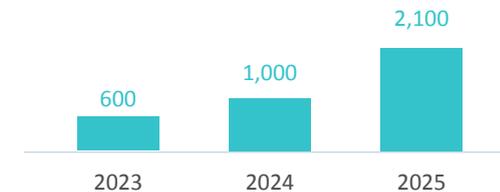
2023: 600
2024: 1,000
2025: 2,100

03   Risk, Opportunity, Targets, and Actions

About this report

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CEO's Message

Photo credit: TEIA

3-1 Targets- Vision for Nature and Climate Targets

Based on the risk and opportunity analysis results following the TNFD and TCFD frameworks, E Ink has established targets and actions related to nature and climate change. These align with the six sustainability policies, 18 sustainability actions, and 54 sustainability indicators under the Company's sustainability management [Note1]. In addition to the existing sustainability indicators, E Ink has formulated new corresponding policies, themes, indicators, management actions, and targets related to nature and climate change based on the risk and opportunity analysis results. This approach ensures the effective management of nature and climate issues.

Management of nature and climate change issues is based on four sustainability policies: "Innovation for Low-Carbon Sustainable Products", " Low-Carbon and Energy Saving Operations and Manufacturing", "Sustainable and Value-Added Supply Chain" and "Local Engagement Aligned with Core Business" corresponding to seven sustainability actions, including "Product Realization & Technology Innovation", "Expansion of Low Carbon Products", "Response to climate change", "Transformation to Net Zero", "Environmental Impact Mitigation", "Building for Low Carbon Supply Chain", and "Caring for Ecological Restoratio", ten sustainability themes, and twenty-one sustainability indicators. Targets for 2025 and 2030 are set according to the TNFD and TCFD frameworks. For detailed information, please see the table below:

Note 1: For detailed information on E Ink's sustainability management, please refer to the 2023 Corporate Sustainability Report.

Sustainability Policy	Sustainability Actions	Sustainability Topics	Sustainability KPIs	Management approaches and performances	Target 2025	Target 2030
Product Sustainability - Innovation for Low-Carbon Sustainable Products	Product Realization and Technology Innovation	Product Research, Development and Innovation	Development Resource	Proportion of R&D Expense to Revenue	10-15%	10-15%
		● Market Expansions	New Product and Technology	Proportion of New Product Developed in Past 3 Years to Revenue	18%	26%
		Business Partnership Management	Industry-Government-Academia Collaboration	Promoting Industry-Government-Academia Collaboration	1 collaboration project annually	1 collaboration project annually
	Expansion of Low Carbon Products	● Green and Sustainable Product Development	Sustainable Products	Proportion of Recycled Raw Materials Used in Light Guides/ Touch Panels for Specified ePaper Modules (% by weight)	5%	10%
				Sustainable Product Development- Number of New Project Developed Annually	1-2	2-3
				Upgrading Existing Products for Sustainability- Number of New Product Upgraded Annually	1-2	2-3
				Optimization of Product Packaging Materials- Reduction of Packaging Tray Usage	10% (compared to 2023)	10% (compared to 2025)
			Green Revenue	△Proportion of FTSE Russell Green Revenue to Revenue	>99%	>99%
			Ecosystem	Value Chain of Ecosystem- Accumulated Number of Partners Annually	150	200
		● Climate Change Mitigation and Adaption	Risks and Opportunities	Management of Climate Related Risks and Opportunities	Completing the identification, analysis, assessment, and mitigation of climate-related risks and opportunities	Reviewing financial impact of climate-related risks and opportunities
	Transformation Path to Net Zero	● Energy and Greenhouse Gas Management	Greenhouse Gas (GHG) Emissions	Absolute target of GHG emission	Scope 1 and scope 2 emissions: 55,000 tons CO_2e	Scope 1 and scope 2 emissions: 4,000 tons CO_2e
				△GHG Emission Intensity (Scope 1 and 2)	20% reduction compared to the baseline year	70% reduction compared to the baseline year
			Energy and Electricity	△Energy Productivity	USD 10 thousand/MWh	• USD 10.5 thousand/MWh • Implement of ISO 50001 energy management system verification to Global operation sites
			Renewable Energy	Renewable Energy Consumption Percentage	40%	100%
	Environmental Impact Mitigation	Water Resource Management	Water Resource	Water Recycle Rate in Production	35%	50%
				Water Use Intensity	20% reduction compared to the baseline year	30% reduction compared to the baseline year
		● Resource Management and Circular Economy	Waste	General Waste Recycling Rate	55%	60%

Sustainability Policy	Sustainability Actions	Sustainability Topics	Sustainability KPIs	Management approaches and performances	Target	
					2025	2030
Sustainable and Value-Added Supply Chain	Developing a Green and Low-Carbon Supply Chain	◉ Sustainable Supply Chain Management	Local Procurement	Ratio of Local Procurement Amount	>95%	>96%
			Low-Carbon Energy	△ Number of Suppliers Using Renewable Energy	Increased by 2 compared to 2024	Increased by 5 compared to 2025
			Risk of Supply Chain	△ ESG Questionnaires	Replied ratio of significant suppliers: 100%	Replied ratio of significant and bill of material (BOM) suppliers: 100%
				Risk Assessment Supply Chain	Evaluation ratio of significant suppliers: 100%	Evaluation ratio of first tier suppliers: 100%
				Compliance with the Conflict Minerals Statement	Complete 10% of significant suppliers annually	Complete 10% of bill of material (BOM) suppliers annually
				On-site Supplier Audit	Audit ratio of significant suppliers: 100%	
			Sustainable Procurement	Sustainable Procurement Training	Training completion ratio of procurement and quality assurance personnel: 100%	
					Training completion ratio of suppliers: 100%	
			Resilience Strategy	Diversified Sourcing Solutions for Raw Materials	Ratio of materials supplied by a second source among our significant suppliers reaches 60%	
Local Engagement Aligned with Core Business Creating a Healthy and Safe Workplace for Employees	Caring for Ecological Restoration and Friendly Environments	Biodiversity	Environmental Conservation	Promoting Environmental Conservation	Promote 2 biodiversity collaboration projects.	Promote 3 biodiversity collaboration projects.

Note 1: The baseline year is 2021.

Note 2：△ Represents that the indicator is linked to senior executive compensation.

Note 3：◉ Represents that E Ink follows the GRI 3 and Double Materiality analysis principles to identify Material topics. For details, please refer to E Ink's 2023 Corporate Sustainability Report - Chapter 1: Sustainability Management.

E Ink 2023 NATURE AND CLIMATE REPORT

3-2 Implementation – Nature and Climate Action Plans and Performance

In 2023, E Ink adopted the TNFD and TCFD frameworks to identify nature and climate related risks and opportunities. This integration enhances E Ink's existing sustainability policies, encompassing four key pillars, including "Product Sustainability-Innovation for Low-Carbon Sustainable Products", "Green Production- Low-Carbon and Energy Saving Operations and Manufacturing", "Sustainable Supply Chain- Sustainable and Value-Added Supply Chain", and "Social Engagement- Local Engagement Aligned to Core Business". This comprehensive approach strengthens the management of natural and climate change issues, ensuring more effective implementation of related actions.

Innovation for Low-Carbon Sustainable Products

E Ink's core ePaper technology and products, leveraging bistable and reflective display principles, provide an environmentally and visually friendly display interface. To promote sustainable products. E Ink centers its sustainable product management on "Product Sustainability - Innovation for Low-Carbon Sustainable Products." E Ink established the "Sustainable Product Management Policy" through two major strategies, "Research and Development Innovation" and "Green Products," leveraging its competitiveness in sustainability and low carbon.

- **Research and Development Innovation**

In the process of transforming new technology research and development into commercial products, E Ink focuses on intellectual property and product risk management, the expansion of diverse ePaper product applications, the active operation and expansion of the ePaper ecosystem, and cross-disciplinary collaboration with industry, government, universities, and institutes. This approach deepens internal R&D innovation and stimulates sustainable technology and product design momentum through external interdisciplinary cooperation.

- **Green Products**

By focusing on "Lean Design and Material Reduction," "Energy Conservation and Carbon Reduction," "Recycling," and "Green Certification," E Ink enhances the low-carbon sustainability of ePaper products throughout the processes of raw material selection, production and manufacturing, distribution and sales, usage, disposal, and recycling.

The 2023 performance can be summarized as follows Note :

Sustainability KPIs	Performance
New Product and Technology	• E Ink developed over 130 new technologies and product applications, focusing on three types of color ePaper technologies, ePaper films, ePaper modules, and related application technologies. • With 51% of the 2023 revenue coming from products developed within the past three years, highlighting the significant and crucial contribution of new products to revenue.
Industry-Government-Academia Collaboration	• Embracing an open innovation mindset, E Ink has collaborated with various industries, government agencies, universities, and institutes to promote 12 interdisciplinary cooperation projects. These initiatives focus on the development of ePaper-related technologies, such as ePaper application products, driver ICs, and flexible backplanes. This accelerates the innovation and development of ePaper technology and application products, providing customers with superior ePaper technology and solutions.
Development Resource	• In 2023, E Ink invested approximately NTD3.65 billion in research and development, accounting for 13% of revenue. • E Ink continues to dedicate itself to the research and development of ePaper technology and related products. In addition to advancing black-and-white ePaper modules, color ePaper films (Front Plane Laminate, FPL), and ePaper driving waveforms (Waveform) technology, the company also focuses on developing related technologies such as ePaper timing controller integrated circuits (TCON IC), wireless power supply, and touch handwriting.
Stainable Products	• E Ink focuses on innovation and adheres to the three dimensions of "Lean Design & Material Reduction", " Energy Conservation & Carbon Reduction" and "Recycling". By integrating the product life cycle concept with the Eco-design Assessment method, E Ink has established its green sustainable product inspection standards- 4R, including Reuse, Repair, Recycle, and Regenerate. Over 20 products and technologies have been designed, continually improving the energy efficiency of products, reducing the carbon footprint in processes such as manufacturing, packaging, and shipping, and substantially minimizing environmental impact.
Green Revenue	• The 99.9% of E Ink's revenue in 2022 is categorized as green revenues, indicating a positive environmental impact. In addition to the environmental benefits offered by ePaper products, the technology also exhibits better energy efficiency and lower power consumption compared to conventional LCD displays.
Ecosystem	• As of December 2023, the alliance has reached 173 members, marking a new milestone in the ePaper industry. Centered on green, low-carbon ePaper, the alliance demonstrates the cohesion and unity of industry ecosystem companies, aligning with the strategic needs of digital economy development and driving industry growth.

With the brand vision "We Make Surface Smart and Green", E Ink utilizing the environmentally and visually friendly display features of ePaper, it is suitable for various Internet of Things (IoT) display applications, including retail, transportation, hospitals, logistics, and home life.

Note : For detailed information, please refer to E Ink's 2023 Corporate Sustainability Report - Chapter 3: Sustainable Products.

Low-Carbon and Energy Saving Operations and Manufacturing

The environmental impact of climate change is intensifying, and the Paris Agreement's goal of keeping global temperatures well below 2 degrees Celsius, while striving to limit the increase to 1.5 degrees Celsius, poses a significant challenge and responsibility for all of humanity. As a leader in green display products, E Ink is actively developing low-carbon, energy-efficient ePaper products and applications. Additionally, the company is implementing energy-saving, water-conserving, and waste-reducing measures in production to fully promote a low-carbon operating model.

E Ink, guided by its sustainability policy of " Low-Carbon and Energy Saving Operations and Manufacturing and its " E Ink Policy on Safety, Health, Environment, and Energy Management " (SHEE policy), has established three major sustainability actions: " Response to Climate Change," " Transformation Path to Net Zero," and " Environmental Impact Mitigation." These actions encompass strategies, management objectives, and quantifiable performance indicators related to environmental protection, climate change, water resources, waste management, and energy consumption.

To further realize the vision of green production and environmental sustainability, E Ink has committed to achieving 100% renewable energy use (RE100) by 2030 and reaching net-zero carbon emissions by 2040. E Ink achieved the 2024 goal of 30% renewable energy usage (RE30) globally by December 2023. Notably, the Company's sites in the US, China, Japan, and South Korea continue to maintain 100% renewable energy usage (RE100). In addition, the Yangzhou site in China has surpassed 50% renewable energy usage, while the renewable energy usage rate at the Taiwan site has doubled from the previous year to 8% (RE8).

In addition, E Ink has set carbon reduction pathways and targets that have been reviewed and validated by the Science Based Targets initiative (SBTi), an authoritative international climate change organization. The SBTi has recognized E Ink's near-term, long-term, and net-zero greenhouse gas reduction targets as among the most ambitious verified through their process. Moreover, E Ink received the Best Newcomer award at the annual RE 100 Leadership Awards by the international renewable energy organization RE 100. This award recognizes new RE 100 members that have significantly reduced their carbon emissions by increasing their use of renewable energy or collaborating with suppliers to reduce their carbon footprint and implement sustainability strategies.

In September 2022, E Ink joined the EP 100 initiative, committing to implementing the ISO 50001 energy management system across all global sites by 2030. The Company has also set a target to double energy productivity by 2040 compared to 2018 levels. To achieve this goal, E Ink continues to promote energy-saving and carbon reduction measures, including upgrading outdated equipment, optimizing equipment parameters, and improving manufacturing processes to effectively reduce energy consumption.

These efforts resulted in a significant reduction of 2,289 MWh, equivalent to a reduction of 1,277 metric tons of carbon emissions in global sites electricity consumption. E Ink will continue its efforts to demonstrate its achievements in the ePaper industry transformation and energy efficiency.

The 2023 performance can be summarized as follows [Note] :

Sustainability KPIs	Performance
Risks and Opportunities	• Beginning in 2022, E Ink has been continuously analyzing the financial impacts of climate-related risks and opportunities based on the TCFD framework, and dynamically adjusting its climate change management strategies based on the analysis results.
Greenhouse Gases	• Reduced greenhouse gas emissions by 27% compared to 2021 • Decreased greenhouse gas emission intensity by 47% compared to 2021
Renewable Energy	• Utilized 36% renewable energy globally (RE36)
Water Resources	• Reduced water intensity by 32% compared to 2021
Wastes	• General Waste Recycling Rate reaching 56% • Converted 282 tons of waste plastic into solid recovered fuel

Note: For details, please refer to E Ink 2023 Corphoate Sustainability Report - Chapter 4: Green Production.

Eink

Sustainable and Value-Added Supply Chain

E Ink, the global leader in the ePaper industry, collaborates with raw material suppliers, component manufacturers, product assemblers, transportation providers, andvarious service providers. To establish a sustainable and resilient supply chain, E Ink is committed to ensuring that workers throughout its supply chain are treated fairly, have the freedom to choose their employment, and work in safe environments. The Company also demands that business operations be conducted ethically and with a strong sense of environmental responsibility. E Ink implements the "Supplier Code of Conduct" and the "E Ink Conflict Minerals Policy." These policies ensure that the supply chain adheres to standards of business conduct, human rights, occupational safety, environmental protection, management systems, and ethics. Furthermore, E Ink manage our supply chain through evaluations and audits, mitigating the risk of supplier disruptions.

E Ink collaborates with its supply chain partners with the goal of "Sustainable and Value-Added Supply Chain." Sustainability is integrated into their procurement policies, and E Ink maintain regular communication with supply chain partners through periodic supplier conferences and related meetings, working together to achieve sustainable goals. Furthermore, E Ink aims to work with its suppliers to achieve the goals of using 100% renewable energy (RE 100) by 2030 and reaching net-zero emissions by 2040, thus realizing a vision of shared sustainability.

The 2023 performance can be summarized as follows[Note1]

Sustainability KPIs	Performance
Local Procurement	• The proportion of local suppliers and procurement value in both Taiwan and the US exceeds 90%.
Low-Carbon Energy	• Regarding target setting for significant suppliers, 44 have committed to the RE100 target, while 48 have set a net-zero carbon emissions target.
Sustainable Collaboration	• The Packaging Materials Recycling Project and Low-Carbon Logistics Management initiatives successfully reduced carbon emissions by 77 metric tons of CO_2e.
Risk of Supply Chain	• **100%** of the audited suppliers passed the audit assessment
Sustainable Collaboration	• **100%** of internal personnel and significant suppliers completed sustainable procurement training
Resilience Strategy	• Ratio of materials supplied by a second source among our significant suppliers reaches **90%**

Note 1: For details, please refer to E Ink 2023 Corporate Sustainability Report - Chapter 5: Sustainable Supply Chain.

Caring for Ecological Restoration and Friendly Environments

Excessive economic development has caused ecological and environmental pollution, posing extreme climate disruption and threats to biodiversity, which endanger the survival of humans and other species. Environmental protection is an indispensable part of achieving sustainable development goals. Sustainable operations depend on land-based facilities and assets, while employees need a safe living environment, and ecosystems indirectly and directly provide raw materials for various productions. Thus, a company's sustainable operations are closely linked with environmental stability and biodiversity.

E Ink aims to raise public awareness and concern for ecological conservation while promoting the sustainable development of global biodiversity through environmental education on ecological protection and biodiversity. By participating in strategies that balance environmental ecology, biodiversity, and forest conservation, and by formulating the "Biodiversity and Non-Deforestation Commitment," E Ink ensures that its global operations, manufacturing, R&D, and business locations are not situated in ecological conservation areas, thus preventing any disruption to habitats, and minimizing natural resource consumption. E Ink encourages suppliers to use environmentally friendly and recyclable materials and collaborates with upstream value chain partners to protect the environment, starting with reducing natural damage. The short-term goal is to achieve No Net Loss (NNL), with a long-term goal of realizing Net Positive Impact (NPI) by 2030.

By joining international advocacy organizations, E Ink actively promotes the protection of natural ecosystems and habitats for wildlife and plants. This initiative extends environmental conservation concepts to employees, shareholders, and significant suppliers, enhancing stakeholder awareness about environmental and ecological protection. Through these efforts, E Ink supports biodiversity maintenance, forest conservation, and ecological protection through practical actions.

The 2023 performance can be summarized as follows[Note2]

Sustainability KPIs	Performance
Environmental Conservation	• E Ink signed a Memorandum of Understanding with the Taiwan Environmental Information Association (TEIA) to preserve the habitats at Nature Valley and Alibang Ecological Farm. This collaboration supports the TEIA in its conservation efforts for the Taipei Grass Frog, Hylarana taipehensis, a Class II protected species. • Sign the Non-Deforestation Commitment and sponsor the Dark Sky Association forum to contribute to environmental sustainability. • E Ink launched the "Environmental Protection Festival" with the objective of achieving the goals of "restoring the ecological environment and promoting a friendly environment." This initiative centered around three core aspects: knowledge sharing, participation promotion, and everyday culture. The festival featured 16 activities, including ecological environment lectures, volunteer services, and green living practices, with over 200 participants. By engaging both internal and external stakeholders, E Ink expanded its influence on environmental protection.

Note 2: For details, please refer to E Ink's 2023 Corporate Sustainability Report - Chapter 7: Social Engagement.

E Ink volunteers are safeguarding the land, preserving natural habitats, and protecting the habitats of native Taiwanese species

The Nature Valley Environmental Trust Base in Qionglin is the first environmental trust in Taiwan, established in 2011. Located in Qionglin Township, Hsinchu, Nature Valley was formerly an abandoned orchard and tea plantation. In June 2014, TEIA took over the site with the goals of protecting and fostering low-altitude forests, promoting local ecological conservation efforts, safeguarding surrounding native habitats, and creating a community environmental learning center. The initiative aims to establish a model of harmonious coexistence between humans and nature, protecting local forests and native species.

In 2023, 37 volunteers from E Ink acted for habitat conservation at the Nature Valley Environmental Trust Education Base. The volunteers anticipated in various seasonal activities in May, September, and December, focusing on bamboo thinning and the removal of the invasive species Mikania micrantha.

- Bamboo Thinning: Controlled the growth area and density of Makino bamboo, ensuring space for the growth of native plants under and around the bamboo groves.
- Mikania micrantha Removal: An invasive species from South America that has spread across Taiwan, requiring manual removal and root cutting to prevent it from strangling trees and proliferating.

Appendix

Appendix I: Nature and Climate Analysis Methods

Nature Identification Process and Methodology

E Ink conducts analysis of natural dependencies and impacts by following the LEAP approach recommended by the Taskforce on Nature-related Financial Disclosures (TNFD).

		Locate	Evaluate	Assess	Prepare
	Analysis process	• Identify E Ink's priority locations of business and nature interface: 6 global sites and 67 significant suppliers.	• Overlay (Map) Analysis (Spatial Analysis): Conduct biodiversity sensitivity analysis using the IUCN World Database on Protected Areas and the Taiwan Forestry Bureau Biodiversity Database. • Identify biodiversity risks from industry economic activities: Analyze using the WWF Biodiversity Risk Filter and the UNEP's "Exploring Natural Capital Opportunities, Risks, and Exposure" tool.	• Referencing TNFD's Guidance on Scenario Analysis v1.0, E Ink conducted scenario analysis for four potential 2030 scenarios. The company simulated the impacts of business activities under each scenario and identified potential risks, opportunities, and financial implications.	• Based on the analysis results and the identified potential risks and opportunities, E Ink developed corporate response strategies, which are disclosed in this report.
Value chain boundaries covered	E Ink operational sites	v	v	v	v
	Upstream-significant suppliers	v	v	v	-
	Downstream- shipping locations/customer operational sites	-	-	-	-

Climate Identification Process and Methodology

Identification	• Based on the TCFD framework, industry assessments, existing and emerging climate change regulations, relevant climate change risks and opportunities for E Ink were identified and screened.
Analysis	• A cross-departmental analysis was conducted to assess the impact and frequency of risk and opportunity factors on the value chain. The risk levels were calculated, and a climate-related risk and opportunity matrix was created and prioritized accordingly.
Assessment	• Risks and opportunities with a risk value of 9 or higher are classified as material climate-related risk and opportunity factors. These factors will be integrated into the company's overall risk management system, enabling comprehensive risk management to enhance E Ink's climate change adaptation capabilities and mitigate potential impacts.

Appendix II: Environmental Data

Item	Unit	2020	2021	2022	2023
Greenhouse gas emissions[Note]					
Scope 1	Metric tons CO_2e	2,942.7	3,459.5	3,569.0	3,677.3
Scope 2 (Market-based)	Metric tons CO_2e	40,593.5	42,536.5	36,334.6	30,071.6
Scope 3	Metric tons CO_2e	-	207,283.9	86,435.6	72,232.7
Greenhouse gas emissions intensity	Metric tons CO_2e/Million NTD	2.8	2.3	1.3	1.2
Energy usage					
Renewable energy	Gigajoules(GJ)	395.8	600.9	62,069.8	108,998.0
Non-renewable energy	Gigajoules(GJ)	310,748.8	325,511.7	303,848.9	261,755.5
Total energy	Gigajoules(GJ)	311,144.6	326,112.6	365,918.7	370,753.5
Renewable energy usage	-	-	-	-	RE20	RE36
Energy productivity	Thousand USD/MWh	6.0	7.8	9.9	8.5
Water usage and discharge					
Water withdrawal	Million Liter	495.8	503.2	477.9	473.2
Water discharge	Million Liter	355.6	352.8	334.2	318.7
Water Consumption	Million Liter	140.2	150.4	143.7	154.5
Water use intensity	m^3/Million NTD	32.3	25.6	15.7	17.4
Waste generation and disposal					
Waste generation quantity	Metric tons	1,251.5	1,670.4	2,981.0	2,530.0
General waste recycling rate	%	27	38	38	56

Note: Data for Scope 1 and Scope 2 have been verified by a third party; for Scope 3, only certain categories have been third-party verified.

Appendix III: TNFD and TCFD Disclosures

TNFD Disclosures

Disclosure aspects	Disclosure content	Corresponding sections
Governance	Describe the Board's oversight of nature-related risks and dependencies, impacts, risks and opportunities.	1.1 Foundation - Establishing a Comprehensive Governance Mechanism and Team Management
	Describe management's role in assessing and managing nature-related dependencies, impacts, risks, and opportunities.	1.1 Foundation - Establishing a Comprehensive Governance Mechanism and Team Management
	Describe the organization's approach to assessing and addressing nature-related dependencies, impacts, risks, and opportunities, including its human rights policies, engagement activities, and the oversight role of the Board and management, with particular attention to Indigenous peoples, local communities, affected parties, and other stakeholders.	1.1 Foundation - Establishing a Comprehensive Governance Mechanism and Team Management
Strategy	Describe the short-, medium-, and long-term nature-related dependencies, impacts, risks, and opportunities identified by the organization.	2.1 Identification – Material Topics of Natural and Climate
	Describe the impact of nature-related dependencies, impacts, risks, and opportunities on the organization's business model, value chain, strategy, and financial planning, as well as any associated transition plans or analyses.	3.2 Implementation – Nature and Climate Action Plans and Performance
	Describe the resilience of the organization's strategy to nature-related risks and opportunities, considering different scenarios.	2.2 Analysis – Natural and Climate Scenario Analysis
	Describe the locations of the organization's assets and/or activities in direct operations, as well as the priority areas upstream and downstream.	2.1 Identification – Material Topics of Natural and Climate
Risk and Impact Management	(i) Describe the process by which the organization identifies, assesses, and prioritizes nature-related dependencies, impacts, risks, and opportunities in its direct operations. (ii) Describe the process by which the organization identifies, assesses, and prioritizes nature-related dependencies, impacts, risks, and opportunities in its upstream and downstream value chain.	Appendix I: Nature and Climate Analysis Methods
	Describe the organization's management process for nature-related dependencies, impacts, risks, and opportunities.	02 Management and Response Strategies for Risks and Opportunities
	Describe how the processes for identifying, assessing, prioritizing, and overseeing nature-related risks are integrated into the organization's overall risk management process.	02 Management and Response Strategies for Risks and Opportunities
Metrics and Targets	Disclose the metrics used by the organization to assess and manage nature-related risks and opportunities based on its strategy and risk management processes.	3.1 Targets- Vision for Nature and Climate Targets
	Disclose the metrics used by the organization to assess and manage its dependencies and impacts on nature.	3.1 Targets- Vision for Nature and Climate Targets
	Describe the targets of organization uses to manage nature-related dependencies, impacts, risks, and opportunities, along with its performance against these targets.	3.1 Targets- Vision for Nature and Climate Targets

TCFD Disclosures

Disclosure aspects	Disclosure content	Corresponding sections
Governance	Describe the Board's oversight of climate-related risks and opportunities.	Foundation - Establishing a Comprehensive Governance Mechanism and Team Management
	Describe management's role in assessing and managing climate-related risks and opportunities.	Foundation - Establishing a Comprehensive Governance Mechanism and Team Management
Strategy	Describe the short-, medium-, and long-term climate-related risks and opportunities identified by the organization.	2.1 Identification – Material Topics of Natural and Climate
	Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning.	2.2 Analysis – Natural and Climate Scenario Analysis 3.2 Implementation – Nature and Climate Action Plans and Performance
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario.	2.2 Analysis – Natural and Climate Scenario Analysis
Risk and Impact Management	Describe the organization's process for identifying and assessing climate-related risks.	02 Management and Response Strategies for Risks and Opportunities Appendix I: Nature and Climate Analysis Methods
	Describe the organization's process for managing climate-related risks.	02 Management and Response Strategies for Risks and Opportunities
	Describe how the processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management system.	02 Management and Response Strategies for Risks and Opportunities
Metrics and Targets	Disclose the metrics and target used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management processes.	2.2 Analysis – Natural and Climate Scenario Analysis
	Disclose Scope 1, Scope 2, and Scope 3 greenhouse gas emissions and the associated risks.	Appendix II: Environmental Data
	Describe the targets the organization uses to manage climate-related risks and opportunities, as well as its performance in achieving those targets.	3.1 Targets- Vision for Nature and Climate Targets

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