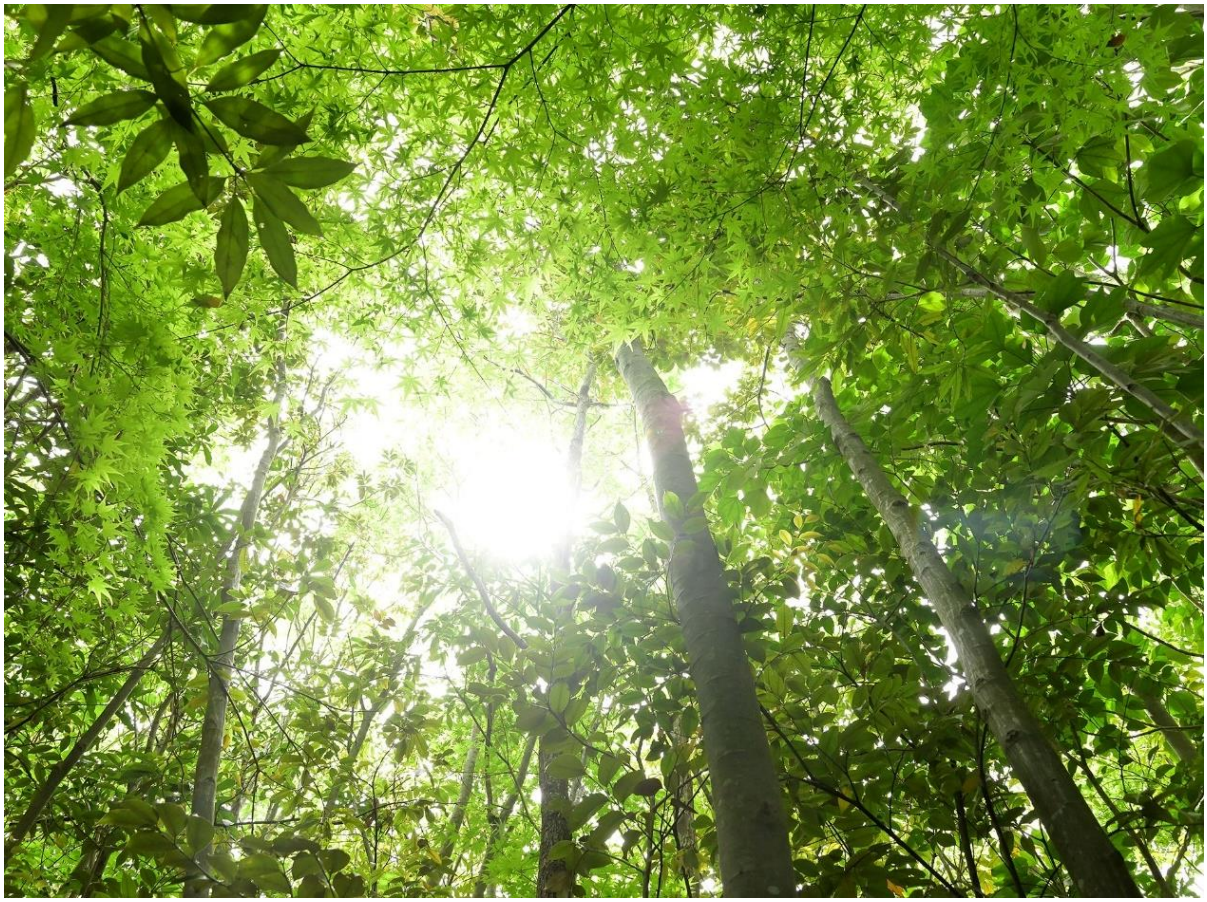

ESPEC TNFD Report 2025

September 2025

ESPEC CORP.

Contents

1. Disclosure Requirements

This report aims to disclose ESPEC Group's nature-related information to stakeholders in accordance with the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations.

The TNFD recommendations proposed four pillars for disclosure: "Governance," "Strategy," "Risk and Impact Management," and "Metrics and Targets," along with six "General Requirements" that straddle these four pillars.

This chapter explains how this report addresses these general requirements.

■ Six General Requirements

Table 1: General Requirements

Application of Materiality	We selected material items by considering the anticipated financial impact arising from nature-related issues and the substantial impact our business activities have on local communities.
Scope of Disclosures	We evaluate direct operations such as manufacturing and sales, and disclose information primarily for businesses with significant involvement with nature.
Location of Nature-Related Issues	We evaluated our global business locations using publicly available data on biodiversity importance and water risks, identifying operations and regions where material nature-related issues are likely to occur.
Integration With Other Sustainability-Related Disclosures	This report discloses only nature-related information in accordance with the TNFD recommendations, whereas climate-related information in accordance with the TCFD recommendations is disclosed on our website. Considering the mutual influence between natural capital and climate change, we plan to examine integration with climate-related information disclosures in the future.
The Time Horizons Considered	The period covered by quantitative information covers April 1, 2024 to March 31, 2025. Information concerning initiatives and progress is disclosed beyond these periods. We examined nature-related issues from short-term (end of 2028), medium-term (end of 2030), and long-term (end of 2050) perspectives.
Engagement With Indigenous Peoples, Local Communities, and Affected Stakeholders	The ESPEC Group values engagement with its stakeholders (employees, customers, shareholders, business partners, and local communities). We prioritize dialogue with each stakeholder, continually considering what is important in order to improve the exchange of value with our stakeholders, and are constructing relationships that better benefit both sides.

2. Governance

● Supervision by the Board of Directors

The ESPEC Group discusses its natural resource dependencies, impacts, risks, and opportunities, along with corresponding measures, within the Environmental Management Department and obtains approval from the Company-Wide Environmental Management Committee. Furthermore, matters critical to fulfilling our commitment to respecting stakeholders' human rights are discussed and decided upon by the Sustainability Management Headquarters. The content of those matters is submitted for deliberation and reported to the Board of Directors as necessary through the Executive Officers' Meeting or other appropriate channels.

● Management's Role and Control Process

The Company-Wide Environmental Management Committee, chaired by the Representative Director and President of ESPEC as the overall environmental officer and vice-chaired by the director in charge of environmental management, is convened once every quarter.

Risks, opportunities, and responses related to environmental management (sustainability) discussed here are raised and reported to the Executive Officers' Meeting based on their degree of importance. The matters determined for implementation will be advanced by the Environmental Management Department of the Sustainability Management Headquarters. The Environmental Management Department identifies group-wide risks and opportunities and works to ensure their permeation throughout the group. Furthermore, we will report periodically to the director in charge of environmental management while raising matters and submitting reports to the Company-Wide Environmental Management Committee on a quarterly basis. Significant risks are reported to the Risk Management Committee under the discretion of the director in charge of environmental management for consideration of countermeasures, and are then reported to the Board of Directors by the chairperson of the Risk Management Committee (director).

● Human Rights Policy and Engagement

The ESPEC Group has systematically compiled the values that have been passed down since its founding, establishing "THE ESPEC MIND" as its corporate philosophy - the foundation for all decision-making and activities.

Based on the philosophy of "THE ESPEC MIND," we have also established the ESPEC Code of Conduct and Behavior Guidelines, which clearly defines the corporate principles and standards of conduct applicable to all ESPEC officers and employees, thereby promoting our commitment to respecting human rights.

3. Dependencies and Impacts Related to Natural Capital

This chapter describes the results of assessing the dependencies and impacts on natural capital for each business category using the “ENCORE” tool provided by Global Canopy, UNEP FI, and UNEP-WCMC.

The ESPEC Group operates its core equipment business (manufacturing and sales of environmental test chambers, etc.), alongside service business (after-sales support, engineering, laboratory testing services, and rentals), plant cultivation equipment business, and environmental conservation business (forestation, waterside development, and urban greening).

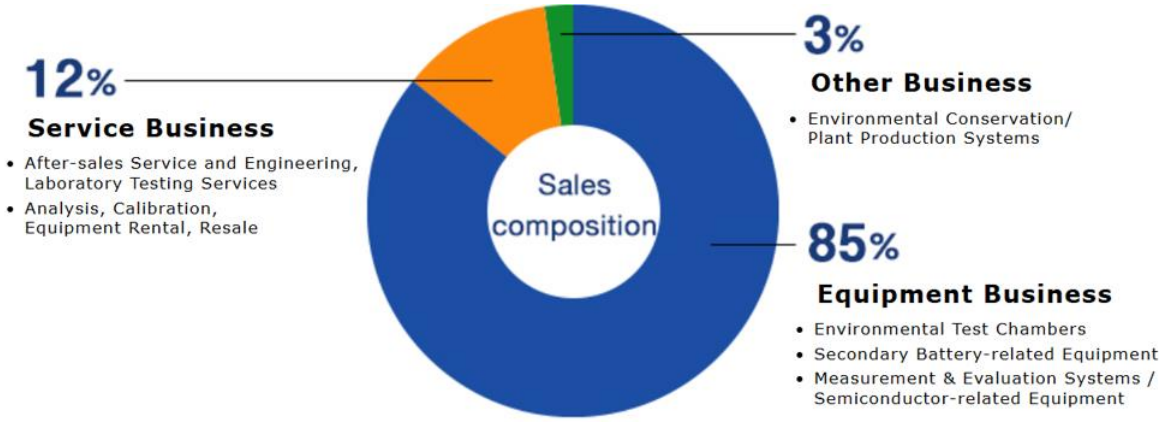

Figure 2: Net Sales Composition Ratio (FY2024)

1. **Equipment Business (Net Sales** Composition Ratio: **85%)**
   This is the core business of our group, which manufactures and sells environmental test chambers and other equipment. ESPEC’s core technology is “Environmental Creation Technology,” which precisely controls environmental factors to reproduce any environment. Environmental test chambers utilizing this are considered essential for the practical application of technologies and products in cutting-edge fields. Our manufacturing plants are in Japan, the U.S., China, and South Korea.

2. **Service Business (Net Sales** Composition Ratio: **12%)**
   This business provides environmental test chamber maintenance, laboratory testing services, and equipment rentals. We provide regular maintenance to ensure the environmental test chambers delivered to our customers continue to perform reliably, along with laboratory testing services using these chambers and renting them out. Our laboratory testing services sites are in Japan, China, and Thailand.

3. **Other: Plant Cultivation Equipment Business and Environmental Conservation Business (Net Sales** Composition Ratio: **3%)**
   Other businesses within the ESPEC Group are handled by ESPEC MIC Corp. (hereinafter referred to as ESPEC MIC). ESPEC MIC primarily engages in the sale of plant factories and natural restoration, making it the business within our group that has the deepest connection to nature.

- **Plant Cultivation Equipment Business:** We provide a wide range of facilities, from large-scale automated plant factories capable of producing 10,000 seedlings per day to vertical indoor cultivation systems suitable for interior use.
- **Environmental Conservation Business:** We engage in forestation using native species (planting trees in corporate forests, factory and store green spaces, etc.), waterside development (greening of rivers, waterways, lakes, marshes, ponds, reservoirs, biotopes, etc.), urban greening, and the production of native species seedlings.

We organized the activities within each of these businesses and identified the sectors according to the International Standard Industrial Classification of All Economic Activities (hereinafter referred to as ISIC), as shown in Table 2.

Table 2: ESPEC Group Businesses and ISIC Sector Classification

ESPEC Business Divisions			ISIC Sector Classification			
Main Category	**Subcategory**	**Overview**	**Section**	**Division**	**Group**	**Class**
Products	Product manufacturing and sales	Equipment manufacturing	Manufacturing	Manufacture of computer, electronic and optical products	Manufacture of measuring, testing, navigating and control equipment; watches and clocks	Manufacture of measuring, testing, navigating and control equipment
Services	Rental and resale	Rental and resale	Administrative and support service activities	Rental and leasing activities	Renting and leasing of other machinery, equipment and tangible goods	Renting and leasing of other machinery, equipment and tangible goods
	After-sales support	Repairs and maintenance	Manufacturing	Repair and installation of machinery and equipment	Repair of fabricated metal products, machinery and equipment	Repair of electrical equipment
		Installation	Manufacturing	Repair and installation of machinery and equipment	Installation of industrial machinery and equipment	Installation of industrial machinery and equipment
	Laboratory testing services	Laboratory testing services	Professional, scientific and technical activities	Architectural and engineering activities; technical testing and analysis	Technical testing and analysis	Technical testing and analysis
Other	Plant cultivation equipment	Plant factories and facility horticulture	Agriculture, forestry and fishing	Crop and animal production, hunting and related service activities	Growing of perennial crops	Growing of other perennial crops
	Environmental conservation	Waterside development and forestation	Agriculture, forestry and fishing	Crop and animal production, hunting and related service activities	Plant propagation	Plant propagation
			Agriculture, forestry and fishing	Forestry and logging	Support services to forestry	Support services to forestry
			Administrative and support service activities	Services to buildings and landscape activities	Landscape care and maintenance service activities	Landscape care and maintenance service activities
	Social contribution activities	ESPEC 50 Year Forest	Agriculture, forestry and fishing	Forestry and logging	Silviculture and other forestry activities	Silviculture and other forestry activities

Next, we used this sector classification to assess each project's dependence and impact on natural capital through ENCORE.

● Natural Capital Heatmap (ENCORE Version)

ENCORE assessments utilize global averages, with evaluation results indicating a dependency and impact on natural capital classified in five levels as VH: Very High, H: High, M: Middle, L: Low, and VL: Very Low.

The results of the evaluation by ENCORE are shown in Figures 3 and 4.

ESPEC Business Divisions			ENCORE Sector Classification	Dependence on Nature																										
				Supply Services				Regulation Services																			Cultural Services			
Main Category	Subcategory	Overview	ISIC Class	Water Supply	Biomass Supply	Pollination	Bioenergy	Water Quality Purification	Genetic Material	Soil Quality Regulation	Solid Waste Treatment	Soil and Sediment Retention	Dilution	Biological Control	Air Filtration	Flood Mitigation	Storm Mitigation	Water Flow Regulation	Global Climate Regulation	Local Climate Regulation	Breeding Ground Population Numbers and Habitat Maintenance	Noise Attenuation	Sensory Impact Mitigation	Rainfall Pattern Regulation	Recreation	Visual Amenities	Educational, Scientific, and Research	Spiritual, Artistic, and Symbolic
Products	Product manufacturing and sales	Equipment manufacturing	Manufacture of measuring, testing, navigating and control equipment	M	-	-	-	M	-	-	L	L	L	-	VL	M	M	M	VL	L	-	VL	VL	VL	-	-	-	-
Services	Rental and resale	Rental and resale	Renting and leasing of other machinery, equipment and tangible goods	VL	-	-	VL	-	-	-	-	VL	-	-	-	M	M	L	VL	L	-	-	-	VL	VH	VH	VH	-
	After-sales support	Repairs and maintenance	Repair of electrical equipment	M	-	-	-	-	-	-	-	L	L	-	VL	M	M	M	VL	L	-	VL	VL	VL	-	-	-	-
		Installation	Installation of industrial machinery and equipment	M	-	-	-	-	-	-	-	M	-	-	VL	M	M	M	VL	L	-	VL	VL	VL	-	-	-	-
	Laboratory testing services	Laboratory testing services	Technical testing and analysis	L	-	-	-	-	-	-	-	VL	-	-	-	L	M	L	VL	L	-	VL	VL	-	-	-	VH	-
Other	Plant cultivation equipment	Plant factories and facility horticulture	Growing of other perennial crops	H	VH	VH	H	VH	VH	VH	M	VH	M	H	M	H	H	H	VH	VH	VL	-	-	VH	-	-	-	-
	Environmental conservation	Waterside development and forestation	Plant propagation	VH	VH	H	M	VH	VH	H	M	VH	M	H	M	H	H	VH	H	VH	H	-	-	M	-	-	VH	VH
			Support services to forestry	H	M	-	L	VH	M	-	VL	M	-	L	-	VL	VL	M	VL	M	-	-	-	VH	-	-	-	-
			Landscape care and maintenance service activities	M	-	VL	-	VH	-	M	L	H	M	M	M	M	M	M	M	M	-	-	-	M	-	VH	VH	VH
	Social contribution activities	ESPEC 50 Year Forest	Silviculture and other forestry activities	H	VH	M	L	VH	VH	VH	M	VH	-	H	M	H	M	M	VH	VH	H	-	-	VH	-	-	-	-

Figure 3: Heatmap of Each Business's Dependence on Natural Capital (ENCORE Version)

ESPEC Business Divisions			ENCORE Sector Classification	Impact on Nature													
				Changes in Land/Freshwater/Marine Usage			Climate Change	Resource Utilization/Recovery			Contamination/Decontamination					Invasive Non-Native Species
Main Category	Subcategory	Overview	ISIC Class	Land Usage Area	Fresh Water Usage Area	Seabed Utilization Area	GHG Emissions	Water Used	Harvesting of Other Biological Resources	Harvesting of Other Non-Biological Resources	Solid Waste	Non-GHG Air Pollutants	Unloading of Toxic Pollutants Into Water and Soil	Unloading of Nutrient Pollutants Into Water and Soil	Disturbances	Introduction of Non-Native Species
Products	Product manufacturing and sales	Equipment manufacturing	Manufacture of measuring, testing, navigating and control equipment	L	-	-	M	M	-	-	L	H	M	-	M	-
Services	Rental and resale	Rental and resale	Renting and leasing of other machinery, equipment and tangible goods	L	L	L	VL	L	-	-	VL	-	L	L	L	L
	After-sales support	Repairs and maintenance	Repair of electrical equipment	L	-	L	L	M	-	-	L	M	M	-	M	-
		Installation	Installation of industrial machinery and equipment	L	-	M	M	M	-	-	L	M	L	-	VH	L
	Laboratory testing services	Laboratory testing services	Technical testing and analysis	M	-	-	VL	L	-	-	VL	VL	VL	VL	VL	-
Other	Plant cultivation equipment	Plant factories and facility horticulture	Growing of other perennial crops	H	H	-	M	H	-	-	H	M	H	H	M	H
	Environmental conservation	Waterside development and forestation	Plant propagation	H	H	-	M	VH	-	-	H	M	H	H	M	H
			Support services to forestry	-	-	-	M	M	-	-	L	L	M	-	M	M
			Landscape care and maintenance service activities	-	-	-	VL	L	VL	L	VL	VL	M	H	-	M
	Social contribution activities	ESPEC 50 Year Forest	Silviculture and other forestry activities	VH	-	-	-	M	-	-	L	VH	H	H	H	H

Figure 4: Heatmap of Each Business's Impact on Natural Capital (ENCORE Version)

● Natural Capital Heatmap (ESPEC Version)

As mentioned above, ENCORE's assessments utilize global averages, but these do not necessarily apply to our business operations. Therefore, considering the disparities between the prerequisites used for the determination and our business operations, we have revised certain determinations based on our own judgment.

The results of the revised evaluations are shown in Figures 5 and 6.

ESPEC Business Divisions			ENCORE Sector Classification	Dependence on Nature																									
				Supply Services				Regulation Services																			Cultural Services			
Main Category	Subcategory	Overview	ISIC Class	Water Supply	Biomass Supply	Pollination	Bioenergy	Water Quality Purification	Genetic Material	Soil Quality Regulation	Solid Waste Treatment	Soil and Sediment Retention	Dilution	Biological Control	Air Filtration	Flood Mitigation	Storm Mitigation	Water Flow Regulation	Global Climate Regulation	Local Climate Regulation	Breeding Ground Population Numbers and Habitat Maintenance	Noise Attenuation	Sensory Impact Mitigation	Rainfall Pattern Regulation	Recreation	Visual Amenities	Educational, Scientific, and Research	Spiritual, Artistic, and Symbolic
Products	Product manufacturing and sales	Equipment manufacturing	Manufacture of measuring, testing, navigating and control equipment	M	-	-	-	M	-	-	L	L	L	-	VL	M	M	M	VL	L	-	VL	VL	VL	-	-	-	-
Services	Rental and resale	Rental and resale	Renting and leasing of other machinery, equipment and tangible goods	VL	-	-	VL	-	-	-	-	VL	-	-	-	M	M	L	VL	VL	-	-	-	VL	-	-	-	-
	After-sales support	Repairs and maintenance	Repair of electrical equipment	M	-	-	-	-	-	-	-	L	L	-	VL	M	M	M	VL	L	-	VL	VL	VL	-	-	-	-
		Installation	Installation of industrial machinery and equipment	M	-	-	-	-	-	-	-	M	-	-	VL	M	M	M	VL	L	-	VL	VL	VL	-	-	-	-
	Laboratory testing services	Laboratory testing services	Technical testing and analysis	L	-	-	-	-	-	-	-	VL	-	-	-	L	VL	L	VL	VL	-	VL	VL	-	-	-	VH	-
Other	Plant cultivation equipment	Plant factories and facility horticulture	Growing of other perennial crops	VL	-	-	-	VL	VL	H	M	-	M	-	M	H	M	-	H	-	VL	-	-	VL	-	-	-	-
	Environmental conservation	Waterside development and forestation	Plant propagation	VH	L	VL	M	VH	VH	VH	M	VL	M	H	VL	VL	H	-	VH	VH	VH	-	-	VH	-	-	VH	-
			Support services to forestry	VH	M	-	L	VH	M	-	VL	M	-	L	-	VL	VL	M	VL	M	-	-	-	VH	-	-	-	-
			Landscape care and maintenance service activities	M	-	VL	-	VH	-	M	L	VH	M	M	M	M	M	M	M	M	-	-	-	M	-	VH	VH	-
	Social contribution activities	ESPEC 50 Year Forest	Silviculture and other forestry activities	VH	VH	M	L	VH	VH	VH	M	VH	-	H	M	H	M	M	VH	VH	VL	-	-	VH	-	-	-	-

Figure 5: Heatmap of Each Business's Dependence on Natural Capital (ESPEC Version)

ESPEC Business Divisions			ENCORE Sector Classification	Impact on Nature												
				Changes in Land/Freshwater/Marine Usage			Climate Change	Resource Utilization/Recovery			Contamination/Decontamination					Invasive Non-Native Species
Main Category	Subcategory	Overview	ISIC Class	Land Usage Area	Fresh Water Usage Area	Seabed Utilization Area	GHG Emissions	Water Used	Harvesting of Other Biological Resources	Harvesting of Other Non-Biological Resources	Solid Waste	Non-GHG Air Pollutants	Unloading of Toxic Pollutants Into Water and Soil	Unloading of Nutrient Pollutants Into Water and Soil	Disturbances	Introduction of Non-Native Species
Products	Product manufacturing and sales	Equipment manufacturing	Manufacture of measuring, testing, navigating and control equipment	L	-	-	M	M	-	-	L	L	M	-	M	-
Services	Rental and resale	Rental and resale	Renting and leasing of other machinery, equipment and tangible goods	-	L	-	VL	L	-	-	M	-	L	-	L	-
	After-sales support	Repairs and maintenance	Repair of electrical equipment	L	-	L	L	L	-	-	L	M	M	-	M	-
		Installation	Installation of industrial machinery and equipment	L	-	M	M	M	-	-	L	M	L	-	M	L
	Laboratory testing services	Laboratory testing services	Technical testing and analysis	L	-	-	VL	L	-	-	VL	VL	VL	-	VL	-
Other	Plant cultivation equipment	Plant factories and facility horticulture	Growing of other perennial crops	-	VL	-	-	VL	-	-	VL	VL	VL	VL	M	-
	Environmental conservation	Waterside development and forestation	Plant propagation	VL	VL	-	VL	M	-	-	VL	M	L	VL	M	M
			Support services to forestry	-	-	-	M	M	-	-	L	L	M	-	M	M
			Landscape care and maintenance service activities	-	-	-	VL	L	VL	L	VL	VL	M	VL	-	M
	Social contribution activities	ESPEC 50 Year Forest	Silviculture and other forestry activities	VL	-	-	-	L	-	-	L	VL	VL	VL	L	VL

Figure 6: Heatmap of Each Business's Impact on Natural Capital (ESPEC Version)

With regard to dependence on natural capital, "Very High" was the evaluation determined for one item in the laboratory testing services under service business, 16 items in the environmental conservation business under other businesses, and nine items in social contribution activities. Additionally, "High" was the evaluation determined for all other businesses: three items in plant factories, two items in environmental conservation business, and two items in social contribution activities.

No items were evaluated as "Very High" or "High" in terms of their impact on natural capital. Below are the items rated as "Very High" or "High" in terms of dependency for each business.

1. Dependence on Natural Capital in the Equipment Business

No items were evaluated as “Very High” or “High.”

2. Dependence on Natural Capital in the Service Business

Only in laboratory testing services, cultural services in the form of “educational, scientific, and research services” were evaluated as “Very High.” This is because test conditions in laboratory testing services are set with reference to the natural environments in which the tested equipment will be used, making it essential to continue research on environmental changes and new usage conditions, while accumulating knowledge. No aspects were evaluated as “High.”

3. Other: Dependence on Natural Capital in the Plant Cultivation Equipment Business and Environmental Conservation Business

In the areas of waterside and forestation, one provisioning service (“water supply”), eight regulating services (“water quality purification,” “genetic materials,” “soil quality regulation,” “soil and sediment retention,” “global climate regulation,” “local climate regulation,” “maintenance of breeding populations and habitats,” and “rainfall pattern regulation”), and two cultural services (“visual amenities” and “educational, scientific, and research services”) were evaluated as “Very High,” while two regulating services (“biological control” and “storm mitigation”) were evaluated as “High.”

In ESPEC 50 Year Forest, two provisioning services (“water supply” and “biomass supply”) and seven regulating services (“water purification,” “genetic materials,” “soil quality regulation,” “soil and sediment retention,” “global climate regulation,” “local climate regulation,” and “rainfall pattern regulation”) were evaluated as “Very High,” while two regulating services (“biological control” and “flood mitigation”) were evaluated as “High.”

Among the items evaluated as “Very High” or “High” in ENCORE, we have summarized those whose evaluations were lowered based on our judgment, as well as those whose evaluations were raised from ENCORE’s rating to “Very High” or “High,” along with the reasons for these changes.

Table 3: Reasons for Changes in Evaluation Regarding Dependence on Natural Capital

ESPEC Business Classifications			Dependence on Nature	Reason for Evaluation Change
Main Category	Subcategory	Overview	Main Cause	
Services	Rental and resale	Rental and resale	Recreation-related	Since the business does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
			Visual amenities	Since the business does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
			Educational, scientific, and research	Since the business does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
Other	Plant cultivation equipment	Plant factories and facility horticulture	Water supply	The water used is tap water, and while there are currently no restrictions on water intake from rivers and other sources, the possibility cannot be completely ruled out in the future, so the evaluation was lowered from “High” to “Very Low.”
			Biomass supply	Since biomass is not utilized, the “Very High” evaluation was amended to “- (Not Applicable).”
			Pollination	Since pollination by living organisms is not involved, the “Very High” evaluation was amended to “- (Not Applicable).”

			Energy from living organisms	Since the business does not utilize the ecosystem service in question, the “High” evaluation was amended to “- (Not Applicable).”
			Water quality purification	Although the water used is artificially purified tap water, the impact of water quality purification in rivers and other sources from which it is drawn cannot be completely ruled out, so the evaluation was lowered from “Very High” to “Very Low.”
			Genetic material	Since we use only seeds produced by specific manufacturers and do not rely on natural seeds, the evaluation was lowered from “Very High” to “Very Low.”
			Soil quality regulation	Although it is hydroponic cultivation with minimal soil use, it relies on pumice stone from specific regions, so the evaluation was lowered from “Very High” to “High.”
			Soil and sediment retention	Since this involves indoor plant production and therefore does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
			Biological control	Since this involves indoor plant production, it does not utilize the ecosystem service in question so, the “High” evaluation was amended to “- (Not Applicable).”
			Storm mitigation	While indoor plant production does not utilize the ecosystem service in question, favorable weather conditions are required during transport, so the evaluation was lowered from “High” to “Middle.”
			Water flow regulation	Since tap water is used and does not utilize the ecosystem service in question, the “High” evaluation was amended to “- (Not Applicable)”.
			Global climate regulation	Indoor plant factories are not dependent on external climate conditions, whereas outdoor plant factories rely on certain climate conditions for indoor air conditioning control, so the evaluation was lowered from “Very High” to “High.”
			Local climate regulation	Since this involves indoor plant production and therefore does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
			Rainfall pattern regulation	Although tap water is used, the impact on the water volume of rivers and other sources from which it is drawn cannot be completely ruled out, so the evaluation was lowered from “Very High” to “Very Low.”
	Environmental conservation	Waterside development and forestation (seedling cultivation)	Biomass supply	In seedling cultivation, while seeds and seedlings are necessary, other biomass is not utilized, so the evaluation was lowered from “Very High” to “Low.”
			Pollination	The plants being propagated include insect-pollinated species, but since the intention is not to cultivate fruit or collect seeds, the evaluation was lowered from “High” to “Very Low.”
			Soil quality regulation	For pot seedling production on plots of cultivated land, we use purchased soil, and since this depends on the quality of the soil collected by the supplier, the evaluation was raised from “High” to “Very High.”
			Soil and sediment retention	The plots are located within a section of parceled farmland where seedling cultivation is conducted using artificial mats to prevent erosion. Given the extremely low dependence on the ecosystem service in question, the evaluation was lowered from “Very High” to “Very Low.”
			Flood mitigation	The nursery field for seedlings is located in an area with low flood risk, so the evaluation was lowered from “High” to “Very Low.”
			Water flow regulation	Since tap water is used and the ecosystem service in question is not utilized, the “Very High” evaluation was amended to “- (Not Applicable).
			Global climate regulation	Climate adjustment significantly impacts cultivation conditions by field plot and the growth of supplied forests and waterfronts, so the evaluation was raised from “High” to “Very High.”
			Breeding ground population numbers and habitat maintenance	In forestation that takes regional characteristics into account, stable seedlings and seeds sourced from specific habitats are essential for identifying suitable trees and herbaceous plants, so the evaluation was raised from “High” to “Very High.”
			Rainfall pattern regulation	The growth of seedlings in forestation and natural water replenishment in waterside development rely on rainwater, so the evaluation was raised from “Middle” to “Very High.”

			Spiritual, artistic, and symbolic	Since the business does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
		Waterside development and forestation (services)	Spiritual, artistic, and symbolic	Since the business does not utilize the ecosystem service in question, the “Very High” evaluation was amended to “- (Not Applicable).”
	Social contribution activities	ESPEC 50 Year Forest	Water supply	Since rainwater supply is essential for forestation, the evaluation was raised from “High” to “Very High.”
			Breeding ground population numbers and habitat maintenance	As this is a newly cultivated forest, ecosystem recovery will take a long time, meaning that dependence on the ecosystem services in question is currently considered very low, so the evaluation was lowered from “High” to “Very Low.”

Table 4: Reasons for Evaluation Changes in Impacts on Natural Capital

ESPEC Business Classifications			Impact on Nature	Reason for Evaluation Change
Main Category	Subcategory	Overview	Main Cause	
Products	Product manufacturing and sales	Equipment manufacturing	Non-greenhouse gas air pollutants	Our manufacturing plants comply with local environmental laws and regulations, and we consider the impact from pollutant emissions to be low, so the evaluation was lowered from “High” to “Low.”
Services	After-sales support	Installation	Interference (disturbances)	Our manufacturing plants comply with local environmental laws and regulations, and since they are located indoors, we consider disturbances to the natural environment during operations (such as noise and light pollution) to be minimized. Therefore, the evaluation was lowered from “Very High” to “Middle.”
Other	Plant cultivation equipment	Plant factories and facility horticulture	Land usage area	Since it involves indoor plant production without utilizing farmland, the “High” evaluation was amended to “- (Not Applicable).
			Fresh water usage area	Although tap water is used, since it is sourced from rivers and other bodies of water, the impact cannot be completely ruled out, so the evaluation was lowered from “High” to “Very Low.”
			Water used	The water used is tap water, and while there are currently no restrictions on usage, future impact cannot be completely ruled out, so the evaluation was lowered from “High” to “Very Low.”
			Solid waste	We comply with local environmental laws and regulations, and we consider the impact from solid waste management and disposal to be sufficiently controlled, so the evaluation was lowered from “High” to “Very Low.”
			Unloading of toxic pollutants into water and soil	We comply with local environmental laws and regulations, and we consider emissions of toxic pollutants to be sufficiently controlled, so the evaluation was lowered from “High” to “Very Low.”
			Unloading of nutrient pollutants into water and soil	Fertilizer applications are minimized based on our voluntary standards, so we consider the unloading of nutrient pollutants to be sufficiently controlled. Therefore, the evaluation was lowered from “High” to “Very Low.”
			Introduction of non-native species	Since this involves indoor plant production with no introduction or spread of invasive species, the “High” evaluation was amended to “- (Not Applicable).
	Environmental conservation	Waterside development and forestation (seedling cultivation)	Land usage area	Since land used by plots only applies to one location and covers a very limited area, the evaluation was lowered from “High” to “Very Low.”
			Fresh water usage area	Although tap water is used, since it is sourced from rivers and other bodies of water, the impact cannot be completely ruled out, so the evaluation was lowered from “High” to “Very Low.”
			Water used	The water used is tap water, and while there are currently no usage restrictions, the future impact cannot be completely ruled out. Furthermore, since seedling cultivation requires a certain amount of water, the evaluation was lowered from “Very High” to “Middle.”
			Solid waste	We comply with local environmental laws and regulations, and we consider the impact from solid waste management and disposal to be sufficiently controlled, so the evaluation was lowered from “High” to “Very Low.”

			Unloading of toxic pollutants into water and soil	Based on our voluntary standards, the use of pesticides is restricted solely to the control of non-native species, and we consider the discharge of toxic pollutants to be sufficiently controlled. Therefore, the evaluation was lowered from “High” to “Low.”
			Unloading of nutrient pollutants into water and soil	Fertilizer applications are minimized based on our voluntary standards, so we consider the unloading of nutrient pollutants to be sufficiently controlled. Therefore, the evaluation was lowered from “High” to “Very Low.”
			Introduction of non-native species	This project implements nature restoration with consideration for regional characteristics and does not introduce non-native species, but the possibility of unintentionally introducing organisms attached to workers’ shoes or clothing cannot be completely ruled out. Therefore, the evaluation was lowered from “High” to “Middle.”
		Waterside development and forestation (services)	Unloading of nutrient pollutants into water and soil	Fertilizer applications are minimized based on our voluntary standards, so we consider the unloading of nutrient pollutants to be sufficiently controlled. Therefore, the evaluation was lowered from “High” to “Very Low.”
	Social contribution activities	ESPEC 50 Year Forest	Land usage area	Since forestation is very limited to only one location covering 3.6 hectares, the evaluation was lowered from “Very High” to “Very Low.”
			Non-greenhouse gas air pollutants	Until now, we have not used heavy machinery that emits air pollutants or sprayed pesticides, but since the possibility of using them in the future cannot be completely ruled out, the evaluation was lowered from “Very High” to “Very Low.”
			Unloading of toxic pollutants into water and soil	Although the use of pesticides is not planned, the possibility of using them in the future cannot be completely ruled out, so the evaluation was lowered from “High” to “Very Low.”
			Unloading of nutrient pollutants into water and soil	Fertilizer applications are minimized based on our voluntary standards, so we consider the unloading of nutrient pollutants to be sufficiently controlled. Therefore, the evaluation was lowered from “High” to “Very Low.”
			Disturbances	Until now, we have not used heavy machinery for operations nor conducted nighttime work. However, since there is a possibility of using forestry equipment in the future, the evaluation was lowered from “High” to “Low.”
			Introduction of non-native species	While the possibility of unintentionally introducing organisms attached to participants’ shoes or clothing during forestation and maintenance events cannot be completely ruled out, this project focuses on forest regeneration that considers regional characteristics. Given that these events occur only a few times per year or less, the evaluation was lowered from “High” to “Very Low.”

4. Risk and Opportunity Management

● Risk and Opportunity Analysis

Regarding nature-related risks and opportunities in our business, we considered items where dependence and impact on nature were evaluated as “Very High” or “High” in Chapter 3 to be significant and included them in our analysis. Below are the results for each business.

1. Risks and Opportunities Related to Natural Capital in the Equipment Business

No items were evaluated as having a “Very High” or “High” level of dependence or impact on nature, so they were excluded from the analysis.

2. Risks and Opportunities Related to Natural Capital in the Service Business

In laboratory testing services, dependence is evaluated as “Very High” only for the cultural services category “educational, scientific, and research services.” This relates to research and studies concerning meteorological conditions, which are part of normal research and development activities. The associated risks and opportunities are included within the financial risks and opportunities of the service business. For this reason, it was not included in the scope of analysis in this report.

3. Other: Risks and Opportunities Related to Plant Cultivation Equipment Business and Environmental Conservation Business

The analysis results for other businesses and social contributions are shown in Tables 5 and 6. As a result, we found that physical risks are predominantly comprised of risks stemming from climate change or from nature altered by climate change. Furthermore, the analysis concluded that while the recent acceleration in policy and market trends toward nature positivity could lead to the risk of declining market share due to increased competition, maintaining and strengthening market competitiveness could present opportunities for business expansion.

Table 5: Risks Related to Natural Capital

Category	Risk Item		Plant Cultivation Equipment Business	Environmental Conservation Business			Social Contributions
	Main category	Subcategory	Plant factories and facility horticulture	Plant propagation	Support services to forestry	Landscape care and maintenance service activities	ESPEC 50 Year Forest
Physical	Acute	Increased intensity and frequency of typhoons, floods, droughts, etc.	—	●Decline in sales due to loss of seeds ●Decline in sales due to difficulties in sourcing raw materials for regional seed varieties	●Decline in sales due to damage to tree-planting sites	●Decline in sales due to damage to customer green spaces	●Increased restoration costs for damaged tree-planting sites
		Damage to crops caused by pests and wildlife	—	●Decline in sales due to loss of seeds and deterioration in quality ●Decline in sales due to difficulties in sourcing raw materials for regional seed varieties	●Decline in sales due to damage to planting sites	●Decline in sales due to damage to customer green spaces	—

	Chronic	Rise in average temperature	—	●Decline in sales due to poor seedling growth	●Decline in sales due to poor growth of cultivated plants	—	●Increased maintenance costs for tree-planting sites
		Change in precipitation patterns	—	●Decline in sales due to poor seedling growth caused by drought	—	—	●Increased maintenance costs for tree-planting sites
		Water shortage	—	●Decline in sales due to poor seedling growth	—	—	●Increased maintenance costs for tree-planting sites
		Soil deterioration	—	●Decline in sales due to poor seedling growth	●Decline in sales due to damage to planting sites caused by topsoil runoff	—	●Increased maintenance costs for tree-planting sites
		Changes in the biota	—	●Decline in sales due to increased damage to crops from insects ●Decline in sales due to difficulties in sourcing raw materials for regional seed varieties	●Decline in sales due to damage from new non-native species among planted trees	●Difficulty in continuing existing service business due to changes in regional vegetation	●Increased restoration costs due to new non-native species damage in tree-planting sites
Transition	Reputation	Stakeholder assessment	—	—	—	—	●Damage to reputation due to inadequate measures against soil erosion from afforestation sites
	Policy and legal regulations	Decline in natural regeneration	—	●Decline in sales due to lower priority given to natural regeneration	—	—	—
	Market	Market changes and growing competition	—	●Decline in sales due to increased competition / declining market share	●Exclusion from the market due to competitive inferiority at the operating site	—	—
	Technology	Development of new products and services	●Exclusion from the market due to inferior energy-saving and resource-conserving technologies	—	—	—	—
		Decline in expertise	—	●Decline in sales due to diminished expertise	●Decline in sales due to diminished expertise	●Decline in sales due to diminished expertise	—

Table 6: Opportunities Related to Natural Capital

Category	Opportunity Item		Plant Cultivation Equipment Business	Environmental Conservation Business			Social Contributions
	Main category	Subcategory	Plant factories and facility horticulture	Plant propagation	Support services to forestry	Landscape care and maintenance service activities	ESPEC 50 Year Forest
Business performance	Opportunities arising from addressing risks	Adapting to climate change	Increased sales due to rising demand for plant factories	Expansion of regional seedling supply areas through dispersed field placement and strengthening business continuity capacity by diversifying risks	Creating business opportunities using topsoil erosion control technology with locally sourced materials	—	—
		Technology development	—	Enhancing business continuity and expansion capacity by developing technologies that adapt to changes in the natural environment	Creating business opportunities by developing materials to suppress crop damage from pests	Enhancing cost competitiveness using DX (drones, etc.)	—
	New opportunities	Development of new products and services	—	Enhancing competitiveness by diversifying our product lineup Expanding business opportunities through enhanced proposal capacity	Creating business opportunities by collaborating with biological survey companies	—	Contributing to the expansion of environmental conservation business through business model development
		Enhancing expertise	—	Expansion of highly specialized after-sales support services	—	—	—
Sustainability performance	Use of sustainable natural resources		—	Expanding business opportunities by enhancing brand strength	Expanding business opportunities by enhancing brand strength	Expanding business opportunities by enhancing brand strength	Enhancing brand strength
	Conservation, restoration, and regeneration of ecosystems		—	Expanding business opportunities by enhancing brand strength	Expanding business opportunities by enhancing brand strength	Expanding business opportunities by enhancing brand strength	Enhancing brand strength

● Identification of Priority Areas

We analyzed the relationship between our company's offices and nationally or regionally designated protected areas, as well as Key Biodiversity Areas (KBAs). As a result, only six locations have national parks or KBAs in their vicinity. Since all of these locations house only office functions and exert a very low environmental burden on their surroundings, we determined that none of them qualify as priority areas.

Going forward, we plan to expand the scope of analysis to encompass the entire value chain.

● Risk and Opportunity Management

On this occasion, we conducted our first analysis of dependencies and impacts, as well as risks and opportunities related to nature. This matter was reported to the Executive Officers' Meeting and the Board of Directors.

We will incorporate this into the formulation process of the Mid-Term Plan on the Environment and conduct a reassessment. Furthermore, the risks we identified will be incorporated into and managed as part of the company-wide risk framework at the Risk Management Committee.

5. Strategy (Scenarios)

As mentioned earlier, we recognize that climate change has a significant impact on the nature-related risks and opportunities within our business. Following TNFD's exploratory scenario analysis, we set climate change (1.5°C or 4°C) as a physical risk and policy (acceleration or delay of nature-positive policies) as a transitional risk. We analyzed two scenario combinations that we set: ① Climate Change 1.5°C & Accelerated Nature-Positive Policies, and ② Climate Change 4°C & Delayed Nature-Positive Policies. Below are the results for each business.

1. Equipment Business

As in the previous chapter, this report excluded this from the scope of scenario analysis. For scenario analysis concerning climate change alone, this is presented in the TCFD report.

2. Service Business

As in the previous chapter, this report excluded this from the scope of scenario analysis. For scenario analysis concerning climate change alone, this is presented in the TCFD report.

3. Other: Plant Cultivation Equipment Business and Environmental Conservation Business

Tables 7 – 10 illustrate the scenario analysis results for each business. The magnitude of the financial impact was assessed using the following scale:
★ (less than 100 million yen), ★★ (100 million yen or more but less than 1 billion yen), and ★★★ (1 billion yen or more).

Table 7: Changes in Natural Capital-Related Risks and Financial Impact (Plant Cultivation Equipment Business)

Category	Risk Item		Scenario ①	Scenario ②
	Main Category	Subcategory		
Transition	Technology	Development of new products and services	●The potential for market exclusion is low as we can take the lead in developing energy-saving and resource-conserving technologies (★)	●Development of energy-saving and resource-conserving technologies is falling behind, leading to market exclusion due to inferiority (★★)

Table 8: Changes in Opportunities Related to Natural Capital and Financial Impact (Plant Cultivation Equipment Business)

Category	Opportunity Item		Scenario ①	Scenario ②
	Main Category	Subcategory		
Business performance	Opportunities arising from addressing risks	Adapting to climate change	●Climate change is gradual, and sales growth driven by increased demand for plant factories is also gradual (★)	● As climate change is advancing, sales are increasing due to rising demand for plant factories (★★★)

Table 9: Risks Related to Natural Capital (Environmental Conservation Business)

Category	Risk Item		Scenario ①	Scenario ②
	Main Category	Subcategory		
Physical	Acute	Increased intensity and frequency of typhoons, floods, droughts, etc.	●The frequency of acute risks is low, and the decrease in sales due to impacts on seedling production and tree-planting / green space services is minimal (★)	●Frequent disruptions to seedling production and tree-planting / green space services occur, resulting in a significant decrease in sales (★★)
		Damage to crops caused by pests and wildlife	●The frequency of damage to crops from pest damage is low, and the decrease in sales due to impacts on seedling production or tree-planting / green space services is minimal (★)	●Frequent pest damage occurs, impacting seedling production and tree-planting / green space services, resulting in a significant decrease in sales (★★)
	Chronic	Rise in average temperature	●The rise in average temperature is gradual, and the decrease in sales due to impacts on seedling production and tree-planting site services is minimal (★)	●Frequent disruptions to seedling production and tree-planting site services occur, resulting in a significant decrease in sales (★★)
		Change in precipitation patterns	●The frequency of droughts is low, and the decrease in sales due to impacts on seedling production is minimal (★)	●Frequent droughts occur, significantly decreasing sales due to impacts on seedling production (★★)
		Water shortage	●Water shortages occur infrequently, and the decrease in sales due to impacts on seedling production is minimal (★)	●Frequent water shortages occur, significantly decreasing sales due to impacts on seedling production (★★)
		Soil deterioration	●The frequency of soil degradation occurring is low, and the decrease in sales due to impacts on seedling production / afforestation site services is minimal (★)	●Soil degradation is progressing, significantly decreasing sales due to impacts on seedling production and afforestation site services (★★)
		Changes in the biota	●The frequency of damage to crops from pest damage is low, and the decrease in sales due to impacts on seedling production or tree-planting / green space services is minimal (★)	●Frequent pest damage occurs, impacting seedling production and tree-planting / green space services, resulting in a significant decrease in sales (★★)
Transition	Policy and legal regulations	Decline in natural regeneration	●Natural regeneration is prioritized, and the decrease in sales is minimal (★)	●Priority for natural restoration is low, resulting in a significant decrease in sales (★★)
	Market	Market changes and growing competition	●The market is expanding, but competition is also increasing, so sales may decrease (★)	●The market is unlikely to expand significantly, leading to competition for market share, so sales may decrease (★)
	Technology	Maintaining and enhancing expertise	●As the company can maintain its competitive edge through its current specialized expertise, the decrease in sales will be minimal (★)	●The inability to develop expertise in adapting to natural changes may lead to a decrease in sales (★★)

Table 10: Opportunities Related to Natural Capital (Environmental Conservation Business)

Category	Opportunity Item		Scenario ①	Scenario ②
	Main Category	Subcategory		
Business performance	Opportunities arising from addressing risks	Adapting to climate change	●Climate change is gradual, and the effects of expanding regional seedling supply areas through dispersed field placement and strengthening business continuity through risk diversification are limited (★) ●Climate change is gradual, and creation of business opportunities using topsoil erosion control technology with locally sourced materials is limited (★)	●As climate change is advancing, expanding regional seedling supply areas through dispersed field placement and strengthening business continuity capacity by diversifying risks is highly effective (★★★) ●As climate change is advancing, the result of creating business opportunities using topsoil erosion control technology with locally sourced materials is significant (★★)
		Technology development	●Climate change is gradual, and the effects of developing technologies for adapting to changes in the natural environment, developing materials to suppress crop damage, and strengthening business continuity and expansion capacity by utilizing DX are limited (★)	●As climate change is advancing, the development of technologies for adapting to changes in the natural environmental, developing materials to suppress crop damage, and strengthening business continuity and expansion capacity by utilizing DX is highly effective (★★★)
	New opportunities	Development of new products and services	●As momentum for natural regeneration is growing, business opportunities are expanding significantly as a result of diversifying our product lineup and strengthening our proposal capabilities (★★★) ●Collaboration with biological survey companies is progressing, creating potential business opportunities (★★)	●As momentum for natural regeneration remains sluggish, the expansion of business opportunities by diversifying our product lineup and strengthening our marketing capabilities is limited (★) ●Progress in collaboration with biological survey companies has been slow, and creating business opportunities is limited (★)
		Enhancing expertise	●Enhancing expertise and digital transformation (DX) can create potential business opportunities (★★)	●Enhancing expertise and digital transformation (DX) can create potential business opportunities (★★)
Sustainability performance	Use of sustainable natural resources		●As momentum for natural regeneration is growing, enhancing brand strength significantly expands business opportunities (★★)	●As momentum for natural regeneration remains sluggish, the expansion of business opportunities by enhancing brand strength is limited (★)
	Conservation, restoration, and regeneration of ecosystems		●As momentum for natural regeneration is growing, enhancing brand strength significantly expands business opportunities (★★)	●As momentum for natural regeneration remains sluggish, the expansion of business opportunities by enhancing brand strength is limited (★)

From this, we determined that there is a significant difference in the degree of financial impact on our business between Scenario ① (Climate Change 1.5°C & Accelerated Nature-Positive Policies) and Scenario ② (Climate Change 4°C & Delayed Nature-Positive Policies). Therefore, we will continue to closely monitor the trends in both physical and transitional risks, update scenario analyses as appropriate, and incorporate them into our business strategy.

Regarding social contribution activities, costs under risk are limited to the investment amount, and opportunities are secondary effects and thus excluded from analysis.

6. Indicators and Goals

● Indicators

The following shows the 2024 results for the global core disclosure indicators. With regard to the placeholders C4.0 and C5.0, calculations will proceed once they are finalized. We will also proceed with gathering information and considering disclosure regarding the global core disclosure indicators concerning risks and opportunities (C7.0 – C7.4).

Table 11: Global Core Disclosure Indicators

Factors of Natural Change	Indicators		Measurement Indicators (FY2024 Results)			Disclosure Range
Climate change		GHG emissions	Scopes 1, 2, and 3	1,292,432	t-CO_2	Consolidated Group
Changes in land/freshwater /marine usage	C1.0	Total spatial footprint	① Total surface area under the supervision and control of an organization with supervisory authority	389	km^2	Consolidated Group and ESPEC 50 Year Forest
			② Total area restored and reconstructed	83	km^2	Consolidated Group and ESPEC 50 Year Forest
			③ Total disrupted area	0	km^2	Consolidated Group
	C1.1	Range of land / freshwater /marine usage changes	Land area that changed during the reporting year	20	km^2	
Contamination /decontamination	C2.0	Total amount of pollutants released into the soil by type		2.3	kg	Consolidated Group
	C2.1	Wastewater discharge		110,118	m^3	Consolidated Group
	C2.2	Waste generation and treatment	**Total emissions**	**1,125**	**t**	Consolidated Group
			• Waste incinerated (including heat recovery)	*113*	t	
			• Waste sent to landfills	*17*	t	
			• Other waste disposal methods	*995*	t	
			Of which, the weight of landfill avoided	**782**	**t**	Consolidated Group
			• Reuse • Recycling	*361*	t	
			• Other means of regeneration	*421*	t	
	C2.3	Plastic pollution		699	t	Consolidated Group
	C2.4	Total atmospheric pollutants excluding greenhouse gases (GHG)		86	t	Consolidated Group
Resource usage / Resource replenishment	C3.0	Water intake and consumption from water-scarce regions		No target region		Consolidated Group
	C3.1	Quantity of high-risk natural primary products sourced from land/marine/freshwater		Cannot be determined		Consolidated Group

● Goals

Nature-related targets are set forth in the 8th Mid-Term Plan on the Environment. Going forward, we plan to consider integration with the disclosure metrics outlined by the Taskforce on Nature-related Financial Disclosures (TNFD) during the review of the next Mid-Term Plan on the Environment.