FY2026

Information Disclosure Based on TNFD Recommendations

NGK Corporation

Table of Contents

[Introduction]・・2
・What is TNFD
・NGK Group's Approach to Nature and Biodiversity
・Correspondence between the Evaluation Process Based on the LEAP Approach and TNFD Recommended Disclosure Items

[General Requirements]・・3

[Governance]・・4
・A. Board of Directors' Oversight
・B. Role of Executives
・C. Human Rights Policies with Respect to Stakeholders, Engagement Activity and Oversight Mechanisms

[Risk and Impact Management]・・・4
・A(i). Process for Assessing Dependencies and Impacts, Risks and Opportunities in Our Own Operations
・A(ii). Process for Assessing Dependencies and Impacts, Risks and Opportunities in the Value Chain
・B. Processes for Managing Dependencies and Impacts, Risks and Opportunities
・C. Integration into the Organization's Risk Management

[Strategy]・・・6
・A. Identifying Dependencies and Impacts, Risks and Opportunities
・B. Impacts of Dependencies and Impacts, Risks and Opportunities on Business Model, Strategy, and Financial Planning
・1. Setting the Scope of Assessment and Overview of Organizing and Identifying Dependencies and Impacts
・2. Understanding Dependencies and Impacts in the NGK Group Value Chain
・2-1. Organizing Dependencies and Negative Impacts Using ENCORE
・2-2. Organizing Positive Impacts from Products and Services
・3. Identifying Material Dependencies and Impacts
・3-1. Methods for Identifying Material Dependencies and Impacts
・3-2. Mapping the Relationship between Identified Material Dependencies and Impacts and Natural Capital
・D. Assessment and Selection of Assets and Activity Locations that meet the Criteria for Priority Locations
・4. Assessment of Whether Locations Qualify as " Sensitive Locations"
・4-1. Sensitive Locations in Raw Material Procurement
・4-2. Sensitive Locations in Product Manufacturing
・5. Assessment of Whether Locations Qualify as "Material Locations"
・5-1. Material Locations in Raw Material Procurement
・5-2. Material Locations in Product Manufacturing
・6. Selection of "Priority Locations"
・6-1. Priority Locations in Raw Material Procurement
・6-2. Priority Locations in Product Manufacturing
・C. Resilience of Strategy to Risks and Opportunities, Taking into Consideration Different Scenarios
・7. Setting Scenarios
・8. Assessment and Prioritization of Risks and Opportunities
・9. Material Risks and Response Measures
・9-1. Material Risks and Response Measures in Raw Material Procurement
・9-2. Material Risks and Response Measures in Product Manufacturing
・10. Material Opportunities

[Metrics and Targets]・・21
・A. Metrics for Risks and Opportunities
・B. Metrics for Dependencies and Impacts
・C. Targets and Performance

[Future Initiatives]・・・22

[Reference]・・・23
・Detailed Assessment of "Priority Locations": Water Stress Assessment at NGK Ceramics Mexico
・Impact Assessment of Water Withdrawal at NGK Ceramics Mexico
・Detailed Assessment of Water Stress at NGK Ceramics Mexico

What is TNFD？

The TNFD (Task Force on Nature-Related Financial Disclosures) is a global initiative established in 2021 to build frameworks for companies to manage and disclose nature-related risks. It was founded as international concern over nature degradation and the urgency of its recovery grew. In September 2023, the taskforce published its TNFD recommendations. Since nature-related issues are integral to corporate strategic risks, the recommendations encourage companies to identify and disclose their dependencies and impacts on nature through their business activities, as well as associated risks and opportunities.



In January 2024, the NGK Group declared early disclosure as a "TNFD Early Adopter"[*1] and has been committed to information disclosure. This disclosure covers assessments across the entire value chain and scenario analysis on nature-related risks and opportunities, addressing all items of the TNFD recommendations.

※1 TNFD Early Adopter：organizations that have committed to starting TNFD-aligned disclosures by FY2025

NGK Group Approach to Nature and Biodiversity

The NGK Group recognizes that its business activities both depend on and affect nature. We regard nature-related issues as material management challenges that can impact the sustainable growth of our business. Based on this recognition, we are working in line with the TNFD framework to understand the relationship between our business and nature across the entire value chain, and to systematically identify and manage our dependencies on and impacts on nature, as well as the associated risks and opportunities.

We also visualize and appropriately disclose the interfaces between our business and nature, as well as key nature-related issues. Through these disclosures, we aim to meet stakeholder expectations and drive nature-related initiatives across the Group. Through these efforts, we will realize "Harmony with Nature" as set out in the NGK Group Environmental Vision and contribute to the Realization of a Sustainable Society.

Correspondence between the Evaluation Process Based on LEAP Approach and TNFD Recommended Disclosure Items

In this disclosure, we apply the LEAP approach recommended by the TNFD recommendations to assess nature-related dependencies, impacts, risks, and opportunities.

Specifically, beginning with Scoping to define the assessment boundary and scope, we work through four steps: Locate, Evaluate, Assess, and Prepare. This process enables us to map the relationship between our business and nature across the entire value chain and align the findings from the LEAP approach with the corresponding disclosure items under the TNFD recommendations.

Figure 1 illustrates the LEAP approach assessment process and its correspondence with the TNFD recommendations.

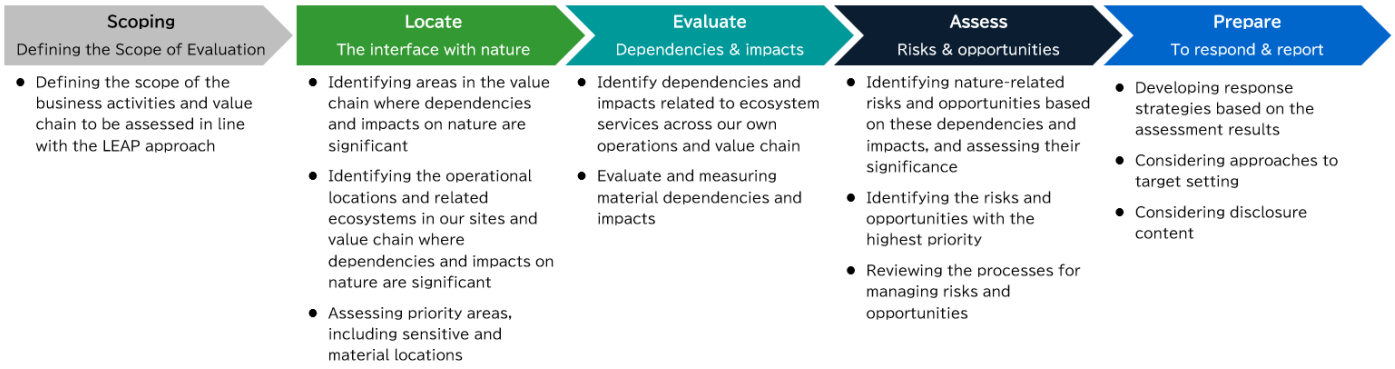


Figure1 LEAP-based Assessment Process for Nature-related Issues

Introduction

The TNFD recommendations require companies to disclose information in line with recommended disclosures, alongside general requirements that apply to all disclosures. In this report, Table 1 presents the mapping between these recommended disclosures and the assessment process based on the LEAP approach.

Table1 Alignment of TNFD Disclosure Recommendations with the LEAP-based Assessment Process

TNFD disclosure recommendations		LEAP approach referenced			
Governance	A. Board of Directors oversight				P
	B. Role of executives				P
	C. Human Rights Policies and Engagement Activities Related to Stakeholders, and Oversight Mechanisms				P
Risk and impact management	A(i). Processes to identify, assess and prioritize dependencies and impacts, risks and opportunities in our own business	L	E	A	
	A(ii). Processes to identify, assess and prioritize dependencies and impacts, risks and opportunities in our value chain	L	E	A	
	B. Processes for managing dependencies and impacts, risks and opportunities		E	A	
	C. Integration with our organization's risk management			A	
Strategy	A. Identify dependencies and impacts, risks and opportunities		E	A	
	B. Impacts of dependencies and impacts, risks and opportunities on our business model, strategy and financial planning				P
	C. Resilience of our strategy in different scenarios			A	P
	D. Locations of assets and/or activities that meet criteria for priority locations	L	E	A	
Metrics and targets	A. Metrics for measuring risks and opportunities			A	
	B. Metrics for measuring dependencies and impacts		E	A	
	C. Targets and performance				P

General Requirements

The TNFD recommendations require companies to explain six general requirements that apply across all disclosures. Table 2 presents the NGK Group's approach to each of these general requirements.

Table2 NGK Group Approach to the TNFD General Requirements

General requirement	NGK Group approach
Application of materiality	Based on the concept of double materiality, the NGK Group works to address environmental and social issues by making efficient and effective use of our limited management resources, and aims to maximize value creation for both the Group and our stakeholders. We use the double materiality approach in our TNFD-based assessment and disclosure.
Scope of disclosures	We analyze and disclose relationships with nature (dependencies and impacts, risks and opportunities) for the whole NGK Group business. We have carried out a detailed analysis of the Group's production sites taking account of the unique features of their locations. We have currently identified the broader picture for the rest of the value chain.
Location of nature-related issues	We have assessed whether the NGK Group's main production sites meet the TNFD criteria for a sensitive location based on the unique features of their locations and designated those that do as priority locations. We are prioritizing action for sites with dependencies and impacts for critical natural systems. We have conducted a detailed analysis for NGK CERAMICS MEXICO because we think water risk merits prioritization.
Integration with other sustainability-related disclosures	The NGK Group regards "sustainability management" as crucial to our vision for 2050. To this end, key nature-related issues we must address are responding to climate change, promoting resource recycling, preventing environmental pollution, and conserving and restoring biodiversity. The Group has fully implemented TCFD recommendations-based disclosure and this disclosure references some of its results. There is some overlap between TCFD-based and TNFD-based disclosure. We will consider how to align these to provide integrated disclosure.
Time horizons considered	The time horizons in our TNFD disclosure are: near-term: next 2-3 years; mid-term: through 2030; long-term: through 2050.
Engagement with indigenous peoples, local communities and affected stakeholders	Our NGK Group Human Rights Policy applies to all NGK Group executives and employees and we also require our suppliers to abide by this policy. The NGK Group Code of Conduct and NGK Group Supplier Code of Conduct define our human rights-related obligations in order to avoid violating the rights of indigenous peoples, local communities and affected stakeholders. We recognize the importance of engaging with stakeholders in our human rights due diligence and in the formulation and implementation of remedial measures.

A. Board of Directors' Oversight
B. Role of Executives

The NGK Group Environmental Vision, adopted by Board of Directors resolution, commits to carbon neutrality, a recycling-oriented society, and harmony with nature. Based on this vision, the NGK Group has identified "conservation and restoration of biodiversity" as one of its materiality issues. The sustainability promotion structure is shown in Figure 2. The Sustainability Management Committee, chaired by the Director and President and composed of committee chairs and Group Executives, develops the 5-Year Environmental Action Plan, monitors progress through management indicators and annual targets, and drives activities across the value chain. Disclosures based on the TNFD recommendations are reviewed by the Sustainability Management Committee and reported to the Board of Directors. The Committee's activities, including the above, are reported to the Board of Directors at least once a year.

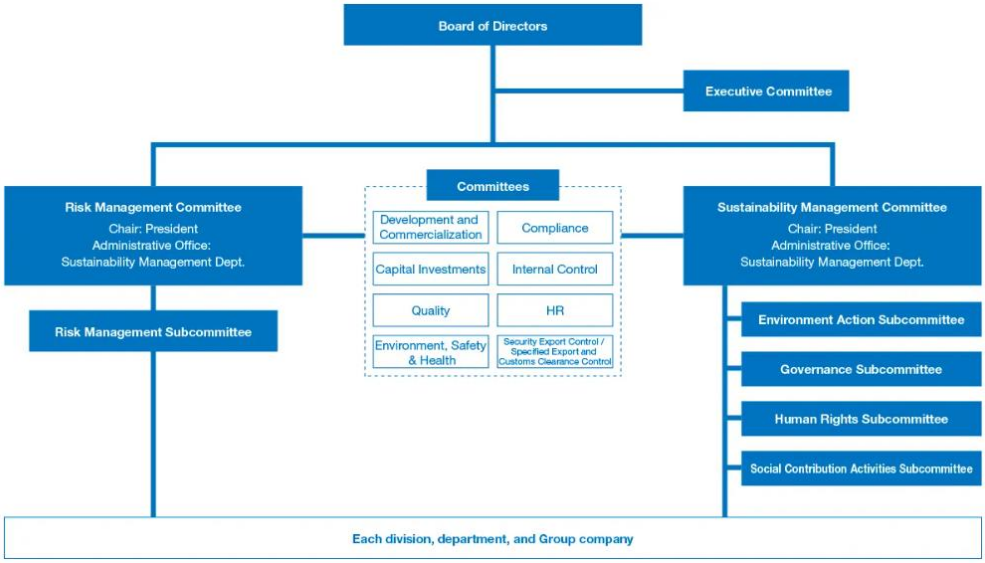


Figure2 NGK Group Sustainability Promotion Framework

C. Human Rights Policies with Respect to Stakeholders, Engagement Activity and Oversight Mechanisms

The NGK Group sets out its basic principles and standards of conduct for respecting human rights in the NGK Group Corporate Business Principles, the NGK Group Code of Conduct, and the NGK Group Supplier Code of Conduct. We have also formulated the NGK Group Human Rights Policy as a dedicated policy to advance our commitment to human rights. In accordance with this policy, we have established a human rights due diligence framework to identify, prevent, and mitigate adverse human rights impacts arising from our business activities. When an adverse human rights impact occurs or is likely to occur, we engage in sincere dialogue with the parties concerned and provide appropriate and effective remediation. These initiatives are led by the Sustainability Management Committee, chaired by the Director and President, with the Director responsible for the Sustainability Promotion Department serving as Vice Chair, in cooperation with the relevant committees and departments. Material decisions made by the Committee are reported to the Board of Directors. The status of activities and annual performance results are also reported to the Board of Directors at least once a year, subject to its oversight.

Respecting Human Rights | Sustainability
Promotion of Sustainable Procurement

A(i). Process for Assessing Dependencies and Impacts, Risks and Opportunities in Our Own Operations
A(ii). Process for Assessing Dependencies and Impacts, Risks and Opportunities in the Value Chain

The NGK Group uses an assessment process based on the LEAP approach to identify nature-related dependencies, impacts, risks, and opportunities in its business activities. Table 3 presents the assessment process for dependencies and impacts and the actions taken at each step. We conducted this process in phases, beginning with a comprehensive overview of dependencies and impacts and progressing to the identification of material risks and opportunities.

Table3 Assessment Process and Actions for Dependencies and Impacts

Process	Content
Overviewing and identifying dependencies and impacts	1. Setting the Scope of Assessment and Overview of Organizing and Identifying Dependencies and Impacts 2. Understanding Dependencies and Impacts in the NGK Group Value Chain 3. Identifying Material Dependencies and Impacts 4. Assessment of Whether Locations Qualify as " Sensitive Locations" 5. Assessment of Whether Locations Qualify as "Material Locations" 6. Selection of "Priority Locations"
Identifying critical nature-related risks and opportunities	7. Setting Scenarios 8. Assessment and Prioritization of Risks and Opportunities 9. Material Risks and Response Measures 10. Material Opportunities

B. Processes for Managing Dependencies and Impacts, Risks and Opportunities
C. Integration into the Organization's Risk Management

The NGK Group manages nature-related dependencies, impacts, risks, and opportunities through the Sustainability Management Committee. For risks specifically, we address them based on the risk management process operated by the Risk Management Committee, within our company-wide risk management system.

Risk Management | Sustainability

A. Identifying Dependencies and Impacts, Risks and Opportunities
B. Impacts of Dependencies and Impacts, Risks and Opportunities on Business Model, Strategy, and Financial Planning

In this section, we organized and identified dependencies and impacts based on Processes 1 to 6 in Table 3, which form part of the assessment process for dependencies, impacts, risks, and opportunities described in the preceding section, "Risks and Impacts Management."

We first defined the scope of the NGK Group's value chain subject to assessment and established the process for organizing and identifying dependencies and impacts. We then used ENCORE*2, an assessment tool, to identify dependencies and impacts across the value chains under review. We further analyzed these findings alongside actual business conditions, including business model, strategy, and financial plans, to identify material dependencies and impacts highly relevant to our business activities.

*2 ENCORE: A tool developed by Global Canopy, UNEP FI (UN Environment Programme Finance Initiative), and UNEP-WCMC (United Nations Environment Programme World Conservation Monitoring Centre) to help financial institutions and companies understand the materiality of nature-related dependencies and impacts across industry sectors.

1. Setting the Scope of Assessment and Overview of Organizing and Identifying Dependencies and Impacts

To assess the NGK Group's relationship with nature across its value chain, we defined the value chain subject to assessment and the key processes involved. Figure 3 presents the NGK Group value chain under assessment and the process for organizing and identifying dependencies and impacts. The upper section of the figure shows the value chain and key processes, while the lower section outlines the process for organizing and identifying dependencies and impacts.

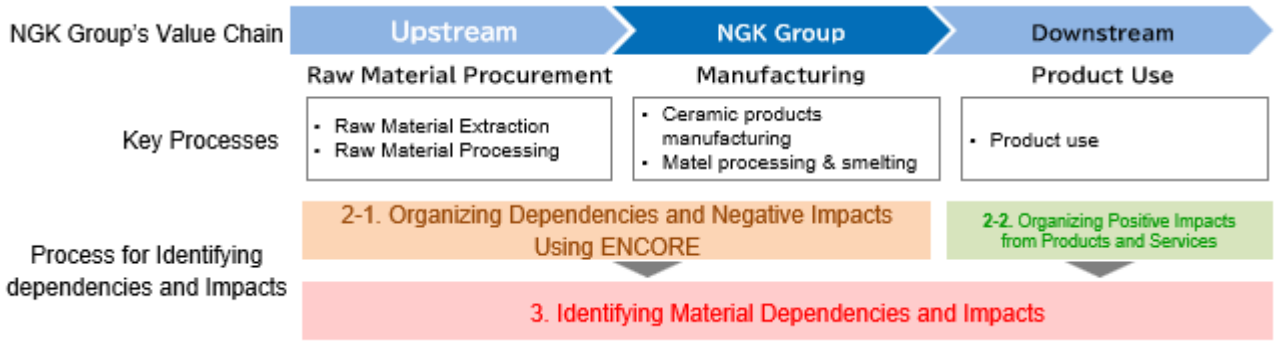


Figure3 Assessment Scope and Process for Identifying Dependencies and Impacts

2. Understanding Dependencies and Impacts in the NGK Group Value Chain

2-1. Organizing Dependencies and Negative Impacts Using ENCORE



ENCORE is a tool that evaluates, based on academic literature and expert assessments, the significance of dependencies on and negative impacts on nature across various industry sectors. The NGK Group used ENCORE to map the key processes in its value chain to the corresponding industry sectors. The processes assessed were as follows: raw material procurement covered the extraction, collection, and production of various raw materials, as well as raw material processing; product manufacturing covered the production of ceramics-related products and the processing and refining of metals, among others. The results were classified as shown in Table 4. Comparing raw material procurement with product manufacturing, we confirmed that raw material procurement has relatively higher significance in terms of both dependencies on and impacts on nature.

This assessment aims to identify which stages and processes in the value chain have the greatest relationship with nature, and we use the results as foundational information for "3. Identification of Material Dependencies and Impacts."

Table 4 ENCORE Assessment Results: Nature Dependencies and Negative Impacts in the NGK Group Value Chain

Dependencies on Nature

NGK group value chain	Primary process		Provisioning services				Regulating and maintenance services										
			Water supply	Other abiotic resource provisioning services	Biomass provisioning services	Genetic material services	Pollution remediation services				Water flow regulation services	Disaster mitigation services					Pollination and Biological Control Services
							Solid waste remediation	Dilution by atmosphere and ecosystems	Air filtration services	Water purification services		Global climate regulation services	Flood mitigation services	Storm mitigation services	Rainfall pattern regulation services (at sub-continental scale)	Soil and sediment retention services	
Raw material procurement	Raw material extraction	Metal extraction	H	VH	VL	-	L	M	M	VH	H	H	H	M	VH	M	-
		Non-metallic mineral extraction	H	VH	L	-	L	M	VL	VH	H	H	H	M	VH	H	-
		Biological resource production	VH	-	VH	VH	M	M	H	VH	VH	VH	H	H	VH	H	H
	Raw material processing		H	H	-	-	M	M	M	VH	H	VL	H	M	M	M	-
Manufacturing	Ceramic products manufacturing		M	H	-	-	M	L	VL	M	M	VL	M	M	L	L	-
	Metal processing & smelting		M	H	-	-	M	L	M	M	M	VL	M	M	M	L	-

VH Very High | H High | M Medium | L Low | VL Very Low

Note 1: In view of the business characteristics of NGK Group, we have added "provision of abiotic resources (provisioning service)," a category not covered by ENCORE's standard assessment scope, and incorporated it into our evaluation. Materiality levels are set based on the degree of resource dependency in each value chain.

Negative Impacts on Nature

NGK group value chain	Primary process		Land/freshwater/ocean use change			Climate change	Resource use			Pollution					Invasive alien species introduction
			Area of land use	Area of freshwater use	Area of seabed use	Emissions of GHG	Volume of water use	Other biotic resource extraction (e.g. fish, timber)	Other abiotic resource extraction	Generation and release of solid waste	Emissions of non-GHG air pollutants	Emissions of toxic pollutants to water and soil	Emissions of nutrient pollutants to water and soil	Disturbances (e.g. noise, light)	Introduction of invasive species
Raw material procurement rimary process	Raw material extraction	Metal extraction	M	VH	VH	M	M	-	H	H	H	VH	M	VH	L
		Non-metallic mineral extraction	M	H	H	H	M	-	VH	M	H	H	-	H	VL
		Biological resource production	H	H	-	M	M	VH	-	H	VH	H	H	H	H
	Raw material processing		M	VH	VH	H	M	-	-	M	H	VH	M	VH	VL
Manufacturing	Ceramic products manufacturing		L	M	-	H	M	-	-	M	H	VH	M	M	-
	Metal processing & smelting		L	-	-	M	M	-	-	M	H	VH	M	VH	-

VH Very High | H High | M Medium | L Low | VL Very Low

2-2. Organizing Positive Impacts from Products and Services



The NGK Group recognizes that its products and services also contribute to generating positive impacts on nature. We therefore organized the positive impacts of our key products and services in line with the drivers of nature change set out in the TNFD recommendations: land use change, climate change, resource use, and pollution. The results are presented in Table 5.
Our products and services reduce resource consumption and waste generation through their use. Some products also help curb land-use changes associated with new resource extraction, through longer product lifespans and the reuse and recycling of resources. The capabilities of each product and service further contribute to reducing environmental impact through the capture and reduction of greenhouse gas emissions and the purification of air and water pollutants. For example, our ceramics for purifying automobile exhaust achieve higher performance through ultra-thin wall technology, enabling more effective removal of hazardous substances from vehicle exhaust compared to conventional products.

Table 5 Positive Impacts of Main Products and Services

Business content		Main products & services	Change in land use	Climate change	Resource use	Pollution			
			Terrestrial ecosystem use	GHG gas emissions	Non-living resource extraction	Solid waste	Non-GHG atmospheric pollution	Soil pollution	Water pollution
Environment Business Group	Automotive Ceramics Business	Ceramics for purifying auto exhaust	●		●	●	●	●	●
		NOx sensors	●		●	●	●	●	●
	Industrial Process Business	Industrial heating systems, refractory products	●	●	●	●			
		Membrane separating systems		●		●			●
		High-temperature dust collectors	●		●	●	●		
Digital Society Business Group	High Performance Ceramics Business	Ceramics for semiconductor manufacturing equipment				●			
	Electronic Devices Business	EnerCera		●	●	●			
	Power Electronics Ceramics Business	AMB substrates		●		●			
	Specialty Metals & Molds Business	Special metals and mold products		●	●	●			
Energy & Industry Business Group	Energy plant business	Low-level radioactive waste treatment units		●		●	●		
	Insulator Business	Insulators	●	●	●	●			
	Others	Renewable Energy Generation and Sales	●	●	●	●			

Note 2: A ● indicates an item we consider to have a positive impact on nature.

Products and Services Contributing to Environmental Protection

3. Identifying Material Dependencies and Impacts

Based on the findings from "2. Dependencies and Impacts in the NGK Group Value Chain," we identified material dependencies and impacts with high relevance to our business. The identification of material dependencies and impacts is based on the following approach.

3-1. Methods for Identifying Material Dependencies and Impacts

Raw Material Procurement and Product Manufacturing

Based on the results of Section 2-1 (Identification of Dependencies and Negative Impacts Using ENCORE), we reviewed all items rated Medium (M) or above in materiality. We also considered various references [References (1) to (4)], TNFD sector guidance, and measures implemented by NGK Group and its suppliers. On this basis, we identified the dependencies and impacts most closely related to our business operations.
For raw material procurement, the raw materials in scope span a wide range. We therefore selected nine key raw materials for evaluation from among those we procure, based on procurement volume, potential business impact in the event of a supply disruption, and whether the material qualifies as a biological resource. (Individual raw material names are not disclosed for confidentiality reasons.)

References:
(1) CDP Water Impact Index
(2) World Bank "Environmental, Health, and Safety (EHS) Guidelines"
(3) European Commission Joint Research Centre "Ecodesign for Sustainable Products Regulation: preliminary study on new product priorities"
(4) Cerame-Unie "Ceramic Roadmap to 2050"

Use of Products

Based on "2-2. Mapping Positive Impacts of Products and Services," we identified positive impacts common across multiple products and services as material positive impacts.

3-2. Mapping the Relationship between Identified Material Dependencies and Impacts and Natural Capital

Upstream (Raw Material Procurement) > NGK Group (Manufacturing) > Downstream (Product Use)

We mapped the material dependencies and impacts identified for each value chain stage, along with their relationships with natural capital. The results are presented in Table 6.
The assessment found that raw material extraction accounts for the greatest number of material dependencies and impacts within the value chain.
Raw material extraction is the process of directly obtaining raw materials from nature. We confirmed that this stage depends on diverse ecosystem services, including the supply of water resources and various natural resources, as well as disaster mitigation. We also confirmed that land disturbance associated with extraction gives rise to various impacts on nature, such as pollutant emissions.
In contrast, raw material processing and product manufacturing involve converting extracted raw materials into finished products. We identified dependencies on water resources used in production processes, as well as impacts such as water use and GHG emissions. However, compared with raw material extraction, this stage involves fewer direct interactions with nature, resulting in a relatively smaller number of material dependencies and impacts identified.
For the use of products, we identified the contribution of our products to reducing various dependencies and negative impacts common across our product portfolio as a material positive impact.

Table6 Material Nature-Related Dependencies and Impacts in the NGK Group's Value Chain, and Associated Natural Capital

Raw Material Procurement				Manufacturing		Product Use
Extraction and Harvesting of Raw Materials (9 Raw Materials)		Processing of Raw Materials (9 Raw Materials)		Ceramic products manufacturing/Matel Processing & smelling		
Dependency	**Negative impact**	**Dependency**	**Negative impact**	**Dependency**	**Negative impact**	**Positive impact**
• Water supply • Water purification services • Water flow regulation services • Disaster mitigation services 【Mineral Resources Only】 • Other abiotic resource provisioning services 【Biological Resources Only】 • Biomass provisioning services • Genetic material services • Pollination Services • Biological Control Services	• Area of land, freshwater and seabed use • Emissions of GHG • Volume of water use • Generation and release of solid waste • Emissions of non-GHG air pollutants • Emissions of nutrient pollutants to water and soil • Disturbances (e.g. noise, light)	• Water supply • Disaster mitigation services	• Volume of water use • Emissions of GHG	• Water supply • Disaster mitigation services	• Volume of water use • Emissions of GHG	• Reusing and recycling resources curbs changes in land use. • Capturing and reducing greenhouse gas emissions mitigates our impact on climate change. • Extending product lifespans reduces resource consumption and waste generation. • Purifying exhaust gas and wastewater reduces pollutant emissions.
Related Natural Capital	Water resources	Terrestrial ecosystems	Freshwater ecosystems	Marine Ecosystems	Atmosphere	

D. Assessment and Selection of Assets and Activity Locations that meet the Criteria for Priority Locations

TNFD recommendations call for identifying locations where interactions with nature are particularly significant as "priority locations" and using these to prioritize the assessment of, and response to, nature-related dependencies and impacts, as well as risks and opportunities. Following this guidance, the NGK Group conducted an assessment and selection of priority locations to clarify which sites require priority attention in addressing nature-related issues.

Note: Under TNFD recommendations, "priority locations" are defined as the combination of "sensitive locations" and "Material location."



"Sensitive locations" are locations that are ecologically significant or vulnerable, regardless of whether our business operations have dependencies and impacts there. Examples include habitats for rare and endemic species, areas retaining intact natural ecosystems, and areas with high water stress.
"Material location" refers to a location where our business activities involve significant nature-related dependencies and impacts. These are locations where the relationship between the NGK Group and nature is considered particularly strong.
The NGK Group assessed both "sensitive locations" and "Material locations" across our value chain. We then combined the results of both assessments to identify "priority locations."

The assessment of priority locations aims to understand the relationship with nature at each operational site. We therefore focused on sites for which location information was available, among those identified through our assessment of material dependencies and impacts. Specifically, for raw material procurement, we assessed the mining and processing sites for nine key raw materials (24 sites in total). For product manufacturing, we assessed NGK Group's primary production sites (39 sites in total). The number of raw material procurement sites used in the assessment is shown in Table 7, and the number of product manufacturing sites is shown in Table 8. Note: Individual raw material names and specific location information are not disclosed for reasons of confidentiality.

Table7 Assessment Sites for Raw Material Procurement

	Number of Assessment Sites
Extraction Sites	9
Processing Sites	15
Total	24

Note 3: The assessment covered nine types of key raw materials.
Of these, two types (9 sites) were assessed at raw material extraction sites, and nine types (15 sites) were assessed at processing sites.

Table8 Assessment Sites by Region for Product Manufacturing

Region	Number of Assessment Sites
Japan	17
North America	9
Europe	4
Asia & Oceania	9
Total	39

4. Assessment of Whether Locations Qualify as " Sensitive Locations"

In assessing whether our sites qualify as sensitive location, we applied the categories of sensitive areas defined in the TNFD recommendations and used the corresponding indicators for each category.



4-1 Sensitive Locations in Raw Material Procurement



In assessing whether sites in our raw material supply chain qualify as sensitive areas, we confirmed whether each assessed site is located within one of the sensitive location categories. Table 9 presents the assessment categories, indicators used, and assessment results.
The assessment found no sites located in Category (1) "Areas important for biodiversity" or Category (5) "Areas important for the provision of ecosystem services." However, we confirmed that multiple sites are located within Category (2) "Areas with high integrity of ecosystems," Category (3) "Areas where the integrity of ecosystems is declining rapidly," and Category (4) "Areas with high physical water risk."
In Category (2) "Areas with high integrity of ecosystems," we identified extraction and processing sites located in areas where the natural environment is maintained in a relatively undisturbed state. In Category (3) "Areas where the integrity of ecosystems is declining rapidly," we identified extraction and processing sites in areas experiencing canopy cover loss and active development. In these areas, land conversion and similar activities may reduce the natural capacity for disaster mitigation, potentially increasing the risk of disasters such as floods and storms.
In Category (4) "Areas with high physical water risk," we found that a particularly large number of processing sites are located in areas where chemical inflows into waterways could readily affect local aquatic organisms. We also confirmed that processing sites are present in areas with high water stress and high flood risk.
Based on our review of suppliers' environmental practices, we understand that environmental measures have already been implemented at these sites. We therefore consider the negative impacts of these sites on the surrounding natural environment to be limited.

Table9 Assessment Methods and Results for Sensitive locations in Raw Material Procurement

Category of Sensitive locations	Related Metric	Criteria	Overview	Number of Sensitive locations	
				Extraction Sites	Processing Sites
(1)Areas Important for Biodiversity	Within 500 m of a protected※4 area or KBA※5	Score based on category-specific importance and proximity of protected areas and KBAs ≥ 4	Areas near protected areas or KBAs with high biodiversity importance	0/9	0/15
	START Indicator[(5)]	START Score ≥ 4	Areas with high biodiversity value, including habitats rich in rare and endemic species and intact ecosystems	0/9	0/15
(2)Areas with high ecosystem integrity	Biodiversity Intactness Index※6[(6)]	Biodiversity Intactness Index ≥ 0.9	Areas with minimal human modification and largely intact natural environments	4/9	2/15
(3)Areas where the integrity of ecosystems is rapidly declining	Tree Cover Loss[(7)]	Tree Cover Loss from 2000 to 2022 ≥ 5%	Areas with declining tree cover, increasing development, and high environmental vulnerability	9/9	4/15
(4)Areas with High Physical Water Risk	Level of water stress [(8)]	Aqueduct Baseline Water Stress: “High” or Higher	Areas with high water stress, where insufficient water availability for ecosystems may lead to the drying of wetlands and rivers and habitat degradation	0/9	2/15
	Toxicity Stress[(9)]	Percentage of Aquatic Species Affected by Chemical Inflows ≥ 25%	Areas where water quality deterioration caused by chemical substances may adversely affect local aquatic species	0/9	7/15
	Flood Inundation Depth [(10)]	Located within Flood Inundation Zones	Areas at high risk of flooding, where disasters may cause soil erosion, water quality deterioration, and habitat destruction	0/9	2/15
(5)Areas Important for the Provision of Ecosystem Services	Indigenous Peoples and Local Communities[(11)]	Indigenous Peoples’ and Local Communities’ claimed areas within 5 km of mines or 500 m of other production sites	Areas with strong ties to Indigenous Peoples and Local Communities, where the loss of ecosystem services may have severe impacts	0/9	0/15

※3 Integrity of ecosystems: An indicator of ecosystem health. Areas with advanced urbanization tend to have lower integrity of ecosystems.
※4 Protected areas: Areas designated for protection under local, national, or international treaties.
※5 KBA (Key Biodiversity Area) : Areas of significance for biodiversity conservation, identified based on standardized scientific criteria and thresholds.
※6 Intactness Index: An indicator showing the extent to which an ecosystem at a given location has been preserved compared to its natural state prior to human activity.
Reference (5): IBAT(Integrated Biodiversity Assessment Tool) “Threat abatement STAR”
Reference (6): Newbold et al.（2016） “Global map of the Biodiversity Intactness Index”
Reference (7): WWF Biodiversity Risk Filter” Forest Canopy Loss”
Reference (8): WRI (World Resources Institute), "Aqueduct Baseline Water Stress"
Reference (9):WWF Water Risk Filter “Toxicity Stress”
Reference (10): Flood inundation depth from the MS&AD Flood Risk Finder
Reference (11): Data on "land collectively owned and used by indigenous peoples and local communities" as identified in LandMark

4-2. Ecologically Sensitive Locations in Product Manufacturing

Upstream (Raw Material Procurement) > NGK Group (Manufacturing) > Downstream (Product Use)

In assessing whether the NGK Group's product manufacturing sites qualify as sensitive areas, we confirmed whether each assessed site is located within a sensitive area. Table 10 presents the assessment categories, indicators used, and assessment results for product manufacturing.
The assessment found sites located in all sensitive area categories. Sites in Category (1) "Areas important for biodiversity" and Category (4) "Areas with high physical water risk" were particularly numerous.
In Category (1)"Areas important for biodiversity," we identified multiple sites located in areas with high conservation priority, including habitats for many rare and endemic species. In these areas, business activities such as changes in land use and pollutant discharge may increase impacts on ecosystems.
In Category (4) "Areas with high physical water risk," we identified sites located in areas with high water pollution indicators. If water quality were to deteriorate due to pollutant discharge and similar factors, this could affect local ecosystems and the living environment of local residents. However, NGK Group continues to implement environmental conservation management, and we consider the negative impacts of these sites on the surrounding natural environment to be limited.

Table10 Assessment Methods and Results for Sensitive locations in Product Manufacturing

Category of Sensitive locations	Related Metric	Criteria	Overview	Number of Sensitive locations
(1)Areas Important for Biodiversity	Within 500 m of a protected area or KBA	Proximity within 500 m	Areas Near Protected Areas or KBAs with High Biodiversity Importance	6/39
	Conservation priority*7(12)	Top 50% Globally	Areas with high biodiversity value, including habitats rich in rare and endemic species and intact ecosystems	38/39
(2)Areas with high ecosystem integrity	Biodiversity Intactness Index*(13)	Biodiversity Intactness Index ≥ 0.5	Areas with minimal human modification and largely intact natural environments	3/39
(3)Areas where the integrity of ecosystems is rapidly declining	Change in human footprint*8(14)	Change in Human Footprint from 2000 to 2019 ≥ 1	Areas with degraded natural environments, high environmental vulnerability, and low resilience to additional pressures	12/39
(4)Areas with High Physical Water Risk	Level of water stress	Aqueduct Baseline Water Stress: “High” or Higher	Areas with high water stress, where insufficient water availability for ecosystems may lead to the drying of wetlands and rivers and habitat degradation	15/39
	Degree of water pollution (Surface Water Quality Index)*(15)	WWF Water Risk Filter Surface Water Quality Index Score ≥ 4	Areas with deteriorating water quality, where water pollution may adversely affect local ecosystems and the living environment of nearby communities	26/39
	Flood risk*(16)]	Areas within Inundation Zones for Storm Surges or River Flooding	Areas at high risk of river flooding and storm surges, where disasters may cause soil erosion, water quality deterioration, and habitat destruction	8/39

※7 Conservation priority: An index measuring the risk of species loss associated with developing a given location.
※8 Human Footprint: An integrated measure of the intensity of human impact on the environment, combining multiple human activities such as urban development, agricultural expansion, and transportation.
Reference (12): Calculated from big data on species distribution compiled by Think Nature Inc., using the number of species present at each location, the threat status of each species, and the geographic range of each species.
Reference (13): Calculated by Think Nature Inc. based on the IUCN Habitat Map (showing land use conditions and the degree of species loss associated with habitat modification) and the distribution of natural forests.
Reference (14): Mu, H., Li, X., Wen, Y., Huang, J., Du, P., Su, W., ... & Gang, M. (2022). A global record of annual terrestrial Human Footprint dataset from 2000 to 2018. Scientific Data, 9(1), 176.
Reference (15) WWF Water Risk Filter “Surface water quality index””
Reference (16): Results from the hazard map used in TCFD risk and opportunity assessments.

5. Assessment of Whether Locations Qualify as "Material Locations"

In assessing whether locations qualify as "Material location," we applied indicators to determine areas where the material dependencies and impacts identified in Section 3-2 "Identified Material Dependencies and Impacts" are particularly likely to occur or where their effects are more significant. Note that impacts which occur regardless of location, such as greenhouse gas emissions, are excluded from this assessment.



5-1. Assessment of Whether Locations Qualify as "Material Locations"

Upstream (Raw Material Procurement) > NGK Group (Manufacturing) > Downstream (Product Use)

In assessing whether sites in raw material procurement qualify as material locations, the NGK Group confirmed whether each assessed site is located within a material location. Table 11 presents the material dependencies and impacts, assessment indicators, and assessment results applied in this evaluation.
The assessment confirmed that multiple extraction sites and processing sites are located within material locations.

Table11 Assessment Methods and Results for Material locations in Raw Material Procurement

Assessment Target	Material Dependencies and Impacts		Assessment Criteria	Criteria	Number of Material locations
Extraction Sites	Dependencies / impacts	・Water purification ・Terrestrial ecosystem use ・Solid waste emissions ・Non-GHG air pollutant emissions ・Soil and water pollutant emissions ・Disturbance	Within 500 m of a protected area or KBA	Score based on category-specific importance and proximity of protected areas and KBAs ≥ 4	9/9
			START Indicator	START Score ≥ 4	
			Biodiversity Intactness Index	Biodiversity Intactness Index ≥ 0.9	
			Tree Cover Loss	Tree Cover Loss from 2000 to 2022 ≥ 5%	
	Dependencies / impacts	・Water resources ・Water use	Level of water stress	Aqueduct Baseline Water Stress: “High” or Higher	0/9
	Dependency	・Water flow regulation ・Disaster mitigation	Tree Cover Loss	Tree Cover Loss from 2000 to 2022 ≥ 5%	9/9
			Flood Inundation Depth	Located within Flood Inundation Zones	
Processing Sites	Impact	・Solid waste ・Air pollutants ・Soil and water pollutants	Within 500 m of a protected area or KBA	Score based on category-specific importance and proximity of protected areas and KBAs ≥ 4	4/15
			START Indicator	START Score ≥ 4	
			Biodiversity Intactness Index	Biodiversity Intactness Index ≥ 0.9	
			Tree Cover Loss	Tree Cover Loss from 2000 to 2022 ≥ 5%	
	Dependencies / impacts	・Water resources ・Water use	Level of water stress	Aqueduct Baseline Water Stress: “High” or Higher	2/15
	Dependency	・Water flow regulation ・Disaster mitigation	Tree Cover Loss	Tree Cover Loss from 2000 to 2022 ≥ 5%	6/15
			Flood Inundation Depth	Located within Flood Inundation Zones	

5-2. Material Locations in Product Manufacturing

Upstream (Raw Material Procurement) > NGK Group (Manufacturing) > Downstream (Product Use)

In assessing whether sites in the NGK Group's product manufacturing qualify as material locations, we confirmed whether each assessed site is located within a material location. Table 12 presents the material dependencies and impacts, assessment indicators, and assessment results applied in this evaluation.
The assessment confirmed that multiple production sites are located within material locations.

Table12 Assessment Methods and Results for Material locations in Product Manufacturing

Assessment Target	Material Dependencies and Impacts		Indicators for Material locations	Criteria	Number of Material locations
Major Production Sites of the NGK Group	Dependencies / impacts	・Water resources ・Water use	Level of water stress	Aqueduct Baseline Water Stress: “High” or Higher	15/39
	Dependency	・Disaster mitigation	Change in human footprint	Change in Human Footprint from 2000 to 2019 ≥ 1	19/39
			Flood risk	Areas within Inundation Zones for Storm Surges or River Flooding	

6. Priority Locations Assessment

By combining the assessments for sensitive locations and material locations, we identified priority locations.
Sites within these priority locations are designated as primary targets for future risk management and response planning.



6-1. Priority Locations in Raw Material Procurement

Upstream (Raw Material Procurement) | NGK Group (Manufacturing) | Downstream (Product Use)

Of the 24 sites assessed for raw material procurement, we identified 16 as priority locations: all 9 extraction sites and 7 of the 15 processing sites.
The NGK Group has long required suppliers to implement the NGK Group Supplier Code of Conduct. This Code calls on suppliers to reduce the environmental burden of their operations on ecosystems and to work toward the conservation and restoration of biodiversity. We also track supplier progress through periodic supplier fact-finding surveys and other means.
This assessment covered our major suppliers. Going forward, building on these results, we will deepen our understanding of suppliers' interface with nature and their progress in raw material procurement, through supplier fact-finding surveys and direct engagement with suppliers. We will also consider expanding the scope of our assessment as necessary.

6-2. Priority Locations in Product Manufacturing

Upstream (Raw Material Procurement) | NGK Group (Manufacturing) | Downstream (Product Use)

The NGK Group assessed its product manufacturing sites and identified 24 of its 39 major domestic and overseas production sites as priority locations. (Figure 4)
From a water resource dependencies and impacts perspective, 15 sites were identified as priority locations, with a concentration in North America (including Mexico) and Asia-Oceania.
From a disaster mitigation dependency perspective, 19 sites were identified as priority locations, with a concentration in Japan, Asia-Oceania, and North America.
Going forward, we will consider conducting detailed assessments of these priority locations as needed, taking into account regional characteristics and site-specific conditions.

Item	Number of priority regions / Number of sites assessed
Number of sites selected as priority locations	24/39
Of which, dependencies and impacts on water resources	15/39
Of which, dependency on disaster mitigation	19/39

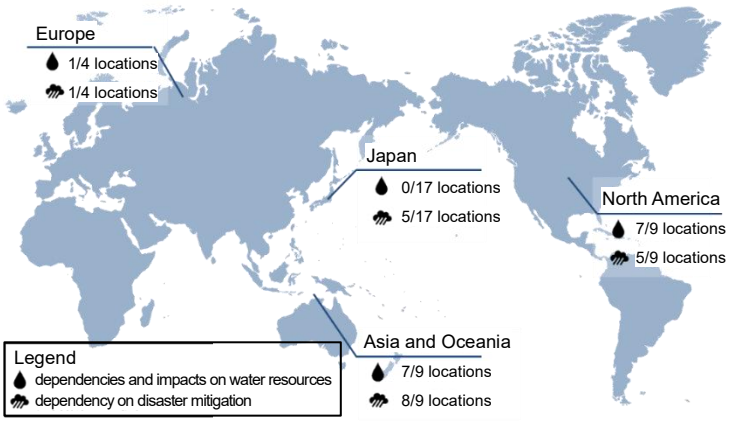


Figure4 Number of Priority Locations by Region in Product Manufacturing

C. Resilience of Strategy to Risks and Opportunities, Taking into Consideration Different Scenarios



Through our assessments under Strategies A, B, and D, the NGK Group has identified material Dependencies and Impacts across the entire value chain and selected priority regions. The significance of the Risks and Opportunities arising from these Dependencies and Impacts and priority locations may change in response to future policy and social trends and shifts in the natural environment. To account for this uncertainty, we developed forward-looking scenarios based on the findings of the Strategy A, B, and D assessments and evaluated the significance of Risks and Opportunities under each scenario. Based on these results, we identified the Risks and Opportunities that are material to the NGK Group. We also organized response measures for each and assessed the resilience of our corporate strategy against future changes.

7. Setting Scenarios

Following the TNFD scenario analysis guidance, the NGK Group organized changes in the external environment from four perspectives: policy, market, social, and nature. We developed four scenarios tailored to our business activities and value chain (Figure 5) and assessed the Risks and Opportunities under each scenario.

For this assessment, we adopted two contrasting future states as the basis for our analysis: Scenario 1, in which nature positive action progresses and the degradation of nature and ecosystem services is contained, and Scenario 3, in which such action does not advance and degradation proceeds significantly.

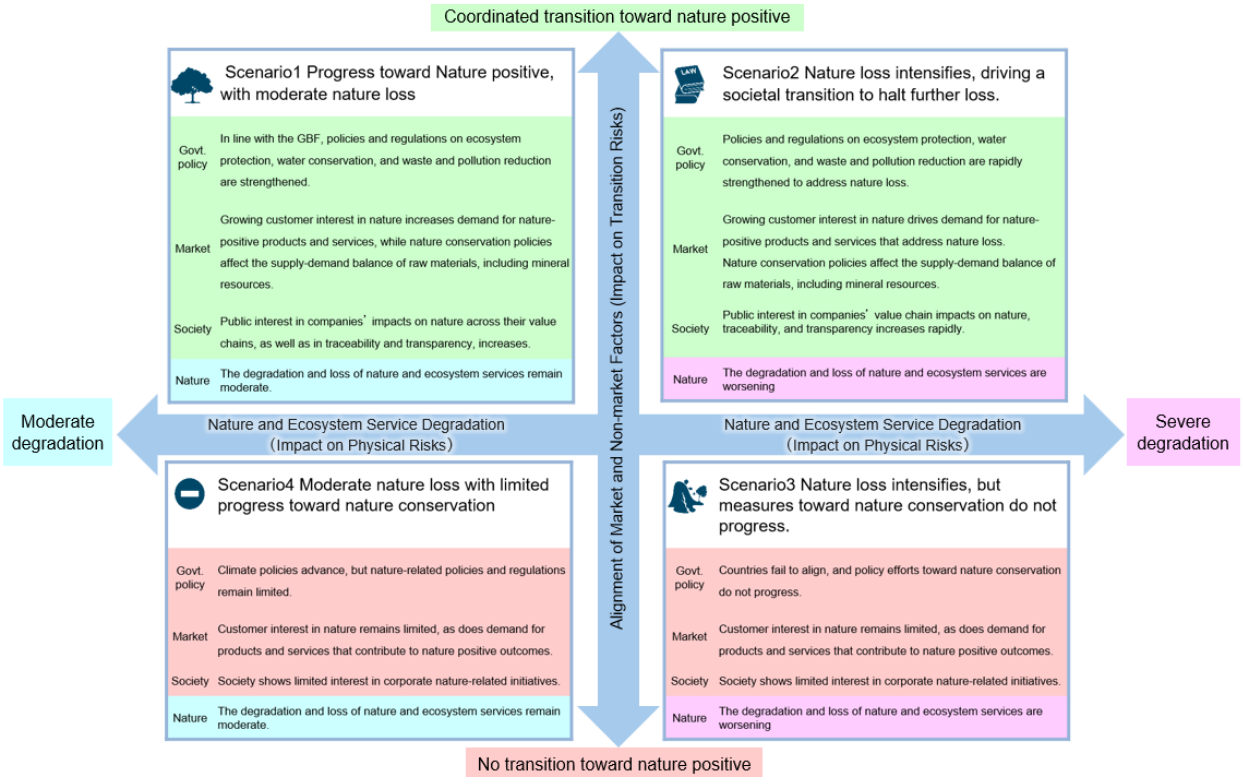


Figure5 Future Outlook under Each Scenario

8. Assessment and Prioritization of Risks and Opportunities

The NGK Group assessed the significance of anticipated Risks and Opportunities against each scenario identified in "7. Scenario Development." This assessment referenced the NGK Group's risk management process to organize the significance levels for each Risk and Opportunity (Figure 6).

For Risks, based on the NGK Group's risk management process, we evaluated both the degree of impact on finances, regions, and society and the likelihood of occurrence on a three-tier scale for each time horizon, and assigned a significance level accordingly.

For Opportunities, drawing on the findings of "2-2. Organizing Positive Impacts Through Products and Services" and our existing initiatives, we identified opportunities anticipated at this point in time and assessed the time horizon over which each opportunity is expected to materialize.

Note that Risks and Opportunities related to greenhouse gas emissions are addressed in our disclosures based on the TCFD recommendations and are therefore excluded from the scope of this disclosure.

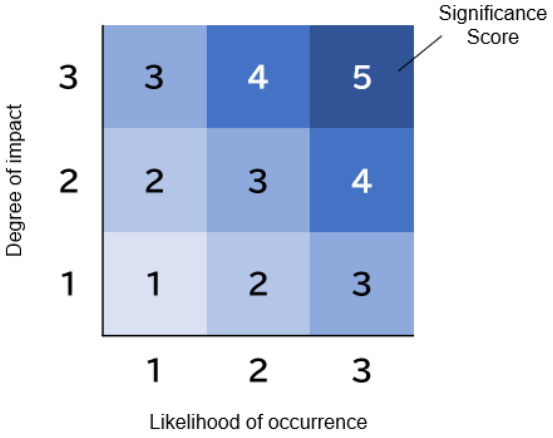


Figure 6 Risk and Opportunity Significance Scores Based on the NGK Group's Risk Management Process

Information Disclosure Based on TCFD Recommendations | Sustainability | NGK Corporation

Risk Management | Sustainability | NGK Corporation

9. Material Risks and Response Measures

Based on the results of "8. Prioritization of Risks and Opportunities," the NGK Group identified items with a significance level of 4 or above as material risks and organized response measures for each. The results are presented in the table below.

The NGK Group will take appropriate response measures to reduce these material risks. We will also continuously review our response measures in line with changes in society and the natural environment, and work to enhance the resilience of our business strategy.

9-1. Material Risks and Response Measures in Raw Material Procurement

Upstream (Raw Material Procurement) > NGK Group (Manufacturing) > Downstream (Product Use)

In raw material procurement, the NGK Group identified the following material risks for the medium term and beyond.
Under Scenario 1, we identified the risk of surging raw material prices driven by tightening policies associated with the transition to nature positive and growing demand for sustainable raw materials.
Under Scenario 3, we identified the risk of supply disruptions as physical risks, including water scarcity and the intensification of natural disasters, broaden their impact on raw material production regions.
Table 13 presents the findings and our responses.

Table13 Material Risks and Responses by Scenario in Raw Material Procurement

Risks		Dependencies/impacts		Risk	Significance Scores by Time Horizon						Countermeasure
					Scenario 1 Nature Positive			Scenario 3 Continued Nature Degradation			
					Near-term	Mid-term	Long-term	Near-term	Mid-term	Long-term	
Transition	Govt. policy/Market	Impacts	・Alteration of terrestrial, freshwater, and marine ecosystems during mineral extraction ・Various impacts from raw material production	・Shortages and rising prices of raw materials due to restrictions on the extraction and development of non-metallic minerals and metals for nature conservation, as well as greater difficulty in obtaining permits and approvals ・Rising prices of sustainable raw materials, such as recycled, certified, and biomass-based materials, due to increased demand	2	4	4	-※9	-	-	・Monitoring relevant environmental rules and raw material supply and demand trends ・Considering the use of recycled materials and other alternatives ・Promoting supplier diversification
	Reputation		Various impacts from raw material production	・Criticism and reputational damage related to the procurement of resources associated with adverse impacts on the environment and local communities	2	4	4	1	3	3	・Promoting initiatives to reduce impacts on nature throughout the supply chain ・Promoting supplier diversification
	Liability		Various impacts from raw material production	・Disruptions to raw material supplies due to environmental accidents or violations of environmental laws and regulations by suppliers	3	4	4	3	3	3	・Promoting initiatives to reduce impacts on nature throughout the supply chain ・Considering alternative suppliers
Physical	Acute	dependencies	Disaster mitigation in the upstream supply chain	・Impacts on the supply chain from worsening floods and storms caused by degradation of the surrounding natural environment	3	3	3	3	4	4	・Conducting risk assessments of the upstream supply chain and considering BCPs that cover the supply chain ・Considering alternative procurement methods
	Chronic		Water supply and water flow regulation in the upstream supply chain	・Impact of water shortages on raw material production	2	4	4	3	5	5	・Assessing water supply and demand risks in the upstream supply chain ・Considering alternative suppliers

※9: In the table, "-" indicates that no risk is anticipated. These items are excluded from the scope of analysis.

9-2. Material Risks and Response Measures in Product Manufacturing

Upstream (Raw Material Procurement) > NGK Group (Manufacturing) > Downstream (Product Use)

In product manufacturing, the NGK Group identified the following material risks for the medium term and beyond.
Under Scenario 1, we identified two risks: rising costs driven by tightening water resource policies, and changes in product demand resulting from shifting customer needs.
Under Scenario 3, we identified the risk that physical risks, including water scarcity and the intensification of natural disasters, could disrupt our operations.
Table 14 presents these findings and our responses. Through the measures outlined in Table 14, we will work to mitigate the impact of these risks and will continue to adapt our approach as circumstances change.

Table14 Material Risks and Responses by Scenario in Product Manufacturing

Risks		Dependencies/impacts		Risk	Significance Scores by Time Horizon						Countermeasure
					Scenario 1 Nature Positive			Scenario 3 Continued Nature Degradation			
					Near-term	Mid-term	Long-term	Near-term	Mid-term	Long-term	
Transition	Govt. policy	Impacts	Water use in production process	・Impact on production from stricter policies requiring reduced water use, water reuse, and recycling ・Increased compliance costs due to stricter regulations	2	4	4	-	-	-	・Monitoring of relevant regulations ・Promotion of initiatives to improve water use efficiency based on the conditions at each production site ・Promotion of initiatives to optimize water use in accordance with relevant guidelines
	Market		Various impacts throughout the life cycle	・Changes in product demand as product life cycle impacts are incorporated into customers' procurement criteria	3	5	5	-	-	-	・Conducting and disclosing product life cycle assessments ・Obtaining environmental certifications ・Monitoring market trends and strengthening communication with customers
	Technology		Use of water resources in manufacturing processes	・Increased costs from introducing technologies and equipment to improve water use efficiency in manufacturing processes	2	4	4	1	3	3	・Monitoring technology trends ・Promoting initiatives to improve water use efficiency based on site locations and whether they are in priority areas
	Reputation, liability		Emissions of air and water pollutants from manufacturing processes	・Fines and compensation for damages resulting from accidental releases of air or water pollutants	3	4	4	3	3	3	・Conducting measurements required by laws and regulations, continuously monitoring key parameters, and complying with regulatory limits ・Establishing voluntary standards for wastewater and implementing alarms and shutoff measures based on these standards ・Conducting environmental patrols and emergency response drills
Physical	Acute	Dependencies	Disaster mitigation in manufacturing processes	・Increased severity of floods and storms due to the degradation of nature in surrounding areas	3	3	3	3	4	4	・Assessing current and future risks of water-related disasters at major sites and promoting BCP (Business Continuity Plan)
	Chronic		Water supply services and water flow regulation in manufacturing processes	・Chronic water shortages due to increased water demand from regional economic development and the impacts of climate change, leading to higher water costs and reduced operations	2	4	4	3	5	5	・Assessing current and future water supply and demand risks ・Promoting initiatives to improve water use efficiency based on site locations ・Promoting initiatives to optimize water use in accordance with relevant guidelines

10. Material Opportunities



The NGK Group assessed potential opportunities in light of projected changes in policy, markets, society, and the natural environment under Scenario 1 and Scenario 3 of our scenario analysis. We identified material opportunities based on positive impacts extracted in Section 2-2, "Mapping Positive Impacts from Products and Services," as well as opportunities arising from existing NGK Group initiatives. Table 15 presents these findings.

Our products and services generate positive impacts, including reductions in water and air pollutant emissions, more effective use of resources, and waste reduction. In Scenario 1, where the transition to nature positive advances, we anticipate market opportunities for expanded product demand in the medium term and beyond, driven by tightening environmental policies and growing societal demand for carbon neutrality and resource recycling.

In product manufacturing, we see opportunities to reduce costs and minimize negative impacts in our manufacturing processes by improving water use efficiency and reducing waste and pollutants. We also believe that ongoing initiatives, such as ecosystem conservation on company-owned land, create opportunities to enhance our brand reputation.

Through these opportunities, the NGK Group aims to expand product demand and strengthen its brand reputation, with the goal of achieving sustained improvement in corporate value over the medium to long term. (Table 15)

Table15 Material Opportunities and Expected Benefits for the NGK Group

Category	Positive impact	Opportunity	Timeframe
Market/products & services	・Water/atmospheric pollutant emission reduction through wastewater/air discharge purification ・Reduction in negative impact on nature from resource extraction due to more efficient resource use (rare metals recovery, yield improvement)	・Increased demand for automotive emissions control components, sensors, membrane separating systems (CO_2 separation), high-temperature dust collectors, and refractory products	Mid-term～
	・Reduction in waste through longer product lifespan, more compact products, recycling	・Increased demand for lithium-ion rechargeable battery “EnerCera” (waste reduction through maintenance-free operation and compact size) ・Increased demand for firing setters (waste reduction through longer service life) ・Increased demand for maintenance of low-level radioactive waste treatment systems (waste reduction through extended service life)	Mid-term～
	・Rare metal disuse resulting in lower mining volume and lower negative impact on natural environment from mining	・Higher demand for products using recycled metals	Mid-term～
Resource efficiency/reputation	・Reduction in all negative impacts of production	・Cost reduction and reputational gain from more efficient water use, measures to reduce waste/pollutant generation	Mid-term～
Reputation	・Lower impact from land alteration, pollution due to resource extraction	・Reputational gain through lower negative impact from raw materials extraction/production due to use of recycled metals, certified raw materials	Mid-term～
	・Local nature/ecosystem conservation	・Reputational gain from measures to protect ecosystems on our land, maintenance of green space to preserve ecosystems	Mid-term～

A. Metrics for Risks and Opportunities
B. Metrics for Dependencies and Impacts
C. Targets and Performance

The "Metrics and Targets" pillar of the TNFD recommendations calls for disclosure of the metrics, targets, and performance data used to assess and manage nature-related risks and opportunities as well as dependencies and impacts.

For metrics, the NGK Group tracks and discloses a range of environmental data generated through our business activities.

For targets, we have established the sixth 5-Year Environmental Action Plan as our environmental goals for FY2026 to FY2030.

We track and manage performance against these targets through progress updates under the plan and actual results from our environmental data.

Building on the above, and in alignment with the global core disclosure metrics recommended in the TNFD recommendations, Table 16 presents our key metrics for dependencies and impacts as currently compiled, and Table 17 presents our metrics for risks and opportunities.

Table16 Metrics for Measuring Dependencies and Impacts

Metric no.	Driver of natural change	Indicator	Metric	Performance Data Reference
—	Climate change	GHG emissions	Greenhouse gas (GHG) emissions	Environmental Data: “Greenhouse Gas (GHG) Emissions”
C1.0	Land/freshwater/ ocean-use change	Total spatial footprint	Total land area managed by NGK Group	Environmental Data: “Conservation and Restoration of Biodiversity”
C1.1		Extent of land/freshwater/ ocean-use change	Area conserved within C1.0	Environmental Data: “Conservation and Restoration of Biodiversity”
C2.0	Pollution/pollution removal	Pollutants released to soil split by type	-	Not disclosed because there are no releases to soil.
C2.1		Wastewater discharged	Water discharge by destination	Environmental Data: “Water Resource Conservation”
C2.2		Waste generation and disposal	Waste emissions	Environmental Data: “Waste Management”
C2.3		Plastic pollution	Plastic waste emissions	Environmental Data: “Waste Management”
C2.4		Non-GHG air pollutants	VOC and PRTR substance emissions to air	Environmental Data: “Chemical Management”
C3.0	Resource use / Resource replenishment	Water withdrawal and consumption in water-scarce regions	Water withdrawal from water-stressed areas as a proportion of total water withdrawal	Environmental Data: “Water Resource Conservation”
C3.1		Volume of high-risk natural primary commodities sourced from land, marine and freshwater ecosystems	-	Not disclosed because the relevant raw materials were not used.

Table17 Metrics for Measuring Risks and Opportunities

Metric no.	Category	Indicator	Metric	Performance Data Reference
C7.0	Risk	Amount and proportion of assets, liabilities, revenue and expenses assessed as vulnerable to nature-related transition risks	Ratio of net sales in water priority areas to total net sales	Environmental Data Collection: “Water Resource Conservation”
C7.1		Amount and proportion of assets, liabilities, revenue and expenses assessed as vulnerable to nature-related physical risks	Impact on operations at production sites in water-stressed areas when physical risks materialize	CDP 3.1.2
C7.2		Nature and amount of significant fines, penalties and litigation incurred during the year due to negative nature-related impacts	Number of serious violations	Environmental Data Collection: “Environmental Risk Management”
C7.3	Opportunity	Capital expenditure, financing or investment deployed toward nature-related opportunities, by type of opportunity, with reference, where relevant, to green investment taxonomies of governments or regulators, or taxonomies developed by third-party industry bodies or NGOs.	Research and development expenses for Products Contributing to Environmental Protection, including the product groups described under “Positive Impacts of Major Products and Services”	Environmental Data Collection: “Products/Services Contributing to Environmental Protection”
C7.4		Increase and proportion of revenue from products and services producing demonstrable positive impacts on nature, with a description of the impacts	Net sales ratio of products and services contributing to environmental protection, calculated based on the definition of products and services contributing to environmental protection	Environmental Data Collection: “Products/Services Contributing to Environmental Protection”

Environmental Data Collection
5-Year Environmental Action Plan

Future Initiatives

Through this assessment conducted in alignment with the TNFD recommendations, the NGK Group systematically identified nature-related dependencies and impacts as well as risks and opportunities across our value chain. We also identified priority areas and material risks and opportunities requiring focused action, and clarified the relationship between our business activities and nature at each stage, from raw material procurement and product manufacturing to the use phase of our products and services.

Going forward, we will continuously track and manage metrics related to dependencies and impacts as well as risks and opportunities, while monitoring changes in the business environment. Drawing on this assessment's findings, we will consider conducting detailed investigations, focusing primarily on our identified priority areas and material risks and opportunities, as needed. We will also advance value chain-wide issue identification and response through supplier questionnaires and engagement. Furthermore, we will pursue an integrated approach that encompasses other global environmental initiatives, including Carbon Neutrality.

Detailed Assessment of ”Priority Locations”: Water Stress Assessment at NGK Ceramics Mexico

As a detailed assessment of a selected priority site, NGK Ceramics Mexico serves as a case study. The site is located in a high water stress area and relies primarily on groundwater. Groundwater is generally more difficult to monitor for water level fluctuations than surface water. We used GETFLOW, a water cycle simulation model developed by Chiken Kankyo Technology Co., Ltd., to assess conditions in the water withdrawal catchment and evaluate the impact of water use on surrounding areas. We conducted the detailed assessment following the process shown in Table 18. This section explains our impact assessments of water withdrawal and our water stress assessments.

Table18 Assessment Process

Assessment Process	Main actions
Build a water cycle model	・Construct a water cycle simulation model using climate, terrain, land use and land cover, geological and water use data inputs
Identify drainage basin	・Use the simulation to identify the catchment area for the groundwater intake and the area this impacts
Assess water intake impact	・Assess the extent and amount of impact the groundwater intake has on the surrounding area
Assess water stress	・Assess the level of stress on the water catchment area and drainage basin

Impact Assessment of Water Withdrawal at NGK Ceramics Mexico

NGK Ceramics Mexico conducted simulation analyses to assess the impact of its water withdrawal on surrounding groundwater levels. We ran two scenarios, one with water withdrawal and one without, and examined the resulting difference in groundwater levels (Figure 9).

The results showed a maximum groundwater level decline of approximately 0.15 m centered on NGK Ceramics Mexico, and a decline of approximately 0.1 m across an area within a radius of approximately 1 km. Groundwater level monitoring data for the area also indicated seasonal fluctuations of 2 to 6 m. Based on these findings, we concluded that the impact of our water withdrawal on groundwater levels is limited.

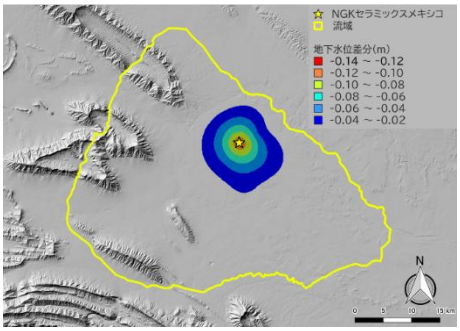


Figure9 Changes in Surrounding Groundwater Levels During Water Withdrawal

Detailed Assessment of Water Stress at NGK Ceramics Mexico

Based on the impact assessment results described above, we confirmed that NGK Ceramics Mexico's water withdrawal has a limited effect on groundwater levels.

To understand the need for water resource management with the goal of continuing operations in this region over the medium to long term, we conducted a detailed water stress assessment. For this assessment, we analyzed relevant literature and data on water demand and water availability in the area from the perspectives of the catchment area and the river basin. Note that this assessment evaluates the overall water resource conditions of the region where NGK Ceramics Mexico is located, and does not measure the facility's actual water withdrawal volume.

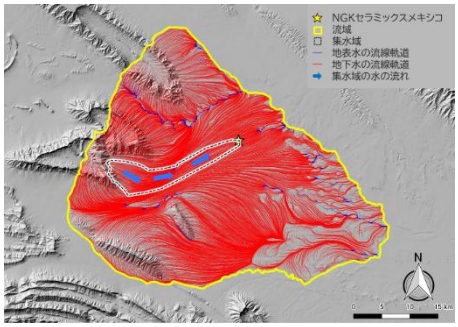


Figure10 Water Flow Pathways in the Site's Watershed

To assess water stress in NGK Ceramics Mexico's catchment area (within the dotted-line boundary) and river basin (within the yellow-line boundary), we conducted a three-dimensional simulation of groundwater and surface water flow pathways. The results are shown in Figure 10. The assessment first revealed that NGK Ceramics Mexico draws water that permeates from the mountainous area to the west, flowing from west to east, as shown by the arrows within the dotted-line boundary in the figure below. The water stress assessment then showed that the water stress level*10 in the catchment area is 3 on a 5-point scale, while the broader river basin that encompasses NGK Ceramics Mexico and downstream areas has a water stress level of 4. These results indicate that, while the impact of our water withdrawal is limited, the region where the facility is located has high water demand and is a high water-stress area.

*10 Water stress level: the water stress criteria as defined in the "Aqueduct Water Risk Atlas" provided by the World Resources Institute (WRI)

Prior to conducting this simulation, The NGK Group had already carried out water risk assessments at our major production sites and recognized NGK Ceramics Mexico as being located in a high water-stress area. We have therefore already implemented measures such as reusing water within the plant. Given the growing global trend toward water resource management at the river basin level, we will continue to compare the findings of this study with our actual water withdrawal data and explore initiatives that help reduce water stress not only in the catchment area but also across the broader river basin.