Environmental Initiatives

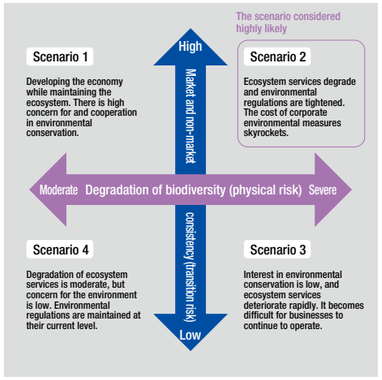
Assess Phase: Assess Nature-related Risks and Opportunities

In identifying risks and opportunities, we conducted an analysis of scenarios based on TNFD guidance. The analysis was divided into four scenarios based on the degree of market and non-market consistency (transition risk) and degradation of ecosystem services (physical risk).

Of the scenarios presented on the right, Scenario 2 was considered the most feasible. Based on this scenario plus the priority areas identified in the Locate phase and the nature-related dependencies and impacts identified and evaluated in the Evaluate phase, and also taking into consideration our definitions of the time horizons of risks and opportunities*1, we identified the risks and opportunities related to natural capital that we believe are important to the Company. We also considered how to respond to the identified risks and opportunities, taking into account our business lines, geographic regions, and value chain.

*1: Defined as short-term (less than 3 years), medium-term (more than 3 years to 10 years ahead), and long-term (more than 10 years to 30 years ahead).

TNFD Scenario Analysis



Summary of Nature-related Risks and Opportunities

Risk/ Opportunity	Area	Important dependencies and impacts	Type of risk/opportunity		Timing of occurrence	Risk/Opportunity factors	Countermeasures
Risk	Upstream	Tighter nature-related regulations	Transition risk	Markets and technologies	Medium to long term	Increased procurement costs due to tighter environmental regulations in raw fuel producing regions.	Strengthen supplier engagement and devise measures with suppliers.
		Water stress, flooding	Physical risk	Chronic	Medium to long term	Unstable supply due to water issues in raw material production regions.	Reduce procurement risk by diversifying procurement regions and suppliers.
	Direct operations	GHG emissions	Transition risk	Markets and technologies	Medium to long term	If the amount of CO_2 from production activities cannot be reduced, the costs associated with carbon taxes and emission credits will increase.	Reduce CO_2 emissions by improving productivity, utilizing renewable energy, and introducing decarbonization facilities.
		Solid waste generation and release	Transition risk	Reputation	Long term	Increasing calls from municipalities and citizens for solid waste reduction and circular economy promotion, increasing waste disposal costs.	Reduce solid waste by improving productivity, promoting recycling, etc.
		Water supply	Physical risk	Chronic	Medium to long term	Inability to secure the water needed for production restricts the manufacture of products.	Gain understanding of water consumption per unit of production. Promote efficient use of water and reduce water consumption. Secure stable water supply by maintaining water storage capacity and diversifying water sources.
		Flooding and storms	Physical risk	Acute	Medium to long term	Disaster countermeasure costs incurred at major production sites.	Prepare for disasters and routinely reinforce facilities and emergency materials. Standardize response procedures and provide education and training.
		Flooding and storms	Physical risk	Chronic	Long term	Flooding causes shutdowns or reduced production, resulting in lower sales and impairment losses on manufacturing facilities.	Prepare for disasters and routinely reinforce facilities.
		Water purification	Physical risk	Chronic	Long term	Deterioration in the quality of water used results in deterioration in product quality and incurs purifying costs.	Maintain water storage capacity and consult with government agencies.
Opportunity	Upstream	Carbon neutrality	Transition opportunity	Markets and technologies	Medium to long term	Meet environmental regulations through decarbonization at raw fuel suppliers.	Utilize renewable energy at suppliers' manufacturing sites.
	Direct operations	Developing and promoting the spread of decarbonization-related products	Transition opportunity	Markets and technologies	Medium to long term	The expansion of the decarbonization market increases sales of our environmental contribution products and improves profitability.	Develop and promote sales of environmental contribution products, improve processes, and promote recycling.
		Carbon neutrality	Transition opportunity	Markets and technologies	Short to medium term	Our carbon neutrality efforts are appreciated by stakeholders and the value of the Company in the market rises.	Reduce CO2 emissions associated with our products by utilizing renewable energy and improving processes.

Metrics and Targets 2: Natural Capital

Prepare Phase: Prepare to Respond and Report

Based on the results of our analysis of the identified risks and opportunities, we further selected the indicators and targets related to natural capital that we considered most important in light of our medium- to long-term strategy. We have identified these issues as materialities and are addressing them with KPIs. We aim to achieve these KPIs while allocating internal resources as appropriate.

Indicators and Targets for Natural Capital

Item	Indicator	Target	FY2024 results
GHG emissions	Scope1, 2	Reduce GHG emissions in FY2030 by 23% compared to FY2020	18.8%
Ratio of environmental contribution product sales to net sales	Sales of environmental contribution products	Achieve a ratio of environmental contribution product sales to net sales ratio of at least 14% in FY2025.	11.3%

Going forward, we will disclose indicators with reference to the TNFD core global disclosure indicators and strive to reduce our environmental impact.

Core Global Disclosure Indicators for Dependencies and Impacts

Dependency/impact indicator		Scope	Unit	2022	2023
GHG emissions (Scope 1+2)		non-consolidated	t-CO_2e	60,319	50,545
Soil pollutants (PRTR substances)		non-consolidated	tons	0	0
Water pollution	Wastewater	non-consolidated	thousand m^3	1,629	1,712
	COD	non-consolidated	tons	5.6	7.1
	Total phosphorus	non-consolidated	tons	3.4	3.2
	Total nitrogen	non-consolidated	tons	13.3	14.6
	PRTR substances	non-consolidated	tons	0.066	0.056
Waste	Total industrial waste discharged	non-consolidated	tons	9,056	11,732
	Total specially controlled industrial waste discharged	non-consolidated	tons	4,193	6,141
	Incineration	non-consolidated	tons	3,384	5,157
	Landfill disposal	non-consolidated	tons	757	1,719
	Other disposal methods	non-consolidated	tons	1,581	1,654
	Disposal method unknown	non-consolidated	tons	0	0
	Recycled amount	non-consolidated	tons	3,322	3,290
Air pollution	Volatile organic compounds (VOC)	non-consolidated	tons	No data	No data
	NOx	non-consolidated	tons	10.8	11.5
	SOx	non-consolidated	tons	0.9	1.2
	Particulate matter	non-consolidated	tons	2.5	2.5
	PRTR substances	non-consolidated	tons	4.2	1.7
Compliance breaches		non-consolidated	Cases	0	0
Recycling of hazardous waste in manufacturing processes		non-consolidated	%	0.468%	0%
Recycling of used hazardous waste		non-consolidated	%	36.2%	27.8%

Going forward we will continue to proactively disclose information concerning climate change and natural capital with reference to the TNFD Framework. We will also seek to improve and promote sustainability activities through dialogue with our stakeholders to realize a sustainable society.

Specific Initiatives

Forest-Conservation Activities

Tokuyama Factory participate annually in the Machi-to-Mori-to-Mizu Exchange Conference (consisting of forest conservation activities), which has been held in the Shunan District since 1997. Through these activities, we learn about how forests facilitate watershed cultivation and help prevent global warming. We will continue to promote forest-conservation activities as a member of the local community and strive to maintain its ecosystem.


Machi-to-Mori-to-Mizu Exchange Conference (Tokuyama Factory)

Local Environmental Conservation Activities

We engage in the city clean-up activities around our offices and clean-up activities along beaches and around dams.

Cleanup activities around the plant (Fukushima No. 1 Factory)

Sakura-no-Sato Clean-Up Operation (Fukushima No. 2 Factory)

Major Waterfront Clean-Up Operation (Aichi Factory)

Cleanup activities around the head office (Head Office and R&D Division)