

Risk List

Risk Assessment Results for Direct Operations (Domestic Manufacturing Sites)

Assessment (=Priority): High, Medium, Low

Risk Classification		Risk Description	Relevance to Nature	Financial Impact	Assessment		Key Countermeasures
					TNFD #1	TNFD #3	
Physical Risk	Acute	1. Risk of environmental pollution due to chemical spills	Manufacturing: Accidental release of hazardous chemicals	Damages and restoration costs, operational shutdown	High	High	<ul style="list-style-type: none"> Implementation of environmental assessments and risk evaluations based on Responsible Care and ISO 14001 Compliance with environmental laws, ordinances, and local agreements; thorough implementation of chemical substance management systems Maintenance of cooperative relationships with local governments, fire departments, and other entities Regular inspection of equipment, replacement of aging equipment, and implementation of redundant safety devices (e.g., oil containment barriers for leak prevention around tanks, water-stopping measures in drainage facilities such as pits) Establishment of initial response procedures for accidents, notification systems for relevant agencies, and clear containment protocols Training and drills: Employee education and regular disaster prevention drills (at least annually) Establishment of cooperative frameworks with local governments, fire departments, and environmental authorities
	Chronic	2. Risk of water resource dependency at manufacturing sites	Manufacturing: Water use and wastewater dependency	Increased water treatment and alternative water source costs	High	High	<ul style="list-style-type: none"> Continuation and strengthening of existing water conservation measures (production efficiency, water saving and recycling) Compliance with environmental laws and ordinances, maintaining voluntary management standards stricter than legal requirements Contribution to local water resource conservation activities (regular cleaning of waterways near facilities) Regular water risk assessments at manufacturing sites
Transition Risk	Regulation	3. Risk related to wastewater regulations	Manufacturing: Impacts on water quality from wastewater	Wastewater treatment facility investment and operational costs, regulatory compliance costs	Medium	High	<ul style="list-style-type: none"> Proper operation and management of wastewater treatment facilities Compliance with environmental laws and ordinances, maintaining voluntary management standards stricter than legal requirements Contribution to local water resource conservation activities (regular cleaning of waterways surrounding the facility)
		4. Risk of operational constraints due to stricter chemical regulations	Manufacturing: Chemical use and emissions	Deterioration in ESG ratings, facility costs, regulatory compliance costs	High	High	<ul style="list-style-type: none"> Implementation of environmental assessments based on Responsible Care and ISO 14001 Compliance with environmental laws and ordinances, continual improvement of chemical substance management systems Continued research and development of eco-harmonized products and strengthened market deployment Optimization of the supply chain through local production (reducing CO₂ emissions from transportation) Expansion of the adoption of renewable energy (such as solar power generation) Continuous monitoring of trends in domestic and international chemical substance regulations (REACH, PRTR, Chemical Substance Control Law, etc.) and establishment of a system for early response to changes Promotion of compliance activities throughout the entire lifecycle of chemical substances—from manufacturing and transportation to waste disposal (through awareness-raising and promotion by the Responsible Care Promotion Committee)
		5. Risk from strengthened waste disposal regulations and circular economy compliance	Manufacturing: Environmental impacts from waste and packaging materials	Increased waste disposal costs, packaging material changeover costs	High	Medium	<ul style="list-style-type: none"> Promotion of waste reduction and zero emissions activities Reduction of plastic usage through product specification changes Promotion of green purchasing, such as recycled plastics Setting and monitoring of waste management targets based on ISO 14001

Risk Assessment Results for Downstream Agricultural Fields

Risk Classification		Risk Description	Relevance to Nature	Financial Impact	Assessment		Key Countermeasures
					TNFD #1	TNFD #3	
Physical Risk	Acute	6. Compound risk from agrochemical leakage during natural disasters	Downstream: Acute impacts on ecosystems	Damages and restoration costs, reputational risk	Medium	Medium	<ul style="list-style-type: none"> Promotion of compliance with usage standards under the Pesticide Control Law Thorough provision of warnings on proper storage and handling on product labels and package inserts Provision of information and awareness-raising campaigns on proper storage and disposal of pesticides
	Chronic	7. Risk of reduced agrochemical demand due to climate change	Downstream: Changes in agricultural environment due to climate change	Declining product demand, market structure changes	Medium	High	<ul style="list-style-type: none"> Research, development, and expansion of eco-harmonized products supporting IPM (Integrated Pest Management) promotion Research, development, and expansion of biostimulants Development and expansion of precision agriculture products, including those for smart farming and water-saving agriculture Deployment of agricultural solutions utilizing digital technology (e.g., AI-based prediction of disease, pests, and weeds)
		8. Risk of reduced agrochemical demand due to water resource constraints	Downstream: Impacts on agriculture due to water resource	Declining product demand, market contraction	High	High	<ul style="list-style-type: none"> Development and facilitation of registration for water-saving technologies (formulations compatible with low-volume spraying) Facilitation of registration for products compatible with precision agriculture (spot spraying and localized application) Market development products for dry regions and water-scarce areas

			constraints				
		9. Risk of demand fluctuation due to changing pest and disease occurrence patterns	Downstream: Uncertainty in pest and disease outbreaks due to climate change	Difficulty in forecasting product demand, inventory risk	Medium	High	<ul style="list-style-type: none"> • Research, development, and expanded adoption of climate-resilient agrochemicals (weather-resistant, long-lasting) • Provision of control technologies tailored to changing pest patterns, including on-site analysis (e.g., spray efficiency optimization) • Monitoring and responding to domestic and international regulatory trends
		10. Risk of specialty crop quality deterioration due to localized climate change	Downstream: Quality decline in specialty crops	Fluctuations in demand for specialty crop materials	High	High	<ul style="list-style-type: none"> • Research and development, and expanded adoption of crop protection products to respond to climate change
Transition Risk	Regulation	11. Risk of environmental runoff and strengthened residue and discharge regulations due to increased agrochemical usage	Downstream: Societal expectations for proper application during use	Regulatory compliance costs, launch delay risk	High	High	<ul style="list-style-type: none"> • Provision of information and awareness-raising campaigns regarding the proper use of agrochemicals • Continuous research and development, and expanded adoption of eco-harmonized products