



Water and wastewater

GRI 2-16,25/3-3/303-1,2,3,4,5

Water stress (drought) assessment

Water stress (drought)*¹ was assessed at domestic and overseas production sites using Aqueduct tools from the World Resources Institute (WRI). In 2024, we found that our European and Southeast Asian sites are in areas that will be under water stress in 2030. It is assumed that the risk of water stress will be even higher at our South American sites by 2050. We will continue our efforts to reduce water consumption.

Drought risk assessment results by Aqueduct

(Number of production sites)

Drought risks	Water stress	2024	2030	2050
Large	Over 40%	2	2	3
Medium	20-40%	14	15	14
Small	Under 20%	7	6	6

Prevention of water pollution

Plant wastewater resulting from production activities is properly treated through treatment facilities and discharged outside the plant. We monitor biochemical oxygen demand (BOD), chemical oxygen demand (COD), and suspended solids*²

Changes in wastewater monitoring items

(tons/year)

Category		2020	2021	2022	2023
NOF	BOD	34	50	37	33
	COD	60	67	44	52
	Suspended solids	33	31	22	36
Domestic Group	BOD	38	52	39	36
	COD	60	68	44	52
	Suspended solids	40	36	25	42
NOF Group	BOD	104	93	67	74
	COD	219	154	148	171
	Suspended solids	56	46	44	58
Violations of laws and regulations (no.)		0	0	0	0

among others contained in wastewater. Along with ongoing equipment upgrades, we are improving our water quality management system and operating in compliance with prescribed limits. In addition, there have been no cases of violations of laws and regulations related to water quality.

*1 Water stress is measured as the ratio of total water withdrawals to available, renewable surface and groundwater supplies. Water withdrawals include consumptive and non-consumptive uses for household, industrial, irrigation, and livestock purposes. Available, renewable water supplies include the impact that upstream consumptive water users and large dams have on downstream water availability.

*2 Particulate substances of 2 mm or less in diameter floating or suspended in water; one of the indicators of water quality.



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Risks and opportunities for water and wastewater

Category	Major risks and opportunities	Overview	Countermeasures
Transition risks	Tighter domestic and international regulations	<ul style="list-style-type: none"> The introduction of new regulations makes it necessary to enhance facilities and strengthen management systems to comply with the new regulations, which increases the associated management costs New wastewater regulations make it impossible to manufacture products as they have been through now, resulting in reduced sales due to lost opportunities 	<ul style="list-style-type: none"> Increased capacity of wastewater processing facilities Development and provision of products with low environmental impact
	Market	<ul style="list-style-type: none"> At production sites in regions with high water risk, procurement costs rise due to higher water prices caused by water shortages At production sites in regions with high water risk, sales decrease due to lost opportunities when operations are interrupted at production plants due to frequent water outages caused by water shortages Aging water infrastructure causes unstable water supply and frequent water outages, interrupting operations at production plants and resulting in lost sales due to lost opportunities 	<ul style="list-style-type: none"> Study of efficient use of water
	Deterioration of evaluation/reputation	<ul style="list-style-type: none"> Delays in complying with regulations and in developing eco-friendly products damage the company's evaluation from investors and its reputation among customers and local residents 	<ul style="list-style-type: none"> Enhancement of information disclosure on content of initiatives
Physical risks	Natural disasters	<ul style="list-style-type: none"> Due to prolonged heavy rainfall causing wastewater processing facilities to exceed their capacity, and damage to facilities caused by typhoons and other natural disasters, it becomes difficult to manage discharges, which in turn causes production to stop, resulting in lost opportunities and lost sales Water cutoffs and droughts due to natural disasters associated with climate change disrupt operations at production plants, resulting in reduced sales due to lost opportunities Increased flooding due to climate change damages production plants at risk of flooding, resulting in asset losses and reduced sales Leaks of pollutants 	<ul style="list-style-type: none"> Increased capacity of wastewater processing facilities Study of efficient use of water
	Chronic risks	<ul style="list-style-type: none"> Excessive groundwater intake causes land subsidence in areas surrounding plants using groundwater, resulting in large compensation for damages and decreased sales due to prolonged shutdowns (Aichi Works) 	<ul style="list-style-type: none"> Study of efficient use of water
Opportunities	Growing needs for products that contribute to water pollution solutions	<p>[Mitigation of water pollution]</p> <ul style="list-style-type: none"> Anti-sticking agents for asphalt mixtures, eco-friendly stern tube bearing oil, biodegradable lubricants, antifreezing agents, lead-free products 	<ul style="list-style-type: none"> Development and provision of eco-friendly products
	Improvement of evaluation and reputation	<ul style="list-style-type: none"> Proactive emission control measures and the development and provision of products that make positive contributions improve the company's evaluation from investors and its reputation among customers and local residents 	<ul style="list-style-type: none"> Enhancement of information disclosure on content of initiatives