



Sustainable Use of Natural Capital

Effective Use of Water Resources

Examples of Initiatives

To maintain production at worksites and conserve nearby aquatic environments, we strive to appropriately manage wastewater, achieve more sophisticated activated sludge treatment, and promote effective water use based on water risk evaluations at each production base.



Protecting the Aquatic Environment

In addition to our initiatives aimed at reducing overall water use, we have realized thorough purification of wastewater from worksites by operating stable and sophisticated wastewater treatment facilities.

● Responding to Increasing Sophistication of Activated Sludge Treatment

At all Works, we are striving to develop management technologies for water treatment that will further reduce our environmental impact and apply these technologies to realize safe and secure wastewater treatment.

At Works, for process wastewater that is difficult to break down, which was conventionally incinerated for treatment, we have developed an activated sludge treatment utilizing microbial immobilization technology to stabilize the process water and reduce treatment costs. We are still considering applying this treatment to a wider scope of water.

 Reduction of Process-derived GHG: Innovations in Wastewater Treatment Technology 

● Water Area Surveys Conducted around Works (Misawa Works)

To confirm the impact of business activities on water areas, we conduct aquatic wildlife surveys of the Sabishiro River, into which process water from the Works flows.

In the Sabishiro River, we confirmed 10 species of precious aquatic benthic organisms, such as a vulnerable species of *Stenothyra* and the endangered species *Cottus reinii*. We determined that we were maintaining ecosystems with extremely good water quality.



Stenothyra



Cottus reinii



Dugesia japonica



A subspecies of *Tubifex tubifex*

● Responding to Water Quality Standards

We are strengthening our voluntary management to continually reduce the COD, nitrogen, and phosphorus in wastewater emitted into the ocean and waterways from wastewater treatment facilities. In addition, we have realized stable treated water quality by enhancing the management technologies used in our water treatment facilities. We are continually working to reduce the impact of water emissions from our plants on Tokyo Bay and other closed coastal waters where regulatory systems have been implemented to control the total water emissions of COD, nitrogen, and phosphorus.

● Promoting the Effective Use of Water

We investigate water risks related to intake, effluence and physical risk at each worksite and Group companies in Japan and overseas. We uncover various issues related to the use of fresh water on the worksite level and assess and manage the associated risks. In addition, we strive to reduce the amount of water we use by examining more effective ways to use water by application, while continuing to maintain and improve the quality of water released from our business sites into public water resources such as the ocean and waterways.



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Water Usage (Sumitomo Chemical Group)

	FY2020	FY2021	FY2022
Sumitomo Chemical Group	992	970	871
(Breakdown 1)			
Sumitomo Chemical	261	269	280
Group companies in Japan	723	693	583
Overseas Group companies	7.99	8.27	7.58
(Breakdown 2)			
Seawater	884	862	764
Fresh water	109	108	107

Note: Water usage volume includes seawater

Wastewater Detoxification Initiatives (Misawa Works)

Wastewater from the Misawa Works goes through general activated sludge treatment, then, after finishing tertiary treatment of activated carbon absorption and the removal of floating substances through coagulation and sedimentation, analysis equipment does quality checks and the water is released into public waterways.



Activated sludge treatment facility

Water risk assessment in areas where major production sites are located

Regarding maintaining production at production bases in the Sumitomo Chemical Group, we conduct water risk evaluations at each production base from the dual perspectives of physical water risks and water quality susceptibility risks.

Evaluating Physical Water Risks

The Group evaluates the baseline water stress in communities where production bases are located as well as underground water stress, the severity of droughts caused by seasonal changes in the water supply, the water storage capacity of the drainage basin, projected changes in water stress, and the percentage of water resources in the drainage basin that are protected.

Evaluating Water Quality Susceptibility Risks of Intake and Effluence

The Group evaluates susceptibility in terms of access to drinking water, water pollution, protected downstream areas, and the presence of endangered species in bodies of fresh water identified by the International Union for Conservation of Nature (IUCN).

Initiatives in regions with declining water resources

Based on the results of water risk assessment, we are taking measures tailored to local needs.

Locate	Around Bhavnagar Plant of Sumitomo Chemical India Ltd.
Evaluate	Water resources are decreasing due to population growth, increased demand for agricultural water, and decreased precipitation.
Assess	In the event of a water supply shortage, Sumitomo Chemical India will not be able to secure sufficient water for its production activities and will not be able to maintain stable operations.
Prepare	The company purchases domestic wastewater from households, treats it in the factory using earthworm farming technology, and reuses it. This approach reduces the use of river water by more than 70% while ensuring a stable water supply for production activities.



Water treatment at the Bhavnagar plant

Effective Use and Management of Yoshioka Springs (Ehime Works)

The name of Yoshioka Springs comes from the Yoshioka family's residence and pond. To provide water to the Kawahigashi district, which had been struggling with water shortages, the springs were created in 1917 by the local residents, and a canal was completed in 1921. After passing through the ownership of several companies, Sumitomo Chemical currently manages the springs.

The supply of water from Yoshioka Springs uses height difference and does not require an outside force. This important source of water for the Company is also used in districts throughout the city for irrigation. To preserve the aquatic environment, we remove weeds and clean the springs and grounds at Ehime Works around three times a week.



Present-day Yoshioka Springs