



Materiality
Water

Our approach

Water is a finite resource. In recent years, water-related disasters, the gap between water supply and demand, and other problems concerning water have become global issues. These are critical issues for our business operations, which involve products that use water as a principal raw material. The Yakult Group has set fixed targets to reduce water consumption (per production unit) and formulated water management plans to address water risks at production bases in order to promote the conservation and sustainable use of water resources.



Risks and opportunities

Risks	Opportunities
<ul style="list-style-type: none"> ● Operational suspensions due to flooding ● Production interruptions due to water shortages 	<ul style="list-style-type: none"> ● Development of sustainable manufacturing and management methods that use less water

Policies/Guidelines/Targets

- Yakult Basic Policy on the Environment
- Environmental Vision 2050
- Environmental Targets 2030
- Environmental Actions (2021–2024)

Targets and achievements

Target	Achievement
Reduce water consumption per production unit at dairy product plants in Japan by at least 3% compared to the level in fiscal 2018 by the end of fiscal 2024	▶ Water consumption per production unit at dairy product plants in Japan reduced by 2.4% Reduction achieved by updating equipment and changing working methods

Challenges and solutions

The Yakult Group currently uses around 6 million m³ of water annually at its plants around the world. Because water is both a finite resource and our principal raw material, we view sustainable water use as a key challenge. Alongside our ongoing efforts to conserve more water by reviewing water use and recycling at business sites and plants around the world, we strive to understand water-related risks at each location and formulate water management plans accordingly.

Understanding water risks

To use water sustainably, we believe that we are required to recognize our water risks, including water supply and demand outlook in the river basins where our plants are located, the possibility of water-related disasters, and impacts on public health and ecosystems. Since fiscal 2017 we have thus engaged an external organization to perform water risk evaluation.

In 2020 we used the WRI Aqueduct*1 and other tools to evaluate water risks and identify which Yakult Group production bases are located in regions with high water stress levels.

Results showed that 28% of our production bases are located in areas of high water stress,*2 with water use in these areas totaling 2,047,922 m³ in fiscal 2020, or 33.2% of our total water use that year.

*1 Aqueduct: A tool for evaluating water risks developed by the World Resources Institute (WRI), a global environmental NGO
 *2 Production bases that the WRI Aqueduct tool ranks as having “extremely high” and “high” baseline water stress

Countries with high water risk (Aqueduct Water Risk Atlas)

- ① Qatar ② Israel ③ Lebanon ④ Iran ⑤ Jordan ⑥ Libya ⑦ Kuwait
 - ⑧ Saudi Arabia ⑨ Eritrea ⑩ United Arab Emirates ⑪ San Marino ⑫ Bahrain
 - ⑬ India ⑭ Pakistan ⑮ Turkmenistan ⑯ Oman ⑰ Botswana (in descending order of risk)
- : Countries where Yakult conducts sales ■: Countries where Yakult conducts production and sales

Water risk assessment in areas with production bases (WRI Aqueduct: Baseline water stress—total, overall water risk)

Risks	No. of production bases	
	Japan	Overseas
Extremely high (4–5)	0	1
High (3–4)	0	10
Medium to high (2–3)	4	8
Low to medium (1–2)	7	8
Low (0–1)	1	0
Total	12	27

Water risk assessment in areas with production bases (WRI Aqueduct: Future Projections/2040/Pessimistic)

	No. of bases	Extremely high	High
Japan	12	1	3
Overseas	27	9	7
Supplier bases	372	35	77
Total	411	45	87

Water risk survey cost

Fiscal year	2017	2018	2019	2020	2021
Cost (millions of yen)	0	0.9	1.2	0	0

Effective use of water resources

We use water in various ways at Yakult Group plants, not only as a raw material in products but also to clean production equipment and cool products and machinery.

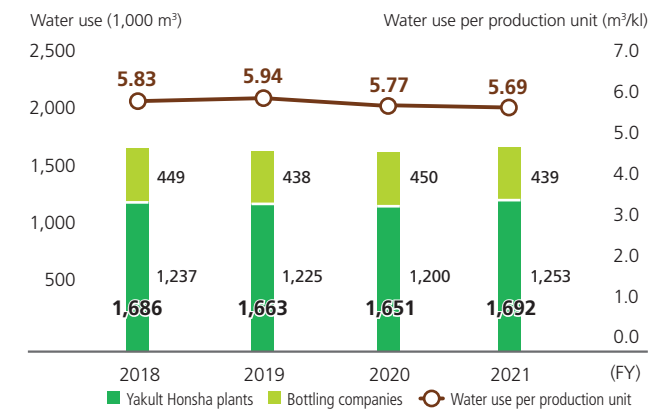
In fiscal 2021, Yakult Honsha plants and bottling companies used approximately 1.69 million m³ of water in total (Yakult Honsha plants: approx. 1.25 million m³, bottling companies: approx. 0.44 million m³). Reducing total water usage per production unit is one objective of Environmental Actions (2021–2024), and water conservation initiatives at plants have reduced total water usage per production unit by 2.4%.

The primary initiative at plants in fiscal 2021 was conserving water by altering automated washing times and improving equipment operation, in line with ISO 14001 activities at each plant.

In addition, water use at the building occupied by the head office and affiliated companies was 4,159 m³.

To make more effective use of limited water resources, the Yakult Group will continue to pursue water conservation by introducing technologies such as those for water reuse and recycling.

Water use at Yakult Honsha plants and bottling companies (total and per production unit)



Note: Water use per production unit is calculated using data from bottling companies and five Yakult Honsha plants, excluding plants that produce cosmetics and pharmaceuticals.

Reusing water generated by the water purification process: Fukushima Plant

Products at the Fukushima Plant are manufactured using tap and purified water. Purified water is created by removing impurities from tap water using special-purpose equipment. A large amount of water with concentrated impurities is generated in the process, and this water used to be treated at the wastewater treatment facility within the plant and discharged to the sewers.

Although this concentrated impure water is not suitable for drinking or use in the production process, it meets quality standards for industrial water, so it is now reused for cooling products and machinery. This has dramatically reduced tap water consumption and the amount of water discharged to the sewers.

■ Reducing water use in automated equipment cleaning

Production equipment at plants, including pipes, tanks and sterilizers, is automatically cleaned with detergent after production ends. The process includes pre-rinsing prior to cleaning and post-rinsing to eliminate detergent residues after cleaning. While these steps are very important to maintain product quality, they account for a large proportion of the water used in production. Our initiatives to reduce the amount of water plants use for pre- and post-rinsing, with full verification and strict quality control, have enabled us to reduce annual water use by approximately 1,440 m³.

Yakult A&G Water Purification System

At every plant in the Yakult Group, regardless of treatment method, our wastewater management is based on voluntarily adopted standards that are more stringent than the wastewater standards required by law and local government ordinances.

At our dairy product plants, we have introduced the Yakult A&G Water Purification System. This system uses *Yakult* containers with the bottoms removed (*Yakult* filter material), in which microorganisms take up residence and break down contaminants in the water.

This system has been installed at four Yakult Honsha plants (Fukushima Plant, Ibaraki Plant, Fuji Susono Plant and Hyogo Miki Plant) and several bottling company plants (Yakult Iwate Plant, Yakult Aichi Plant and Yakult Okayama Wake Plant). Outside Japan, the system was introduced at the Sukabumi Plant operated by P.T. Yakult Indonesia Persada in 2010.

Preventing water pollution and conserving biodiversity

At Yakult Honsha dairy product plants and bottling companies, wastewater such as cleaning water generated during production processes is properly treated at plant wastewater treatment facilities and then discharged into sewers or rivers. Knowing the impact our plants can have on the natural environment of surrounding waterways, at least once per year each plant runs educational training on dealing with emergencies—such as unforeseen situations in the wastewater treatment facility, or oil leaking from a transport vehicle on plant premises—to improve awareness among workers and strengthen our systems for preventing water pollution.

We also endeavor to conserve biodiversity in and around waterways. We use IBAT* to perform ecological risk assessments, and have confirmed that the Abukuma River coast downstream from the Fukushima Plant is a landing zone for northern pintail ducks and designated a Key Biodiversity Area (KBA).

* IBAT (Integrated Biodiversity Assessment Tool): A tool developed by the IBAT Alliance biodiversity project in partnership with the United Nations Environment Programme

Related information ▶ p. 41 Assessment of biodiversity risks for existing operations ▶▶▶

Initiatives in each country and region

■ Reusing treated water to water green spaces: Yakult S.A. de C.V. (Mexico)

At our Ixtapaluca Plant, water treated at wastewater treatment facilities is reused to water green spaces around the plant. In 2021, a monthly average of 1,413 tons for a yearly total of 16,956 tons of water was used for watering.

■ Installing production wastewater purification facilities: Yakult China Group

At our Wuxi Plant, we have installed production wastewater treatment facilities that meet China's Class 1A wastewater standards. Class 1A wastewater is considered of sufficient quality for reuse as industrial water, and the wastewater at our Wuxi Plant is used by plants belonging to other companies after passing through the final water treatment location. We have also installed domestic wastewater purification facilities at our Wuxi Plant and ensure that wastewater meets the standards for external discharge before it is discharged.

Key initiatives in effective use of water by country/region

Country/region	Initiatives
Taiwan	Installing a rainwater recycling system. In 2021, reused 94 tons for toilet water, plant watering, etc.
Thailand	When manufacturing tanks were updated, 8 old tanks were used to store wastewater which was then reused for cleaning vehicles and other purposes. Achieved zero wastewater discharge to rivers in 2021 as a result.
South Korea	Reusing wastewater from the automatic cleaning of production facilities to reduce water consumption.
Philippines	Reusing water used for cooling during production, along with rainwater, in plant watering, fire hydrants, toilets and elsewhere.
Indonesia	Installing water purification facilities for production wastewater at Sukabumi Plant in 2011. Water quality in plant checked daily and audited monthly by external organizations.
China (Tianjin)	Continuously using recycled water as toilet water.
Brazil	Purifying wastewater at third production facility starting from 2021, and reusing an average of 12 m ³ per month as toilet water.
United States of America	Installing a rainwater reuse system on the head office and plant grounds and reusing water to water plants.
India	Using processed wastewater from the plant to water the plants on the premises.