

Environmental Activities Report

Aiming for a society in which “people and the planet co-exist,” we will contribute to the health of the Earth by acting with due consideration to conserving the environment in all aspects of our corporate activities.

Contents

21	Environmental management
27	Materiality Climate change
32	Materiality Plastic containers and packaging
36	Materiality Water
39	Resource recycling
40	Biodiversity

Fiscal 2021 legal compliance

There were no serious violations of laws or internal regulations related to the environment in fiscal 2021. Nor were any fines or penalties paid in relation to the environment.



Photo courtesy of Hyogo Miki Plant

Message from the chief officer

**Masao Imada**

Director and Senior Managing Executive Officer
Divisional General Manager of Management Support Division

Yakult's business development and environmental initiatives

Since its founding in 1935, Yakult has engaged in corporate activities that aim to contribute to the health and happiness of people around the world. Today, 41 million bottles of our dairy products are consumed every day in 40 countries and regions around the world (fiscal 2021 data).

However, this also means we have a significant impact on the global environment. Asking how we could reduce the growing burden of our business on the planet, we formulated the Yakult Basic Policy on the Environment in 1997, and have carried out environmentally responsible business activities ever since. In March 2021, noting the increasing demands society makes of corporations in response to the rapidly intensifying environmental issues of recent years, we established the Yakult Group Environmental Vision. This sets out Environmental Vision 2050—our ideal vision of the future, in which we achieve net-zero Scope 1, 2 and 3 carbon emissions by 2050 in order to realize a value chain that has zero environmental impact.

To drive forward effective initiatives based on this vision, we also formulated the medium- and short-term milestones in Environmental Targets 2030 and Environmental Actions (2021–2024) respectively.

Advancing the Yakult Group Environmental Vision

In order to further initiatives toward our ideal vision of the future as set out in the Yakult Group Environmental Vision, in April 2022 we established an Environmental Promotion Department. This team currently plays a central role in strengthening activities within the Group, building cooperative relationships with companies outside the Group, and collaborating with relevant government and municipal bodies.

Some examples of specific initiatives in detail are as follows. Within the Group, purchased energy for manufacturing was switched entirely to renewable energy at 12 dairy product and pharmaceutical plants in Japan*¹ in April 2022, followed by 1 cosmetic plant in July, helping reduce our

greenhouse gas emissions. To reduce plastic use, our *New Yakult* series no longer comes with straws, and we switched to a basic policy of not providing spoons and straws at time of sale in response to the Plastic Resource Circulation Act*² of April 2022. Overseas, amid moves to restrict the use of all kinds of plastic products, we are responding to relevant regulations and emissions restrictions in each country or region as necessary. In Europe, for example, we have switched from plastic film to paper for multi-pack packaging for *Yakult* series and outer packaging for distribution. Outside the Group, in November 2021 we revealed our capital participation in R Plus Japan, which engages in activities geared towards making used plastic reusable.

*1 Please refer to p. 29 for a list of applicable plants

*2 Formally known as the Act on Promotion of Resource Circulation for Plastics

Honoring our corporate slogan

Our corporate slogan is “In order for people to be healthy, everything around them must also be healthy.” We believe that a healthy world is essential for health.

The first thing we can do to help achieve this is ensure that all Group workers understand environmental issues as directly relevant to them as individuals, and take step-by-step action with a sincere attitude. For this reason, we will strive to raise awareness of environmental issues among workers.

Climate change and environmental pollution caused by human activity is putting our planet at risk. We must recognize the gravity of the situation and work toward a solution for this difficult but urgent problem, not just within the Yakult Group but across our entire value chain.

The Yakult Group will come together as one and, in order to realize a society in which people and the planet co-exist, will challenge itself with new initiatives to increase the sustainability of society and the world.

Environmental management

Yakult Basic Policy on the Environment

We established organizational units focused on environmental conservation measures in November 1991, and instituted the Group-wide Yakult Basic Policy on the Environment in June 1997. In accordance with our Environmental Philosophy and Guidelines for Activities, we are promoting environmental conservation activities throughout all our business fields. From fiscal 2001 to fiscal 2020, we established the Yakult Environmental Action Plan and conducted environmental activities with the participation of all departments, including research and development, manufacturing, marketing, and office units. In fiscal 2021, we established the Yakult Group Environmental Vision, and the entire Yakult Group now works together on initiatives to reduce our burden on the environment.

Yakult Basic Policy on the Environment

Environmental Philosophy

Recognizing that environmental preservation and harmony with society are among the most important corporate management objectives, Yakult Honsha and all Yakult Group business units will give due consideration to environmental preservation with regard to all types and aspects of corporate activities.

Action Guidelines

1. To realize the measures determined by the CSR Promotion Committee within Yakult Honsha, all Yakult Group business units will work concertedly, proactively, and in a sustained manner to address environmental issues associated with business activities.
2. Each business unit will build environmental management systems and systematically work with the participation of all employees to realize the objective of reducing environmental impacts and will also seek to realize sustained improvement in environmental performance by periodically checking the implementation of associated measures, auditing such measures, and reevaluating environmental activities.
3. Besides maintaining rigorous compliance with environment-related laws, regulations, and agreements, each business unit will autonomously set its own environmental standards, and strive to further improve the level of its environmental management and eliminate environmental pollution risk factors before they occur.
4. In all business activities, business units will give due consideration to the environment as well as biodiversity by promoting the reduction of environmental impacts.
5. All employees will be provided with thorough environmental education, and we will make efforts to increase environmental awareness.
6. Information related to environmental activities will be appropriately disclosed, and we will strive to communicate effectively with society at large.
7. The Group will act as an exemplary corporate citizen by proactively supporting and cooperating with activities aimed at protecting the global environment.

Established: June 24, 1997. Revised: March 8, 2004 / January 25, 2010

Please refer to the following URL for the full text of the Yakult Basic Policy on the Environment:

WEB <https://www.yakult.co.jp/english/csr/environment/management/>

Yakult Group Environmental Vision

The world is experiencing climate change and various other environmental issues that are growing more severe with time. The Yakult Group creates products that are available in 40 countries and regions around the world, and we conduct our business on the basis of local production for local sales. We recognize that our corporate activities have not only positive but also negative impacts on local communities and environments in various locations globally.

In March 2021, the Yakult Group created the Yakult Group Environmental Vision to reduce our negative impacts and promote efforts with a positive impact on the global environment with the aim of uniting people and planet as one. We set out our ideal vision for the future in Environmental Vision 2050 and, using backcasting, established short- and medium-term milestones in order to effectively act and make progress toward this vision.



Environmental management structure

The CSR Promotion Committee is responsible for formulating Environmental Targets 2030 and Environmental Actions (2021–2024) as short- and medium-term milestones for Environmental Vision 2050, and for monitoring and evaluating the progress of environmental activities. Every half-year, the secretariat of the CSR Promotion Committee conducts a review of the results and performance of the corporate environmental activities, and uses the findings in developing plans for the following fiscal year.

A committee has been established at each of Yakult Honsha's plants and bottling companies, chaired by either the plant manager or bottling company president. The committees oversee environmental activities, including formulating annual plans, promoting environmental management programs based on ISO 14001 standards and other guidelines.

Instead of each of our facilities working on their own, each year a general meeting brings together representatives of all production facilities to share good practices within the Group and to promote such good measures at all the facilities.

Related information [p. 88 CSR Promotion Committee](#) >>>

Environmental Vision 2050

To realize a society where people and the planet co-exist as one through a value chain that has zero environmental impact

Our goal is to achieve Net Zero Carbon by 2050 (in Scope 1, 2 and 3).

Environmental Targets 2030

For the three material themes related to the environment, we set Environmental Targets 2030 as medium-term milestones to work on achieving Environmental Vision 2050.

Climate change



Reduce GHG emissions (in Japan, Scope 1 and 2)

by **30%** compared to fiscal 2018 levels

- Initiatives**
- Reduce GHG emissions to create a zero-carbon society
 - Promote energy conservation, adopt renewable energy

Related information → [p. 27 Climate change >>>](#)

Plastic containers and packaging



Reduce plastic containers and packaging (in Japan)

by **30%** compared to fiscal 2018 levels, or make them **recyclable**

- Initiatives**
- Convert to easily recyclable containers and packaging
 - Reduce environmental impact by changing container and packaging materials

Related information → [p. 32 Plastic containers and packaging >>>](#)

Water



Reduce water consumption (at dairy product plants in Japan, per production unit) by **10% compared to fiscal 2018 levels**

- Initiatives**
- Sustainable use of water resources
 - Reduce water consumption

Related information → [p. 36 Water >>>](#)

Environmental Actions (2021–2024)

We set Environmental Actions (2021–2024) as short-term milestones to work on achieving Environmental Targets 2030. In addition to the material themes, we will also continue to promote our efforts to reduce waste and conserve biodiversity.

Priority issues	Targets
1. Achieve a zero-carbon society Climate change 	By the end of fiscal 2024, reduce GHG emissions (in Japan, Scope 1 and 2) by 10% compared to fiscal 2018 levels
2. Convert to fully recyclable containers and packaging Plastic containers and packaging 	(1) By the end of fiscal 2024, reduce plastic containers and packaging (in Japan) by 5% compared to fiscal 2018 levels, or make them recyclable (2) Reduce raw material consumption for containers and packaging (3) Reduce environmental impact by changing container and packaging materials (4) Use plant-based, environmentally responsible materials for containers and packaging
3. Reduce water consumption Water 	(1) By the end of fiscal 2024, reduce water consumption (at dairy product plants in Japan, per production unit) by 3% compared to fiscal 2018 levels
4. Reduce waste	(1) By the end of fiscal 2024, reduce amount of waste generated by 20% compared to fiscal 2010 levels (2) Maintain at least a 95% recycling rate for food loss and waste
5. Conserve and utilize biodiversity	(1) Support and participate in conservation activities (2) Promote biodiversity education

Environmental Vision progress status

Climate change

GHG emissions (in Japan, Scope 1 and 2) were reduced by 5.2% in fiscal 2021 compared to fiscal 2018 through the replacement of five molding machines with energy-saving electric molding machines at three domestic plants, energy-saving activities implemented at individual business sites, and other efforts.

Plastic containers and packaging

We strove to reduce the amount of plastic containers and packaging used (in Japan) in fiscal 2021 through measures like discontinuing the provision of straws for the *New Yakult* series of products. However, due to growing sales of new products, the amount of non-recyclable plastic used is expected to increase by around 6% compared to fiscal 2018.

Water

Water consumption (at dairy product plants in Japan, per production unit) was reduced by 2.4% in fiscal 2021 compared to fiscal 2018. This was achieved by conserving water through such water-saving efforts as reducing the use of water for raw materials by revamping production methods and reviewing automated washing times.

Roadmap for achieving Environmental Vision

The Environmental Promotion Department was established in April 2022 to achieve the goals of Environmental Vision. We will promote various efforts to achieve the targets of Environmental Actions (2021–2024), Environmental Targets 2030 and Environmental Vision 2050.

Climate change

- Convert to renewable energy (purchasing electricity effectively generated from renewable sources, installing in-house solar power generators, etc.)
- Explore the possibility of introducing internal carbon pricing (ICP)
- Promote energy-saving activities

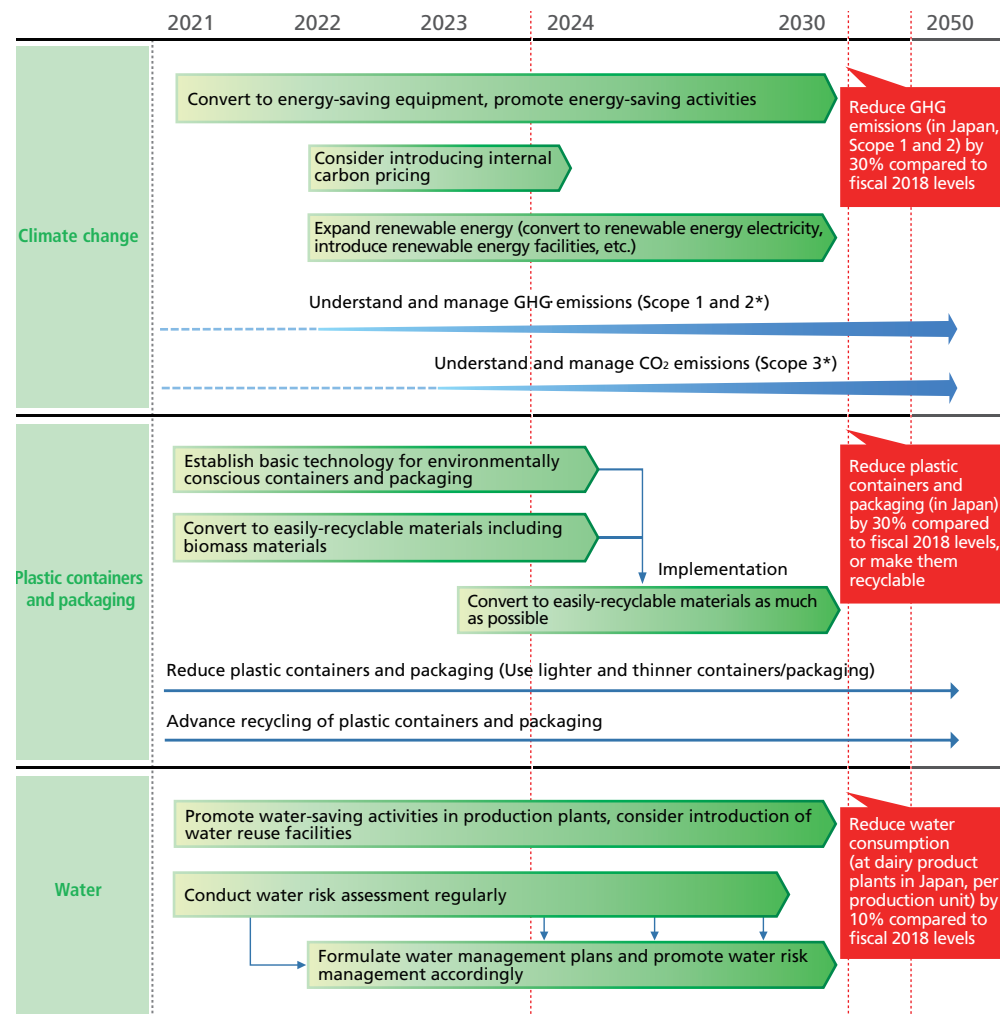
Plastic containers and packaging

- Reduce the amount of plastic used in containers and packaging (lightness, thinness)
- Explore diversification of containers
- Explore options for switching to more easily recyclable materials in containers and packaging (recycled materials, biomass materials, biodegradable materials, etc.)

Water

- Explore the possibility of introducing water cycle systems
- Formulate a water management plan and promote water risk management based on it

Roadmap for achieving Environmental Vision



* Scope definitions
 Scope 1: Direct emissions from fuel used for company's own business activities
 Scope 2: Indirect emissions from generation of electricity, steam and heat purchased from outside company
 Scope 3: Emissions from across supply chain related to company's business activities

Environmental certification status

As part of our efforts to reduce environmental impacts associated with our production and distribution activities, the Yakult Group is promoting initiatives to acquire ISO 14001 certification at Yakult Honsha plants, the Yakult Central Institute, bottling companies, marketing companies, and plants outside Japan. All Yakult Honsha plants and bottling companies have already acquired certification.

Status of ISO 14001 environmental certification

	Certified sites	Certification rate
Yakult Honsha plants and bottling companies in Japan (12 sites in total)	12	100%
Yakult Central Institute	1	100%
Marketing companies in Japan (101 in total)	10*	9.9%
Plants outside Japan (27 sites in total)	6	22.2%

* Includes branches that have acquired certification

WEB [Details about certification acquired by each company >>>](https://www.yakult.co.jp/english/csr/social/product_safety/certification/index.html)

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Compliance with environmental laws and regulations

Energy Conservation Act

For all of Yakult Honsha's business sites, the Company submitted a periodic report for fiscal 2021 and a medium- to long-term plan for the period beginning from fiscal 2021.

The Company's total energy use during fiscal 2021 amounted to 25,190 kiloliters (crude oil equivalent), up 177 kiloliters from the previous fiscal year (100.7% compared with the previous fiscal year). The five-year year-on-year average energy use value per production unit was 97.4%, which means we achieved the Energy Conservation Act's objective of reducing the five-year average energy use per production unit by 1% or more, making us an S-class business for superior energy conservation as determined by the Agency for Natural Resources and Energy. Furthermore, the level of greenhouse gas emissions generated as a result of energy use was 45,435 tons, which was 529 tons lower than the previous fiscal year.

Act for Rationalized Use and Proper Management of Fluorocarbons

The Act for Rationalized Use and Proper Management of Fluorocarbons went into effect in April 2015. The Company conducts the appropriate management of equipment subject to this requirement at all business sites and departments based on this law. The amount of fluorocarbon leakage in fiscal 2021 was 563.9 t-CO₂.

Food Recycling Act

All Yakult Honsha business sites are striving to reduce the volume of their food loss and waste and promote its recycling. In fiscal 2021, the volume of food loss and waste generated was 436.7 tons, and recycling and other measures were undertaken for 96.2% of this according to the periodic report for fiscal 2021.

Food loss and waste recycling results (fiscal 2021)

Volume generated (t)	Volume recycled (t)	Recycling, etc. rate (%)	Recycling applications
436.7	417.8	96.2	Fertilizer, animal feeds, etc.

Related information [p. 39 Initiatives to reduce food loss and waste >>>](#)

PRTR Act

Japan's Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Act) requires that companies measure the volume of their emissions of specified substances, transfers of such substances from their business sites, and other data. It also requires the submission of reports on the volume of specified substances that are handled in volumes of one ton or more in the course of a year. The Tokyo Metropolitan Ordinance on Environmental Preservation, which took effect in 2001, requires that reports be submitted with respect to chemical substances handled in annual volumes of 100 kilograms or more. In fiscal 2021, the scope of the Company's mandatory reporting based on that ordinance included three substances.

Substances used by the Yakult Central Institute (Kunitachi City, Tokyo) (fiscal 2021)

Chemical	Amount handled (kg/year)	Amount released (kg/year)	Amount transferred (kg/year)	PRTR Act	Tokyo Metropolitan Ordinance
Chloroform	200	3.8	200	○	
Methanol	250	9.9	0		○
Sulfuric acid	260	0	0		

Note: The chemicals are primarily used as reaction solvents and extraction solvents. Sulfuric acid is used to adjust pH, etc. The figures stated above were reported to the government and Tokyo officials.

Containers and Packaging Recycling Act

According to the Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging (Containers and Packaging Recycling Act), the Company has been obligated as a manufacturer to undertake product recycling processes, and to take additional measures regarding 3Rs (reduce, reuse and recycle) promotion and the system for making payments to the municipal governments handling sorted waste processing. The Company complies with this law, and in fiscal 2021 established the following obligatory recycling volumes for containers and packaging.

The amount of commissioned recycling fees and payments by the Company in fiscal 2021 amounted to approximately 220 million yen.

Container and packaging obligatory recycling volume (fiscal 2021)

Container and packaging type	Obligatory recycling volume (t)
Glass bottles	212
PET plastic bottles	19
Plastic containers and packaging	5,046
Paper containers and packaging	87
Total	5,364

Environmental accounting

Yakult's environmental accounting system

Yakult Honsha established the Yakult Environmental Accounting Guidelines in May 2001 based on the Environmental Accounting Guidelines issued by Japan's Ministry of the Environment, and has disclosed relevant information annually since fiscal 2001.

Purpose of the system

1. Clarify the cost-effectiveness of environmental conservation expenses and use this information to optimize environmental management programs.
2. Carry out our responsibilities to society by working to disclose environmental information to stakeholders.

Main features of the system

Scope of data: Yakult Honsha, on a non-consolidated basis

Time period: From April 1, 2021 through March 31, 2022

Noteworthy features:

- (1) Data is compiled only for activities targeting environmental conservation.
- (2) Investment amounts are equal to depreciable assets recorded during the period under financial accounting standards.
- (3) Depreciation expenses on depreciable assets and environmental business-related costs are not recorded.

Environmental accounting results showed an increase of approximately 140 million yen compared to the previous fiscal year. The implementation of various environmental conservation measures is causing a rise in costs overall.

Economic impact increased by approximately 18 million yen compared to the previous fiscal year. Factors in this increase include cost reductions due to energy conservation, overhauling and reusing vending machines, and other initiatives.

Economic accounting results

(millions of yen)

Item	Main activities	FY2020			FY2021		
		Investment	Expense	Total	Investment	Expense	Total
(1) Business area costs	1. Pollution prevention costs	39.5	191.6	231.1	49.0	214.3	263.3
	2. Global environment conservation costs	40.5	54.8	95.3	42.7	67.4	110.1
	3. Resource recycling costs	50.9	89.0	139.9	53.4	82.3	135.7
(2) Upstream/downstream costs	Containers and Packaging Recycling Act commissioned recycling fees, vending machine overhaul	0	194.8	194.8	0	224.5	224.5
(3) Administration costs	Plant grounds green area management, environmental management system renovation and maintenance, CSR Report, environmental impacts monitoring expenses, employee environmental education program expenses	0	136.6	136.6	0.2	186.5	186.6
(4) R&D costs	Consideration of improvements to containers and packaging	0	11.8	11.8	0	23.2	23.2
(5) Social activity costs	Plant vicinity cleanup campaign, donations to organizations engaged in environmental protection activities	0	4.0	4.0	0	5.4	5.4
(6) Environmental remediation costs*	Pollution load levy	0	0.1	0.1	0	0.1	0.1
Total		130.9	682.7	813.6	145.3	803.6	948.9

* Environmental remediation costs = pollution load levy

This is a special charge levied on operators of facilities that generate soot, etc., and other specified facilities as a means of gathering a portion of the funds required for the distribution of compensation based on Japan's pollution-related health damage compensation system.

Note: Because the figures are rounded off, the sum of the breakdown figures and the total may not match.

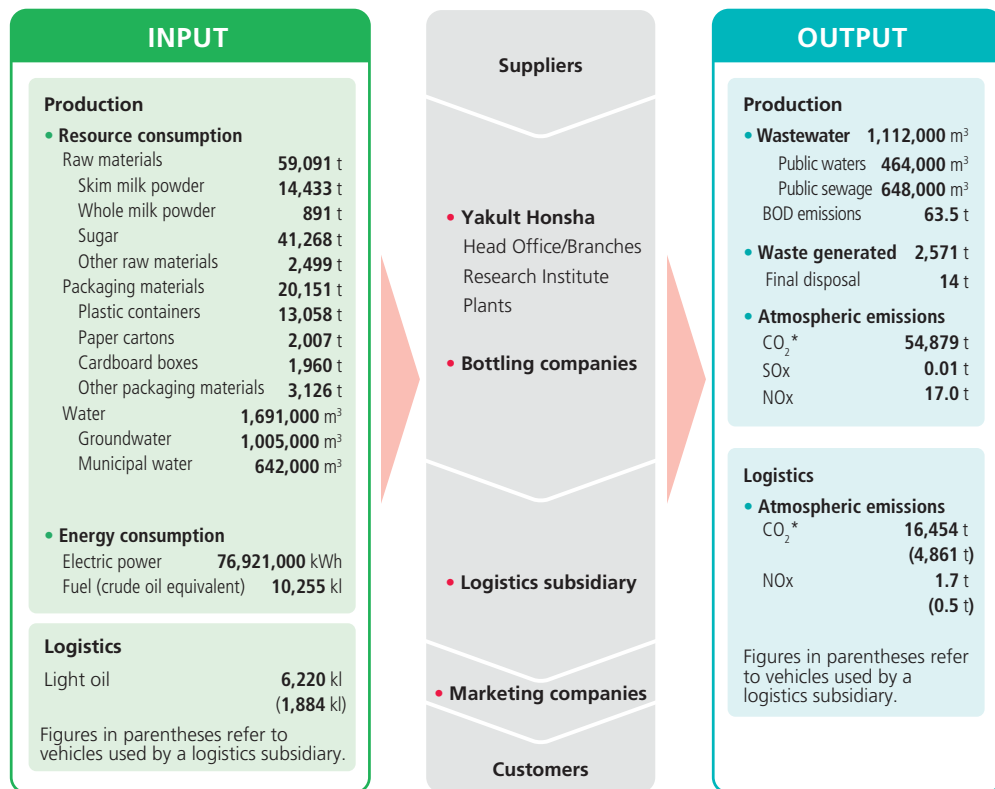
Economic benefits associated with environmental conservation measures

(millions of yen)

Type of benefit	FY2020	FY2021
Reduction of waste disposal costs associated with recycling	0	0
Income from recycling	5.2	3.8
Cost reductions resulting from resource conservation	4.5	4.8
Cost reductions resulting from energy conservation	31.5	38.6
Cost reductions resulting from packaging weight reductions	5.1	7.4
Cost reductions resulting from the overhaul and reuse of vending machines	17.2	26.5
Gains resulting from green purchasing	0	0
Other	0	0
Total	63.5	81.8

Environmental impacts of business activities

From production through delivery (Fiscal 2020)



Scope of calculations: Yakult Honsha Co., Ltd. (including Fukushima Plant, Ibaraki Plant, Fuji Susono Plant, Fuji Susono Pharmaceutical Plant, Hyogo Miki Plant, Saga Plant, Shonan Cosmetics Plant, and designated shippers), bottling companies (Yakult Iwate Plant Co., Ltd., Yakult Chiba Plant Co., Ltd., Yakult Aichi Plant Co., Ltd., Yakult Okayama Wake Plant Co., Ltd., and Yakult Fukuoka Plant Co., Ltd.).

* CO₂ emission levels use the adjusted emission coefficients provided by each power company
 Note 1: See the ESG Data spreadsheet file (<https://www.yakult.co.jp/english/csr/download/>) for data from the previous five years.
 Note 2: Itemized figures are rounded up or down, so sums may not match totals.

Identifying and reducing environmental impacts

The Yakult Group has identified its environmental impacts in the lifecycle of its products, from production, logistics, marketing to recycling, and is working to effectively reduce the impacts based on Environmental Actions (2021–2024).

Production

The *Yakult* series of fermented milk drink and other dairy products are produced at five Yakult Honsha plants and five bottling companies. We are pushing ahead with effective utilization of raw materials (e.g., skim milk powder), electricity, fuel, water and packaging materials (paper, plastic) in production at plants and bottling companies in line with ISO 14001 objectives and targets.

Logistics

The transport of products manufactured in plants and bottling companies is primarily handled by a logistics subsidiary. As the Company has designated shipper status in accordance with Japan’s revised Act on the Rational Use of Energy (Energy Conservation Act), we are encouraged to annually reduce energy use per unit of freight by an average of 1% or more during the last five-fiscal-year period. Our logistics subsidiary has obtained and renewed its Green Management Certification, and is promoting fuel-efficient driving and introducing fuel-efficient trucks to further reduce its CO₂ emissions.

Marketing

We strive to reduce the energy use of vending machines and promote the use of overhauled vending machines.

To reduce CO₂ emissions associated with home deliveries, we are replacing the current delivery vehicles used by Yakult Ladies with COMS super-compact electric vehicles. We are also taking various measures to promote the recycling of used containers collected from our suppliers, including route delivery trucks that are equipped with a dedicated space to facilitate the separated collection of waste.

Recycling

The containers of *Yakult* series and other products delivered to customers’ homes and offices are subject to Japan’s Containers and Packaging Recycling Act, meaning that we are responsible for recycling them. The Company has commissioned the Japan Containers and Packaging Recycling Association, which is specified by the national government as a qualified recycling organization, to handle this recycling process and pays the association a commission for this service.

Environmental education

We promote environmental education at each plant based on ISO 14001. Specifically, we are training internal auditors and having them share information on environmental initiatives within each department. An overview of ISO 14001 and its organizational structure are provided at new employee training sessions to foster awareness among all employees of working towards shared goals and targets. In fiscal 2021, 19 training sessions with a total of 404 participants were held at 15 plants in Japan.



Materiality

Climate change

Our approach

Climate change caused by human economic activity has brought about wide-ranging risks worldwide, from natural disasters to biodiversity loss due to the impacts of global warming, which require urgent global action. We recognize that climate change is a critical issue for the Yakult Group’s business continuity. As global society works toward net zero, the Yakult Group will cut GHG emissions by setting fixed targets, advancing more energy conservation initiatives and actively adopting renewable energy.

Risks and opportunities

Risks	Opportunities
<ul style="list-style-type: none"> ● 2°C scenario risks <ul style="list-style-type: none"> • Difficulty procuring raw materials (powdered skim milk) • Higher costs for energy/compliance with plastic regulations • Higher fuel and electricity costs 	<ul style="list-style-type: none"> ● 2°C scenario opportunities <ul style="list-style-type: none"> • Development of probiotics and food products to help dairy cows produce more milk • Switching to containers and packaging using biomass-derived plastic materials • Development of energy-efficient production methods for cosmetics, development of non-thermal production methods for particular products
<ul style="list-style-type: none"> ● 4°C scenario risks <ul style="list-style-type: none"> • Difficulty procuring raw materials (powdered skim milk)/worsening work environment for Yakult Ladies/fewer outings by consumers/infectious disease epidemics/plant and animal disorders • Suspension of procurement, production, distribution, sales and other operations 	<ul style="list-style-type: none"> ● 4°C scenario opportunities <ul style="list-style-type: none"> • Shift to use of inexpensive agricultural products with stable supply, such as non-dairy proteins (soybeans, insects, etc.)/safe and secure deliveries that do not rely on people/development of beneficial bacteria that effectively prevent new pathogens • Development of sustainable production and management methods with lower water consumption

Policies/Guidelines/Targets

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



Targets and achievements

Target	Achievement
By the end of fiscal 2024, reduce GHG emissions (in Japan, Scope 1 and 2) by 10% compared to fiscal 2018 levels	▶ GHG emissions reduced by 5.2% (compared to fiscal 2018)

Challenges and solutions

The Yakult Group currently emits approximately 600,000 tons of CO₂ annually through its business activities. Given our corporate slogan “In order for people to be healthy, everything around them must also be healthy,” we are keenly aware that climate change countermeasures are urgently needed. We have set a goal to achieve net-zero greenhouse gas emissions by 2050, and are promoting efforts to reduce CO₂ emissions throughout our entire value chain, from raw material procurement to production, distribution and sales. Additionally, in August 2022, we indicated our endorsement of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Based on these recommendations, we will analyze the risks and opportunities of climate change for our business, evaluate the relevant financial impacts and continue working to disclose further information through a framework of governance, strategy, risk management, and metrics and targets.

Recognizing and responding to climate-related risks and opportunities

■ Conducting TCFD-recommended scenario analysis

We participate in the Japan Climate Initiative, exchanging ideas and information with other companies, local governments, NGOs and NPOs to gain a better understanding of the rapidly changing situation around climate change, and to support activities and industry organizations working to prevent it. We also participate in the Japan Dairy Industry Association and support their climate change targets.

As part of our disclosure related to climate change, we calculated our Scope 3 emissions in Japan for fiscal 2021 and arrived at a total of 324,452 tons. We also answered the CDP climate change questionnaire and received a B grade for two consecutive years. Following TCFD recommendations,*1 we performed multiple climate change scenario analyses of Yakult's corporate activities using the Representative Concentration Pathway (RCP) scenarios.*2

*1 TCFD recommendations: TCFD stands for "Task Force on Climate-related Financial Disclosures," an international organization established by the Financial Stability Board in 2015. In its final report published in 2017, the TCFD issued recommendations that companies disclose information on climate-related risks and opportunities through scenario analysis to examine risk strategies under various different conditions.

*2 Analyses were carried out using the scenario with the lowest temperature rise (RCP2.6 scenario, with around 2°C rise) and the highest temperature rise (RCP8.5 scenario, with around 4°C rise)

Methods

Based on international recognition and credibility, RCP2.6 and RCP8.5 were used for scenario analyses, with the 2°C and 4°C scenarios considered.

Period and region

Considering that the results of the 2100 forecast have too many uncertainties in terms of business strategy and that the Paris Agreement's goal of a net-zero emissions world is set for 2050 at the latest, the period covered by the scenario analysis was set to 2050, and the regions covered were the Group's offices located around the world.

Organizational areas

The Company manufactures and sells pharmaceutical and cosmetic products and other products, with its main focus on sales of the fermented milk drink, *Yakult*. In the scenario analyses, we focused on the fermented milk drinks business, our main business.

Results of the scenario analyses

Assumptions/inputs for the scenario analysis were CO₂ emissions in the world with 2°C and 4°C temperature rises, the relationship between the physical impact of the temperature increase and the impacts on crops, the likelihood of disasters, changes in the labor environment, and changes in the energy mix and energy costs, and analyses were conducted using publicly available literature as reference. In the 2°C scenario, pastureland is projected to decrease, agricultural land for energy crops to increase, and agricultural land for food and feed crops to decrease. Under these

circumstances, it is possible that procurement of powdered skim milk, the main raw material for the fermented milk drinks that are our key products, may become difficult in the future. For example, we suspect it may become necessary to use protein sources other than milk (such as soybeans) and inexpensive agricultural products, and are developing products based on various safe and secure raw materials. We are also considering the possibility of commercializing foods that contribute to the health of animals, such as the development of probiotic foods that help increase the amount of milk produced by dairy cows.

In addition, with the anticipated tightening of regulations such as carbon taxes and emissions trading, there is a risk that our energy costs will increase and that demands from society for plastic-free options will increase. We must take measures such as reducing our energy usage further and switching our containers and packaging to biomass-derived, renewable plastics. Since the ratio of low-carbon energy is expected to increase and the cost of fuel and electricity is at risk of increasing, we will consider all possible methods, including the development of manufacturing processes that are more energy-efficient than conventional methods and, for specific products such as cosmetics, manufacturing processes that do not use heat.

In the 4°C scenario, climate and weather extremes are projected to advance further, with extreme temperature increases becoming unavoidable. In addition to the difficulty in procuring our main ingredient (powdered skim milk) as in the 2°C scenario, other possible risks include a worsening working environment for Yakult Ladies, consumers going out less frequently, epidemics of infectious diseases, and poor animal and plant health. Along with examining protein sources other than milk, we will consider safe and secure delivery methods that do not rely on humans and the development of useful bacteria that are effective in prevention of new pathogens.

Exposure to water stress such as floods, torrential rains and rainfall shortages is also expected to become more frequent, and plants face the risk of being flooded and forced to suspend production, distribution and sales activities. We will explore the possibility of developing solidified products and other products that can be manufactured with sustainable use of water resources.

2°C scenario

Major impacts	Risks	Opportunities
Fewer livestock farms/more demand for energy crops*	Difficulty procuring raw materials (powdered skim milk)	Development of probiotics and animal feed products to help dairy cows produce more milk
Stricter environmental laws and regulations	Higher costs for energy/compliance with plastic regulations	Switching to containers and packaging using biomass-derived plastic materials
Higher ratio of energy with lower carbon emissions	Higher fuel and electricity costs	Development of energy-efficient production methods for cosmetics, development of non-thermal production methods for particular products

* Energy crops: Agricultural crops cultivated as raw materials for biofuel use. Grains, sugar cane, etc. Grains once used as dairy cow feed may be used for biofuels instead, causing difficulties in procuring skim milk powder made from raw milk

4°C scenario

Major impacts	Risks	Opportunities
Extreme temperature rise	Difficulty procuring raw materials (powdered skim milk)/worsening work environment for Yakult Ladies/fewer outings by consumers/infectious disease epidemics/plant and animal disorders	Shift to use of inexpensive agricultural products with stable supply such as non-dairy proteins (soybeans, insects, etc.)/safe and secure deliveries that do not rely on people/development of beneficial bacteria that effectively prevent new pathogens
Occurrence of floods and heavy rains/higher water stress	Suspension of procurement, production, distribution, sales and other operations	Development of sustainable production and management methods with lower water consumption

CO₂ emissions in fiscal 2021

(t-CO₂)

		Scope 1	Scope 2	Scope 3	Total
Yakult Honsha	Plants*	17,046	18,657	324,452	408,034
	Yakult Central Institute	1,566	7,365		
	Head office/branches	297	580		
	Pharmaceutical branches	8	122		
	Logistics department	18,443	320		
Consolidated subsidiaries (Japan)	Bottling companies	3,770	15,406		
	Marketing companies	—	—		
	Other	—	—		
Consolidated subsidiaries (overseas)	Plants	193,606			193,606
	Business sites	—			
Total		277,188		324,452	601,640

Note 1: “—” indicates data that was not collected or is still being collected.

Note 2: Numbers are shown rounded to the nearest whole figure, so actual totals may not match result of adding numbers shown.

* Including plants that produce cosmetics and pharmaceuticals

Initiatives to reduce CO₂ emissions at Yakult Honsha plants and bottling companies

At Yakult Honsha plants and bottling companies, we have stepped up energy and resource conservation activities with the goal of attaining objectives and targets based on the ISO 14001 standard.

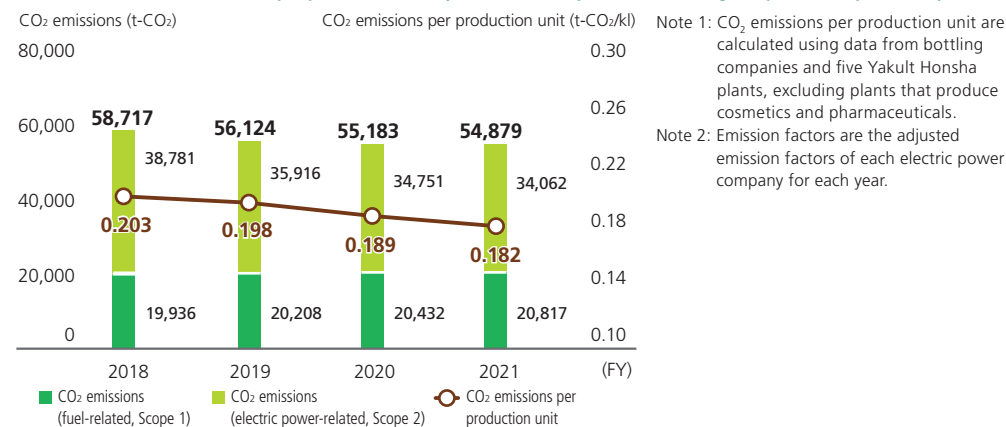
In fiscal 2021 a total of five electric molding machines to produce *Yakult* and other containers were upgraded to energy-saving machines at the Yakult Chiba Plant, Yakult Okayama Wake Plant and Yakult Fukuoka Plant.

Furthermore, to reduce CO₂ emissions at plants throughout Japan, we ran various initiatives focused on ISO 14001 goals and targets, installing LED lighting and determining efficient ways to use production equipment to reduce operating times. As a result of these efforts, we achieved a 6.5% reduction in CO₂ emissions at Yakult Honsha plants and bottling companies compared to fiscal 2018.

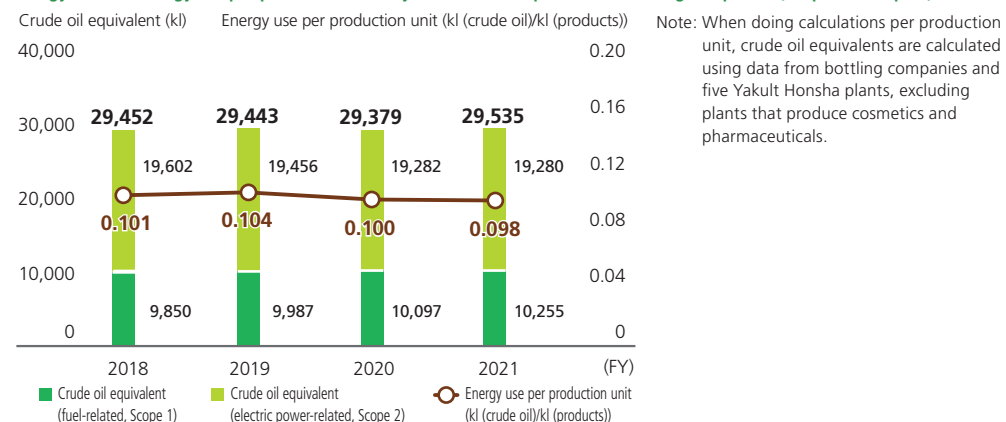
In April 2022, we switched all purchased electricity used in production processes at our 12 domestic plants,* and in July at the Shonan Cosmetics Plant, to electricity almost entirely from renewable energy sources provided by power companies with which we have contracts. This conversion to renewable energy has reduced CO₂ emissions by approximately 34,800 tons per year for the 13 plants in total, and is expected to reduce greenhouse gas emissions (in Japan, Scope 1 and 2) by approximately 40% compared to fiscal 2018.

* Fukushima Plant, Ibaraki Plant, Fuji Susono Plant, Hyogo Miki Plant, Saga Plant, Yakult Iwate Plant, Yakult Chiba Plant, Yakult Aichi Plant, Yakult Okayama Wake Plant, Yakult Fukuoka Plant, Fuji Susono Pharmaceutical Plant, Yakult Materials Co., Ltd. Fuji Susono Plant
Note: Electric power-related CO₂ emission factors are the adjusted emission factors of each electric power company.

CO₂ emissions and CO₂ emissions per production unit by Yakult Honsha plants and bottling companies (Scope 1 + Scope 2)



Energy use and energy use per production unit by Yakult Honsha plants and bottling companies (Scope 1 + Scope 2)



Initiatives to reduce CO₂ emissions at the Yakult Central Institute

Since its full-scale renovation in 2016, the Yakult Central Institute has been constantly engaged in initiatives to conserve energy, including installing new equipment, improving the thermal insulation of steam pipes, changing HVAC systems operations, and lowering the temperature of air-conditioning systems. This led to a 4.3% annual improvement in energy intensity on average over five fiscal years from fiscal 2017.

In recognition of these initiatives, Yakult received the Kanto Bureau of Economy, Trade and Industry Director-General's Award in Energy Management Excellence for Businesses (Ministry of Economy, Trade and Industry, METI) in fiscal 2020.



Certificate from Kanto Bureau of Economy, Trade and Industry Director-General

Basic agreement on carbon-neutral city gas supply with Tokyo Gas

Since April 2021, we have adopted carbon-neutral city gas as part of our environmental actions that contribute to efforts toward achieving a sustainable society.

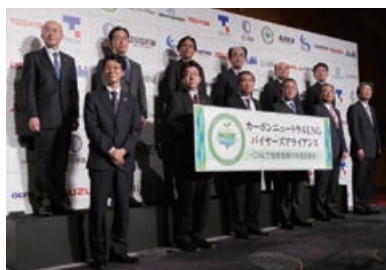
This supply agreement is the first of its kind from Tokyo Gas Co., Ltd. to the beverage industry. Switching the total supply of the Yakult Central Institute to carbon-neutral city gas for five years from April 2021 to the end of March 2026 will help reduce CO₂ by approximately 11,500 tons.



Membership in the Carbon Neutral LNG Buyers Alliance

In March 2021, we established the Carbon Neutral LNG (CNL)* Buyers Alliance with Tokyo Gas Co., Ltd. and 13 other companies.

The Alliance was established through the concerted efforts of Tokyo Gas, which procures and supplies CNL, and companies that purchase CNL, with the aim of spreading the use of CNL and increasing its utility value. Choosing environmentally responsible energy helps in the efforts toward achieving a sustainable society, and directly contributes to climate change action, the SDGs and ESG corporate management.



CNL Buyers Alliance

* Carbon-neutral LNG (CNL): Liquefied natural gas (LNG) that is deemed to have net zero carbon emissions by offsetting GHGs generated in the process, from extraction to combustion of natural gas, through purchasing carbon credits that support reforestation and other projects

LCA of Yakult series

In considering the environmental impacts of our products, it is important to look at the entire product lifecycle to identify those impacts in all phases, from raw material procurement to product consumption and disposal, in addition to the impacts produced at our own plants. With this in mind, the Company made preliminary calculations based on a lifecycle assessment (LCA) for CO₂ emissions and water use. We are using the results for internal education and future product development to help promote understanding of the concept of LCA. We will also continue calculating GHG emissions through the supply chain based on these results.

Utilization of renewable energy (solar power energy)

We have installed solar power generation equipment with an overall power generation capacity of approximately 1,014 kilowatts at a total of 10 business sites (six Yakult Honsha plants and four bottling companies). By using solar power as part of the electricity supply at our business sites, we were able to reduce CO₂ emissions by approximately 446 tons in fiscal 2021 compared to having made electricity purchases from power utilities.

At the Yakult Central Institute, installation of solar power generators with a capacity of approximately 110 kilowatts has reduced CO₂ emissions by approximately 46 tons.

Initiatives to reduce CO₂ emissions outside Japan

Introduction of solar power generation

As part of our efforts to reduce CO₂ emissions, we are promoting the introduction of solar power generation in our Group companies outside Japan.

Key initiatives in each country and region

Country/region	Initiatives
Hong Kong	Began solar power generation in December 2020, achieving a generation rate of 229.57 MWh in fiscal 2021
South Korea	Exploring possibility of installing a solar power generation system on the roof of the factory
Philippines	Exploring possibility of installing solar power generation equipment with the approval of local partners
India	Began solar power generation in August 2020, with full operation by December 2021, reducing CO ₂ emissions by 810 tons annually
Brazil	Started preparatory study project for solar power generation in the company's facilities in July 2021

■ Energy-saving air compressors: Yakult (Thailand) Co., Ltd

In February 2022, the Ayutthaya Plant installed two new energy-saving air compressors (inverter type). Four out of five air compressors in the Ayutthaya Plant are now energy-saving models, which is expected to reduce power consumption by 195,400 kWh per year and CO₂ emissions by 119 tons per year.

■ Introduction of electric trucks: Guangzhou Yakult Co., Ltd.

Guangzhou Yakult Co., Ltd. is promoting the introduction of electric trucks to comply with China's diesel truck regulations. The company has reduced its diesel fuel consumption by 42,000 liters per year by switching from leasing to purchasing and putting 14 electric trucks on the road in 2021.

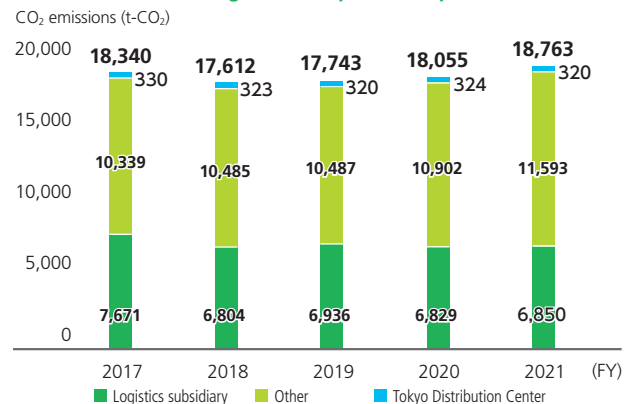


Electric truck in Guangzhou

Logistics initiatives

The Yakult Group's shipping of dairy and other food products, as well as cosmetics, in Japan is primarily handled by a logistics subsidiary. Our logistics subsidiary has obtained Green Management Certification* for each of its marketing offices, and is striving to continuously reduce the environmental impacts of its operations. In fiscal 2021 we again achieved a 1.0% average annual energy reduction over the preceding five-year period, the target set forth in Japan's revised Energy Conservation Act.

CO₂ emissions from logistics (Scope 1 + Scope 2)



* Green Management Certification is obtained from the Foundation for Promoting Personal Mobility and Ecological Transportation, which evaluates business units' measures and certifies that they have achieved a specified level of performance



■ Eco-Rail Mark and Eco-Ship Mark Certification

We are promoting a modal shift to rail and ocean freight transport as one of our efforts to reduce environmental impacts. In 2015, we received companywide and product-based certification under the Eco-Rail Mark system, and were certified under the Eco-Ship Mark system in 2016.

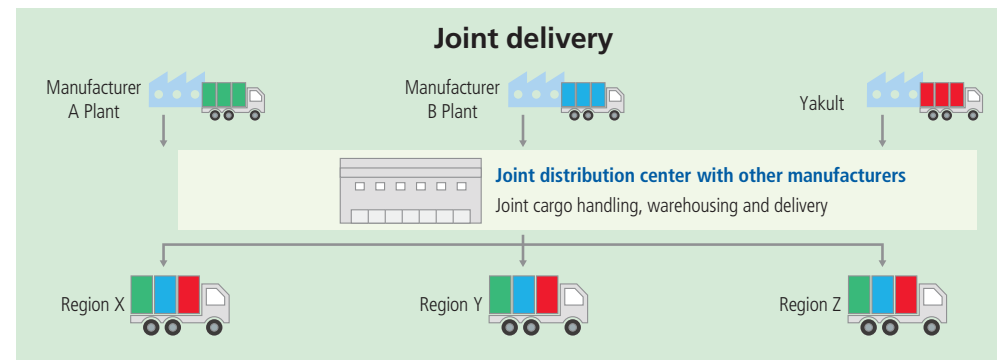
CO₂ emissions from the use of rail freight transport are one-thirteenth the levels of emissions from transportation by truck, and those from ocean freight are one-fifth those from trucks. We will continue to deliver products to our customers while utilizing these more energy-efficient modes.

Note: Each certification is valid for two years, and is thus renewed every two years.



■ Joint delivery with other manufacturers

Yakult promotes joint delivery with other manufacturers (through joint cargo handling, warehousing and delivery) to reduce CO₂ emissions and make logistics more efficient.



Initiatives at sales

We introduced electric vehicles (COMS) in our home delivery service by Yakult Ladies to reduce CO₂ emissions. As of March 2022, 1,847 vehicles have been introduced in total. In our pharmaceutical business, marketing representatives use fuel-efficient hybrid vehicles (excluding certain areas). Gasoline fuel usage in fiscal 2021 totaled 78,958 liters.

Materiality

Plastic containers and packaging

Our approach

The Yakult Group aims to establish a foundation for environmentally conscious container and packaging technology in order to address challenges related to the growing social issues around plastic waste, such as environmental pollution and the recycling of resources. We plan to reduce the environmental impact of our plastic containers and packaging, and at the same time transition to easily recyclable materials. We will continue to pursue initiatives around containers and packaging, including reducing the amount of plastic used in them and improving recycling based on quantitative targets.

Risks and opportunities

Risks	Opportunities
<ul style="list-style-type: none"> ● Cost increases associated with responding to stronger global plastic regulations and expansion of ethical consumption ● Loss of sales opportunities due to increased preference for plastic-free options among business partners and consumers ● Procurement risks due to shrinking plastics market and concentrated demand for environmentally responsible materials 	<ul style="list-style-type: none"> ● Improving corporate value as a result of switching to environmentally responsible materials for containers and packaging ● Generating innovation by promoting joint research ● Creating new customers through the introduction of environmentally responsible products

Policies/Guidelines/Targets

- Yakult Basic Policy on the Environment
- Declaration of Action on Plastic Recycling
- Environmental Vision 2050
- Environmental Targets 2030
- Environmental Actions (2021–2024)



Targets and achievements

Targets	Achievements
<ul style="list-style-type: none"> ● By the end of fiscal 2024, reduce plastic containers and packaging (in Japan) by 5% compared to fiscal 2018 levels, or make the corresponding proportion recyclable ● Reduce material consumption in containers and packaging ● Minimize environmental impact by substituting materials used in containers and packaging ● Utilize ecofriendly plant-derived materials used for containers and packaging 	<ul style="list-style-type: none"> ▶ Use of non-recyclable plastic containers and packaging expected to increase by around 6% compared to fiscal 2018 (preliminary figures) ▶ Eliminated straws in 5-packs of the <i>New Yakult</i> series ▶ Expanded use of bio-based ink (5 products), recycled PET labels (3 products) and thinner OPS labels (4 products) for soft drink PET container shrink labels ▶ Expanded use of lightweight caps (4 products) for soft drink PET container caps ▶ Introduced recycled PET material for 3 cosmetic products

Challenges and solutions

The Yakult Group currently uses approximately 13,000 tons of plastic containers and packaging annually. From the perspective of environmental pollution caused by plastic waste and resource recycling, replacing our containers and packaging with easily recyclable materials is a pressing issue. We are taking steps to reduce the environmental burden of our plastic containers and packaging by making them thinner and lighter, while also shifting to materials more suitable for sustainable resource recycling such as biomass products. As global movements around plastic product regulation increases, we will follow these developments closely and consider specific strategies to address the regulations in each country and region.

Declaration of Action on Plastic Recycling

As part of our efforts to design containers and packaging with low levels of environmental impact, in 1995 we instituted guidelines for more concrete initiatives with the fundamental goals of ensuring the safety of containers and packaging, reducing the amount of packaging used, optimizing processing/disposal processes and promoting resource recycling. We announced our Declaration of Action on Plastic Recycling in January 2019 to focus attention on issues such as plastic pollution in oceans, global warming and natural resource depletion, and to show our commitment to recycling our plastic containers and packaging.

Declaration of Action on Plastic Recycling (summary)

- The Yakult Group is engaged in initiatives that promote recycling of plastic containers and packaging.

— 2025 target —

We will establish a foundation for environmentally conscious container and packaging technology, and begin conversion to easily recyclable materials such as biomass, recycled and biodegradable materials.

— 2030 target —

We will work to convert to easily recyclable materials as much as possible while keeping up with developments in recycling markets, environmental infrastructure and other external environmental facilities

- Moving forward, we will actively promote resource recycling initiatives, further implementing initiatives beyond these to reduce the amount of plastic used in containers and packaging, and reuse plastic packaging materials in our production processes.

Reducing specified plastic-containing products*

The Yakult Group has worked to reduce single-use plastics through strategies such as partially replacing the plastic spoons it provides to customers with paper ones.

In accordance with the April 2022 Act on Promotion of Resource Circulation for Plastics, we have set targets for fiscal 2022 to further reduce our use of plastic spoons and straws. We are implementing the following measures.

- (1) As a general rule, Yakult Ladies will no longer provide spoons and straws when selling products (excluding straws affixed to the product as part of its design)
- (2) Using paper spoons wherever possible
- (3) Using plant-derived plastic in straws

* Specified plastic-containing products: As stipulated within the Act on Promotion of Resource Circulation for Plastics, these are "plastic-containing products provided to consumers free of charge along with sales of goods and provision of services." Twelve kinds of products fall under this definition: forks, spoons, knives, muddlers, straws, hair brushes, combs, razors, shower caps, toothbrushes, hangers and garment covers.

Amount of specified plastic-containing products distributed

FY	2018	2019	2020	2021	2022*
Amount distributed (tons) (excluding biomass plastics)	89.3	80.1	60.5	52.8	30.0
	—	—	—	52.7	29.0
Compared to previous year (%) (excluding biomass plastics)	—	89.7	75.5	87.3	56.8
	—	—	—	87.0	55.0
Amount reduced (tons) (excluding biomass plastics)	—	9.2	19.6	7.7	22.8
	—	—	—	7.8	23.7

* Target for fiscal 2022

Plastic recycling promotion framework

■ Plastic Recycling Promotion Committee

We have established a Plastic Recycling Promotion Committee composed of directors who head the departments concerned with plastic containers and packaging and chaired by the Divisional General Manager of the Production Division (Senior Managing Executive Officer and Director).

Committee meetings are held twice a year at every half-year term in principle to share information and discuss the trends in plastic regulations and relevant government policies around the world, as well as the status of initiatives and discussions at each department. Important matters concerning management policy that come up during these meetings are referred to the Management Policy Council for deliberation.

Increased use of biomass materials

Since fiscal 2014, we have been working to use more bioplastic, which is made from renewable organic resources such as plant matter, in the shrink labels for some products sold in PET containers. In October 2020, we transitioned to using biomass material in the plastic straws and multi-pack shrink wrap for *Yakult no Hakko Tonyu*.

We are also working to increase our use of bio-based ink. In the past, we used this ink primarily in shrink labels for products sold in PET containers. In fiscal 2021 we began using it in the shrink labels for 5 products, including *Milouge*. Products using bioplastic and bio-based ink are certified by the Japan Organics Recycling Association as using plant-derived resources (biomass) and conforming to all relevant laws, regulations, and standards for quality and safety, and bear the “Biomass Mark.”

Thinner shrink labels

In fiscal 2021 we reduced the thickness of the shrink labels on 4 products sold in PET containers, including *Yakult Bansoreicha* (500 ml), from 50 μm to 45 μm .

Increased use of recycled PET labels

We have increased our use of recycled PET labels, which use reclaimed PET bottles in 25% of the raw materials, on 3 products sold in PET containers, including *Ocha* (280 ml).

Products using recycled PET labels are certified by the Council for PET Bottle Recycling, and bear the “PET Bottle Recycling Promotion Mark.”



Biomass Mark

This mark certifies that a product uses plant-derived resources (biomass) and conforms to all relevant laws, regulations and standards for quality and safety.



Recycled PET Mark

This mark is shown on products that use recycled PET bottles.

Equity participation in R Plus Japan

Our equity participation in the joint venture R Plus Japan lets us contribute to the resolution of various plastic-related social issues. R Plus Japan promotes technological developments in the efficient recycling of used plastics with reduced environmental impact.

At Yakult, we are investigating and promoting initiatives which reduce the amount of plastic in containers and packaging, and encouraging transitions to more easily recyclable materials.

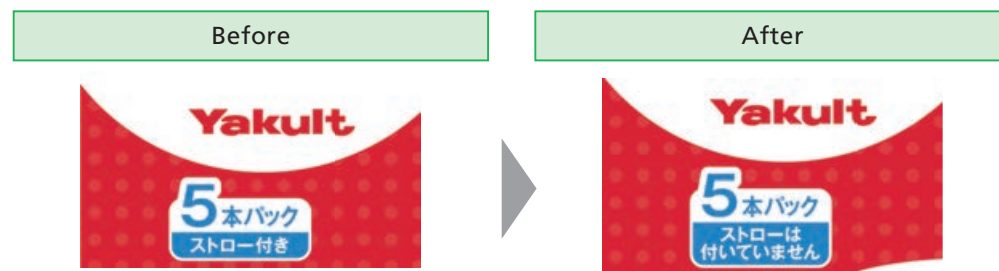
Going forward we will also work to make used plastics recyclable through R Plus Japan initiatives.

Reducing plastic usage

■ New Yakult series initiative: Japan

Previously, 5-packs of the *New Yakult* series came with pre-attached straws while 10-packs did not, allowing customers to choose whether they wanted straws by purchasing packs of different sizes. However, in line with our efforts to achieve the goals of the Yakult Group Environmental Vision formulated in March 2021, we stopped affixing individual straws to *New Yakult* and *New Yakult Calorie Half* 5-packs as part of a strategy to reduce the plastic used in containers and packaging and transition to recyclable materials.

Notice at the upper left corner of *New Yakult* 5-pack



■ From plastic to carton packaging: Yakult Europe B.V.

Yakult Europe B.V. has been switching its multi-pack packaging for *Yakult* series and external packaging for shipping from plastic film to carton. In addition to the Netherlands, Germany, Austria, Belgium, France and Spain, the company switched to carton packaging in Italy and Malta at the end of 2020. As a result, it reduced the amount of plastic used in 2021 by approximately 15 tons. By April 2023 the company intends to use carton packaging for all European products.

Furthermore, Yakult S/A Ind. E Com. (Brazil) is currently preparing to replace plastic straws with paper ones as part of their September 2022 production facility update.



Expanded use of carton packaging

■ Plastic waste collection: P.T. Yakult Indonesia Persada

In July 2021, P.T. Yakult Indonesia Persada began collecting plastic waste in accordance with the Indonesian government's plan to reduce waste from manufacturers, which sets the goal of a 30% overall reduction in plastic and other waste by 2029. In addition to submitting a road map for achieving this plan and yearly waste reduction goals to the government, the company began trial collection of *Yakult* 50-pack shrink wrap by Yakult Ladies and direct sales route operators in July 2021, and has recovered 20,128 kg to date. The company also began a pilot project collecting *Yakult* containers in October 2021.



Separating shrink wrap



Collecting *Yakult* containers



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	<ul style="list-style-type: none"> ▶ 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.

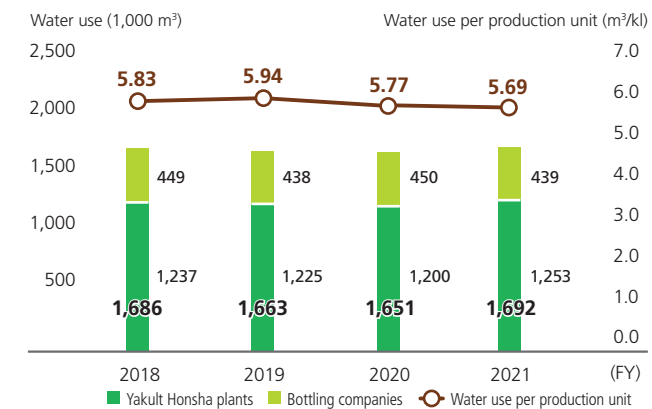
In fiscal 2021, Yakult Honsha plants and bottling companies used approximately 1.69 million m³ of water in total (Yakult Honsha plants: approx. 1.25 million m³, bottling companies: approx. 0.44 million m³). Reducing total water usage per production unit is one objective of Environmental Actions (2021–2024),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

Resource recycling

Reducing waste

Initiatives at Yakult Honsha plants and bottling companies

Yakult Honsha plants and bottling companies are implementing measures to curb waste generation as well as promote recycling, and are aiming to reach zero waste generation.*

Waste generated by Yakult Honsha plants and bottling companies in fiscal 2021 totaled approximately 2,571 tons (approx. 1,732 tons by Yakult Honsha plants and approx. 839 tons by bottling companies). As a result of diverse efforts made to reduce waste, we successfully reduced waste generation by 26.7%

compared to that of fiscal 2010, an action target of Environmental Actions (2021–2024).

We also strive to further promote the reuse of packing materials and the introduction of returnable packing materials. In addition, we are changing our waste recycling programs from thermal recycling at waste disposal contractor facilities to material recycling. We will continue to make improvements in our recycling programs while reducing processing expenses.

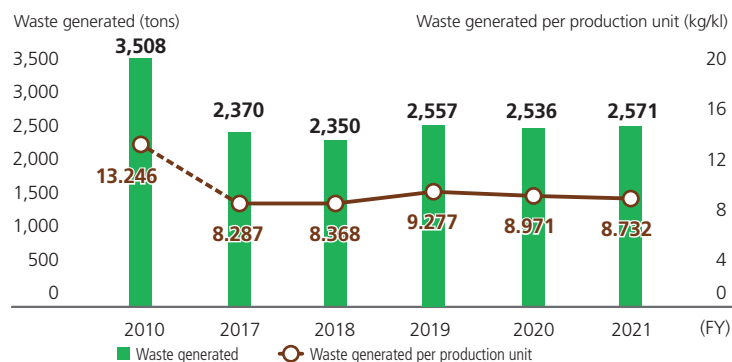
* Yakult's definition of zero waste generation: A state achieved when the amount of waste for final disposal (landfill) from plants (excluding specially controlled industrial waste) is less than 1% of waste generated



Eco station at Fukushima Plant

Waste generated at Yakult Honsha plants and bottling companies

Note: The amount of waste generated per production unit is calculated using data from bottling companies and five Yakult Honsha plants, excluding plants that produce cosmetics and pharmaceuticals.



Initiatives at the building occupied by the head office

We have introduced wastepaper recycling boxes on each floor along with waste sorting bins, and are working to properly separate each kind of waste. In fiscal 2021, the recycling rate for waste generated at the head office was 81.8%.

To raise employees' awareness of these efforts, we engage in awareness raising activities on an ongoing basis. These include posting our performance on waste disposal and recycling rates on our intranet.

Initiatives at the Yakult Central Institute

The Institute generates a wide variety of waste in its research. This waste is separated and collected properly at the Institute, and disposal is conducted by licensed waste disposal contractors. The fiscal 2021 recycling rate for the Institute was 100%.

Initiatives to reduce food loss and waste

Yakult's dairy products are made to order and produced through a lean production system. We strive to reduce our food loss and waste by limiting excess inventory and other measures.

In fiscal 2021, as an initiative to reduce food waste, we donated a portion of our products marked for disposal (soft drinks in easily manageable paper packages and plastic containers) to food bank organizations. In June 2021, we donated 2,952 cases of soft drinks in plastic containers to the NPO Food Bank Yamagata, and in March 2022, following a soft drink product redesign, we provided former versions of the products in paper packaging to 37 food banks through Food Bank All Japan.

List of recipients of soft drinks in paper packaging

(Unit: Items)

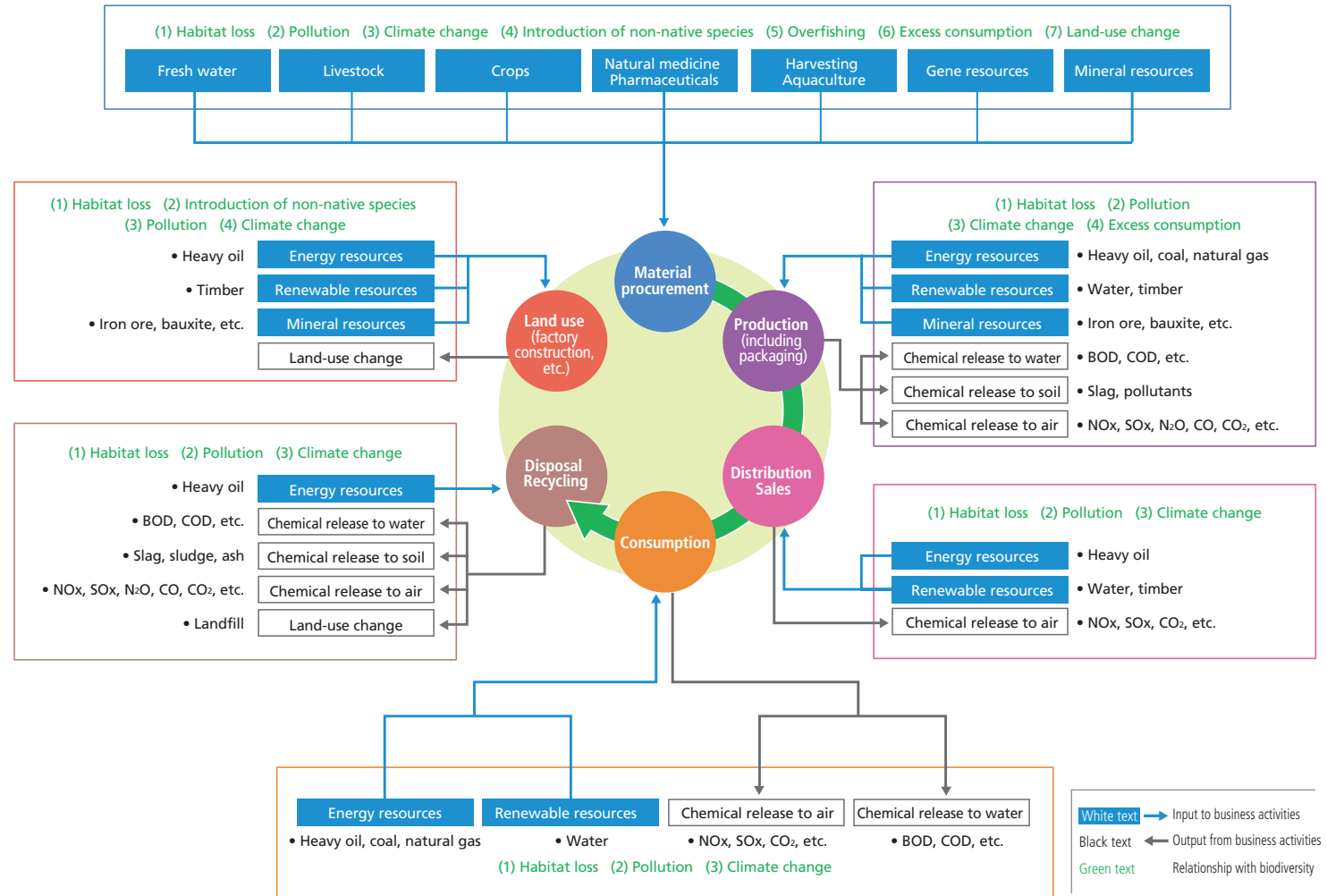
Recipient	Amount	Recipient	Amount
1 Food Bank Ikor Sapporo	3,600	20 Second Harvest Kyoto	1,260
2 Food Bank Iwate	720	21 Food Bank Nara	1,080
3 Food Bank Ishinomaki	2,160	22 Food Bank Wakayama	1,800
4 Food Bank Iwaki	720	23 Junsei Delicious Food Kids Club	720
5 Food Bank Ibaraki	3,600	24 Harmony Net Mirai	1,800
6 Food Bank Net West Saitama	3,600	25 Live-ing Shimonoseki Food Bank	1,080
7 Food Bank Iruma	720	26 Food Bank Tokushima	1,800
8 Food Bank Chiba	1,800	27 Food Bank Kitakyushu Life Again	3,600
9 Food Bank Funabashi	720	28 Food Bank Fukuoka	6,732
10 Tokatsu Kusanone Food Bank	10,800	29 FBQ Food Bank Omuta	1,440
11 Food Bank Chofu	4,320	30 Iruka	6,696
12 Food Bank Komae	720	31 Food Bank Saga	1,080
13 Food Bank Mitaka	360	32 Single-parent Family Welfare Group Nagasaki	3,600
14 Food Bank Shonan	3,600	33 Food Bank Kumamoto	6,696
15 Food Bank Niigata	7,200	34 Food Bank Hyuga	180
16 Food Bank Shibata	10,800	35 Food Bank Miyazaki	360
17 Hotline Shinshu	13,896	36 Food Bank Teshiote	3,600
18 Food Bank Aichi	3,600	37 Food Bank Soo	2,880
19 Food Bank Shiga	144	Total	119,484

Biodiversity

Our business and biodiversity

Yakult clearly stipulates in one of the Action Directives in the Yakult Basic Policy on the Environment that “In all business activities, business units will give due consideration to the environment as well as biodiversity by promoting the reduction of environmental impacts.” We believe it is essential to give consideration to the global environment and biodiversity in our corporate activities that aim to benefit the health of our customers. We will strive to conserve biodiversity going forward by making good use of the technology we have built up in research and development over the years. At each step of our business activities, from material procurement to disposal and recycling, we review our dependency and our impact on the environment, and then clarify the relationship between business activities and biodiversity as shown on the right:

Map of relationship between business activities and biodiversity



Assessment of biodiversity risks for existing operations

In order to better understand the impact our existing operations have on biodiversity conservation, we conduct assessments of how each plant affects the natural ecosystems in the river basins where they are located. We use IBAT to determine the presence of nature conservation areas (world natural

heritage sites, International Union for Conservation of Nature (IUCN) Category I, II, III, IV and V areas, Ramsar Convention wetlands) and habitats of IUCN-designated endangered species within 10 km of each plant.

Assessment of biodiversity around production bases

Plant	River basin	Fiscal 2021 total water intake (m ³)	Fiscal 2021 total water discharge (m ³)	Assessment using IBAT		Notes on biodiversity (ecological risk)
				No. of aquatic species	No. of endangered species (IUCN-designated)	
Fukushima Plant	Entire Abukuma River basin including Surikami River	180,032	150,625	62	0*	Plant wastewater discharges into the Abukuma River, which has been designated as a Key Biodiversity Area (KBA) and Important Bird and Biodiversity Area (IBA) as a landing zone for northern pintail (a duck on the IUCN Red List).
Hyogo Miki Plant	Kako River basin, Muko River basin, Yodo River basin, around Kobe City	263,876	225,059	66	0	Within 10 km downstream of the plant, there are no areas of special importance for biodiversity, and no habitats of IUCN-designated endangered species have been identified in the small bodies of water around the plant.
Ibaraki Plant	Tone River system	152,416	125,077	60	0	Within 10 km downstream of the plant, there are no areas of special importance for biodiversity, and no habitats of IUCN-designated endangered species have been identified in the small bodies of water around the plant.
Fuji Susono Plant, Fuji Susono Pharmaceutical Plant	Kano River basin	463,605	244,593	63	0	Within 10 km downstream of the plant, there is a wildlife sanctuary classified as IUCN Category IV. No habitats of IUCN-designated endangered species have been found in the small bodies of water around the plant.
Saga Plant	Chikugo River system	175,697	130,433	61	0	Within 10 km downstream of the plant, there are no areas of special importance for biodiversity, and no habitats of IUCN-designated endangered species have been identified in the small bodies of water around the plant.
Yakult Iwate Plant	Kitakami River system	83,743	47,628	58	0	The area surrounding water sources have been designated as IUCN protected areas, including Category Ib: forest ecosystem conservation area at the source of Kakkonda and Tama Rivers, and Wagadake plant community and forest reserve, and Category II: Towada-Hachimantai National Park and Hayachine Quasi-National Park.
Yakult Chiba Plant	Tone River basin	103,461	28,172	63	1	Water source area has a number of conservation areas classified as IUCN Categories II and IV, such as Joshinetsu-Kogen. Within 10 km downstream of the plant, there is a Category IV protected area (wildlife sanctuary). It has also been identified as a habitat for the Reeves' turtle , classified as endangered by IUCN.
Yakult Aichi Plant	Kiso River, Yahagi River, Shonai River basins	80,079	30,138	66	1	The streams and rivers of the Nobi Plain are habitats for the Madara-naniwa-tombo dragonfly , classified as endangered (Ib by Japan's Ministry of the Environment Red List), and has been designated as a KBA.
Yakult Okayama Wake Plant	Yoshii River basin	110,657	73,425	65	2	There are a number of IUCN Category IV areas within the Yoshii River basin. There are also Category IV and V protected areas within 10 km downstream of the plant. These have been identified by IUCN as habitats for the endangered Reeves' turtle and the vulnerable (DD by Japan's Ministry of the Environment Red List) Chinese softshell turtle .
Yakult Fukuoka Plant	Chikugo River basin	60,721	39,914	92	2	Within 10 km downstream of the plant, there is an IUCN Category IV area (wildlife sanctuary). Also, the Japanese grenadier anchovy , classified by IUCN as endangered (Ib by Japan's Ministry of the Environment Red List), and the Ariake stripe spined loach , vulnerable (Ib by the Ministry of the Environment Red List), may possibly inhabit small bodies of water around the plant.
Shonan Cosmetics Plant	Sagami River and Hikiji River basins	17,040	16,854	106	1	Within 10 km downstream of the plant, there is an IUCN Category IV protected area (wildlife sanctuary). Also, the genuine bitterling , classified by IUCN as vulnerable (Ib by Japan's Ministry of the Environment Red List) may possibly inhabit the small bodies of water around the plant.

* The northern pintail duck is not an aquatic species and thus not included in the total

Conserving biodiversity through afforestation

■ Environmental Actions (2021–2024) Tree Planting: Japan

In 2021, as one of the Environmental Actions (2021–2024) initiatives conducted for our CSR campaign, we planted 30 trees at 13 locations throughout Japan on May 22nd, the International Day for Biological Diversity, and on other occasions.

■ Million Trees Project: Yakult China Group

In 2015, the Yakult China Group began participating in the Million Trees Project run by the NGO Shanghai Roots & Shoots. The group has donated 2,000 seedlings every year since, most recently in 2021. With a total of 14,000 trees planted at the Yakult public welfare forest (14.76 hectares) and an average conservation rate of approximately 70% (NGO data), this initiative has been steadily contributing to the afforestation of the area.

■ Working with Treedom to plant 10,000 trees in 3 years: Yakult Europe B.V.

In 2022, Yakult Europe B.V. began a new activity in collaboration with Treedom, a global web platform that facilitates tree-planting around the world. Seedlings purchased online by Treedom users are planted and raised by farmers in Africa and Central and South America. To raise awareness of this activity among operating companies in Europe, the company presented every employee of the Yakult Group in Europe with a seedling and a Treedom code for an individual tree, and now works with employees to manage Yakult's forest online.

Biodiversity conservation in partnership with stakeholders

Both in Japan and overseas, we partner with relevant authorities, local governments, NGOs, NPOs and other stakeholders to promote business activities and social contributions that further biodiversity conservation.

■ Joining UN and Ministry of the Environment initiatives

The Yakult Group has implemented Yakult CSR campaigns for all workers since fiscal 1994. In fiscal 2017, we joined the My Action Declaration program of the Japan Committee for United Nations Decade on Biodiversity (UNDB-J) that encourages biodiversity engagement in daily life, and 15,706 Yakult workers participated by selecting and declaring their commitment to any number of five actions to protect biodiversity. This initiative was highly rated and featured in the UNDB-J's collection of My Action Declaration initiatives.

[WEB](#) [UNDB-J My Action Declaration Initiatives >>>](#)

https://undb.jp/wp/wp-content/uploads/2019/06/action_jirei.pdf (Japanese)

■ Partnering with international NGO OISCA

Founded in 1961, OISCA International is an NGO with the highest UN consultative status. OISCA focuses on rural development, environmental conservation and the cultivation of future talent in the Asia-Pacific region.

Yakult has worked with OISCA around the world to make social contributions since 1979.

• Supporting Children's Forest Program

We support the OISCA Children's Forest Program as an activity related to biodiversity conservation. This program encourages local communities to understand the value of forests and the natural environment, and participate in forest conservation themselves, through activities such as environmental education, community-led tree planting, and helping children green the areas around their schools.

We consult with OISCA to determine specific regions to support, and our contributions have been used for activities in places such as Indonesia and the Philippines.

Use of internationally certified paper in products (participating in biodiversity-related certification programs)

We use environmentally responsible FSC^{®*1}- and PEFC^{*2}-certified papers, both of which programs are known as forest certification programs, in some of our paper containers for soft drinks.

We believe that the use of paper with forest certification contributes to climate action, biodiversity conservation, and appropriate forest and wood management across the supply chain. To these ends, we are in the process of switching to using FSC[®]- and PEFC-certified papers for our main paper containers and packaging.

*1 The FSC[®] (Forest Stewardship Council[®]) is an international NPO established with the goal of promoting responsible forest management more widely

*2 The PEFC[®] (Programme for the Endorsement of Forest Certification) is an international NGO that promotes the mutual recognition of forest certification programs established and operated in different countries based on standards set by the PEFC, and promotes sustainable forest management



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のマーク
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Note: PEFC logo mark used with the permission of the Sustainable Green Ecosystem Council (SGEC/PEFC Japan).