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
● 2°C scenario risks • Difficulty procuring raw materials (powdered skim milk) • Higher costs for energy/compliance with plastic regulations • Higher fuel and electricity costs	● 2°C scenario opportunities • 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
● 4°C scenario risks • 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	● 4°C scenario opportunities • 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 CO_2 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 CO_2 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 CO_2 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

CO_2 emissions in fiscal 2021

(t-CO_2)

		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 CO_2 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.

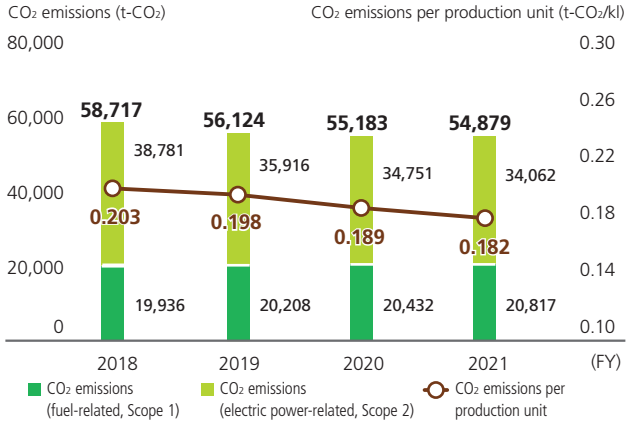
In fiscal 2021 a total of five electric molding machines to produce *Yakult* and other containers were upgraded to energy-saving machines at the Yakult Chiba Plant, Yakult Okayama Wake Plant and Yakult Fukuoka Plant.

Furthermore, to reduce CO_2 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 CO_2 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 CO_2 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.

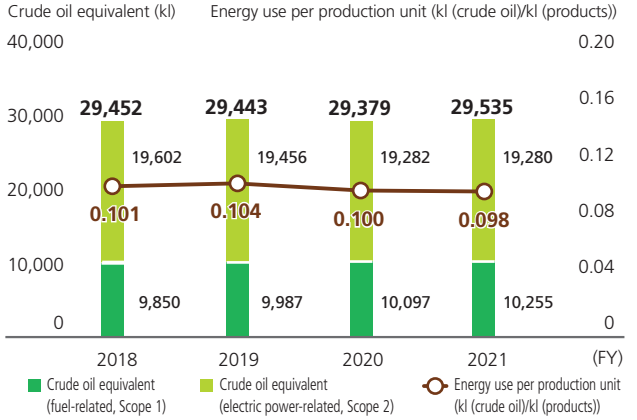
* Fukushima Plant, Ibaraki Plant, Fuji Susono Plant, Hyogo Miki Plant, Saga Plant, Yakult Iwate Plant, Yakult Chiba Plant, Yakult Aichi Plant, Yakult Okayama Wake Plant, Yakult Fukuoka Plant, Fuji Susono Pharmaceutical Plant, Yakult Materials Co., Ltd. Fuji Susono Plant
Note: Electric power-related CO_2 emission factors are the adjusted emission factors of each electric power company.

CO_2 emissions and CO_2 emissions per production unit by Yakult Honsha plants and bottling companies (Scope 1 + Scope 2)



Note 1: CO_2 emissions per production unit are calculated using data from bottling companies and five Yakult Honsha plants, excluding plants that produce cosmetics and pharmaceuticals.
Note 2: Emission factors are the adjusted emission factors of each electric power company for each year.

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



Note: When doing calculations per production unit, crude oil equivalents are calculated using data from bottling companies and five Yakult Honsha plants, excluding plants that produce cosmetics and pharmaceuticals.

Initiatives to reduce CO_2 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.

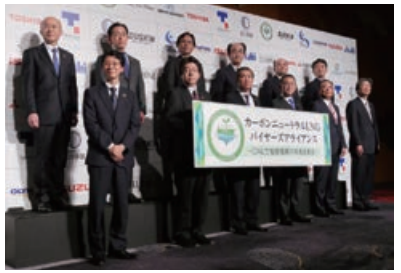
This supply agreement is the first of its kind from Tokyo Gas Co., Ltd. to the beverage industry. Switching the total supply of the Yakult Central Institute to carbon-neutral city gas for five years from April 2021 to the end of March 2026 will help reduce CO_2 by approximately 11,500 tons.

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.

* 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


CNL Buyers Alliance

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 CO_2 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 CO_2 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 CO_2 emissions by approximately 46 tons.

Initiatives to reduce CO_2 emissions outside Japan

Introduction of solar power generation

As part of our efforts to reduce CO_2 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 CO_2 emissions by 119 tons per year.

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

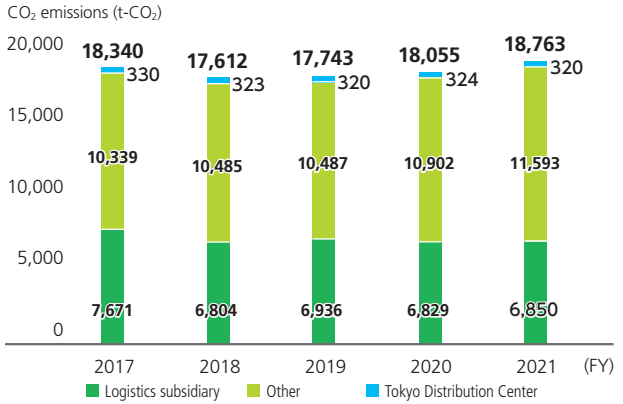
Guangzhou Yakult Co., Ltd. is promoting the introduction of electric trucks to comply with China's diesel truck regulations. The company has reduced its diesel fuel consumption by 42,000 liters per year by switching from leasing to purchasing and putting 14 electric trucks on the road in 2021.

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.

CO_2 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

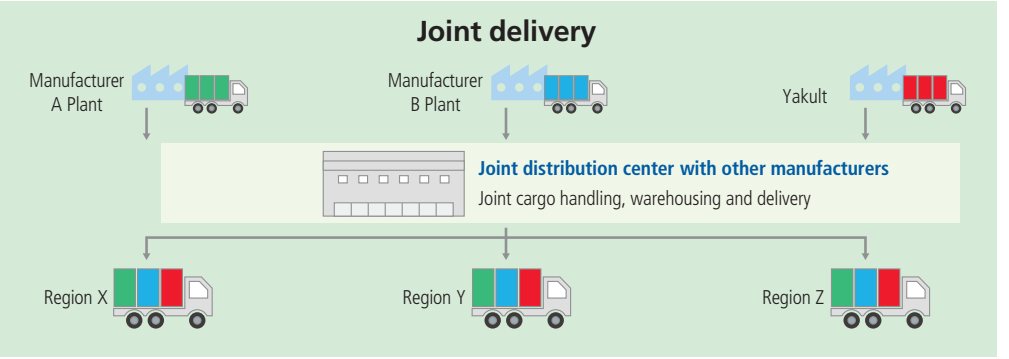
We are promoting a modal shift to rail and ocean freight transport as one of our efforts to reduce environmental impacts. In 2015, we received companywide and product-based certification under the Eco-Rail Mark system, and were certified under the Eco-Ship Mark system in 2016.

CO_2 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 CO_2 emissions and make logistics more efficient.



Initiatives at sales

We introduced electric vehicles (COMS) in our home delivery service by Yakult Ladies to reduce CO_2 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.