

Environment | 2050 Environmental Vision

For more details about our environment-related initiatives, visit:
<https://www.otsuka.com/en/csr/environment/>



Toward Our 2050 Environmental Vision, "Net Zero"

As a total healthcare company, the Otsuka group will work diligently to reduce its impact on the global environment and contribute to the realization of a sustainable society that continues into a healthy future. We will strive to achieve our medium-term targets for the environment and our 2050 environmental vision, Net Zero.

Sustainability Mission

Contribute to a healthier and more sustainable society, while simultaneously achieving growth

Carbon Neutrality

2028 target
50% reduction in CO₂ emissions compared to 2017

Circular Economy

2028 target
50% reduction in simple incineration and landfill disposal compared to 2019

2030 target
100% recyclable materials in our PET bottles and use of plant-based materials

Water Neutrality

2028 target
Expand the plant water management program to all locations globally
Develop a water use strategy for business locations in water-stressed areas



Materiality (Material Issues)	Social Issues	Our Goals	Our Activities
Carbon Neutrality ¹	Global warming	2028 target 50% reduction in CO ₂ emissions compared to 2017	<ul style="list-style-type: none"> Reduce CO₂ emissions throughout the value chain Reduce environmental impact by improving resource efficiency
Circular Economy ²	Environmental load increase	2028 target 50% reduction in simple incineration and landfill disposal compared to 2019 2030 target 100% recyclable materials in our PET bottles and use of plant-based materials	<ul style="list-style-type: none"> Promote business activities aimed at sustainability for both society and the earth
Water Neutrality ³	Reduced freshwater availability due to water resource risks	2028 target <ul style="list-style-type: none"> Expand the plant water management program to all locations globally Develop a water use strategy for business locations in water-stressed areas 	<ul style="list-style-type: none"> Understanding water resource risks Management and effective use of water resources

1. To reduce CO₂ emissions from business activities to substantially zero (calculated by subtracting uptake from emissions)
 2. To establish an economic system that recycles resources by reusing waste discharged from business activities as new raw materials
 3. To reduce the impact of water intake and discharge from business activities on water resources to zero

Environment | Carbon Neutrality

For more details about our Carbon Neutrality, visit:

<https://www.otsuka.com/en/csr/environment/climate.html>



Carbon Neutrality

Basic Policy

Aiming to create a healthy future as a total healthcare company, the Otsuka group established 2050 Environmental Vision, "Net Zero," with the aim of reducing the total environmental impact across all its business activities to zero. As global efforts to realize a decarbonized society accelerate, the Otsuka group is committed to reducing greenhouse gas emissions throughout its business value chain in accordance with the international targets and indicators set forth in the Paris Agreement, with the aim of achieving a sustainable society.

Disclosure in line with TCFD recommendations

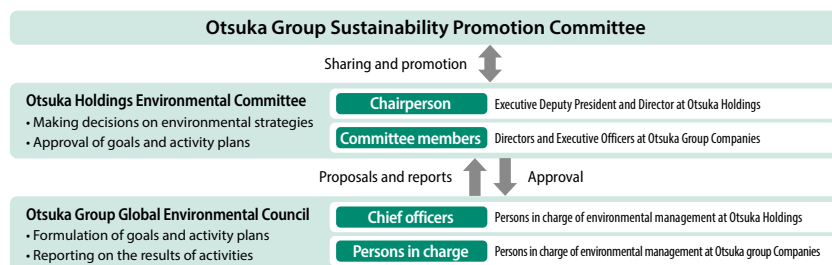
In October 2021, Otsuka Holdings announced its support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We are disclosing information in line with the disclosure framework ("Governance," "Strategy," "Risk Management," and "Targets and Indicators") regarding the financial impact of and response to climate change-related risks and opportunities, as recommended for disclosure by the TCFD. We will continue to deepen our efforts based on the results of scenario analysis and expand our disclosures.



Governance

The Otsuka Holdings Environmental Committee comprises the executive deputy president and director of Otsuka Holdings, group company directors, and executive officers. The committee is responsible for making decisions on key challenges relating to climate change. Furthermore, resolutions on matters relating to group-wide direction are shared with each company following approval by the Board of Directors. These matters are communicated to each company in the form of Otsuka group policies and incorporated into specific action plans. In 2022, the Board of Directors approved revised targets for each material issue to further strengthen our environmental efforts through our business operations to achieve a sustainable society.

Otsuka Group Environmental Management System



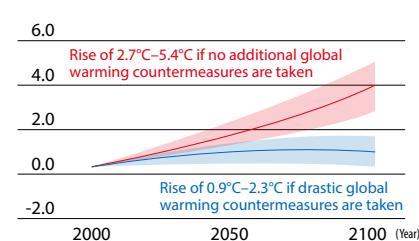
Strategy

The Otsuka group has Net Zero as its environmental vision for 2050, which aims to reduce the environmental impact of all its business activities to zero. In addition to reducing CO₂ emissions in the group's business activities, the group aims to reduce the environmental impact of its entire supply chain to zero. In 2021, the Otsuka group also conducted a primary analysis to identify and assess risks that could have a significant financial and strategic impact on climate change. Recognizing that a sustainable society requires proactive decarbonization efforts to address climate change, the Otsuka group is developing strategies in line with TCFD recommendations.

Scenario Analysis

We analyzed business risks and opportunities under the 2°C and 4°C climate change scenarios below, which are related to scenarios indicated by the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC), and examined adaptation measures and financial impacts. We will continue to examine risks and opportunities and expand our scenario analysis.

Change in Global Mean Surface Temperature*



4°C Scenario

A scenario in which development is dependent on fossil fuels and climate change measures are not introduced. Rising temperatures cause an increase in natural disasters, negative impact on crops, and loss of biodiversity.

Below 2°C Scenario

A scenario in which development is sustainable and climate change measures are proactively implemented to keep the temperature rise below 2°C. Measures to achieve a decarbonized society are enhanced, including the introduction of CO₂ emissions regulations and expansion of the renewable energy market.

[Main Scenarios Referenced]
 • IEA World Energy Outlook 2020 (Sustainable Development Scenario, Stated Policy Scenario)
 • IPCC (RCP2.6, RCP8.5)
 • OECD-FAO Agricultural Outlook 2021-2030
 * Based on the Ministry of the Environment's Japanese translation of Summary for Policymakers, Working Group II Report, Fifth Assessment Report published by the IPCC

Environment Carbon Neutrality

Carbon Neutrality

Category	Contents	Business/Financial Impacts		Our Response/Resilience	
		Below 2°C	4°C		
Transition Risks	Policies and regulations	Increased costs due to tightened regulations such as carbon pricing	Large	Large	<ul style="list-style-type: none"> Introduction of internal carbon pricing Introduction of CO₂-free electricity
	Market	<ul style="list-style-type: none"> Steep rise in renewable energy prices Steep rise in energy prices 	Large	Large	<ul style="list-style-type: none"> Introduction of solar power generation systems including mega solar power systems Improving energy efficiency through energy saving and fuel conversion
	Reputation	Reputation risk and investment-related risk associated with inadequate response to climate change and water resource risks	Large	Medium	Investment in environmental facilities in Japan and overseas
Physical Risks	Acute	<ul style="list-style-type: none"> Risks of damage to production and other facilities due to intensification of extreme weather, and cost increases to prepare for extreme weather events Risks in raw material procurement such as disruption to supply chains and stable procurement 	Medium	Large	<ul style="list-style-type: none"> Decentralized production of major products Formulation, disclosure, and sharing of procurement policies and guidelines with suppliers Strengthening communication with our supply chains (expanding the number of suppliers that are subject to our supply chain questionnaires, improving and enhancing contents of the questionnaires, and holding discussions)
	Chronic	<ul style="list-style-type: none"> Increased energy costs associated with temperature rise Effects of climate change on drug discovery using crop and other natural products 	Large	Large	<ul style="list-style-type: none"> Systematic renewal of facilities Collection of information about the impacts on drug discovery using crops and other natural products, risk assessment, and examination of countermeasures
Opportunities	Resource efficiency	Reduction of operating costs through the introduction of highly energy-efficient equipment	Large	Medium	Collection of information on new technologies (such as membrane water treatment technology that does not require steam) and examination of introduction of such technologies in a timely manner
	Energy sources	Reduction of energy procurement risk due to proactive introduction of renewable energy	Large	Small	<ul style="list-style-type: none"> Introduction of internal carbon pricing Collection of information on next-generation energy sources (such as hydrogen and ammonia) and examination of introduction of such sources in a timely manner
	Products and services	Increased revenue from increased demand for products that mitigate or address climate change (e.g., products for preventing heat stroke and the spread of infectious diseases)	Large	Large	<ul style="list-style-type: none"> Formulation of the Otsuka Group Plastic Policy (in 2020) that aims at reducing reliance on fossil fuel-derived materials Examination of introduction of recycled PET resin or plant-based bio-PET resin for PET bottle beverage containers Examples: Expand sales of products for preventing heat stroke, and expand sales of products with low environmental impact throughout their lifecycles
	Market	Increased revenue from expansion into new market categories with products that address climate change	Medium	Medium	Development of products that mitigate or address climate change (e.g., plant-based products)
	Resilience	Strengthening business continuity planning (measures against disasters and supply chain disruptions)	Medium	Large	<ul style="list-style-type: none"> Strengthening of promotion of energy saving and renewable energy through internal carbon pricing Business continuity plan measures at manufacturing sites (anti-seismic measures and measures against flooding)

Assessment of business/financial impacts Large: One billion yen or more (equivalent to 1% of operating income assuming a minimum operating income of 100 billion yen) Medium: From negligible to less than one billion yen Small: Negligible

The Otsuka group aims to contribute to the realization of a decarbonized society by expanding the introduction of renewable energy sources in Japan and overseas, promoting more efficient energy use, and creating synergies through collaboration among group companies. We are also working on the formulation of a sustainability and environmental strategy in the next medium-term management plan.

Risk Management

The Otsuka group identifies and assesses risks related to climate change that could have a significant financial impact or impact on business strategies. Items identified as important in the risk assessment are approved by the Otsuka Holdings Board of Directors and shared with other Otsuka group companies as the group's response policy, aiming for management that mitigates climate-related risks group-wide.

Metrics and Targets

The Otsuka group has set targets for each material issue under its Net Zero 2050 environmental vision, which aims to reduce the environmental impact of all its business activities to zero. In terms of mitigation measures to curb emissions of greenhouse gases that cause global warming and adaptation measures to prepare for the effects of climate change, the group has set a target of reducing CO₂ emissions by 50% by 2028 (compared to 2017 levels), and is promoting activities aimed at decarbonization, including participation in the RE100 program. The Otsuka group will continue to work proactively to achieve its medium-term targets, leveraging synergies through collaboration among group companies.



Carbon Neutrality



Circular Economy



Water Neutrality

Targets	• 2028 target: Reduce 50% in CO ₂ emissions compared to 2017	
Fiscal 2022 Results	CO ₂ emissions reductions through introduction of renewable energy	CO ₂ emissions
	249,000 t-CO ₂	576,000 t-CO ₂
Targets	<ul style="list-style-type: none"> • 2028 target: Reduce 50% in simple incineration of waste and landfill disposal compared to 2019 • 2030 target: 100% content of recycled and plant-based materials in our PET bottles 	
Fiscal 2022 Results	Total waste volume	Simple incineration and landfill disposal volume
	92,900 t	18,000 t
Targets	<ul style="list-style-type: none"> • 2028 target: Expand the plant water management program to all locations globally • 2028 target: Develop a water use strategy for business locations in water-stressed areas 	
Fiscal 2022 Results	Water usage	Water intensity per unit of sale
	18.50 million m ³	10.64 m ³ /¥ million

(Calculated based on the performance of all manufacturing sites in the consolidated Otsuka group)

Environment | Carbon Neutrality

Carbon Neutrality

On the CDP Climate Change A-List, the highest rating

Otsuka Holdings made the 2022 CDP Climate Change A-list, the highest ranking in the climate change study. The Otsuka group's climate change initiatives and performance, as well as its extensive information disclosure, were recognized as being at the level of an international leader. In Japan, 74 companies were selected for the Climate Change A-List.



External Evaluation

Inclusion in ESG Investment Indexes



Initiatives to Introduce Renewable Energy and Maximize Energy Use Efficiency

In 2022, the Otsuka group brought forward its climate change targets from 2030 to 2028, and further revised its SCOPE 1 and 2 targets upward from 30% (compared to 2017) to 50% (compared to 2017). The group is also a member of RE100, an initiative that aims to achieve 100% renewable energy for all electricity used. To achieve this goal, the group is working to maximize the efficiency of energy use throughout the group by supplying highly efficient energy to group companies, such as by introducing CO₂-free electricity, utilizing renewable energy through the installation of solar power generation equipment, and through cogeneration systems¹. In Japan, we have completed the switch to 100% renewable energy-derived electricity for all electricity purchased from external sources at all 23 factories and offices of five companies in the Group², and renewable energy now accounts for approximately 61% of the total electricity purchased. In April 2022, four Group companies³ introduced CO₂-free electricity in Indonesia, reducing annual emissions by approximately 103,500 t-CO₂, or 60% of total emissions in Indonesia. In India, a large-scale solar power generation facility was introduced in June 2022, which is expected to reduce annual CO₂ emissions by approximately 14,500 t-CO₂.



Otsuka Chemical (India)

1. A system that uses natural gas, LP gas, etc. as fuel to generate electricity by means of an engine, turbine, fuel cell, etc., and simultaneously recovers the waste heat generated during the process, thereby utilizing heat and electricity without waste.
 2. Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, Otsuka Foods
 3. PT Otsuka Indonesia, PT Amerta Indah Otsuka, PT Widatra Bhakti, PT Lautan Otsuka Chemical

Establish and Promote Integrated Energy Services

The Otsuka group has established an Energy Support Department (ES Department) within Otsuka Business Support to pursue the best energy mix⁴ in the Otsuka group as well as to expand the use of renewable energy by centralizing energy management in Japan and building an advanced supply and demand management system. In April 2022, five Group companies² in the Shikoku area, where many of the Group's production facilities are located, began procuring renewable energy power from power generators and other sources and supplying it to Group business sites.

In April 2023, we expanded our energy supply in the Shikoku area to include affiliated companies and employee benefit facilities, as well as newly adding facilities in the Tohoku, Hokuriku, and Kanto areas. The ES Department will continue to work on both contributing to business growth and improving environmental issues, aiming to further expand energy supply to group companies in the future.

4. Pursue optimization of power supply configuration in consideration of environmental friendliness, economic efficiency, and stability of supply

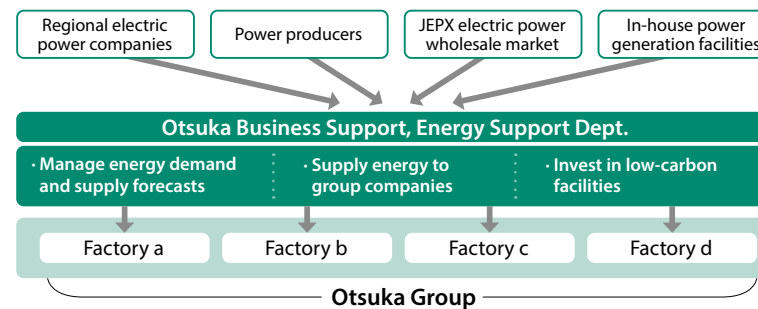
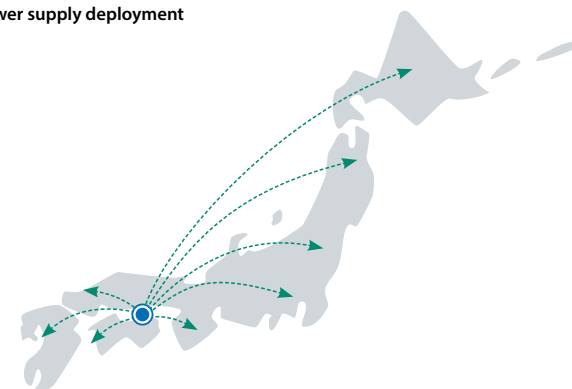


Image of power supply deployment



Environment | Circular Economy

For more details about our Circular Economy initiatives, visit:
<https://www.otsuka.com/en/csr/environment/resource.html>



Circular Economy

Basic Policy

In line with global trends, for us to be able to create a more sustainable society and achieve sustainable corporate growth, we must shift to a circular economy-type business model whereby we can achieve growth without having a serious impact on the environment. We regard the use of materials derived from fossil resources and waste discharge to the natural environment as environmental impacts that must be reduced to zero. We are committed to eliminating materials derived from fossil resources and achieving zero waste* as our vision. We will also continue to increase the efficiency of resource use throughout the value chain and build a harmonious and sustainable relationship with resources, including bioresources.

* Approach to reduce waste discharge (simple incineration and landfill disposal) to the natural environment to zero and use all resources effectively

Initiatives toward Zero Waste

The Otsuka group regards discarded raw materials and other resources as “resources” and aims to achieve zero-waste by effectively using them for recycling and reuse, and has set a goal of reducing simple incineration and landfill by 50% by 2028, compared to 2019. To achieve this goal on a global basis, we are working with each group company to resolve issues.

	Fiscal 2019 Results	Fiscal 2022 Results		2028 Targets
			Compared with 2019	
Simple Incineration and Landfill Volume	18,500t	18,000t	-2.7%	50% reduction

PET Bottle Resource Recycling

The majority of the plastic containers and packaging handled by the Otsuka group are PET beverage bottles. In 2020, the Otsuka group established the Otsuka Group Plastic Policy, and set a target of 100% recycled and plant-derived raw materials in PET bottles globally by 2030.

The Otsuka group has been working to reduce the amount of plastic used in its products for some time by reducing the weight of plastic containers and packaging, as well as through label-less product initiatives. PET bottles made from recycled PET resin are used in Japan for products such as *POCARI SWEAT*, *POCARI SWEAT ION WATER*, *Amino-Value*, and *CRYSTAL GEYSER*. Overseas, PT Amerta Indah Otsuka in Indonesia began selling *POCARI SWEAT* in a PET bottle container that uses 30% recycled PET resin, in August 2022.

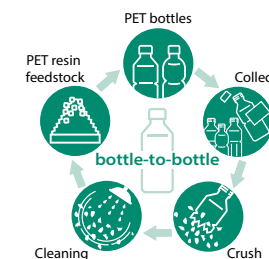
Otsuka group Plastic Policy

<https://www.otsuka.com/en/csr/environment/plastic.html>



Promoted “bottle-to-bottle” (horizontal) PET bottle recycling

The Otsuka group promotes recycling of plastics, primarily “bottle-to-bottle” (horizontal) recycling, in which used PET bottles are recycled back into PET bottles. In November 2022, Otsuka Pharmaceutical signed a comprehensive collaboration agreement with Altec Corporation and Japan Power Bottlers Co. that covers the collection, manufacture, and sale of PET bottles. In February 2023, we also concluded a three-way partnership agreement for resource recycling with Naruto City, Tokushima Prefecture, and Toyota Tsusho Corporation. We will continue to promote alliances with governments, municipalities, and business partners to realize a sustainable recycling-oriented society.



POCARI SWEAT is now available on Loop, a circular shopping platform.

As part of our efforts to reduce resources through reuse, we have developed a container that meets strength and quality standards suitable for the reuse model, and have been selling 250 ml *POCARI SWEAT* returnable bottles through the Loop recycling-oriented shopping platform since July 2022. The Otsuka group will continue to take on various approaches and challenges, and the group as a whole will work toward the realization of a recycling-oriented society.



Environment



Water Neutrality

For more details about our Water Neutrality, visit:

<https://www.otsuka.com/en/csr/environment/water.html>



Water Neutrality

Basic Policy

Since its establishment, the Otsuka group's operations have had a deep connection to water, a resource essential to life. Through products that use water as a raw material, we have actively contributed not only to the treatment and prevention of diseases, but also the maintenance and promotion of health. We therefore recognize the importance of water to us as a resource, and consider its conservation to be a critical global issue. Moreover, water resources are unevenly distributed across different countries and regions, each of which faces different risks. We cooperate with all stakeholders, and conduct ongoing water conservation initiatives from intake to discharge (including cultivation of water resources, conscientious use and clean return), in the aim of sustainable water use.

Considering environmental risks in each region is also important for sustainable growth in the diverse business models of the Otsuka group operating around the world. Aqueduct, a water risk assessment tool developed by the World Resources Institute (WRI), was used to evaluate the Otsuka group's production sites. The assessment found that seven factories in the United States, India, and Spain were classified as "Extremely High" in terms of Baseline Water Stress¹.

Otsuka group's water consumption in 2022 was 18,500,000 m³, of which 5% is from water-stressed areas, and at this point we have confirmed that there is no risk to our business activities. We will continue to examine the details of the risks at these factories together with the local subsidiaries and proceed with further investigations (Phase 2).

¹ This means a shortage of water demand by humans and ecosystems relative to the amount of available water resources. It includes not only water scarcity, but also water quality and access to water.

Identification of regional water issues (Aqueduct Assessment)

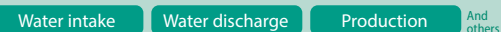
Baseline Water Stress (identification of sites that qualify as Extremely High)

Phase 2

Composite risk assessment



Business impact assessment (business characteristics analysis)



Water risk on-site survey



Water intake by area

(1,000 m³)

	Municipal water, industrial water	River water	Groundwater
Japan	10,399	96	1,134
Asia, North Africa	3,264	0	2,755
North America	390	0	201
Europe	220	2	26

From the Field in Indonesia for Total Healthcare

Contributing to nurturing the global environment together with local communities

In September 2022, PT Amerta Indah Otsuka signed an agreement with the Ministry of Environment and Forestry regarding the OTSUKA BLUE PLANET sustainability program for local governments and residents around the factory, and is promoting the following three programs.

- 1 Eco-Village Project: Support for the creation of a community capable of waste disposal and waste management.
- 2 Eco-Blue School Project: Fostering a school community that makes recycling resource separation a habit and implements continual management of plastic bottle disposal.
- 3 Eco Bottle Project: Production and sale of POCARI SWEAT PET bottles made from recycled PET resin*.

Environmental problems are becoming serious because the custom of throwing garbage in the garbage can has not taken root and local governments do not have a system in place for waste disposal and management. Through this program, we would like to work together with local people to preserve the environment in Indonesia, and we would like to work in cooperation with the government and local authorities.

* Uses 30% recycled PET resin



Sudarmadi Widodo

PT Amerta Indah Otsuka
Otsuka Blue Planet
Project Representative
HCD & Corporate
Communication Director



Garbage separation awareness seminar in Jakarta.