

Otsuka

Otsuka-people creating new products
for better health worldwide



Environmental Report 2022

Otsuka Holdings Co., Ltd.





TABLE OF CONTENTS

Editorial Policy	.....	2
Corporate Profile	.....	3
Message from the Director in Charge	.....	4
Policy and Management	.....	5
Material Issues	Carbon Neutrality	7
	Circular Economy	11
	Water Neutrality	14
Biodiversity	.....	16
Management of Chemical Substances	.....	17
Supply Chains	.....	18
Engagement	.....	19
Environmental Data and Third-Party Verification	.....	20



How to Use This Report

Navigation buttons and category tabs are provided at the top of each page to enhance the searchability of information. The pages also include links to pages or external sites related to the text.

Navigation Buttons

-  Click here to return to the TABLE OF CONTENTS
-  Click here to return to the previous page
-  Click here to move to the next page
-  Click here to return to the immediately preceding page

Link Button

-  **PDF Icon**
Click here to go to the relevant page in this report
-  **Web Icon**
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Category Tab

Click here to go to the top page of each category

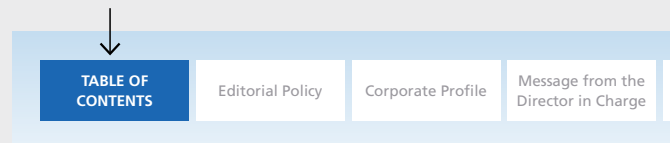


TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification
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Editorial Policy

Editorial Policy

The editorial policy of this environmental report is to ensure accuracy of information, comprehensiveness, and response to requests from stakeholders. In terms of the environment, the report is based on specific numerical targets and progress in the results of initiatives.

For information on social (S) and governance (G) initiatives, please refer to the Integrated Report or our website.

 [Integrated Report](#)

Information on the environment is available on our website.

 [Environment](#)

Reporting Period

Data for FY 2022 (from January 1 to December 31 of 2022) are used.

Initiatives reported include the most recent ones.

Scope of Reporting

In principle, all Otsuka group consolidated production sites are covered.

In case of any limit on the scope of initiatives or data, a note on the details is provided in this report.

Issuing Date

August 2023 (once a year)

Guidelines Referenced

- International Integrated Reporting Framework, International Integrated Reporting Council (IIRC)
- GRI Sustainability Reporting Standards, Global Reporting Initiative (GRI)
- ISO 26000
- Environmental Reporting Guidelines 2018, Ministry of the Environment, etc.

Disclosure of Information on Otsuka Group



 [Integrated Report 2022](#)



 [Investor Relations](#)



 [Sustainability](#)



 [Sustainability Handbook](#)

Contact Information

Otsuka Holdings Co., Ltd.
 Section for Environmental Affairs, Sustainability Promotion Department
 Shinagawa Grand Central Tower, 2-16-4 Konan,
 Minato-ku, Tokyo 108-8241, Japan
 TEL: +81-3-6717-1410

Third-Party Verification

In order to improve reliability, we are verified by third-party organizations.

 [Third-Party Verification](#)

TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification
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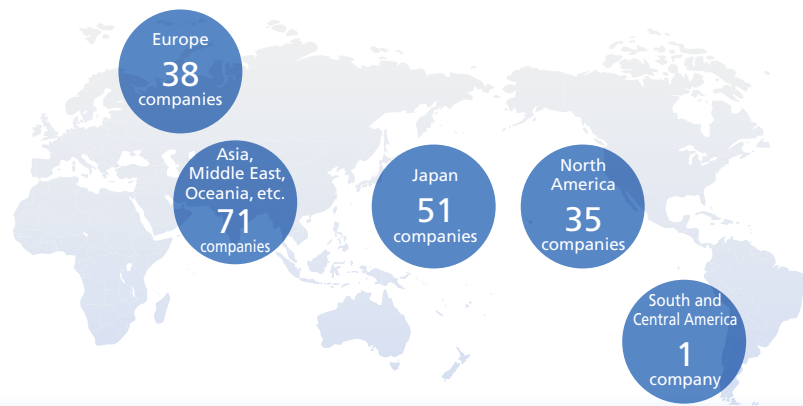
Corporate Profile

Corporate Profile (As of December 31, 2022)

Company Name	Otsuka Holdings Co., Ltd.
Established	July 8, 2008
Capital	¥81.69 billion
Head Office	2-9 Kanda-Tsukasamachi, Chiyoda-ku, Tokyo 101-0048, Japan
Tokyo Headquarters	Shinagawa Grand Central Tower, 2-16-4 Konan, Minato-ku, Tokyo 108-8241, Japan
Telephone	+81-3-6717-1410
Number of Employees	147 (Consolidated: 33,482)
Business Description	Control, management and related activities with respect to the Company's subsidiaries and affiliates operating in pharmaceutical, nutraceutical, consumer product, and other businesses

Global Network (As of December 31, 2022)

Otsuka operates **196** companies in **32** countries/regions



Approach to Sustainability

Corporate Philosophy

Otsuka-people creating new products for better health worldwide

Otsuka's Goal

To become an indispensable contributor to people's health worldwide

Sustainability Mission

Address social issues such as the evolution toward a healthier and more sustainable society, while simultaneously achieving growth. These activities are all supported by a comprehensive governance system.

Contribution to a More Sustainable Society

Otsuka's business is fully synchronized with our efforts to address social issues

Otsuka-people creating new products for better health worldwide



Message from the Director in Charge of Sustainability

We aim to contribute to a sustainable society that leads to a prosperous future.

Based on its corporate philosophy of "Otsuka-people creating new products for better health worldwide," the Otsuka group works to solve social issues through its businesses and contribute to the creation of a healthy and sustainable society, while achieving its continued growth. As a unique total healthcare company that contributes to maintaining and improving people's health through innovative and creative products, We hope to contribute to a sustainable future through handing down continuously to future generations a society where people and the earth can coexist.

The Otsuka group aims to help resolve social issues through its business activities. We have adopted the 2050 Environmental Vision, "Net Zero," which calls for us to reduce the total environmental impacts of our business activities to zero. In light of our business characteristics, we have determined the environmental issues with which we are particularly concerned to be carbon neutrality, circular economy, and water neutrality. We have set medium-term targets for 2028 and 2030, and are working together to achieve these targets. For carbon neutrality, in order to achieve unified management for optimizing energy consumption of group companies in Japan, we have established a new integrated energy service structure, and started its operation in the Shikoku region, where many of our production facilities are located. We have also begun to introduce renewable energy in Indonesia and India, which have the highest environmental impact within our group after Japan. For circular economy, in accordance with the Otsuka Group Plastic Policy, we aim to achieve 100 percent content of recycled and plant-based materials in our PET bottles. In Japan and Indonesia, we have launched a PET bottle made using recycled PET resin for POCARI SWEAT. In Indonesia, local governments, residents in the vicinity of our plants, and our staff are working together to raise awareness and to form habits about environmental consciousness, as well as to support the creation of communities together with the local areas that promote resource recycling. For water neutrality, we are working to identify water risks in accordance with the characteristics of each region and to establish a management system to mitigate such risks.

The Otsuka group is formulating a plan for the integrated operation and promotion of a sustainability strategy, which incorporates management strategy and the environment into the Fourth Medium-Term Management Plan to be launched in 2024. We will continue working on our own approaches, such as introduction of new technologies, and will earnestly strive to take our environmental initiatives, in order to achieve the goals.

Yoshiro Matsuo

Executive Deputy President and Director
Otsuka Holdings Co., Ltd.

TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Material Issues				Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification
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Environmental Management

Sustainability Management

The Otsuka Group Sustainability Promotion Committee was established in 2018 and is chaired by the director in charge of sustainability promotion at Otsuka Holdings. The committee promotes sustainability for the entire Otsuka group, acting as an engine for discussions and decision-making regarding the direction of sustainability-related activities, plans, and other measures. Committee meetings are held regularly to discuss direction and evaluate activities, develop systems in each area of sustainability promotion, and update promotion plans, as necessary. Committee members comprise group officers in charge of various areas such as supply chain, environment, human resources, corporate governance, compliance risk management, and public relations. The Committee, together with persons in charge from group companies, carries out close examination, with the Sustainability Promotion, IR and Corporate Planning Departments of Otsuka Holdings functioning as the secretariat.

Sustainability Management Structure



*1 Activities are promoted through various conference bodies, WGs, TFs, and others (including time-limited PJ)
 *2 Consumer Relations: Activities to build trust between companies and consumers

Otsuka Group's Environmental Policy

The Otsuka group strives to advance as an essential company that contributes to the health of people and global environment. We will help to realize a society in which people and the earth can coexist in the future by continuing to work on the issues with creativity.

Guidelines

1. Carbon Neutrality

We are committed to carbon neutrality throughout our business activities, aiming to create a decarbonized society.

2. Circular Economy

We are committed to the elimination of fossil resources-derived materials and the achievement of zero waste, aiming to create a circular economy society.

3. Water Neutrality

Promote sustainable use of water through conservation, recycling and clean return.

4. Environmental Compliance

Continue to improve our environmental management system, increase effectiveness of compliance, and reduce risks.

5. Communication

We will proactively disclose environment-related information in a transparent manner, and promote communication with stakeholders.

(Revised June 2022)

Environmental management system

Acquisition of Integrated ISO 14001 Certification for the Otsuka Group

To strengthen group-wide efforts toward more efficient and effective environmental activities, the Otsuka group began acquiring ISO 14001 integrated certification in August 2020. In 2022, the certification expanded to include seven companies^{*1} in Japan and Otsuka Holdings, the supervising organization. Under the integrated environmental goals and management systems outlined in the certification, we will further strengthen our environmental initiatives and make group-wide efforts to achieve the goals.

The Otsuka group has acquired ISO 14001 certification including integrated certification at 12 companies in Japan and 14 overseas (as of the end of December 2022).

*1 Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical (including its subsidiary, Okayama Taiho Pharmaceutical), Otsuka Chemical, Otsuka Foods, Otsuka Techno, and EN Otsuka Pharmaceutical



ISO 14001 Certification

TABLE OF CONTENTS			Editorial Policy			Corporate Profile			Message from the Director in Charge			Policy and Management			Material Issues			Carbon Neutrality			Circular Economy			Water Neutrality			Biodiversity			Management of Chemical Substances			Supply Chains			Engagement			Environmental Data and Third-Party Verification		
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2050 Environmental Vision of "Net Zero"

– Zero environmental impact of all our business activities –

As a total healthcare company, the Otsuka group earnestly strives to reduce its impact on the global environment. In order to contribute to the realization of a sustainable society that leads to a sound future, we aim to achieve our medium-term environmental goals as well as our 2050 Environmental Vision, "Net Zero."



Carbon Neutrality

2028 target
Reduce **50%** in CO₂ emissions compared to 2017

Circular Economy

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

2030 target
100% content of recycled and plant-based materials in our PET bottles

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

	Social Issues	Our Goals	Our Activities	FY 2022 Progress	Related SDGs
	Global warming	2028 target • Reduce 50% in CO ₂ emissions compared to 2017	• Reduce CO ₂ emissions throughout the value chain	<ul style="list-style-type: none"> • Introducing CO₂-Free Electricity^{*5} at Four^{*4} Indonesian Group Companies • Introduction of large solar power generation facility in India (Otsuka Chemical India) • Establishment of an integrated energy service structure aiming for unified energy management in Japan 	
	Environmental load increase	2028 target • Reduce 50% in simple incineration and landfill disposal compared to 2019	<ul style="list-style-type: none"> • Reduce environmental impact by improving resource efficiency • Promotion of business activities aimed at sustainability for both society and the earth 	<ul style="list-style-type: none"> • Promotion of horizontal PET bottle recycling • Selling of PET bottles made using recycled PET resin • Started distribution of POCARI SWEAT via circular shopping platform "Loop" • Sustainability program "Otsuka Blue Planet" 	
	Reduced freshwater availability due to water resource risks	2028 target • Expand the plant water management program to all locations globally	<ul style="list-style-type: none"> • Risk analysis and understanding of sustainable water use • Management and effective use of water resources 	<ul style="list-style-type: none"> • Implementation of our water source management program at three sites 	

*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 *4 PT Otsuka Indonesia, PT Amerta Indah Otsuka, PT Widatra Bhakti, PT Lautan Otsuka Chemical *5 Including virtually CO₂-free electricity utilizing environmental value derived from renewable energy that does not emit CO₂

Material Issues												
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Carbon Neutrality

Approach and Policy

Climate change due to global warming is causing serious environmental issues on a worldwide scale, such as by severely impacting biological and water resources. We recognize it as a major risk to our global operations.

In aiming to contribute to a decarbonized, more sustainable society, the Otsuka group is working to reduce greenhouse gas (GHG) emissions throughout the value chain in line with the international targets and indicators adopted under the Paris Agreement.

Initiatives for TCFD Recommendations

In October 2021, Otsuka Holdings announced its support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Accordingly, we are moving forward with the disclosure of information on climate-related risks and opportunities in governance, strategy, risk management, and metrics and targets, according to the framework recommended by the TCFD. From now on, we will work to deepen our efforts based on the results of scenario analysis and expand our disclosure.



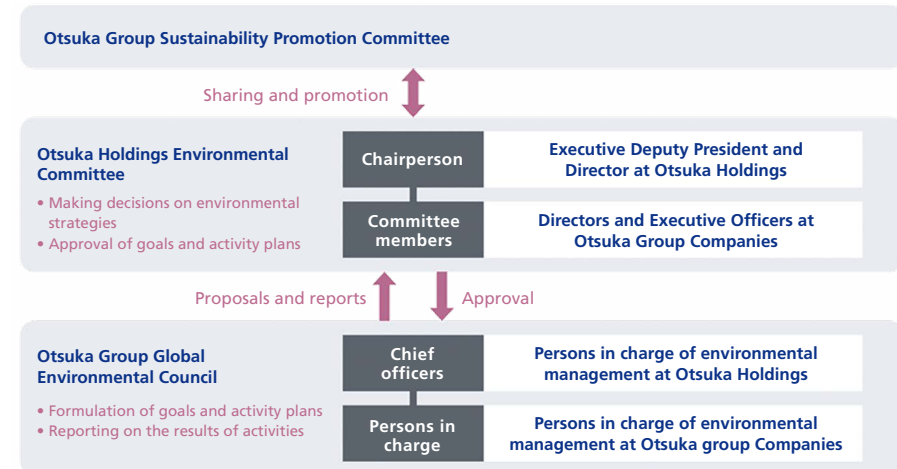
Governance

As a global group that contributes to the health of people worldwide, the Otsuka group works sincerely to reduce the impact its businesses have on the global environment, and seeks to contribute to the creation of a sustainable society that protects nature and the future of the earth. Therefore, we have built a system of governance.

The Otsuka group's environmental policies and initiatives are discussed and determined by the Otsuka Holdings Environmental Committee, which consists of the executive deputy president and director of Otsuka Holdings and the directors and executive offices in charge of environmental management in our group companies. Matters on the direction of the entire Otsuka group will be discussed and approved by the Otsuka Holdings Board of Directors, and will be shared with group companies as the Otsuka group's policy. Then, they will be implemented as an implementation scheme of the Otsuka Group Global Environmental Council (hereafter referred to as "OGG Environmental Council"), which consists of directors from the production departments of group companies and persons in charge of environmental management. In 2022, the Board of Directors approved revisions of the targets for each materiality in order to further strengthen environmental initiatives through our business activities. The OGG Environmental Council assesses the risks and opportunities examined and reports the results of monitoring. The Otsuka Holdings Environmental Committee gives instructions for improvement and approves planning. In addition, if the

monitoring results have an impact on business strategy and management resources, they will be incorporated into the management plan as matters to be resolved at the Board of Directors. The Committee is positioned as a subordinate organization of the Otsuka Group Sustainability Promotion Committee, which decides overall sustainability strategies and directions. This plays an important role in the group's sustainability initiatives.

Otsuka Group Environmental Management System



Strategy

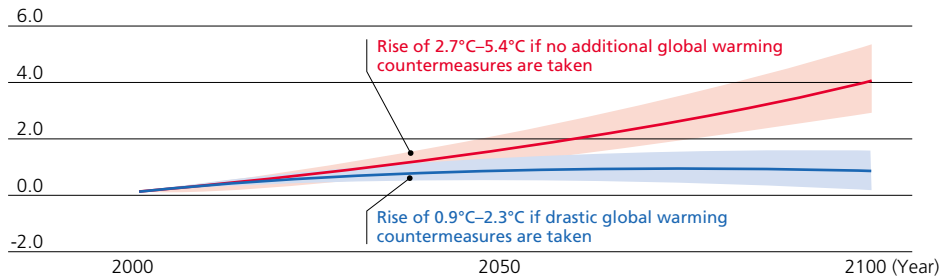
We have adopted the 2050 Environmental Vision, "Net Zero," which calls for us to reduce the total environmental impacts of our business activities to zero. In addition to reducing CO₂ emissions in our group's business activities, we aim to reduce to zero our environmental impacts throughout the supply chain. In 2021, the Otsuka group conducted the first analysis to identify and assess risks that may have impact on its key finance and strategy related to climate change. In order to realize a sustainable society, we recognize that active decarbonization initiatives in response to climate change are necessary, and we are developing strategies in line with the TCFD Recommendations.

Process of Scenario Analysis

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

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Climate-related scenarios — 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.

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 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

Financial Impacts and Responses Associated with Climate-Related Risks

Category	Contents	Business/Financial Impacts		Our Response/Resilience
		Below 2°C	4°C	
Transition Risks	Policies and regulations	Large	Large	<ul style="list-style-type: none"> • Introduction of internal carbon pricing • Introduction of CO₂-free electricity
	Market	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	Large	Medium	<ul style="list-style-type: none"> • Investment in environmental facilities in Japan and overseas
Physical Risks	Acute	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 suppliers
	Chronic	Large	Large	<ul style="list-style-type: none"> • Systematic renewal of facilities
		Medium	Medium	<ul style="list-style-type: none"> • Collection of information about the impacts on drug discovery using crops and other natural products, risk assessment, and examination of countermeasures

Financial Impacts and Responses Associated with Climate-Related Opportunities

Category	Contents	Business/Financial Impacts		Our Response/Resilience
		Below 2°C	4°C	
Opportunities	Resource efficiency	Large	Medium	<ul style="list-style-type: none"> • 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	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	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	Medium	Medium	<ul style="list-style-type: none"> • Development of products that mitigate or address climate change (e.g., plant-based products)
	Resilience	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

Adaptation measures to strengthen resilience

In order to grasp the risks, opportunities, and financial impact of climate change on our business, the Otsuka group conducted the first scenario analysis and found that the introduction of additional policy measures to deal with global warming such as a carbon tax, and rising energy costs due to the tightening of regulations could have an impact on our business activities.

As adaptation measures to avoid and mitigate these risks, the Otsuka group has upgraded its climate change target to meet the “1.5°C level,” which limits the temperature increase to 1.5°C since the pre-industrial era. We also are working on the adaptation measures to further strengthen the resilience of our business activities by promoting the introduction of renewable energy, the introduction of mega-solar facilities, and fuel conversion.

[Establishment and promotion of a new integrated energy service structure](#)

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Risk Management

The Otsuka group examines and assesses climate-related risks that have the potential to impact its financial affairs and strategies. The Otsuka Holdings Environmental Committee considers related risks, and committee members in charge of environmental management report on any matters that are deemed to be significant in the risk assessment process to the Board of Directors. Resolutions on matters approved by the Board of Directors are communicated to each company in the form of Otsuka group policies, and the whole group works to minimize climate-related risks.

Metrics and Targets



Our Goals

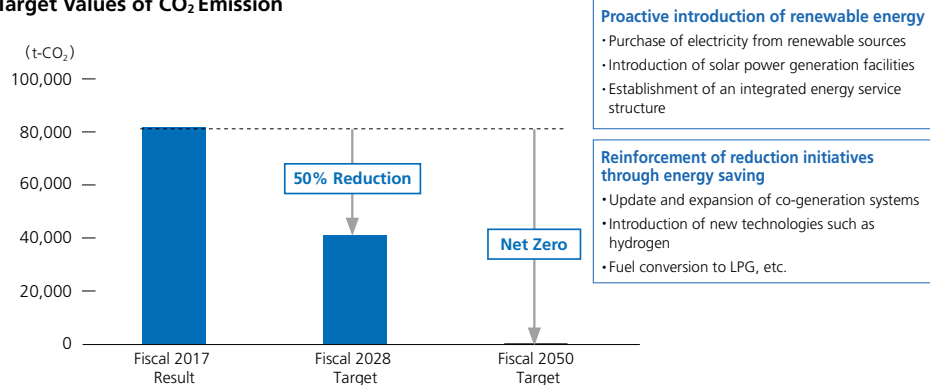
•2028 target: Reduce 50% in CO₂ emissions compared to 2017

	Fiscal 2017 Result	Fiscal 2022 Result	Compared with 2017
CO ₂ Emissions(Scope 1, 2)	818,000t-CO ₂	576,000t-CO ₂	-29.6%
CO ₂ reduction by CO ₂ -free electricity*	—	248,000t-CO ₂	—
CO ₂ reduction by self-production of renewable energy	—	12,000t-CO ₂	—

* Including the Green Power Certificates for offices

[Joining the RE100 Initiative](#)

Target Values of CO₂ Emission



Initiatives to Reduce CO₂ Emissions

Increasing Utilization of Renewable Energy and Maximizing Energy Efficiency

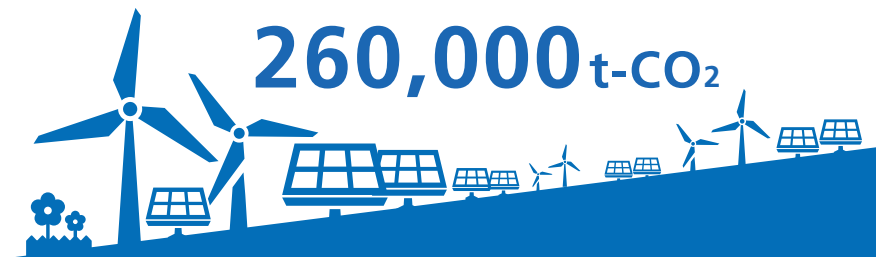
In 2022, the Otsuka group accelerated its climate change goals from 2030 to 2028, and also upgraded the SCOPE 1 and 2 targets from 30% (compared to 2017) to 50% (compared to 2017). We have joined the RE100 initiative, which asks companies to commit to using 100% renewable energy in their activities.

To achieve this goal, the Otsuka group is working to maximize energy efficiency of the entire group by utilizing renewable energy through the introduction of CO₂-free electricity and the installation of solar power generation facilities, and by supplying highly efficient energy to the group companies through the co-generation systems^{*1}. In Japan, five group companies^{*2} have completed the switch of all purchased electricity for all 23 plants and all office divisions to 100% renewable energy-derived electricity, resulting in approximately 61% of all purchased electricity being renewable energy.

We have started emissions-reduction overseas. In April 2022, four group companies^{*3} introduced CO₂-free electricity in Indonesia, resulting in a reduction of approximately 103,500 t-CO₂ emissions, which is equivalent to 60% of annual emissions in Indonesia. In India, we introduced a large solar power generation facility in June 2022. It is expected to reduce approximately 14,500 t-CO₂ emissions annually.

*1 The engines, turbines, or fuel cells of co-generation systems generate electricity from natural gas, LPG, or other fuel sources. At the same time, the systems collect the waste heat, thereby achieving efficient use of both heat and electricity
 *2 Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, and Otsuka Foods
 *3 PT Otsuka Indonesia, PT Amerta Indah Otsuka, PT Widatra Bhakti, and PT Lautan Otsuka Chemical

Reduction in CO₂ Emissions Through Adoption of Renewable Energy*



* Total of CO₂-free electricity and self-production of renewable energy

Material Issues												
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Joining the RE100 Initiative

The Otsuka group joined the international RE100 initiative, which asks companies to commit to using 100% renewable energy in their business activities. We are working to introduce renewable energy in line with the new technological requirements of RE100.

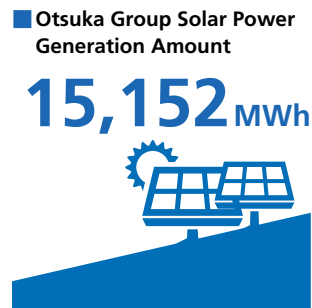


Introduction of solar power generation facilities

In the procurement of renewable energy, the Otsuka group places importance on “additionality,” which contributes to the creation of new renewable energy for the entire society. In Japan, a large-scale solar power generation facility with an output of 1 MW or more was introduced at Kushiro Factory of Otsuka Pharmaceutical Factory in 2020. Following that, Otsuka Pharmaceutical newly installed solar power generation facilities at Tokushima Itano Factory in 2021 and at Takasaki Factory in 2022. Outside Japan, large-scale solar power generation facilities were introduced at Otsuka Pharmaceutical India in 2020, and at Otsuka Chemical India in 2022.



Kushiro Factory, Otsuka Pharmaceutical Factory

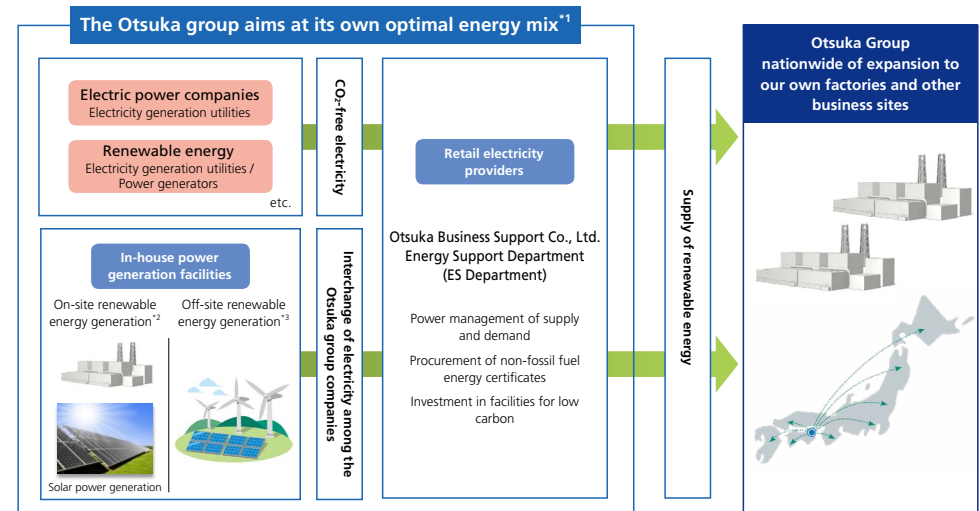


Establishment and promotion of a new integrated energy service structure

The Otsuka group established the Energy Support Department (ES Department) in Otsuka Business Support, which aims to pursue the optimal energy mix^{*1} in the Otsuka group while expanding renewable energy use through centralizing energy management in Japan and establishing an advanced management system of supply and demand. Since April 2022, we have been supplying renewable energy to five group companies^{*2} in the Shikoku region, where many of our production facilities are located, by purchasing electricity from electricity generation utilities and other sources.

In April 2023, we started supplying renewable energy to affiliated companies and welfare facilities in the Shikoku region. Our supply area has expanded to Tohoku, Hokuriku, and Kanto regions as well. ES Department will work to both improve environmental issues and contribute to business growth with the aim of further expanding supply to our group companies.

*1 Choosing the best ratio of diverse energy sources in consideration of the environment, economy, and stable supply of energy
 *2 Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, and Otsuka Foods



*1 Choosing the best ratio of diverse energy sources in consideration of the environment, economy, and stable supply of energy
 *2 On-site: A system to provide electricity by installing a power generation facility on the premises of a consumer
 *3 Off-site: A system to provide electricity to specific consumers via the general power transmission network

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Circular Economy

Approach and 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 fossil resources-derived materials and waste discharge to the natural environment as environmental impacts that must be reduced to zero. We are committed to eliminating fossil resources-derived materials and achieving zero waste*¹ as our vision. We will also continue to increase resource efficiency throughout the value chain and build a harmonious and sustainable relationship with all resources including bioresource.

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

Our Goals



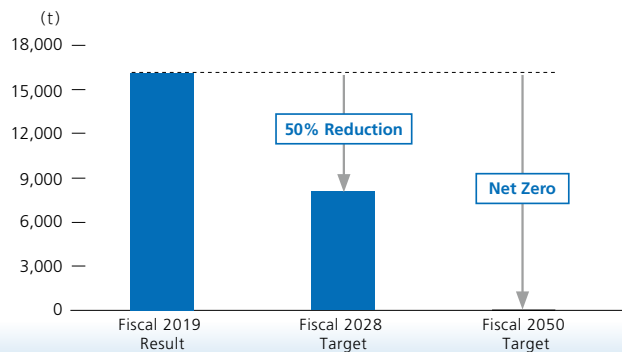
Our Goals

- 2028 target: Reduce 50% in simple incineration and landfill disposal compared to 2019
- 2030 target: 100% content of recycled and plant-based materials in our PET bottles

	Fiscal 2019 Result	Fiscal 2022 Result	Compared with 2019
Total Waste Volume*	100,100t	92,900t	-7.2%
Simple Incineration and Landfill Volume	18,500t	18,000t	-2.7%

*Figures for waste emissions in 2019 were revised through a review of data.

Simple Incineration and Landfill Volume Target

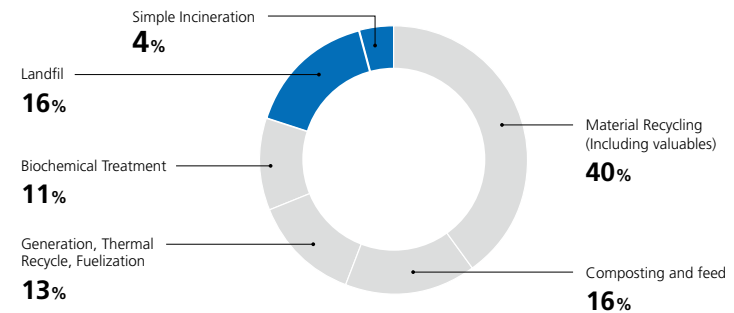


Initiatives toward Zero Waste

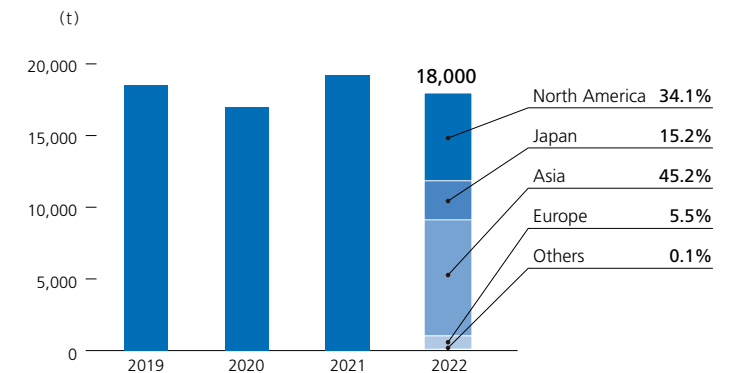
Global emissions in FY 2022 were 92,900 metric tons, and simple incineration and landfill volume was 18,000 metric ton.

In order to achieve the 2028 goal of a 50% reduction in simple incineration and landfill compared with 2019, the Otsuka group is working with each group company in Japan and overseas to reduce waste.

Total Waste Volume



Volume of waste simply incinerated and landfilled



Material Issues												
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Otsuka Group Plastic Policy

Fundamental Concept

PET bottles comprise the majority of plastic containers and packaging used for consumer products by our group companies. For this reason, we believe that by promoting PET bottle recycling, we can reduce our reliance on fossil fuel and thereby contribute to environmental conservation. Our plan is to use PET bottles manufactured from recycled and plant-based materials and increase the percentage of such sustainable resource use in our production processes globally to 100% by 2030 and by 2050, we aim to eliminate the use of petroleum-based raw materials in all consumer products.

Our Vision for 2050

For our entire line of consumer products, we will endeavor to use packaging that supports a sustainable society:

- No use of plastics made from petroleum-based materials
- Promote use of recycled, plant-based, and biodegradable materials
- Promote use of reusable packaging

Our Goal for 2030

- Achieve a 100 percent or higher content of recycled and plant-based materials in our PET bottles.
- Introduce alternative packaging (e.g., paper) and increase use of cans for our drink products.
- Step up promotion of drink bottle recycling by introducing reusable packaging through a zero-waste sales and circular distribution model, which also includes the use of sports bottles for our powder products.
- We will promote the use of alternative packaging and concurrently pursue using more recyclable materials for drink containers.

To advance PET material recycling, it is essential to recycle PET bottles for use as raw material. Together with our various stakeholders, we will advance our global efforts on proper collection and recycling of used PET bottles.

Revised July 2022

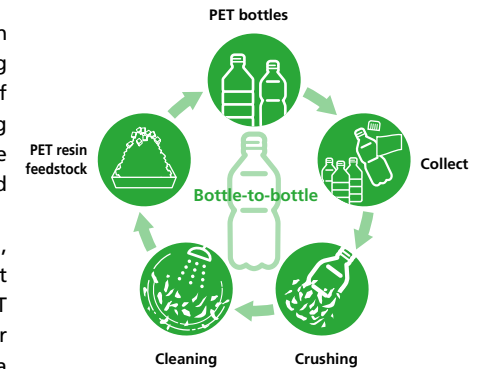
Guided by the Otsuka Group Plastic Policy, we are taking swift and appropriate actions regarding every aspect of our use of plastic, and thereby contributing to the sustainable use of plastic and effective resource recycling. Specific initiatives include developing an action plan for PET bottles, using recycled and plant-based materials, and examining options for alternative packaging.

Initiatives to Use Packaging that Supports a Sustainable Society

Promotion of horizontal PET bottle recycling “Bottle-to-bottle”

“Bottle-to-bottle” refers to a system in which resources are repeatedly circulated by converting used PET bottles into new PET bottles instead of other products. The Otsuka group is promoting “Bottle-to-bottle” initiatives, and aims to increase the percentage of recycled and plant-based materials used in all PET bottles to 100% by 2030.

In November 2022, Otsuka Pharmaceutical Co., Ltd. finalized a business collaboration agreement in collection, manufacturing, and sales of PET bottles with ALTECH CO., LTD. and Japan Power Bottlers K.K. The company also finalized a collaboration agreement for resources recycling with Naruto City of Tokushima Prefecture, and Toyota Tsusho Corporation in February 2023. We will continue to demonstrate synergies through cooperation and collaboration with administrative bodies, local governments, and business partners, and to work to realize a recycling-oriented society.



Resources recycling of PET bottles

The Otsuka group has been working to reduce the amount of plastic used through reducing the weight of plastic containers and packaging, and selling label-free products. In Japan, PET bottles made from recycled PET resin are now available in various products, including POCARI SWEAT, POCARI SWEAT ION WATER, Amino-Value, and Crystal Geyser. Outside of Japan, PT Amerta Indah Otsuka in Indonesia launched POCARI SWEAT in PET bottles made from 30% recycled PET resin in August 2022.



					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Initiatives of Resources Recycling through Reuse

Started distribution of POCARI SWEAT via circular shopping platform "Loop"

Reuse refers to an initiative to effectively utilize limited resources and reduce environmental impact by repeatedly using products that have been used once in their original form. Otsuka Pharmaceutical developed durable containers that meet the quality standard suited for reuse, and has launched POCARI SWEAT in 250 ml returnable bottles through circular shopping platform "Loop" from July 2022. The Otsuka group will continue to adopt company-wide, various approaches and challenges to realize a recycling-oriented society.

Otsuka Pharmaceutical introduces its initiatives for resources recycling of returnable bottles that can be used repeatedly on the POCARI SWEAT sustainability site.



ポカリスエットの
サステナビリティ

スカフィンのうた

これは「あの子」と「瓶くん」の物語。いつもラッパを吹くあの子は、ある日ポカリスエットの瓶くんと出会います。次第に向けるとキラキラして地球が回り始めるのは、少し変わった友達になりました。でもある日、夢に出てきた長老ボトルに教えられ、あの子は、瓶くんがここにはいないことに気が付きます...

「スカフィン」とは、瓶が繰り返し使用されることで、刷りきれなくてくっつくこと。動画では長老ボトルの胸に刺まっています。リターンブル瓶が繰り返し使われるためには、あの子のように瓶を返却するという、ひと手間が必要です。誰かが返却してくれれば「スカフィン」を知りながら、地球をめるボトルの物語、楽しんでもらえたらうれしいです。

演出：©G&M
アニメーション：土屋晴晃
作画：中村佳穂

The Scuffing Song
<https://pocarisweat.jp/products/sustainability/>

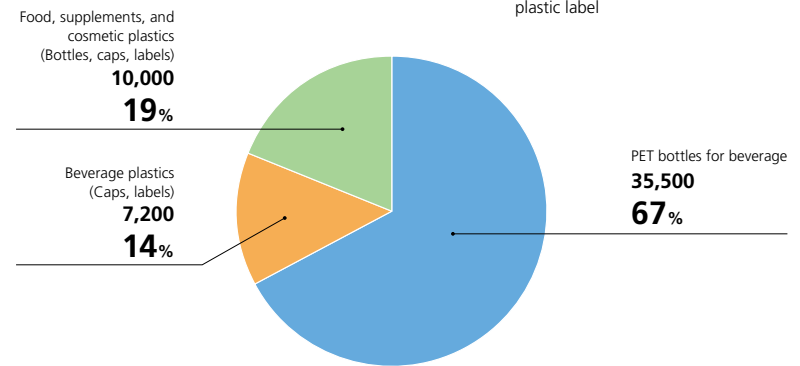
Initiatives of Containers and Packaging in Pharmaceutical Products

The Otsuka group is working to develop and introduce environmentally conscious packaging materials for pharmaceuticals as well, such as thin-walled packaging materials, smaller individual packaging boxes, and recycled-paper containers. As for plastic containers, we have started to sell products that use biomass-based plastic made from plant-based materials.



登録番号 233
 ボトルは植物由来の原料を使用しています。
 Biomass-based plastic label

2022 Amount of Plastic Containers and Packaging Used for Consumer Products* (Metric Tons/Year)



*16 Companies

4 companies in Japan: Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, and Otsuka Foods

12 companies overseas: Crystal Geyser Water Company, Nutrition & Sante (including Iberia), Pharmavite, Ridge Vineyards, Interpharma Praha, PT Amerta Indah Otsuka, Otsuka Sims (Guangdong) Beverage, Korea Otsuka Pharmaceutical, FoodState, Tianjin Otsuka Beverage, Daiya Foods, and Shanghai Otsuka Foods

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

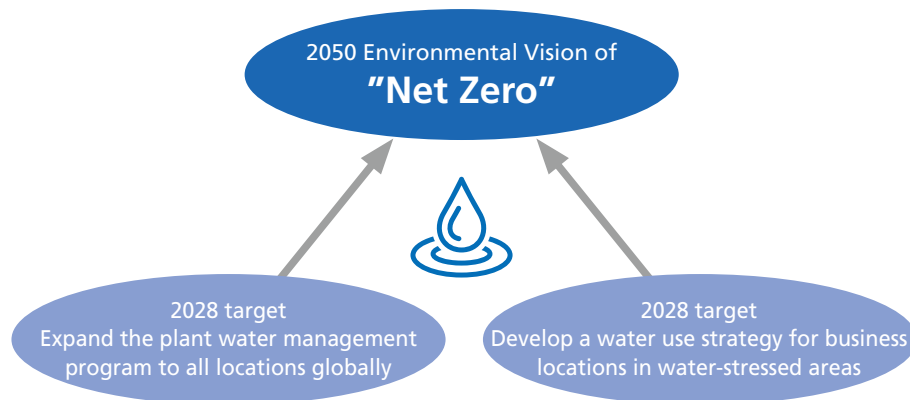
Water Neutrality

Approach and 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.

Our Goals

The Otsuka group has established a 2050 Environmental Vision of "Net Zero", which aims to reduce total environmental impact of our business activities to zero. Under the vision, we have revised our medium-term targets to include developing and implementing a water use strategy for business sites in water-stressed areas, and expanding the plant water management program to all locations globally, both by 2028. We are working on the realization of sustainable water use by improving water use efficiency and working to preserve water resources from intake to discharge (including cultivation of water resources, conscientious use of water, and return of clean water to the environment).



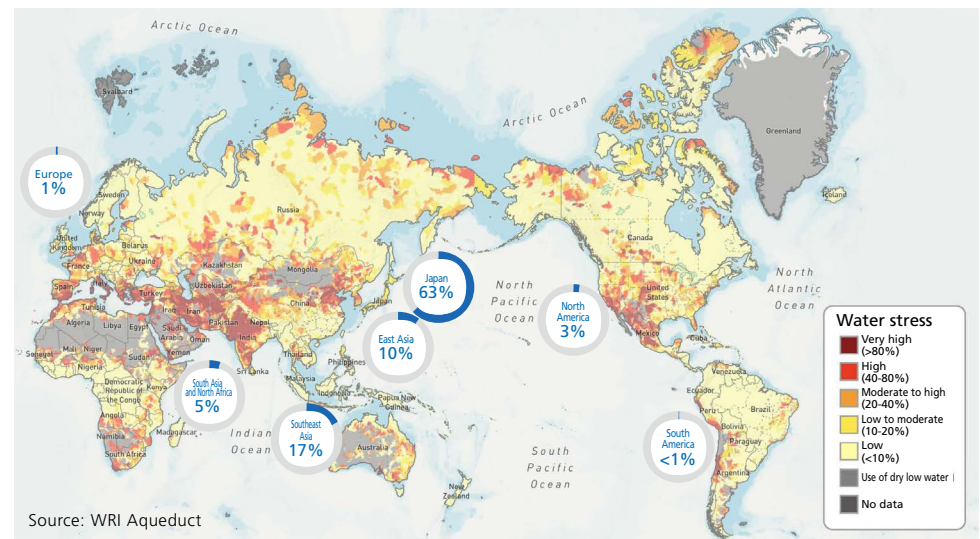
Evaluating Water Risk at Manufacturing Sites

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. As for water resources, we have conducted water risk assessments at our group's production sites using the water risk assessment tool "Aqeduct," developed by the World Resources Institute (WRI), which found that seven factories in the U.S., India, and Spain fall under the category of "Extremely High" in the index of Baseline Water Stress^{*1}.

The Otsuka group used 18.5 million m³ of water in 2022, of which 5.07% of the water was used in highly water-stressed areas. At present, it is confirmed that no risk has surfaced. We will continue to closely examine risk details at these factories with our local subsidiaries and further investigate the risks.

*1 A state in which the amount of available water resources is insufficient relative to the amount of water demand of humans and ecosystems. It includes not only water shortage, but also water quality and access to water.

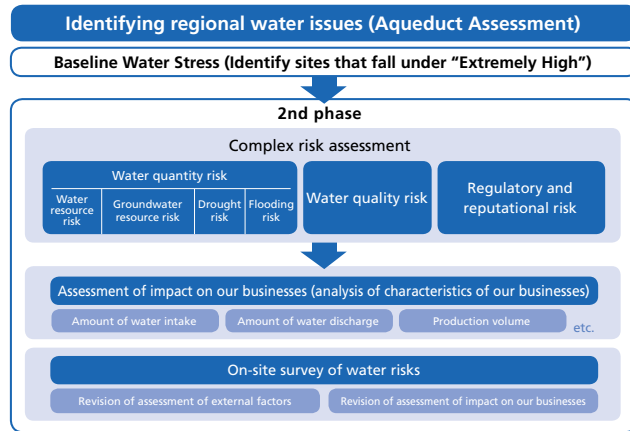
■ Aqeduct Water Risk Atlas and Breakdown by Region of Water Consumption in the Otsuka Group



Source: WRI Aqeduct

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Water risk assessment

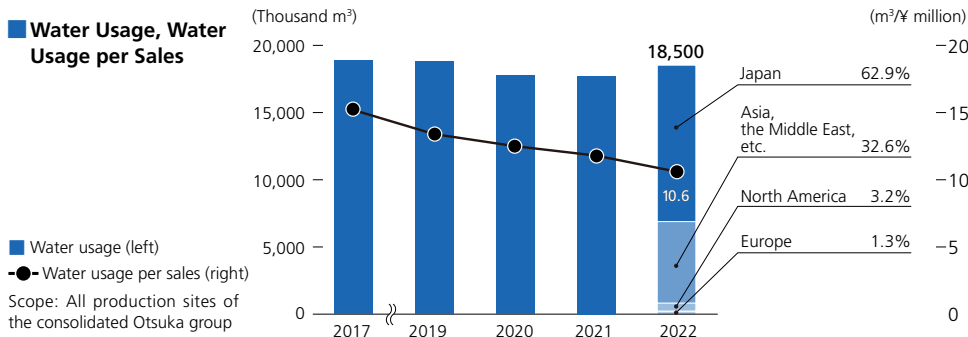


Initiatives to Reduce Water Usage

About 60% of the water used by the Otsuka group comes from production activities in Japan. The Otsuka group strives to ensure the proper use of water in order to continuously preserve water resources from intake to discharge. In Japan, Otsuka Foods introduced heat pumps into the pasteurizer process (heat sterilization and cooling after filling beverages) and automated water supply controls for freezers. As a result, the reduction in water use reached 167,400 m³. Although water use in Japan increased by 72,000 m³ due to an increase in the number of drinks produced in the factories of Otsuka Pharmaceutical and an increase in plant utilization by Otsuka Chemical, the entire global water use efficiency was improved, resulting in a 9.9% reduction compared to that in FY 2017.

Limiting Emissions to the Atmosphere and Water Systems

Water Usage, Water Usage per Sales



Initiatives that Protect Water Sources*1 through Forestry

One of our initiatives to preserve water resources uses water conscientiously and returns clean water using water source protection through forestry. Group employees and family members voluntarily participate in conservation drives, such as planting trees, in turn developing a sense of closeness with forests.

Projects

In Japan

The Otsuka group has signed a partnership agreement with Tokushima Prefecture's Tokushima Cooperative Forestry Project, taking part in intensive forest management that is focused on large-scale forests covering 100 ha or more.

Tokushima Forests – Forestry in Collaboration with Tokushima Prefecture

In 2010, Otsuka Pharmaceutical Factory and Taiho Pharmaceutical signed partnership agreements with the Tokushima Cooperative Forestry Project, to support measures for CO₂ sinks through forest improvement. In fiscal 2022, eight group companies*2 planted broad-leaved trees and others in an area of 4.73 hectares (approximately the same size as TOKYO DOME), equivalent to 19.25 t-CO₂ absorbed by forests.



Outside Japan

PT Widatra Bhakti Social activities of afforestation in the Pandaan Region

Employees of PT Widatra Bhakti participated in the afforestation environment program conducted by the Pandaan government. PT Widatra Bhakti provided some of the funds to purchase seedlings, and 250 trees were planted.



*1 Nurturing and maintaining water resources, as well as using the natural capacity of forests to mitigate flooding and droughts. Forests soak up falling rain and snow, then allow that water to slowly flow into rivers as groundwater.
 *2 Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Warehouse, Otsuka Chemical, Otsuka Foods, Otsuka Packaging Industries, and Otsuka Techno Corporation

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Biodiversity

Otsuka Group's Biodiversity Policy

Basic Approach

The Otsuka group recognizes the invaluable benefits provided by the global environment, and thus deeply values the wonder of life. It understands that nature's gifts are the key to our future, and is consequently committed to protecting biodiversity worldwide.

Guidelines

1. The group will deepen its understanding of the relationship between business activities and biodiversity.
2. The group will strive to reduce the environmental impact of business activities that impact biodiversity.
3. The group will strive for sustainable use of resources (including ecosystem services), and for fair and equitable distribution of genetic resources in accordance with international arrangements.
4. The group will work on conservation of biodiversity by communicating, cooperating and collaborating with stakeholders worldwide.
5. The group will help foster public awareness of biodiversity.

Business Activities That Take Local Ecosystems into Account

Initiatives for Nature Conservation

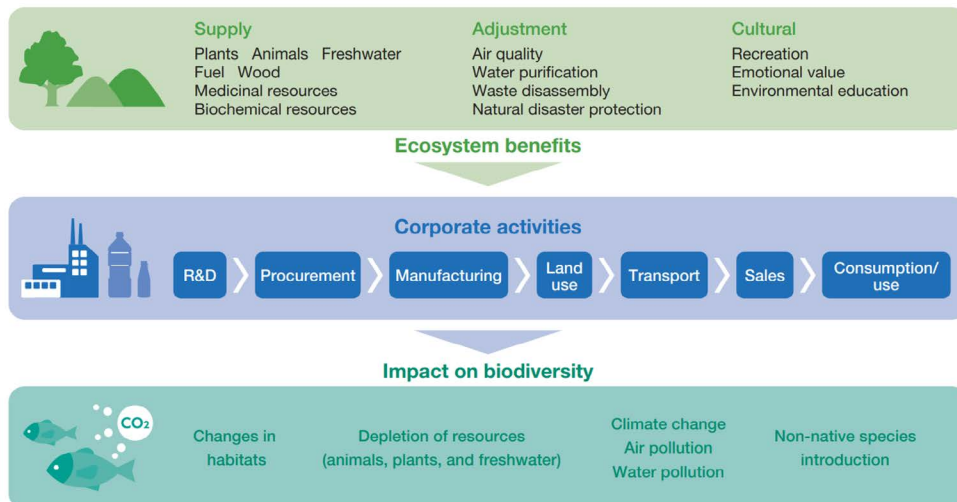
The Otsuka group is committed to conserving animals and plants based on laws and regulations, as well as protecting the natural environment rooted in local communities. We have been annually conducting our environmental survey to operating companies in Japan and overseas that have production sites, to monitor the status of compliance with laws and regulations on animals and plants to be protected that are defined by laws and others (IUCN protected area management categories, the Ramsar Convention, domestic laws and regulations) and conservation activities for them. We will continue to grasp ecological risks in the areas surrounding our plants, and take measures against them.

Creating Biotopes*1

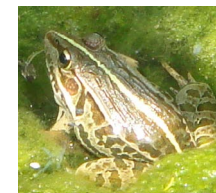
The Otsuka group created biotopes at the Tokushima Itano Factory of Otsuka Pharmaceutical and at a factory of Okayama Taiho Pharmaceutical. By reusing the cooling water, etc., from the factories, the water is discharged into ditches that reproduce the natural environment. Seasonal flowers bloom around the water, and insects and wild birds also fly in, creating a symbiosis with nature.

*1 Restoring ecosystems that have been lost due to the establishment of factories, etc., and creating an environment for plants and animals that originally lived in the area can return.

Relationship between Biodiversity and Business Activities



Wild birds and insects flying in to the Tokushima Itano Factory of Otsuka Pharmaceutical



Black-spotted pond frog (Endangered)



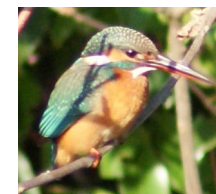
Giant water bug (Critically Endangered)



Golden venus chub (Critically Endangered) (from the Tokushima Red List)



Japanese Heike firefly



Kingfisher



					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Management of Chemical Substances

Otsuka Group's Chemical Substance Management Policy

Basic Approach

Chemical substances used and emitted in business activities of our group companies and our manufacturing contractors are appropriately managed.

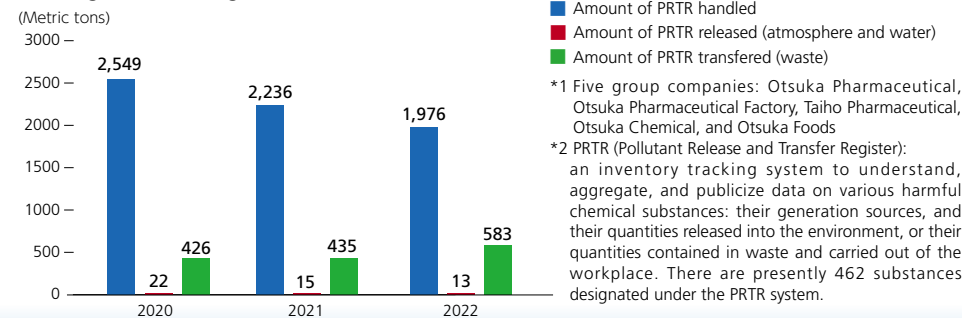
Guidelines

- 1. Prevent the adverse effects of chemical substances on humans and ecosystems**
- 2. Comply with laws and regulations in each country and further promote voluntary initiatives**
We will comply with the laws and regulations of each country regarding the use and discharge of chemical substances and will further promote voluntary initiatives.
- 3. Monitoring**
We will monitor the amount of chemical substances used and emitted in our business activities, check the status of compliance and progress of voluntary initiatives regularly, and take necessary corrective actions.
- 4. Response in the event of violations or disasters**
We prepare the procedures for dealing with violations and disasters, and share them with relevant employees to prevent the occurrence of chemical contamination even in a state of emergency.

Proper Management of Chemical Substances*1

We handled 1,976 metric tons of PRTR substances*2 in our business activities. We will continue to strive for proper management of chemical substances.

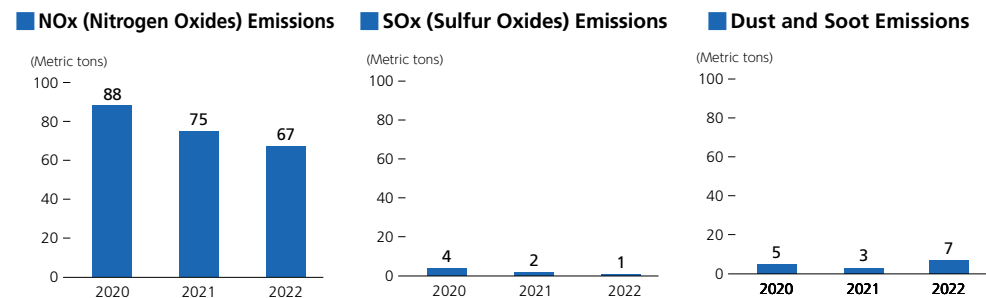
Changes in Handling, Release of PRTR Substances



Limiting Emissions to the Atmosphere and Water Systems*1

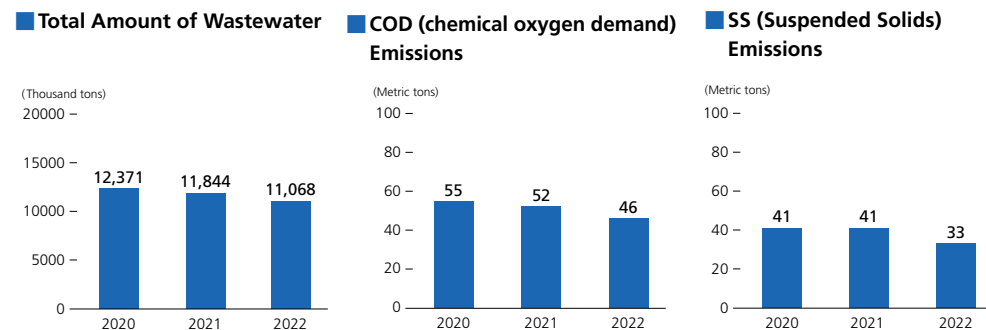
Prevention of Air Pollution

Emissions of air pollutants from our business activities amounted to 67 metric tons of NOx (nitrogen oxides), one metric ton of SOx (sulfur oxides), and seven metric tons of soot and dust. We will continue to consolidate boiler facilities, switch to cleaner fuels, and continue to improve its energy efficiency in an effort to minimize emissions of NOx (nitrogen oxides) and SOx (sulfur oxides) into the atmosphere.



Prevention of Water Pollution

The total amount of wastewater discharged during business activities was 11,068,000m³, COD (chemical oxygen demand), which indicates the environmental impact of water quality, was 46 metric tons, and SS (suspended solids) emissions were 33 metric tons.



Material Issues												
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Related Information

[Basic Policy](#) [Promotion System](#)

Supply Chain

Initiatives for Sustainable Procurement

Across the entire value chain, the Otsuka group engages in business activities that are safe, reliable, socially acceptable, and in compliance with laws and regulations. When commencing transactions with a supplier, we perform screening and checks to ensure the quality of raw materials and to guarantee stable procurement. We also conclude a basic transaction agreement. In the case of a new supplier, transactions are determined only after we have carried out due diligence.

We aim for mutually sustainable development through fair, equitable, and transparent procurement and the establishment of healthy relationships with business collaborators. To further these initiatives, we formulated the Otsuka Group Procurement Policy, which considers factors such as human rights, labor issues, the environment, and anti-corruption measures, and the Otsuka Group Sustainable Procurement Guidelines to promote the initiatives with the aim of embedding sustainable procurement. Starting in 2022, the Otsuka group has also begun focusing on a new area—stability of supply, which addresses natural disasters and geopolitical risks—in addition to the four existing areas of attention: human rights, labor, the environment, and anti-corruption.

Otsuka Group Procurement Policy

The Otsuka group of companies, in accordance with our corporate vision, “Otsuka-people creating new products for better health worldwide”, and international norms, conducts procurement activities in a responsible way. Otsuka delivers innovative, safe, secure, and high-quality products in order to contribute to the construction and maintenance of a sustainable society, as well as to the health of people around the world.

1. Relationships with suppliers

As a collaborator with many suppliers, the Otsuka group aims to build good relationships for mutual sustainable development through shared understanding, based on a fair exchange of appropriate information and opinions.

2. Supplier selection

The Otsuka group selects suppliers in a fair, and transparent manner based on comprehensive assessments of supplier quality, costs, quantity, delivery terms, compliance with laws and regulations, promotion of environment preservation, etc.

3. Responsibilities toward society

For the realization of sustainable society, the Otsuka group strives to maintain procurement activities that reflect consideration for human rights, labor, the environment, and non-tolerance of corruption.

4. Compliance

The Otsuka group of companies observes all applicable laws and rules, and all Otsuka employees and supplier employees must act at all times with the highest level of ethics, consistent with social norms.

Otsuka Group Sustainable Procurement Guidelines

(Excerpts involved environment)

We require the following in accordance with the Otsuka Group Environment Policy:

1. Observance of environmental law as well as international treaty as well as in the countries and areas of business activities
2. Pursuing activities such as chemical management, reduction and appropriate disposal of waste and the prevention of pollution, to consider the health and safety of local communities and environments
3. Consideration of the impacts of activities on the global environment, such as reduction of greenhouse gas emissions, responses to climate change, and environmental load reduction
4. Recycling, efficient usage and reduction in the consumption of resources such as energy, water, and raw materials
5. Promotion of comprehensive conservation activities for biodiversity considering the diversity in ecosystems, species, and genetics. Fair and equitable allocation of benefits resulting from utilization of genetic resources

Initiatives to promote sustainable procurement

For the procurement activities that take into consideration UNGC’s four areas, the Otsuka Group Sustainable Procurement Enhancement Project trained staff in charge of procurement, held briefings to primary suppliers*¹ of direct materials, conducted the sustainable procurement SAQ, and checked the status of activities.

*1 Suppliers to eight group companies: Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, Otsuka Foods, Otsuka Techno, EN Otsuka Pharmaceutical, and Otsuka Packaging Industries.

Initiatives	Results	Efforts in 2022
Training for staff in charge of procurement	58 new and existing persons in charge in total	Based on the CSR Procurement Self-Assessment Questionnaire published by Global Compact Network Japan (GCNJ), the attendees learned about issues in the UNGC’s four areas.
Briefings on sustainable procurement practices	583 domestic suppliers 583 suppliers that signed the agreement	We conducted on-demand e-learning where the attendees received a briefing on the Otsuka Group Procurement Policy, the Otsuka Group Sustainable Procurement Guidelines, and the Otsuka Group 2050 Environmental Vision, along with training on the Guidelines of Respect for Human Rights in Responsible Supply Chains. We obtained consent from suppliers that understood the above and agreed to cooperate in promoting sustainable procurement.
Sustainable Procurement SAQ	597 domestic and overseas suppliers (577 domestic companies and 20 overseas companies)	In addition to the CSR Procurement Self-Assessment Questionnaire of GCNJ, we implemented the Human Rights SAQ and the Environmental SAQ, which we have developed independently based on the Otsuka group’s business activities. Furthermore, we reviewed the findings and identified risks.
Confirmation of suppliers’ activities	Telephone interviews with 112 suppliers Online hearings with 13 suppliers	We conducted telephone interviews with 112 suppliers to grasp their actual activities. We also held online hearings with 13 suppliers for deeper dialogue. We confirmed their activities and were able to grasp the situation of suppliers in more depth.

Material Issues												
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Engagement

Initiatives That We Are Engaged In

Participation in TCFD

The Otsuka group has announced its support for recommendations issued by TCFD in October 2021. Scenario analysis assesses climate-related risks and opportunities, including carbon taxes, physical risks, and crop demand. We promote various measures based on the assessment result.



[Initiatives for TCFD Recommendations](#)

Joining the RE100 Initiative

Otsuka Holdings has endorsed RE100, an international initiative that aims for 100% use of renewable energy for business operations, and joined it in April 2022.



Support for Climate Change Initiatives

Otsuka Holdings supports for Japan Climate Initiative that declares "joining the front line of global push for decarbonization from Japan," and participates in various activities.



Certification by Science Based Targets (SBT)* Initiative

Greenhouse gas (GHG) emissions reduction targets set by Otsuka Pharmaceutical and Taiho Pharmaceutical have been certified by the Science Based Targets (SBT) initiative. In order to achieve these new goals, we will optimize energy use and introduce renewable energy, and continue to promote reduction of GHG emissions throughout the value chain.



* An international initiative led by the United Nations Global Compact (UNGC), World Resources Institute (WRI), and World Wide Fund for Nature (WWF). It certifies the CO₂ emission reduction targets of companies that are in line with emissions reduction scenarios based on scientific facts, for achieving the Paris Agreement-mandated objective of limiting the average global temperature rise to below 2°C.

External Recognition

Otsuka Holdings selected for CDP Climate Change A List

Otsuka Holdings has been selected as an A-list company, the highest rating, in CDP Climate Change 2022, a survey on climate change.



ESG Investment Indexes for which Otsuka Holdings has been selected as their constituent



FTSE4Good



FTSE Blossom Japan Index



FTSE Blossom Japan Sector Relative Index



S&P/JPX Carbon Efficient Index

Communication with Local Communities

Public-private-academic collaboration in Indonesia Sustainability Program "OTSUKA BLUE PLANET"

In September 2022, PT Amerta Indah Otsuka in Indonesia concluded an agreement with the Ministry of Environment and Forestry on OTSUKA BLUE PLANET, a sustainability program for local governments and residents in the vicinity of its factory. The company is promoting the following three projects:



A seminar on waste separation in Jakarta

- 1 ECO Village Project: to support development of communities capable of refuse disposal and waste management
- 2 ECO Blue School Project: to foster school communities that encourage people to make a habit of separating recyclable resources and practice sustainable plastic bottle disposal management
- 3 ECO Bottle Project: to produce and sell POCARI SWEAT in PET bottles made with recycled PET resin*. In Indonesia, environmental issues are becoming more serious in areas where the practice of disposing of waste in a trash can has not established yet and waste disposal and management systems has not been developed. Through this program, we will work together with local people to protect the environment in Indonesia and work in cooperation with the national and local governments.

* Uses 30% recycled PET resin

Relationship with Stakeholders

The Otsuka group is promoting environmentally conscious efforts to build relationships of trust with various stakeholders.



TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Material Issues	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification
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Environmental Data

Materiality	Classification	Sources	Scope	Unit	FY2019	FY2020	FY2021	FY2022
Carbon Neutrality	Energies	Electricity	Global total	thousand kWh	736,508	533,095	503,399	405,636
			Japan		311,456	127,521	93,177	80,972
			Outside Japan		425,052	405,573	410,221	324,664
		CO ₂ free electricity	Global total	thousand kWh	82,549	201,858	265,242	424,719
			Japan		74,805	194,051	226,690	289,010
			Outside Japan		7,744	7,807	38,552	135,709
		Natural gas & City gas	Global total	thousand m ³	72,075	71,600	68,084	59,718
			Japan		32,014	31,498	31,153	22,696
			Outside Japan		40,061	40,101	36,930	37,022
		Coal	Global total	t	67,707	57,968	60,203	55,502
			Japan		0	0	0	0
			Outside Japan		67,707	57,968	60,203	55,502
		Steam	Global total	t	363,460	343,067	355,317	345,182
			Japan		158,207	152,076	152,010	139,282
			Outside Japan		205,253	190,991	203,307	205,900
		LNG	Global total	t	13,337	14,104	16,142	18,735
			Japan		13,055	13,823	15,729	18,735
			Outside Japan		282	281	413	0
		A HFO	Global total	kL	9,516	7,945	5,025	2,762
			Japan		9,516	7,945	5,025	2,762
			Outside Japan		0	0	0	0
		LPG	Global total	t	6,046	5,870	5,990	5,523
			Japan		5,776	5,596	5,664	5,473
			Outside Japan		270	274	327	50
		Diesel	Global total	kL	543	436	452	554
			Japan		69	58	20	18
			Outside Japan		474	378	432	536
Kerosene	Global total	kL	145	130	133	139		
	Japan		145	130	133	139		
	Outside Japan		0	0	0	0		
Gasoline	Global total	kL	50	115	48	52		
	Japan		50	115	48	52		
	Outside Japan		0	0	0	0		
Steam (non industrial)	Global total	GJ	1,033	1,084	1,198	1,397		
	Japan		1,033	1,084	1,198	1,397		
	Outside Japan		0	0	0	0		
Hot water	Global total	GJ	2,408	2,567	1,371	1,461		
	Japan		163	173	138	162		
	Outside Japan		2,245	2,393	1,233	1,299		
Cold water	Global total	GJ	11,400	11,774	3,897	4,087		
	Japan		11,400	11,774	3,897	4,087		
	Outside Japan		0	0	0	0		

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Materiality	Classification	Sources	Scope	Unit	FY2019	FY2020	FY2021	FY2022			
Carbon Neutrality	Renewable Energies	Solar power	Global total	thousand kWh	1,674	3,869	6,727	15,152			
			Japan		356	1,409	4,069	4,417			
			Outside Japan		1,318	2,459	2,658	10,735			
		Solar water heater	Global total	GJ	222	222	0	0			
			Japan		0	0	0	0			
			Outside Japan		222	222	0	0			
		Biomass power	Global total	thousand t	1	7	13	17			
			Japan		0	0	0	0			
			Outside Japan		1	7	13	17			
		CO ₂	CO ₂ emissions	Global total	thousand t-CO ₂	821	706	683	576		
	Japan			282,243		207,281	188,999	164,784			
	Outside Japan			538,525		498,754	494,704	411,032			
	CO ₂ emissions per sales		Global total	t/¥ million	0.59	0.50	0.46	0.33			
	GHG emissions throughout the value chain				thousand t-CO ₂	1,320	1,118	1,030	1,110		
	Scope1					138,583	125,038	130,391	112,229		
	Scope2					92,444	36,647	9,731	3,215		
	Category 1					730,219	635,542	592,537	648,624		
	Category 2					85,119	52,402	38,763	85,592		
	Category 3					29,633	45,579	34,167	30,272		
	Category 4					79,981	70,621	70,519	72,548		
	Category 5					11,851	12,836	13,535	10,966		
	Category 6				Japan*1	10,882	6,030	5,413	8,285		
	Category 7					t-CO ₂	5,888	5,773	5,917	5,679	
	Category 8					8,463	6,356	7,258	7,294		
	Category 9					22,484	20,407	20,736	22,480		
	Category 10							N/A			
	Category 11					81,034	80,209	79,452	80,051		
Category 12				23,681		20,751	21,163	22,879			
Category 13						N/A					
Category 14						N/A					
Category 15						N/A					
Water Neutrality	Water	Water usage	Global total	thousand m ³	18,756	17,732	17,680	18,488			
			Japan		12,274	11,605	10,909	11,629			
			Outside Japan		6,482	6,127	6,772	6,859			
		Water use efficiency	Global total	t/¥ million	13.4	12.5	11.8	10.6			
			Japan		Municipal water (including industrial water)			9,654	10,399		
					River water	12,274	11,605	123	96		
		Water intake by water source	Asia, the Middle East, etc.	Ground water			1,131	1,134			
				Municipal water (including industrial water)			3,275	3,264			
			North and South America	River water	5,615	5,330	0	0			
				Ground water			2,708	2,755			
			Europe	Municipal water (including industrial water)			407	390			
				River water	587	525	0	0			
				Ground water			137	201			
				Municipal water (including industrial water)			212	220			
			Europe	River water	280	272	2	2			
Ground water					32	26					

*1 Five group companies: Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, and Otsuka Foods

Material Issues

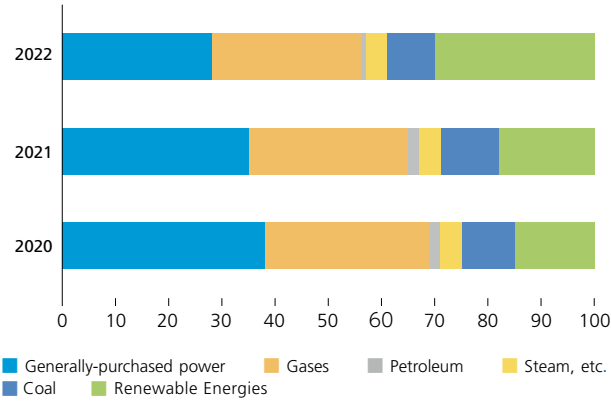
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification
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Materiality	Classification	Sources	Scope	Unit	FY2019	FY2020	FY2021	FY2022		
Water Neutrality	Water	Wastewater by destination	Rivers, lakes and marshes	thousand m ³	12,345	11,717	11,194	10,560		
			Underground seepage		61	60	4	1		
			Area of ocean		1,267	1,002	1,051	1,118		
			Third-party processing (municipal sewage, etc.)		3,109	2,886	2,873	2,729		
			Total Amount of Wastewater		16,782	15,666	15,122	14,407		
Circular Economy	Material	Material	Japan ^{*1}	t	125,289	114,847	114,771	119,541		
			Plastics	PET	14,376	11,963	12,028	14,416		
	Packaging material	Plastics	Japan ^{*1}	t	Others	17,783	16,028	14,998	15,675	
					Paper and cardboard	36,388	33,149	32,481	36,173	
					Others	95,658	89,826	88,949	92,812	
					Total amount of waste	Global total	100,126	91,838	93,895	92,943
						Japan	43,083	35,723	35,246	30,820
		Outside Japan	57,043	56,115	58,649	62,123				
		Recycled materials	Global total	71,711	64,487	65,314	64,891			
		Japan	38,003	31,110	30,352	27,279				
		Outside Japan	33,708	33,377	34,962	37,612				
		Global Breakdown	Material Recycling	t	42,609	39,703	37,723	37,487		
	Thermal Recycle		11,945	9,528	11,911	12,639				
	Composting and feed		17,157	15,256	15,680	14,765				
		Total (Including valuables)	Global total	4,703	4,378	5,532	3,370			
		Final disposal	Japan	t	3,818	3,606	3,983	2,529		
			Outside Japan	885	772	1,549	841			
			Global total	13,760	12,594	13,695	14,660			
		(landfill)	Japan	t	115	99	112	207		
			Outside Japan	13,645	12,495	13,583	14,453			
			Global total	10,379	9,355	9,355	10,022			
		Bio-processing and chemical processing	Japan	t		909	799	804		
			Outside Japan		9,470	8,556	9,218			
			Global total	9,708	9,884	10,831	10,543			
		Total amount of waste	Japan	t	3,770	3,836	4,513	3,279		
			Outside Japan	5,938	6,048	6,318	7,264			
			Global total	5,074	4,549	5,450	6,365			
	Recycled materials	Japan	t	1,516	1,653	2,174	1,932			
		Outside Japan	3,558	2,897	3,276	4,433				
		Global Breakdown	Material Recycling	t	2,633	1,832	2,257	3,155		
			Thermal Recycle	2,441	1,556	3,193	3,210			
			Composting and feed	0	0	0	0			
	Global total	2,389	2,443	2,694	1,661					
	Final disposal	Japan	t	2,124	2,047	2,235	1,201			
		Outside Japan	265	396	459	460				
		Global total	1,520	1,914	2,265	2,003				
	(landfill)	Japan	t	9	1	1	2			
		Outside Japan	1,511	1,913	2,264	2,001				
		Global total	726	978	421	514				
	Bio-processing and chemical processing	Japan	t	122	135	102	144			
		Outside Japan	604	843	319	370				
		Global total	604	843	319	370				

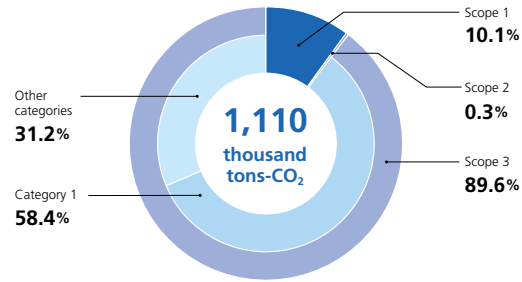
*1 Five group companies: Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, and Otsuka Foods *2 Specially controlled industrial waste by Japanese regulations; in other countries, the classification is based on the respective national standards

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Global energy composition (converted to heat quantity: GJ/year)

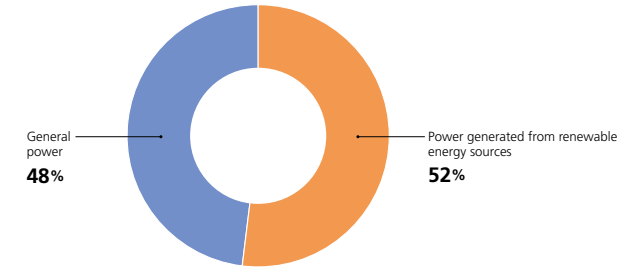


GHG Emissions throughout the Value Chain

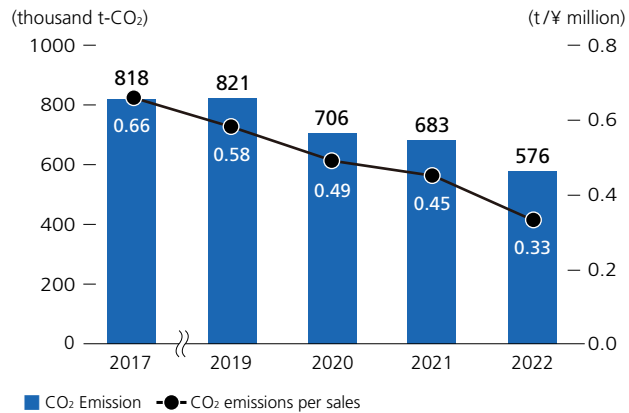


Scope: Five group companies: Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, and Otsuka Foods

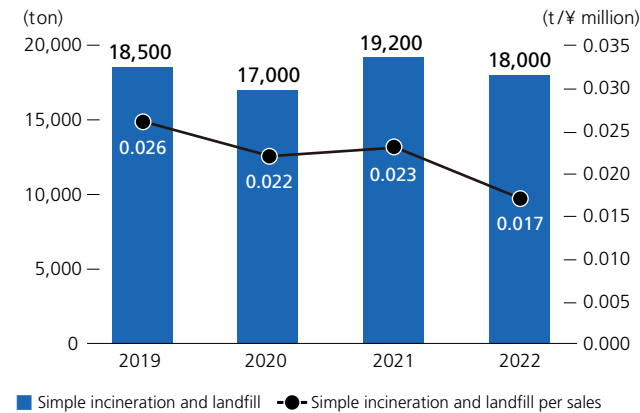
Global renewable energy ratio



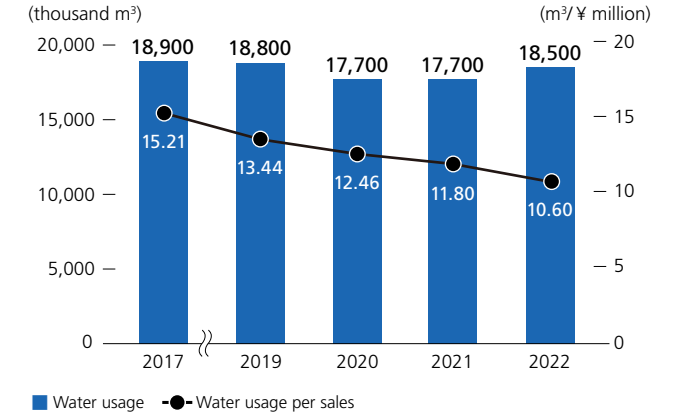
CO₂ emissions per sales



Simple incineration and landfill per sales



Water Usage, Water Usage per Sales

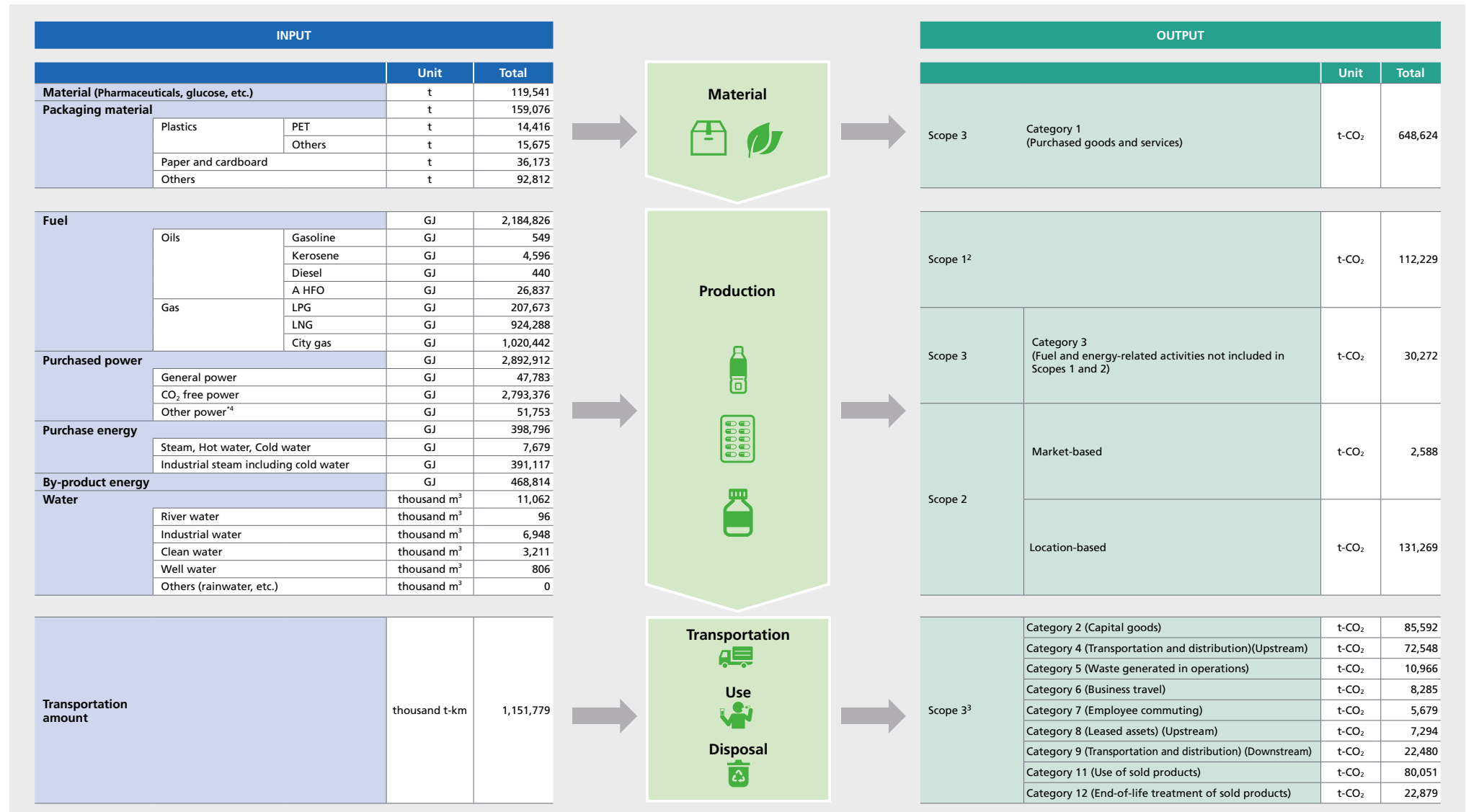


Reporting of Violations of Environmental Laws and Regulations

In FY 2022, the Otsuka group had five violations of environmental laws and regulations (violations due to inadequate reporting and waste water exceeding the standards). We have completed the correction of the violations, and will make efforts to prevent recurrence.

					Material Issues							
TABLE OF CONTENTS	Editorial Policy	Corporate Profile	Message from the Director in Charge	Policy and Management	Carbon Neutrality	Circular Economy	Water Neutrality	Biodiversity	Management of Chemical Substances	Supply Chains	Engagement	Environmental Data and Third-Party Verification

Material balance over the life cycle of the business*1



*1 Five group companies: Otsuka Pharmaceutical, Otsuka Pharmaceutical Factory, Taiho Pharmaceutical, Otsuka Chemical, and Otsuka Foods

*2 Indirect emissions from energy sources and indirect emissions from freon leak volume and during the production of carbonated beverages, etc.

*3 Categories 10 and 13 to 15 are not applicable *4 Power generation by co-generation systems

