



Daiichi Sankyo Group Environmental Data Book 2020



Position of This Book

The information of this book complements Daiichi Sankyo Group Value Report 2020 and the environmental data on our website. Please see them in addition.

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Basic Environmental Management Policy

Safeguarding the environment is the foundation of all Group operational management. We pursue environmental management that contributes to a sustainable society and enhances our good corporate citizenship.

We implement the respective items listed below.

1. Confirm the environmental impacts of each business process, from R&D to production, distribution, usage and consumption, and disposal, and reduce environmental loads.
2. Comply strictly with environmental laws and ordinances, regional covenants, and voluntary standards.
3. Construct, operate, evaluate, and enhance an environmental management system.
4. Use resources and energy efficiently, reduce greenhouse gas emissions, and recycle and reduce waste.
5. Protect the environment and respect biodiversity by helping preserve the ecosystem.
6. Address environmental risks.
7. Educate and enlighten about the environment.
8. Communicate with internal and external stakeholders about environmental issues.



Environmental Management System

1-1 Our Stance on Environmental Management

Environmental issues such as global warming and extreme weather are very closely related to our lifestyles and work. We are practicing environmental management on a global scale in accordance with the Daiichi Sankyo Group EHS Policy and Basic Environmental Management Policy. We thereby aim to address such environmental issues through responsible corporate activities.

1-2 Promoting Environmental Management

To appropriately address environmental issues, we regard response to climate change, chemical substances management, water consumption control, waste management, and consideration for biodiversity as our main sustainability issues while also taking into account the societal demand and expectation for environmental conservation as well as the relationship with medium- and long-term business activities. Taking these sustainability issues into consideration, we promote environmental management by following the Fourth Medium-term Environmental Management Policy, which contains our targets for fiscal 2020.

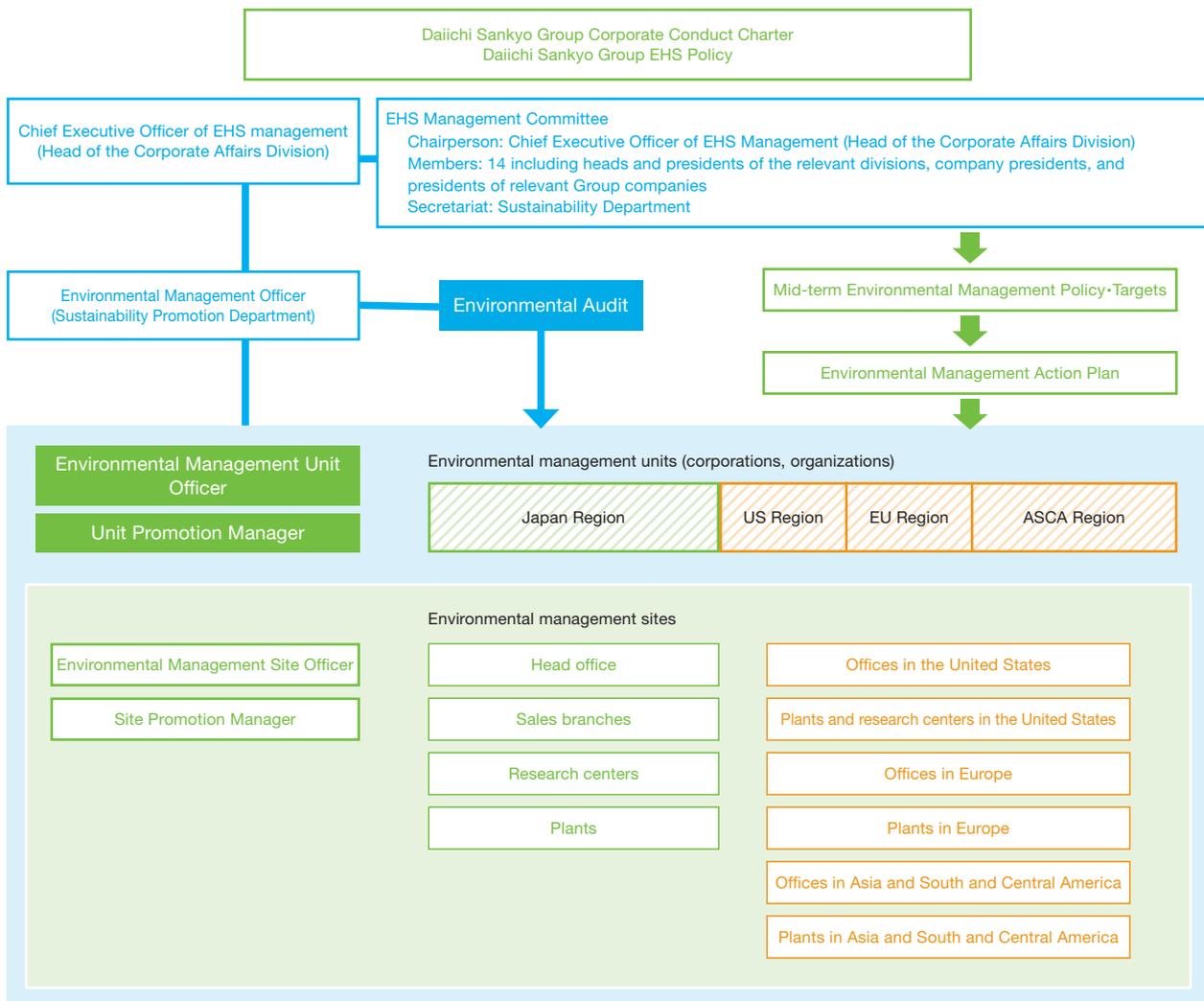
Fourth Medium-Term Environmental Management Policy and Goals (Numerical Targets and Main Activities)

Fourth Medium-Term Environmental Management Policy	Numerical Targets and Main Activities	
Lower the environmental impact of all operations by conserving energy and resources, or reducing greenhouse gas emissions and waste.	Entire group	<ul style="list-style-type: none"> • CO₂ emissions: 5.6% reduction compared to fiscal 2015 • Total waste generated: 5% reduction compared to fiscal 2015 • Water consumption: 5% reduction compared to fiscal 2015 • Recycle waste • Utilize renewable energy
	Group companies in Japan	<ul style="list-style-type: none"> • Maintain 1% or less of the final disposal rate • Office paper consumption: 5% reduction compared to fiscal 2015 • Cooperate with suppliers to reduce environmental burdens
Lower environmental risks by continuously improving our environmental management systems in such areas as environmental compliance, pollution prevention, and chemical substances management.	Entire group	<ul style="list-style-type: none"> • Comply with environment-related laws and regulations through environmental audit and compliance evaluation • Prevent environmental accidents and minimize pollution risks • Identify and continuously reduce pollutant emissions to the atmosphere and waters
	Group companies in Japan	<ul style="list-style-type: none"> • Optimize the environmental management system • Prevent improper waste treatment
Manage the external risks that have the potential to generate a change in business operations, such as climate change and water risks.	Entire group	<ul style="list-style-type: none"> • Identify and address climate change and water risks
Ensure that operations reflect the need to preserve biodiversity and use ecosystem services sustainably.	Entire group	<ul style="list-style-type: none"> • Facilitate environmental conservation activities in cooperation with business partners and pursue procurement that takes environmental burdens and biodiversity into account • Take proper care of the environment around operating sites
	Group companies in Japan	<ul style="list-style-type: none"> • Evaluate environmental impacts by water discharged from plants and research facilities • Identify and minimize environmental burdens by utilizing biodiversity indicators • Contribute to a biodiversity-friendly society
Enhance environmental disclosure, improve the reliability of information, and engage in environmental communications with stakeholders.	Entire group	<ul style="list-style-type: none"> • Improve the reliability of disclosure data through third-party verification • Enhance environmental awareness
	Group companies in Japan	<ul style="list-style-type: none"> • Provide environmental education throughout the entire company and professional education • Communicate with communities, suppliers, NPOs, and other entities

1-3 Environmental Management Promotion System

The head of the Corporate Affairs Division of Daiichi Sankyo serves as the chief executive EHS officer of environmental management and oversees environmental management on a Group basis, while the vice president of Sustainability Promotion Department promotes environmental management as the environmental management officer. As a system for promoting environmental management, we have established an environmental management unit that deliberates on business activities, and each environmental management unit establishes an environmental management site and discusses regions and functions as necessary while overseeing targets. In addition, we have established the EHS Management Committee, chaired by the chief executive officer of EHS management. This committee discusses the formulation of the Daiichi Sankyo Group EHS Policy and other important matters and reports them to the Board of Directors.

Diagram of the Daiichi Sankyo Group Environmental Management Promotion System



1-4 ISO 14001 Certification

Operating sites with production functions that have high environmental burdens have acquired ISO 14001 certification.

List of ISO 14001 Certified Plants (As of the End of June 2020)

	Company	Site	ISO 14001 Acquisition Period
Daiichi Sankyo Group (multisite certification)	Daiichi Sankyo Co., Ltd.	Sustainability Department	January, 1998
		Pharmaceutical Technology Division (Hiratsuka)	
		Biologics Division (Tatebayashi)	
	Daiichi Sankyo Propharma Co., Ltd.	Hiratsuka Plant	
		Technology Department	
	Daiichi Sankyo Chemical Pharma Co., Ltd.	Onahama Plant	
		Tatebayashi Plant	
		Biologics Technology Department (Tatebayashi)	
		Odawara Plant	
		Daiichi Sankyo Biotech Co., Ltd.	
	Daiichi Sankyo Biotech Co., Ltd.	Kitamoto Site	
	Daiichi Sankyo Happiness Co., Ltd.	(Hiratsuka)	
Daiichi Sankyo Europe		Pfaffenhofen Plant	December 2019
Daiichi Sankyo Altkirch Sarl			March 2019
Daiichi Sankyo Pharmaceutical (Beijing)		Beijing Plant	March 2019
Sankyo Pharmaceutical (Shanghai) Co., Ltd.		Shanghai Plant	March 2019
Daiichi Sankyo Brasil Farmacêutica		Alphaville Plant	March, 2012
ISO 14001 Certification Acquisition Rate of Production Sites (on the basis of FY2019 CO ₂ emissions)	Japan		100%
	Entire group		87.0%

Furthermore, we established the Daiichi Sankyo Group Environmental Management system in accordance with ISO 14001 for other sites.

1-5 Environmental Supply Chain Management

Main Efforts	Details
Setting of CSR procurement standards	We request that our business partners make efforts based on the CSR procurement standards of our group. The environment-related items in the CSR procurement standards are as follows. (1) Reduction of greenhouse gas emissions (2) Appropriate management and reduction of waste and emissions (3) Prevention or mitigation of leakage (4) Promotion of conservation of energy and resources (5) Response to biodiversity conservation
Cooperation with Suppliers	We ascertain the amount of CO ₂ emissions from our major suppliers and how much water they use. We also ask of any supplier that has no CO ₂ reduction target to set one as a good opportunity for improvement. These efforts are based on the Science Based Targets* initiative. *An international initiative that calls on companies to set CO ₂ emission reduction targets in line with scientific evidence to achieve the Paris Agreement target of keeping the average global temperature increase below 2°C compared to pre-industrial levels.
Cooperation with logistics partners	We request our logistics partners to strive to reduce greenhouse gas emissions, such as by sharing the transportation weight and distance data of product transportation, stopping excessive idling on the premises of logistics centers, and practicing eco-driving.
Cooperation for environment audit	Partner companies storing and delivering our products and promotional goods cooperate for the environment audit on environment-related laws and regulations including waste management.

1-6 Environmental Auditing

Operating Sites Subject to an Environment Audit in Fiscal 2019

Company	Operating Site and Branches
Daiichi Sankyo	Chiba branch
	Saitama branch
	Shikoku branch
	Chugoku branch
	Kobe branch
	Tokai branch
Daiichi Sankyo Propharma	Hiratsuka site
Daiichi Sankyo Chemical Pharma	Tatebayashi site

*There were no findings that might cause serious environmental risks.

1-7 Emergency preparedness and response

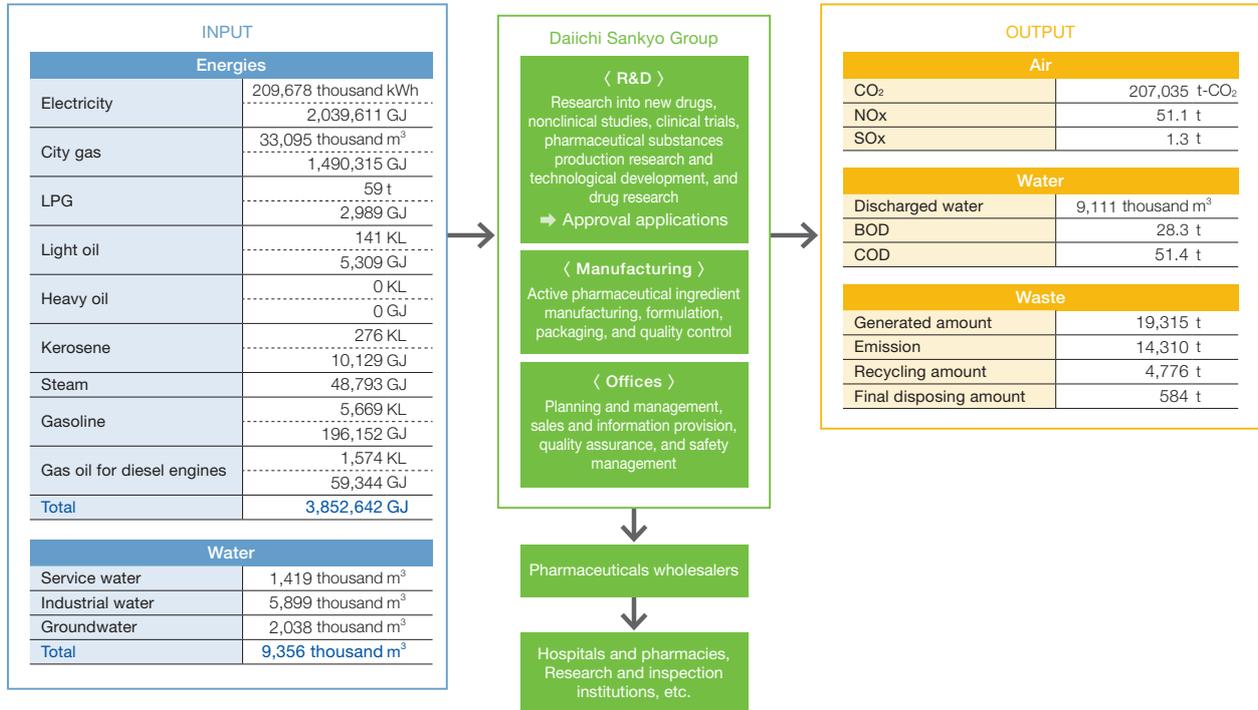
Plants and research facilities with particularly high environmental risks have protocols to prepare for and respond to emergencies, including prevention and mitigation of environmental pollution due to disasters and accidents. They also conduct periodic education and emergency drills while maintaining necessary equipment.

Emergency Drills Conducted (Plants and Research Facilities)

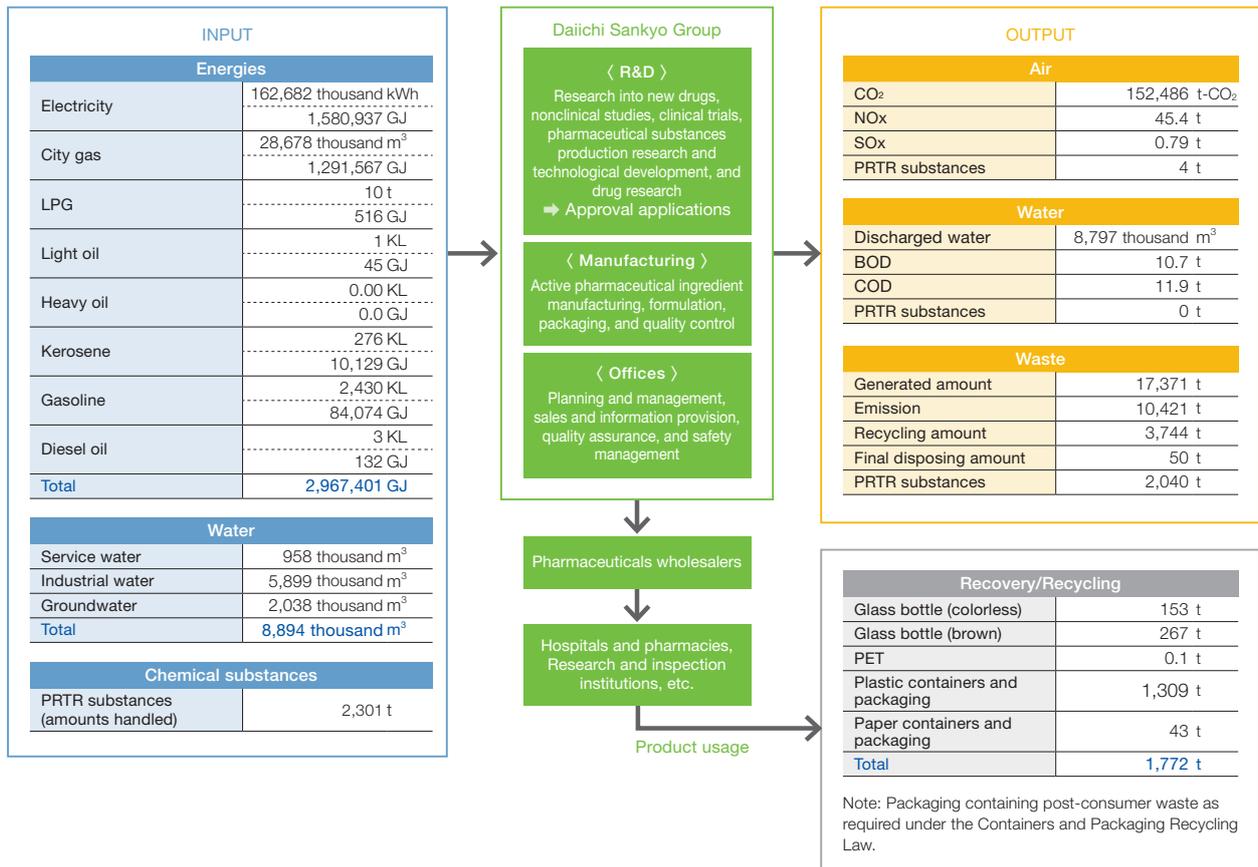
Company	Operating site	Details of Emergency Drills (Possible accidents/incidents)	Number of Emergency Drills	Total Number of Participants
Daiichi Sankyo	Shinagawa R&D Center	Large-scale earthquake, fire, emergency report, confirmation of employees' safety	10 drills	3,053
	Kasai R&D Center	Large-scale earthquake, fire, emergency report, emergency meal-serving drill	11 drills	1,354
Daiichi Sankyo Propharma	Hiratsuka Plant	Large-scale earthquake, fire, leakage, and emergency report	46 drills	1,124
Daiichi Sankyo Chemical Pharma	Onahama Plant	Large-scale earthquake, fire, and leakage and workplace accidents	22 drills	863
	Tatebayashi Plant	Large-scale earthquake, fire, and leakage	24 drills	1,064
	Odawara Plant	Large-scale earthquake, fire, leakage, and emergency report	74 drills	1,018
Daiichi Sankyo Biotech	Kitamoto Site	Large-scale earthquake and fire	6 drills	1,564

1-8 Business Activity and Environmental Performance

Business Activity and Input/Output (Entire Group)



Business Activity and Input/Output (Group in Japan)



1-9 Environmental Accounting

Environment Conservation Cost (Group in Japan)

Unit: million yen

Environmental Item	FY2018		FY2019	
	Investment	Cost	Investment	Cost
Pollution Prevention Cost	309	0	108	94
Global Environmental Conservation Cost	3,346	21	1,770	314
Resource Circulation Cost	9	315	0	337
Upstream / Downstream Costs	0	58		58
Administration Cost	49	655	3	684
R&D Cost	0	30		30
Social Activity Cost	0	0		0
Environmental Remediation Cost	11	0	0	47
Total	3,724	1,079	1,882	1,563

*There were no findings that might cause serious environmental risks.

Economic Benefit (Group in Japan)

Unit: million yen

	FY2019
Value of sales of valuables	0.9

Environmental Conservation Benefit (Group in Japan)

	Unit	FY2018	FY2019	Increase/Decrease Compared to the Previous Year	Increase/Decrease Rate Compared to the Previous Year
Total volume of energy consumed	GJ	3,169,679	2,967,401	△ 202,278	△ 6.4%
Water used	1,000m ³	9,867	8,894	△ 972	△ 9.9%
PRTR substances used	t	1,798	2,301	503	28.0%
CO ₂ emission	t-CO ₂	156,323	144,204	△ 12,118	△ 7.8%
Total volume of waste	t	14,684	17,371	2,687	18.3%
Waste emissions (= Outsourced treating volume)	t	10,933	10,421	△ 512	△ 4.7%
Volume of recycled waste	t	3,045	3,744	699	23.0%
Final disposing amount of waste	t	74	50	△ 25	△ 33.1%
Recycling rate	%	27.8	35.9	—	8.1%
Recovered or recycled volume of containers and packages	t	1,854	1,772	△ 82	△ 4.4%
SOx emissions	t	0.64	0.79	0.1	22.9%
NOx emissions	t	41	45	5	11.7%

1-10 Environmental Efficiency (Entire Group)

Environmental Efficiency Index	Index Definition	FY2015	FY2016	FY2017	FY2018	FY2019
CO ₂	Sales/CO ₂ emissions	100	99	105	109	119
Waste	Sales/Total waste emissions	100	97	140	126	143
Water	Sales/Water consumption	100	105	112	113	133

* The figures as of fiscal 2015 have been set to 100. Higher index shows higher level of efficiency.

2 Conserving Energy and Combatting Global Warming

2-1 Our Basic Stance

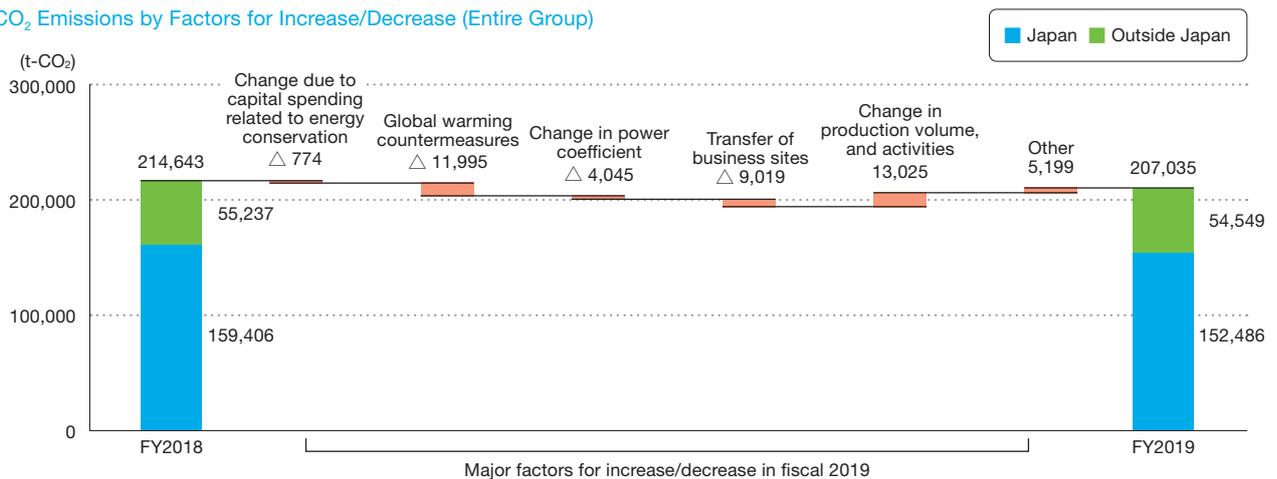
To facilitate responsible corporate activities that address climate change, we have set a CO₂ emissions target for fiscal 2020 the final year of the 5-year business plan of pursuing a 5.6% reduction from fiscal 2015 based on our long-term CO₂ emissions target for fiscal 2030 and the approach of the Science Based Targets initiative*.

Possible climate change impacts include tightened controls on CO₂ emissions in accordance with the international framework for greenhouse gas emissions reduction, physical effects such as a rise in average temperature, drought, flood, change in disease structure, and health impacts. The Medium-Term Environmental Management Policy of our group includes "Manage the external risks that have the potential to generate a change in business operations, such as climate change and water risks". By doing so, we facilitate the efforts not only to mitigate the emissions of CO₂ and other substances, but also to adapt to climate change-driven impacts as well as influences that are inevitable in the medium- and long-term.

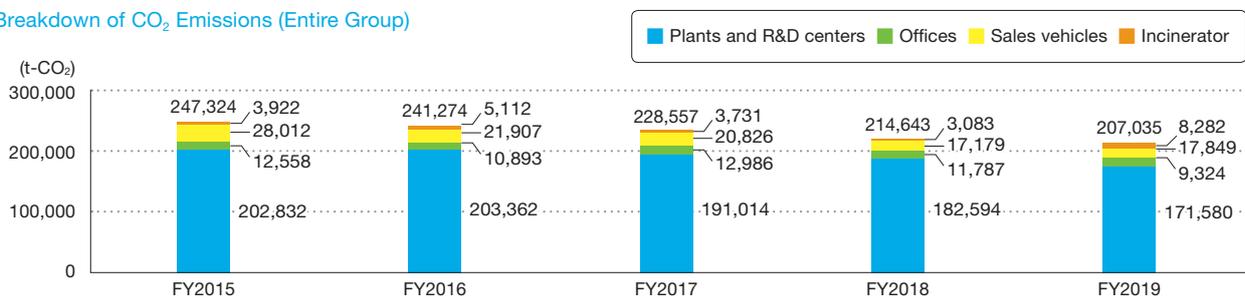
*An international initiative that encourages companies to set CO₂ reduction targets based on scientific evidence in order to help accomplish the goal of the Paris Agreement of keeping the average increase in global temperature below 2°C

2-2 Target and Result of CO₂ Emissions Reduction

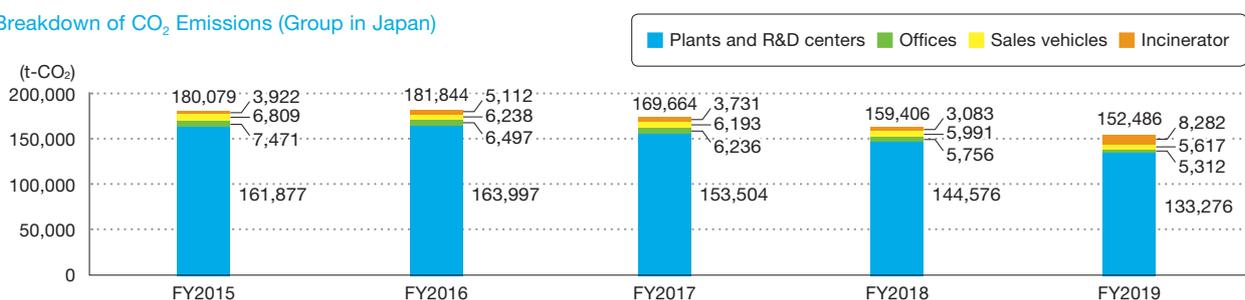
CO₂ Emissions by Factors for Increase/Decrease (Entire Group)



Breakdown of CO₂ Emissions (Entire Group)



Breakdown of CO₂ Emissions (Group in Japan)



2-3 CO₂ Emissions by Scope

Total CO₂ Emissions by Region (Scope 1 and Scope 2)

(t-CO₂)

	SCOPE1	SCOPE2	Total
In Japan	78,597	73,889	152,486
Outside Japan	21,814	32,735	54,549
Total	100,411	106,624	207,035

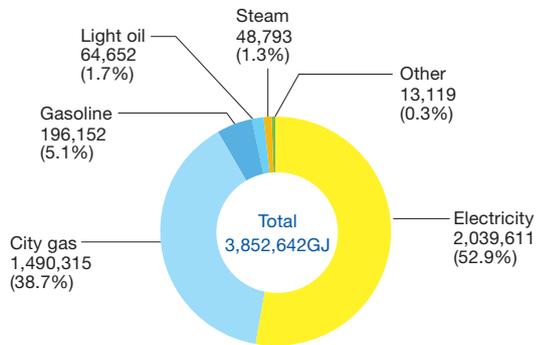
2-4 Supply Chain GHG Emission (Scope 3) (Group in Japan)

Sources	CO ₂ emissions (t-CO ₂) FY2018	CO ₂ emissions (t-CO ₂) FY2019	Increase/Decrease Rate Compared to the Previous Year (%)	Emissions Calculation Methodology	Explanation
Purchased goods and services	644,322	612,885	△4.9%	The figures are calculated by multiplying the emission basic unit based on guidelines* by the weight or purchase amount of raw materials, ingredients, and stock goods.	Geographic scope is Japan.
Capital goods	89,891	46,950	△47.8%	It computed based on the amount of money for acquisition of the fixed assets and CO ₂ emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	6,058	11,088	83.0%	It computed based on the usage of electricity and steam and CO ₂ emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan.
Upstream transportation and distribution	8,960	8,549	△4.6%	In accordance with guidelines*, etc., the figures are calculated with the transportation distance between the logistics centers of our group and the destinations (pharmaceutical wholesalers, etc.) based on the fuel consumption method.	Geographic scope is Japan.
Waste generated in operations	9,955	9,532	△4.2%	It computed based on the weight of each waste discharged from the plants and R&D center and CO ₂ emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan.
Business travel	15,164	30,271	99.6%	It computed based on the travel and accommodation expenses and CO ₂ emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry. For travel expenses, CO ₂ emission coefficients for aircraft were adopted.	Geographic scope is Japan. The amount of emissions on business trips using company vehicles is included in Scope 1.
Employee commuting	2,779	3,711	33.5%	The figures are calculated by multiplying the emission basic unit based on guidelines* by the commutation expenses of public transportation systems used by employees. The amount of emissions from the commuter cars of employees is calculated based on the amount of gasoline used.	Geographic scope is Japan.
Upstream leased assets	—	—	—	—	It is irrelevant because all emissions from the leased assets are counted in Scopes 1 and 2.
Downstream transportation and distribution	16,867	16,227	△3.8%	The emission basic unit of sales at wholesalers is estimated based on the sales of major pharmaceutical wholesalers and the CO ₂ emissions. The figures are calculated based on the total sales of the pharmaceutical wholesalers and our ratio of the sales volume.	Geographic scope is Japan.
Processing of sold products	—	—	—	—	—
Use of sold products	—	—	—	—	There is no energy use for product use, because of the characteristic of medical supplies. Therefore, it is estimated irrelevant.
End of life treatment of sold products	1,939	1,810	△6.7%	It computed based on the weight of each materials for the containers of the sold product and CO ₂ emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan. Recycling is included.
Downstream leased assets	3,562	2,913	△18.2%	It computed based on the floor area according to the purpose of using the rented assets and CO ₂ emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan.
Franchises	—	—	—	—	Since we have no franchise, it is irrelevant.
Investments	—	—	—	—	—
Total	799,497	743,936	△6.9%		

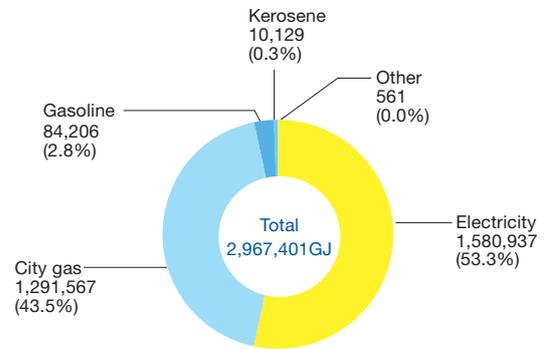
* Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver. 2.6), Policy on Emissions Unit Values for Accounting of Greenhouse Gas Emissions, etc., by Organizations Throughout the Supply Chain (Ver. 2.6), and the Emissions Unit Value Database (Ver. 3.0)

2-5 Breakdown of Energy Use

Breakdown of Energy Use (Entire Group)



Breakdown of Energy Use (Group in Japan)



2-6 Using Renewable Energy

Renewable Energy Usage and Breakdown

Types of Renewable Energy	Power Supply (MWh)	Remarks
Solar energy generation	36	Electricity generated by solar energy equipment installed in plants and research facilities. Not included in energy consumption.
Hydroelectric power generation	15,260	Purchased by our Group companies in Germany and Brazil.
Biomass power generation	500	Purchased by group companies in Japan. Not subtracted from the amount of emissions in Scope 2.
Biomass heat	1,693	Purchased by our group companies in Germany. Not subtracted from the amount of emissions in Scope 2.
Other renewable energies	2,562	Purchased by group companies in Spain, Portugal, Austria, Brazil and other countries.

2-7 Emissions Trading

Carbon Offset

Offset Amount	Project Type	Project Number	Certification Standards
30t-CO ₂	Clean and Efficient Cooking and Heating	Clean and Efficient Cooking and Heating Project, China [GS949]	Gold Standard

2-8 Supplementary Notes

1 Conversion factors and their sources

The conversion factors used in this data book are as follows:

Conversion factors of the Accounting and Reporting System under the Act on Promotion of Global Warming Countermeasures (the Global Warming Countermeasures Act) are used for the CO₂ conversion factor and the energy conversion factor.

Regarding the countries outside Japan, the factors commonly used in such countries or the factors based on GHG protocol are used in this data book.

List of conversion factors in Japan

Energy Source		Conversion Factor			
		Unit Calorific Value		CO ₂ Emission	
Electricity	General electricity utility (Day time)	9.97	GJ/1,000 kWh	Emission coefficients for power utilities (used for calculating greenhouse gas emissions of specified emitters) for FY2017	t-CO ₂ /1,000 kWh
	General electricity utility (Night time)	9.28	GJ/1,000 kWh	Emission coefficients for power utilities (used for calculating greenhouse gas emissions of specified emitters) for FY2017	t-CO ₂ /1,000 kWh
	Other	9.76	GJ/1,000 kWh	Emission coefficients for power utilities (used for calculating greenhouse gas emissions of specified emitters) for FY2017	t-CO ₂ /1,000 kWh
A-type heavy oil		39.1	GJ/KL	2.71	t-CO ₂ /KL
Diesel oil		37.7	GJ/KL	2.58	t-CO ₂ /KL
Kerosene		36.7	GJ/KL	2.49	t-CO ₂ /KL
LPG		50.8	GJ/t	3.00	t-CO ₂ /t
City gas (13A)		44.8	GJ/1,000 m ³	2.23	t-CO ₂ /1,000 m ³
LNG		54.6	GJ/t	2.70	t-CO ₂ /t
Gasoline		34.6	GJ/KL	2.32	t-CO ₂ /KL
Steam for industry		1.02	GJ/GJ	0.060	t-CO ₂ /GJ

2 Emissions not subject to accounting

Of the emission data, both Scope 1 and Scope 2 emissions do not include emissions from small offices outside Japan. Emissions of greenhouse gasses other than CO₂ are not included either, due to the small quantity.

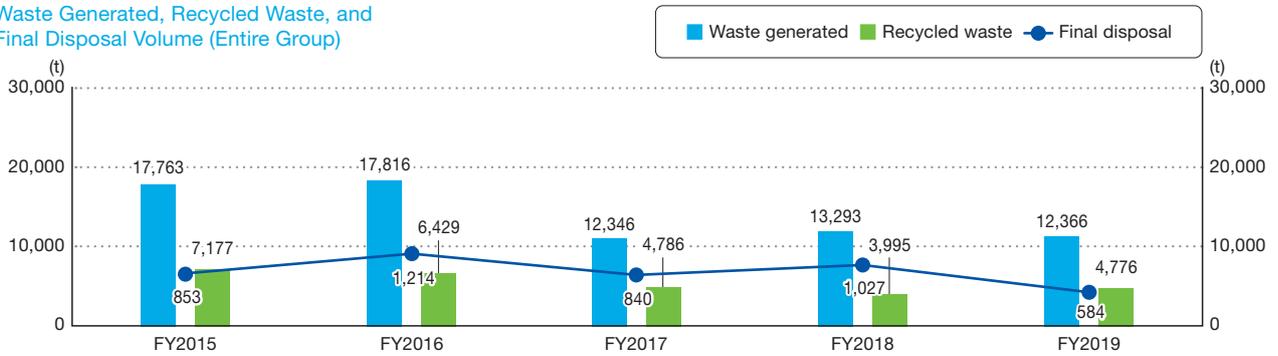
3 GHG emissions from sold products

Any use of sold products will not help reduce GHS emissions.

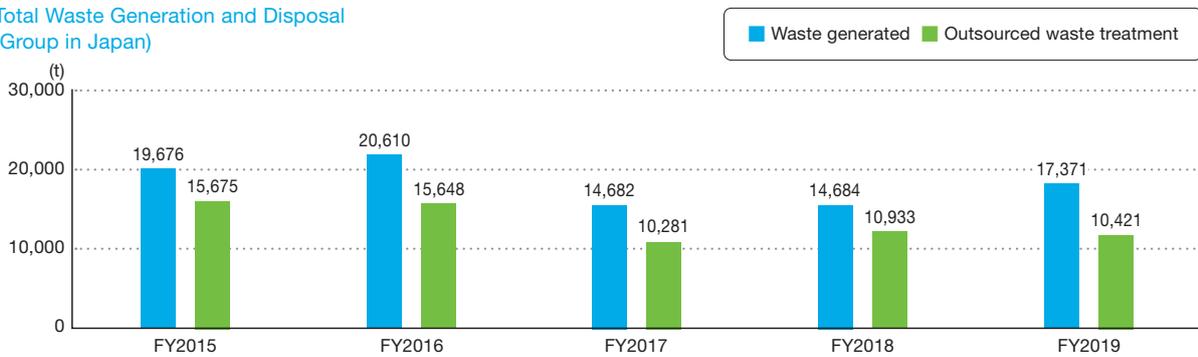
3 Effective Use of Resources and Reduction of Environmental Burdens

3-1 Waste Reduction Targets and Achievements

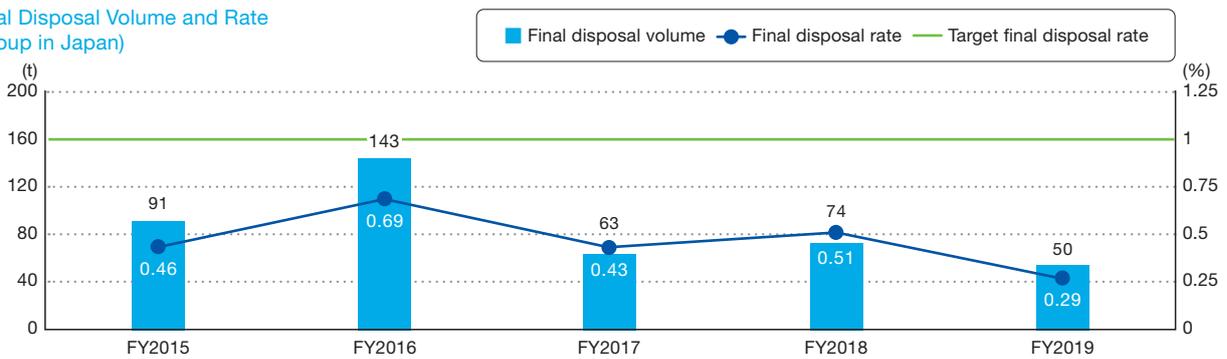
Waste Generated, Recycled Waste, and Final Disposal Volume (Entire Group)



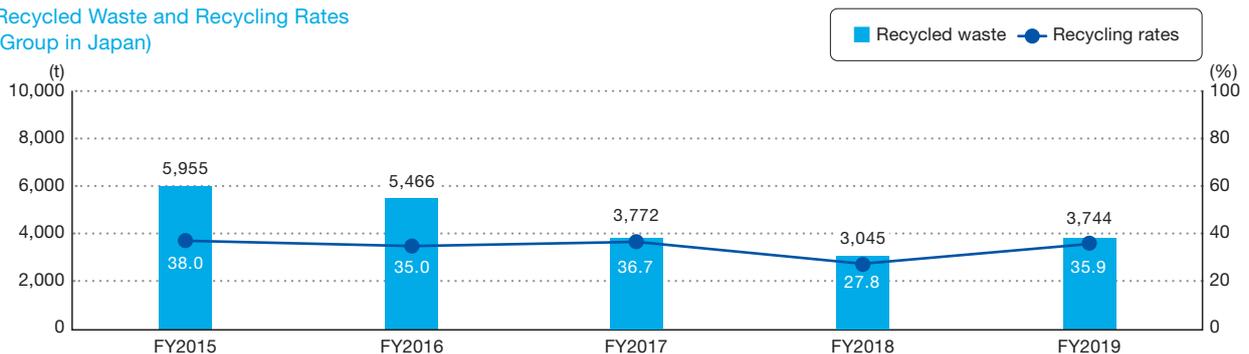
Total Waste Generation and Disposal (Group in Japan)



Final Disposal Volume and Rate (Group in Japan)



Recycled Waste and Recycling Rates (Group in Japan)

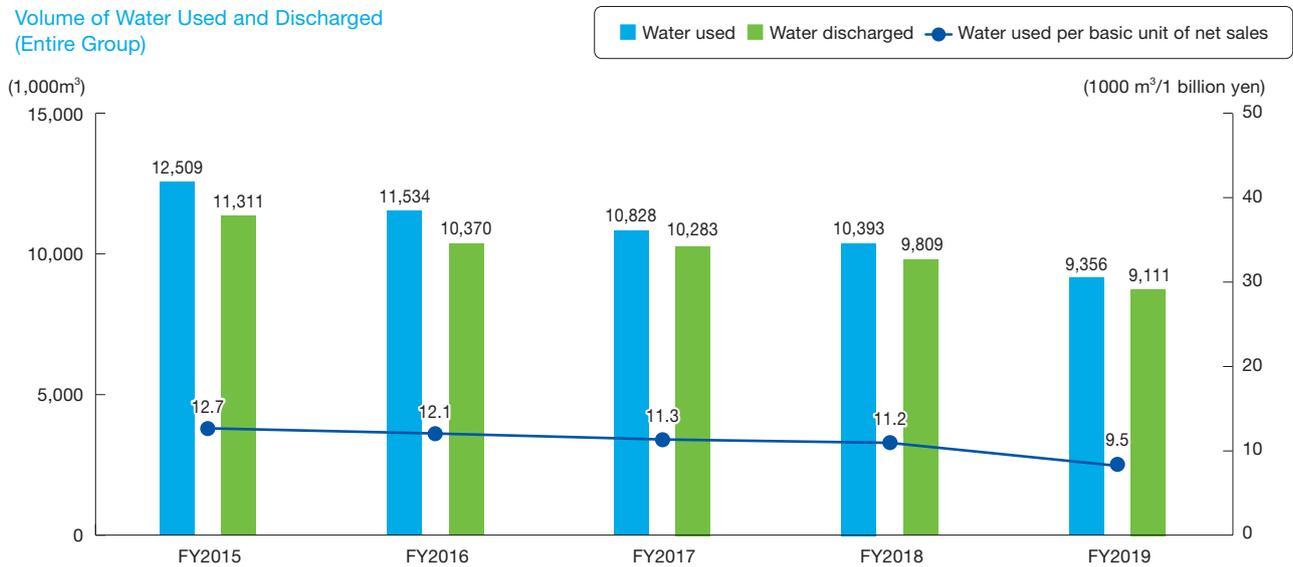


3-2 Efforts to Reduce Waste

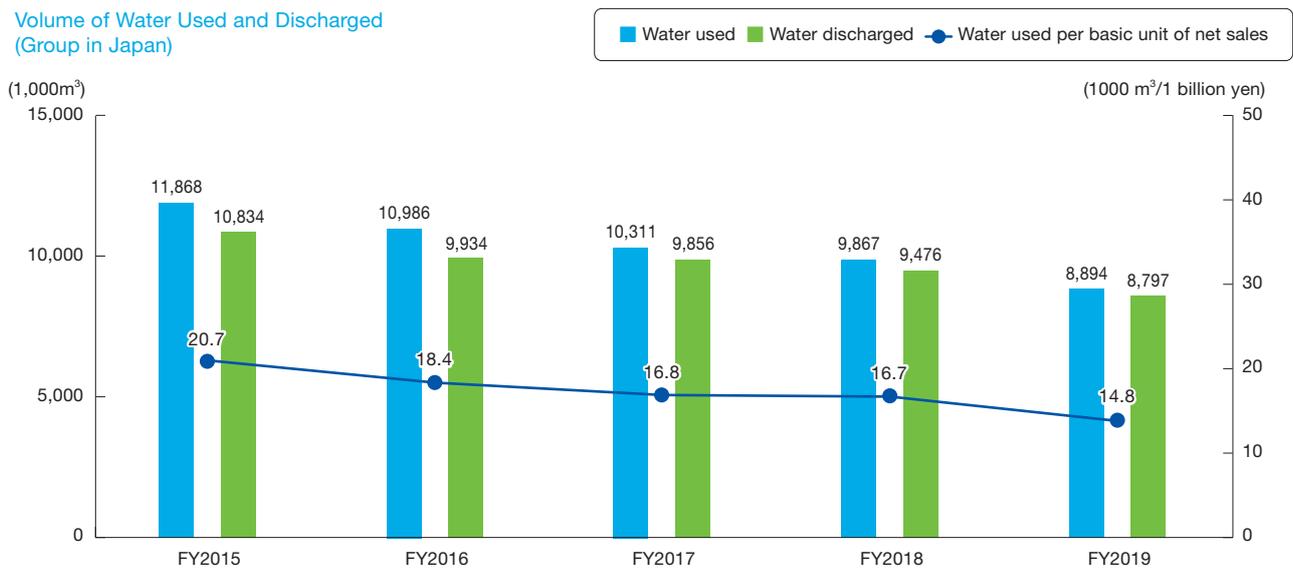
Name of Operating site, etc.	Main Efforts
Offices, sales branches, plants, etc.	Reduce office paper consumption
Headquarters, R&D centers, etc.	Promote the reuse of stationery, devices, and equipment
Cooperation between plants/research facilities and waste disposal contractors	Promote recycling work clothes and latex gloves

3-3 Appropriate Use of Water Resources

Volume of Water Used and Discharged (Entire Group)



Volume of Water Used and Discharged (Group in Japan)

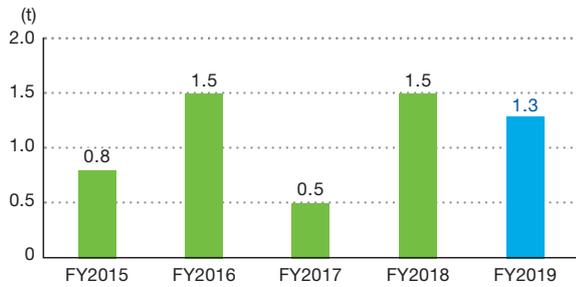




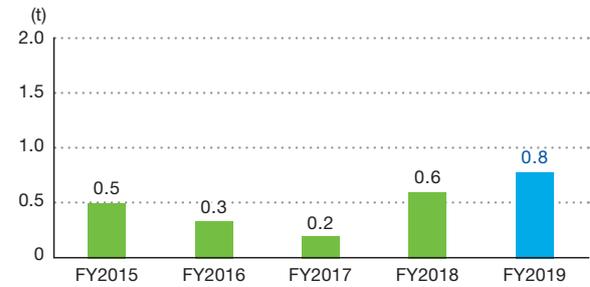
Reduction of Environmental Risks

4-1 Preventing Air and Water Pollution

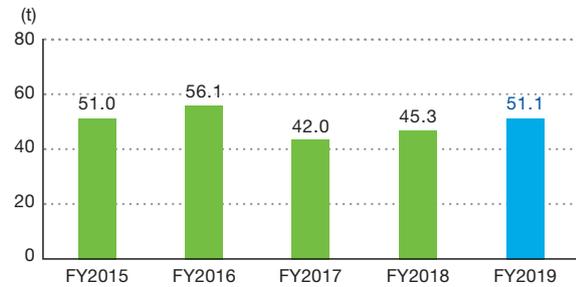
SOx Emissions (Entire Group)



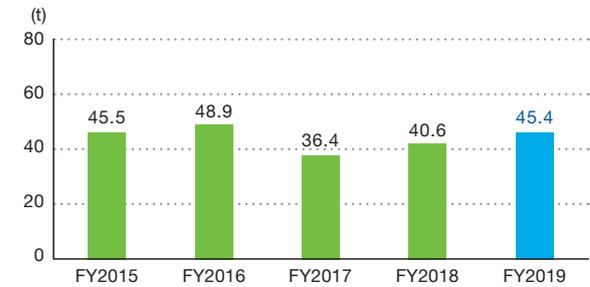
SOx Emissions (Group in Japan)



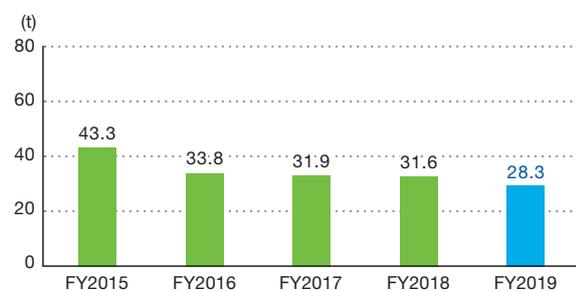
NOx Emissions (Entire Group)



NOx Emissions (Group in Japan)

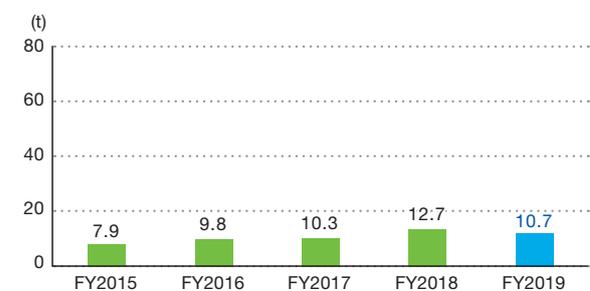


BOD (Entire Group)



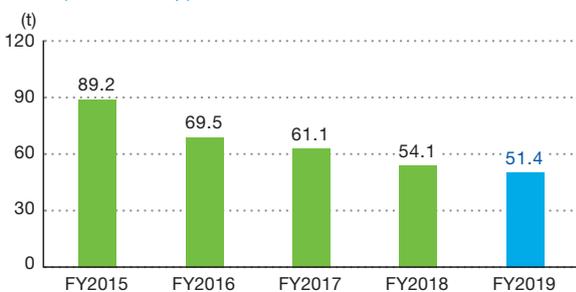
*Public water only

BOD (Group in Japan)



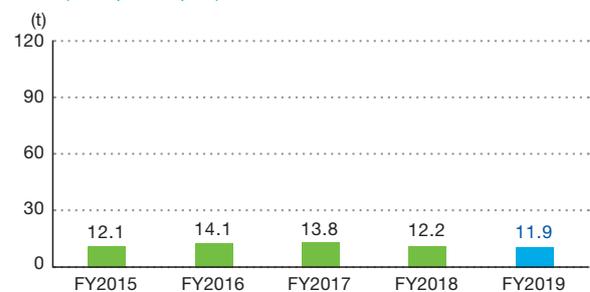
*Public water only

COD (Entire Group)



*Public water only

COD (Group in Japan)



*Public water only

4-2 Preventing Soil and Groundwater Contamination and its Countermeasures

Progress of Measures for Soil Purification

Office	Overview
Shinagawa R&D Center (Shinagawa-ku, Tokyo)	We performed a soil investigation associated with the construction of new research facilities in accordance with a Tokyo municipal ordinance. As a result, contamination was found in a part of soil, and we therefore consult with the government and performed the necessary purification work.
Site of the former Yasugawa Plant (Yasu City, Shiga Prefecture)	We have been continuously monitoring the groundwater since we completed on-site environmental improvement work in 2006. As a result, contamination was found in part of the soil. We are currently conducting a soil investigation in consultation with regulatory authorities to perform appropriate purification work. We also confirmed the presence of mercury used as a material for pesticides that exceeded environmental standards on the grounds of the former plant site in 1993. Since then, we have installed a robust underground storage facility in adherence to regulatory guidance to manage the soil appropriately. Although there have been no reports of leakage or health issues to date, we decided to remove the storage facility in view of increasing safety and security in the region and in response to requests from the local community. We will consult with the relevant parties to ensure that the removal work will cause no negative impact on the surrounding environment.

4-3 Prevention of Noise, Vibration, and Offensive Odor

We conduct appropriate measures and continuous monitoring to comply with the laws and regulations related to noise, vibration, and offensive odor.

4-4 Usage Reduction and Emission/Transfer Control of Chemical Substances

Emission/Transfer Chemical Substances (Group in Japan)

(Unit: metric ton; mg-TEQ for dioxins)

Substance (Annual handling amount of 1 or more metric tons)	Handling Amount	Emission (except for emission into soil)		Transfer Amount		
		Air	Public Water	Sewage	Out of Offices (Recycling)	Out of Offices (Other)
Acetonitrile	1,540.7	1.8	0.0	0.0	251.6	1,223.5
Chloroform	11.5	0.0	0.0	0.0	12.1	0.0
Cobalt and its compounds	1.4	0.0	0.0	0.0	0.0	0.0
Cyanamide	1.3	0.0	0.0	0.0	1.3	0.0
Dichloromethane (also known as methylene chloride)	10.9	0.5	0.0	0.0	10.4	0.0
N,N-Dimethylformamide	58.4	0.0	0.0	0.0	0.0	0.0
N,N-Dimethylacetamide	6.9	0.0	0.0	0.0	0.0	6.0
Dimethylamine	8.0	0.0	0.0	0.0	0.0	8.0
Toluene	531.4	1.1	0.0	0.0	0.0	397.7
Triethylamine	103.3	0.3	0.0	0.0	0.0	102.9
Pyridine	17.8	0.0	0.0	0.0	0.0	17.8
N-Hexane	9.7	0.7	0.0	0.0	0.0	9.0
Total	2,301.3	4.4	0.0	0.0	275.4	1,764.9
Dioxins	—	0.000	0.000	0.036	0.000	0.000

PCB Usage

Types of PCBs	Quantity
Capacitors	0
Fluorescent lamp ballasts, etc.	0

PCB Storage

Types of PCBs	Quantity		
	Heavy PCB	Light PCB	Total
Capacitors	1,341	0	1,341
Fluorescent lamp ballasts, etc.	2,910	0	2,910
Mercury lamp ballasts	3	0	3
Other electric devices	5	0	5
Other polluted products	13	0	13

* We have sorted and weighed the PCB contaminated matter and have registered the shipment to be treated by JESCO, an interim storage and environmental safety corporation. We have already disposed of all low concentration PCBs.

5 Climate Change and Water Risks

5-1 Response to Climate Change risk

Setting a Target to Reduce CO₂ (by 37.5% Compared to 2015) with Consideration for Long-Term Goals

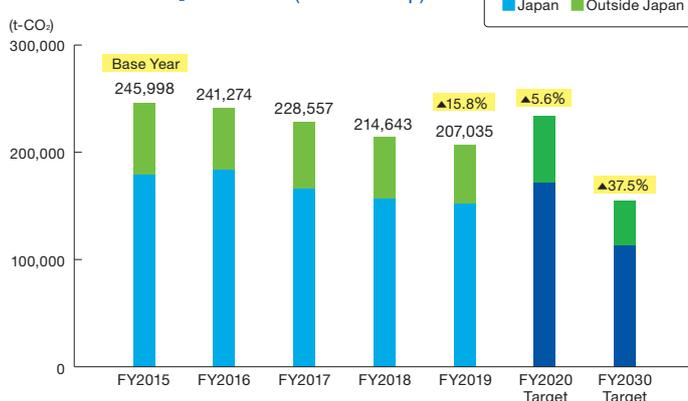
We have set a target at Daiichi Sankyo Group to reduce greenhouse gases, and this target has been approved by the Science Based Targets initiative (SBTi)*. Our target to reduce greenhouse gases emitted through business activities at the Group falls in line with the necessary degree of reduction for keeping the average increase in global temperature below 2°C.

CO₂ emissions target for fiscal 2020:
5.6% reduction from fiscal 2015

In fiscal 2019, we achieved a 15.8% reduction of CO₂ emissions from fiscal 2015, meaning that we have gone beyond our target for fiscal 2020. We will continue to engage in initiatives for CO₂ reduction in consideration of long-term goals in 2030.

* Science Based Targets initiative (SBTi): An international initiative that encourages companies to set CO₂ reduction targets based on scientific evidence in order to help accomplish the goal of the Paris Agreement of keeping the average increase in global temperature below 2°C.

Breakdown of CO₂ Emissions (Entire Group)



Disclosure based on TCFD recommendation

In April 2019, Daiichi Sankyo Group expressed support for the TCFD recommendation, which were formulated to encourage companies to disclose information about the risks and opportunities presented by climate change in business activities. In line with the TCFD recommendations, the analysis and response to climate change risks and opportunities are disclosed.



Governance

The Daiichi Sankyo Group has established the EHS Management Committee formed of members including group companies in an effort to protect the environment and ensure the health and safety of employees and contribute to the development of a sustainable society while achieving the uniform management and promotion of environment, health, and safety management for which there is a high likelihood of risks occurring. We hold discussions on policies, target setting, and activities related to global EHS management at this committee twice a year.

In fiscal 2019, the committee met in July and February to discuss measures for combating climate change, optimizing the environmental management system, and disclosing information in response to the recommendations of the TCFD, among other agenda items.

<Read more here>

Corporate Governance

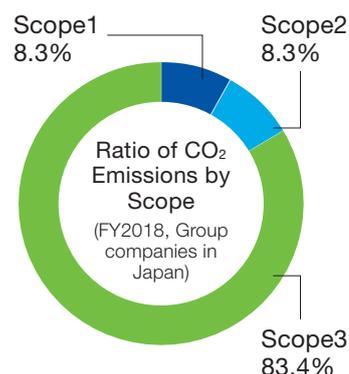
https://www.daiichisankyo.com/about_us/company_profile/governance/feature/index.html

Environmental Management Promotion System

https://www.daiichisankyo.com/about_us/responsibility/csr/business/environment/management/index.html

Strategy

As the impact of various environmental factors increases, we will need to realize a sustainable society if we are to continue our corporate activities. Particularly for pharmaceuticals, which are life-related products, disruption of the supply chain due to worsening meteorological disasters and a decline in the supply capacity of pharmaceuticals are major risks, both from business and social perspectives. On the other hand, CO₂ emissions are characterized by low direct emissions from business activities (Scope 1 and Scope 2) and high indirect emissions from the supply chain (Scope 3). Thus, we consider transition risks are relatively low. Based on this understanding of the environment, the Daiichi Sankyo Group conducted a scenario analysis and risk assessment in accordance with the recommendations of the TCFD in order to clarify the resilience of our businesses towards climate change.



Risk management

As regards climate change risks, a cross-departmental task team was established in fiscal 2019, and workshops on the outline of scenario analysis and the IEA/IPCC were held for employees from relevant departments. In this way, we enhanced our understanding of what happens to the world when transition risks increase (1.5°C scenario, 2°C scenario, etc.) or when physical risks increase (4.0°C scenario, etc.). In addition, business risks and opportunities through to fiscal 2030 were examined.

Risk	
2°C Scenario	Introduction of carbon taxes, increased costs for introducing renewable energy facilities, and reputational risk attributable to insufficient disclosure
4°C Scenario	Supply chain disruption, temporary suspension of operations at company sites, increased air conditioning costs due to rising temperatures, and difficulty in operation due to water withdrawal risk, and reduced productivity of products derived from natural compounds
Opportunity	
2°C Scenario	Measures to achieve Science Based Targets (SBTs)
4°C Scenario	Contribution to diseases that will increase with climate change

<Source> 2°C Scenario, IEA WEO 2018 SDS; 4°C Scenario, IPCC RCP8.5

• Results of scenario analysis

For each business, the potential impact and resilience were clarified, and a comprehensive evaluation was performed, taking into account financial impacts as well as investor perspectives.

Scenario	Key Risk	Event	Potential Impact on Daiichi Sankyo	Degree of Impact	Daiichi Sankyo's Resilience	Business Risk
2°C Scenario (world with advanced transition)	Strengthening policies and regulations related to decarbonization	Introduction of carbon taxes	<ul style="list-style-type: none"> A carbon tax 100 \$/ t-CO₂ in 2030 will result in approx. 2.0 billion yen Increased costs associated with supplier transition risk responses 	Minor	<ul style="list-style-type: none"> Adapt to a decarbonized society and turn the risk into an opportunity by continuing to take a range of measures to achieve SBTs, although the financial impact is not significant in terms of amount 	Minor/ Opportunity
		Increased costs for introducing renewable energy facilities	<ul style="list-style-type: none"> Energy sources are mainly electricity and gas. Renewable electricity is already being purchased in some areas Replacing all electricity used within the Group with renewable energy will cost 0.3 to 0.6 billion yen, but the impact will be minor 	Minor	<ul style="list-style-type: none"> Consider all options for de-fossilization (for all fossil fuels, including gas) 	Minor/ Opportunity
4°C Scenario (world with increasing physical impacts)	Increased frequency and scale of meteorological disasters (such as heavy rains, floods, and typhoons)	Supply chain disruption	<ul style="list-style-type: none"> Increased concerns over the stable supply 	Major	<ul style="list-style-type: none"> Strengthen inventory control to ensure the stable supply in the event of a disaster Purchase from multiple suppliers. Raw materials that cannot be purchased from multiple suppliers are to be examined 	Minor
		Temporary suspension of operations at company sites	<ul style="list-style-type: none"> Key research centers may be flooded Manufacturing bases are unlikely to be flooded even if located close to a river. However, traffic disruption may lead to temporary suspension of operations 	Major	<ul style="list-style-type: none"> Continue to examine ways to strengthen our operating bases and optimize our global bases in light of our business continuity plan Include more training for flood responses/countermeasures in our emergency drills to enhance resilience 	Minor
	Temperature rise	Increased prevalence of diseases associated with climate change	<ul style="list-style-type: none"> Increased demand for products for malignant melanoma, cardiovascular, respiratory, and tropical diseases 	Major	<ul style="list-style-type: none"> Expand research and development of pharmaceuticals for the diseases Ensure production lines and strengthen inventory control 	Opportunity
		Increased air conditioning costs	<ul style="list-style-type: none"> At our head office, research and development bases, and manufacturing bases, most operations are performed basically indoors, and air conditioning costs increase as the temperature rises 	Minor	<ul style="list-style-type: none"> Continue to improve energy efficiency, although the costs are within an absorbable range and their impact is small 	Minor
	Water shortages	Risk of operations being infeasible	<ul style="list-style-type: none"> Plants in China and Brazil are at greatest water withdrawal risk and are likely to be shut down because of flooding 	Major	<ul style="list-style-type: none"> In the event of plants in China being shut down for a long period of time, consider emergency supply measures, such as using other manufacturing sites and outsourcing manufacturing, in line with trends in pharmaceutical regulations 	Minor
	Biodiversity loss	Reduced productivity of products derived from natural compounds	<ul style="list-style-type: none"> No product has been subject to major impacts to date 	Minor	<ul style="list-style-type: none"> Continue to monitor risks and opportunities for products derived from natural compounds 	Minor

Indicator

As indicators and targets for assessing and managing climate-related risks and opportunities, the numerical targets specified in the Medium-Term Environmental Management Policy are used. Progress has been made as planned. Based on the results of this scenario analysis, we will include more aggressive indicators and targets in the next Medium-Term Environmental Management Policy.

Fourth Medium-Term Environmental Management Policy (FY2016-FY2020)

Fourth Medium-Term Environmental Management Policy
Lower the environmental impact of all operations by conserving energy and resources, or reducing greenhouse gas emissions and waste.
Lower environmental risks by continuously improving our environmental management systems in such areas as environmental compliance, pollution prevention, and chemical substances management.
Manage the external risks that have the potential to generate a change in business operations, such as climate change and water risks.
Ensure that operations reflect the need to preserve biodiversity and use ecosystem services sustainably.
Enhance environmental disclosure, improve the reliability of information, and engage in environmental communications with stakeholders.

<Read more here>

Promoting Environmental Management

https://www.daiichisankyo.com/about_us/responsibility/csr/business/environment/management/index.html

5-2 Water Risk

We carry out comprehensive risk evaluations based on the results of analysis of local water risks using the WWF-DEG Water Risk Filter and the survey results on water risks due to plants and research facilities.

The evaluations indicate that the operating sites with the highest water risks among our group are two plants in China, one in Brazil. Water withdraw restrictions and other strengthened regulations are considered to be major risk factors.

Status of Offices in Regions Associated with High Water Risks

Site	River Basin	Volume of Water Used (Withdrawn) (1,000 m ³)	Volume of Water Discharged (1,000 m ³)	Volume of Water Used (1,000 m ³)
Beijing Plant	Yongding River	114.7	86.7	28.1
Shanghai Plant	Yangtze River	36.7	33.0	3.7
Brazil Plant	Parana River	8.3	8.3	0.0
Total		159.7	128.0	31.7

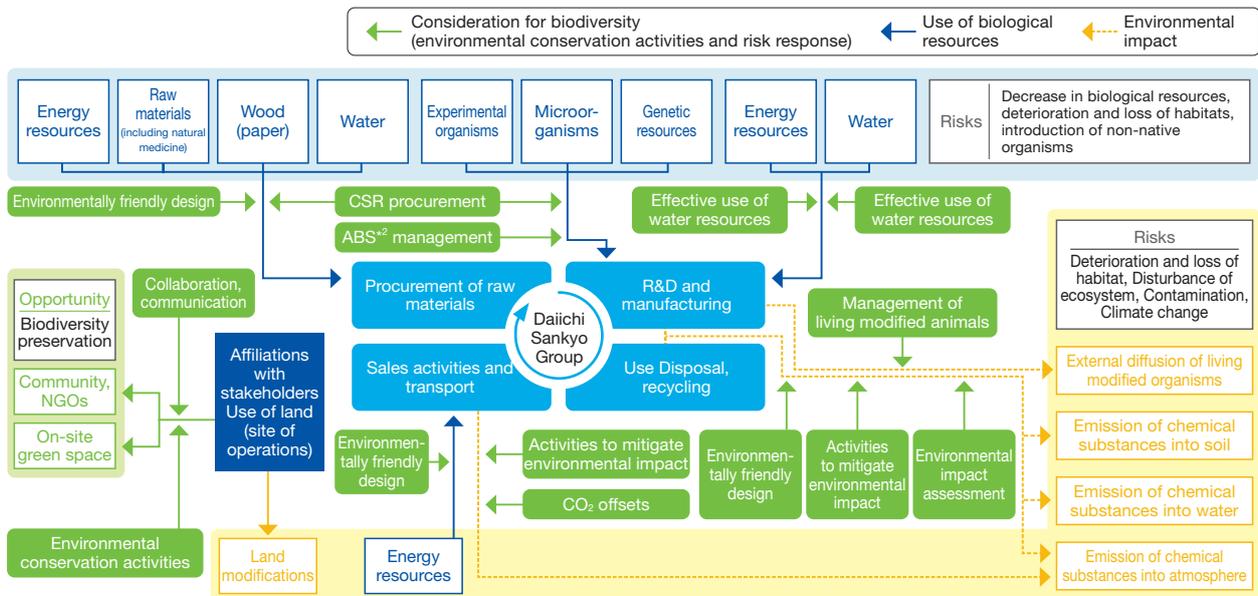
6 Initiatives for Biodiversity Conservation

6-1 Our Basic Stance

Basic Biodiversity Principles and Action Guidelines

Basic Policy	
<ul style="list-style-type: none"> Our Basic Environmental Management Policy states that, "Safeguarding the environment is the bedrock of all Group operational management." We have therefore acted to prevent pollution and global warming and contribute to recycling. Through our initiatives, we have used biological resources properly to minimize the impacts of our operations on biodiversity and have sustainably reduced chemical and other discharges. We will continue striving to preserve biodiversity and respect the principles of the Convention on Biological Diversity by adhering to the following Biodiversity Action Guidelines, thereby enhancing social sustainability. 	
Action Guidance	
1. Actively promote to address biodiversity conservation in all business activity	<ul style="list-style-type: none"> Under take ongoing endeavors to avoid or reduce operational impacts on biodiversity, devoting particular attention to lowering the environmental burdens of air and water emissions and wastes.
2. Identify the biodiversity impacts of ecosystem services, using those services sustainably	<ul style="list-style-type: none"> Recognize the operational importance of ecosystem services while understanding and minimizing their impacts on biodiversity, using those services sustainably.
3. Use genetically modified organisms responsibly	<ul style="list-style-type: none"> Maintain biosafety by continuing to responsibly use genetically modified organisms in drug discovery and production in keeping with the Cartagena Protocol on Biosafety and national laws and ordinances.
4. Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization	<ul style="list-style-type: none"> Comply with the Convention on Biological Diversity, the Bonn Guidelines, and other relevant rules to access and utilize genetic resources of the provider countries appropriately and to share benefits arising from their utilization in a fair and equitable manner.
5. Communicate with stakeholders and improve in-house awareness	<ul style="list-style-type: none"> Foster biodiversity preservation by communicating and liaising better with public and private entities. Educate employees to better understand how operations affect biodiversity and encourage internal and external efforts to safeguard biodiversity.

Map of Corporate Activities and Biodiversity¹



¹ Prepared with reference to the "Map of Corporate Activities and Biodiversity" developed by the Japan Business Initiative for Conservation and Sustainable Use of Biodiversity (JBIB)

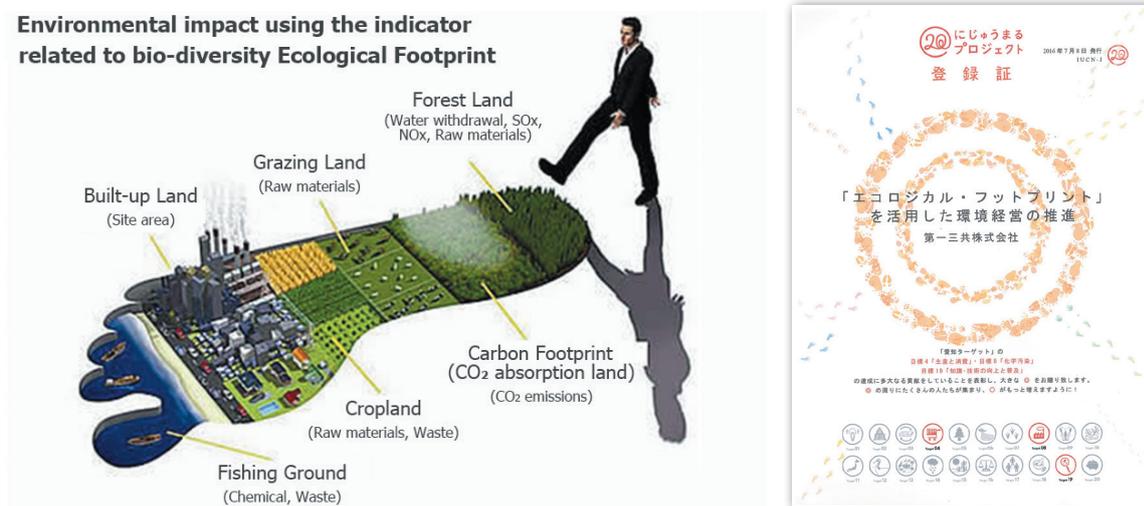
² Access to genetic resources and benefit sharing

6-2 Initiatives for Biodiversity Conservation

● Assessment of the biodiversity indicator called ecological footprint

We have been assessing our ecological footprint (EF), an indicator of biodiversity, jointly with experts from the NGO Global Footprint Network since fiscal 2014 to examine all environmental impacts resulting from the business activities of group companies in Japan. Moreover, we are using the assessed EF as a comprehensive indicator of environmental impacts, including those related to biodiversity, by checking and monitoring long-term changes in the relationship between the group's reduction of environmental impacts and its biodiversity conservation (trade-off).

In addition, assessing EF has been recognized as an action for achieving the Aichi Target (20 targets) that was adopted at COP10 (the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity, in Nagoya) and registered on the Nijyu-Maru Project as well.



● Implementation of WET testing

In fiscal 2019, WET test*s were conducted as environmental impact assessments to examine water discharged from all plants and research facilities in Japan, confirming that the discharged water has no serious impact on river ecosystems.

*A testing method that utilizes the biological responses of fish, Daphnia, and seaweed to determine the whole toxicity of discharged water.

7 Environmental Communication

7-1 Main Efforts

Efforts	Details
Reporting of ISO 14001 audit results	Date: Tuesday, January 15, 2020 Time: 13:00–16:30 Place: Daiichi Sankyo's main office building A, 4th floor, Meeting Room A Target attendees: 24 employees involved in the ISO 14001 internal audit Agenda: (1) Lecture entitled "The Pharmaceutical Supply Chain Initiative (PSCI)" Mr. Hisaki Okazaki, Customized Service Section Manager, Certification Division Head Office, Bureau Veritas Japan Co., Ltd. (2) Report on results of the ISO 14001 surveillance audit
Working session on combating global warming	Dates: Thursday, December 5 and Friday, December 6, 2019 Place: Panasonic Industrial Devices SUNX Co., Ltd. (5th), Technology and Innovation Center, Daikin Industries, Ltd. (6th) Target attendees: employees tasked with saving energy and promotion managers (21 in total) Agenda: Overview of business sites, tour of plants, tour of R&D facilities, introduction of energy saving projects and products based on collaborative production, Q&A session
Environmental Art Contest	We received 1,295 applications (1,262 applications for the previous contest) from Group companies in and outside of Japan. Categories Images: 389 works (351 works) from Group companies in Japan and 139 works (185 works) from those outside Japan "Senryu" and slogans: 743 works (702 works) from Group companies in Japan and 24 works (24 works) from those outside Japan The awards ceremony was held on Thursday, November 21, 2019.
Environmental e-learning 2019	Theme: "Impact of Climate Change on the Company's Future and You" Number of participants: 9,435 (participation rate: 97.6%)
COOL CHOICE Program	Period: June 17–September 6 Number of enrollees: 1,385 (1,127 for the previous program)
Participation in the Light-Down Campaign	Implemented on Friday, June 21 and Sunday July 7, from 20:00 to 22:00 at many Group business sites in Japan
Posters for raising environmental awareness	Posters were displayed at 140 locations.

7-2 Environment-related Awards

Daiichi Sankyo Co., Ltd.	Selected to the CDP's Supplier Engagement Leaderboard
Shinagawa R&D Center, Daiichi Sankyo Co., Ltd.	Shinagawa R&D Center was certified as a "Near-Top-Level Facility" by the Environment Bureau of Tokyo

8 Site Data

Business Activity and Input/Output in fiscal 2019 (Group in Japan: Plants and R&D Centers)

INPUT		Unit	Shinagawa	Kasai	Onahama	Tatebayashi	Hiratsuka	Takatsuki	CP Hiratsuka	Odawara	Kitamoto	
Energies	Electricity	1,000 kWh	25,419	15,245	9,166	4,334	35,201	6,263	125	15,026	41,181	
		GJ	246,292	147,432	89,007	41,593	342,812	60,840	1,228	146,062	399,433	
	City gas	1,000m ²	2,056	3,573	1,501	2,809	9,155	3,299	0	1,657	4,513	
		GJ	92,586	160,904	67,615	126,495	412,301	148,595	0	74,633	203,253	
	LPG	t	0	0	2	2	0	0	0	0	6	0
		GJ	0	0	85	102	18	5	0	0	307	0
	Light oil	t	0	0	0	0	0	0	0	0	1	0
		GJ	0	0	0	0	0	0	0	0	45	0
	Heavy oil	KL	0	0	0	0	0	0	0	0	0	0
		GJ	0	0	0	0	0	0	0	0	0	0
	Kerosene	KL	0	0	0	0	0	0	0	0	0	276
		GJ	0	0	0	0	0	0	0	0	0	10,129
	Gasoline (hybrid)	KL	0	0	0	0	0	0	0	0	0	0
	Gasoline	KL	1	0	0	0	1	0	0	0	0	0
GJ		39	0	14	2	44	8	0	0	4	0	
Gas oil for diesel engines	KL	0	0	0	0	2	0	0	0	1	0	
	GJ	0	0	0	0	0	0	0	0	0	0	
Total	GJ	338,917	308,335	156,725	168,193	755,266	209,455	1,228	221,081	612,815		
Water	Service water	1,000m ³	114	107	81	52	315	13	5	31	241	
	Industrial water	1,000m ³	0	0	5,337	58	0	505	0	0	0	
	Groundwater	1,000m ³	3	0	0	0	3	0	38	1,994	0	
	Total	1,000m³	117	107	5,417	110	317	517	43	2,024	241	
Chemical substances	PRTR substances (amounts handled)	t	25	0	892	2	23	0	0	1,359	0	

OUTPUT		Unit	Shinagawa	Kasai	Onahama	Tatebayashi	Hiratsuka	Takatsuki	CP Hiratsuka	Odawara	Kitamoto
Air pollution	CO ₂	t-CO ₂	16,152	14,903	8,010	8,220	36,441	9,451	57	10,554	29,488
	NO _x	t	3.6	4.5	1.4	15.4	13.1	3.5	0.0	1.9	2.0
	SO _x	t	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3
	PRTR substances	t	1	0	2	0	0	0	0	1	0
Water pollution	Water discharged	1,000m ³	66.6	55.9	5,327.9	83.1	236.7	437.3	38.5	2,385.7	165.1
	BOD	t	3.7	0.6	6.4	0.1	5.9	0.4	0.3	4.0	0.2
	COD	t	0.0	0.0	9.0	0.4	0.0	1.5	0.0	1.2	0.6
	PRTR substances	t	0	0	0	0	0	0	0	0	0
Waste	Generated amount	t	391	219	2,316	312	2,687	152	0	10,334	959
	Emission	t	391	219	2,316	312	1,855	152	0	4,217	959
	Recycling amount	t	313	182	0	281	435	149	0	2,203	182
	Final disposal amount	t	2	1	16	1	0	0	0	29	0
	PRTR substances	t	24	0	891	0	23	0	0	1,099	0

ESG Data (Environment)

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2016	FY2017	FY2018	FY2019	
Basic Information	Sales		Outside Japan	Million yen	411,946	359,224	347,295	340,017	379,793	
			In Japan	Million yen	574,500	595,900	612,900	589,700	602,000	
			Entire group	Million yen	986,446	955,124	960,195	929,717	981,793	
	Employees		Entire group	Person	15,249	14,670	14,446	14,887	15,348	
CO ₂	Energy-originated CO ₂ emissions	Sales vehicles	Outside Japan	t-CO ₂	21,204	15,669	14,633	11,189	12,232	
			In Japan	t-CO ₂	6,809	6,238	6,193	5,991	5,617	
			Entire group	t-CO ₂	28,012	21,907	20,826	17,179	17,849	
		Offices	Outside Japan	t-CO ₂	5,087	4,396	6,750	6,031	4,013	
			In Japan	t-CO ₂	7,471	6,497	6,236	5,756	5,312	
			Entire group	t-CO ₂	12,558	10,893	12,986	11,787	9,324	
		Plants and R&D centers	Outside Japan	t-CO ₂	40,955	39,365	37,509	38,018	38,304	
			In Japan	t-CO ₂	161,877	163,997	153,504	144,576	133,276	
			Entire group	t-CO ₂	202,832	203,362	191,013	182,594	171,580	
		Total	Outside Japan	t-CO ₂	67,246	59,430	58,893	55,237	54,549	
	In Japan		t-CO ₂	176,157	176,732	165,933	156,323	144,204		
	Total		t-CO ₂	243,402	236,162	224,826	211,560	198,753		
	Non-energy oriented CO ₂ emissions	Incinerator	Entire group	t-CO ₂	3,922	5,112	3,731	3,083	8,282	
	Total of CO ₂ emissions	Total	Entire group	t-CO ₂	247,324	241,274	228,557	214,643	207,035	
	CO ₂ emissions by Greenhouse Gas Protocol	Scope 1		Outside Japan	t-CO ₂	30,199	23,812	23,823	20,998	21,814
				In Japan	t-CO ₂	88,967	91,662	84,283	79,505	78,597
				Total	t-CO ₂	119,165	115,474	108,106	100,503	100,411
		Scope 2		Outside Japan	t-CO ₂	37,047	35,618	35,069	34,239	32,735
				In Japan	t-CO ₂	91,112	90,182	85,382	79,901	73,889
				Total	t-CO ₂	128,159	125,799	120,451	114,140	106,624
		Category 1: Purchased goods and services	In Japan	t-CO ₂	497,843	515,388	646,985	644,322	612,885	
		Category 2: Capital goods	In Japan	t-CO ₂	53,541	44,564	50,017	89,891	46,950	
		Category 3: Activities related to fuel and energy (not included in Scopes 1 or 2)	In Japan	t-CO ₂	6,623	6,748	6,364	6,058	11,088	
		Category 4: Upstream transportation and distribution	In Japan	t-CO ₂	10,569	9,773	9,571	8,960	8,549	
		Category 5: Waste generated in operations	In Japan	t-CO ₂	8,974	10,071	7,657	9,955	9,532	
		Category 6: Business travel	In Japan	t-CO ₂	15,348	15,322	16,193	15,164	30,271	
		Category 7: Employee commuting	In Japan	t-CO ₂	3,225	3,283	3,057	2,779	3,711	
		Category 9: Downstream transportation and distribution	In Japan	t-CO ₂	15,231	16,755	21,723	16,867	16,227	
		Category 12: End-of-life treatment of sold products	In Japan	t-CO ₂	2,896	2,476	1,681	1,939	1,810	
		Category 13: Downstream leased assets	In Japan	t-CO ₂	7,451	6,617	6,943	3,562	2,913	
		Scope 3	In Japan	t-CO ₂	621,701	630,996	770,193	799,497	743,936	
		Scopes 1 + 2 + 3	Total in Japan	t-CO ₂	869,025	872,270	998,750	1,014,140	950,971	
		Emissions by group site in Japan	Shinagawa	In Japan	t-CO ₂	18,406	17,978	17,091	16,834	16,152
Kasai			In Japan	t-CO ₂	17,184	16,808	16,201	15,459	14,903	
Daiichi Sankyo Propharma (Hiratsuka)* ¹			In Japan	t-CO ₂	38,036	36,704	36,455	35,873	36,441	
Daiichi Sankyo Propharma (Takatsuki)			In Japan	t-CO ₂	19,024	18,156	18,879	18,470	9,451	
Daiichi Sankyo Chemical Pharma (Onahama)			In Japan	t-CO ₂	7,641	12,439	9,016	8,871	8,010	
Daiichi Sankyo Chemical Pharma (Tatebayashi)* ²	In Japan		t-CO ₂	6,446	6,626	6,701	7,250	8,220		
Daiichi Sankyo Chemical Pharma (Hiratsuka)	In Japan		t-CO ₂	3,464	2,296	161	110	57		
Daiichi Sankyo Chemical Pharma (Odawara)	In Japan		t-CO ₂	8,191	10,345	9,017	8,677	10,554		
Asubio Pharma	In Japan		t-CO ₂	5,897	5,523	4,825	0	0		
Daiichi Sankyo Biotech Co., Ltd.	In Japan		t-CO ₂	37,587	37,120	35,159	33,034	29,488		

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Energy	Energy consumption by group companies in Japan	Electricity	In Japan	1,000kWh	187,102	190,635	179,783	171,119	162,682
				GJ	1,821,193	1,855,855	1,749,509	1,662,432	1,580,937
		City gas	In Japan	1,000m ³	33,176	35,700	32,988	31,203	28,678
				GJ	1,492,942	1,607,796	1,485,679	1,405,265	1,291,567
		LPG	In Japan	t	10	11	10	10	10
				GJ	529	548	514	499	516
		LNG	In Japan	t	1,361	0	0	0	0
				GJ	74,330	0	0	0	0
		Light oil	In Japan	KL	2	1	5	1	1
				GJ	89	36	200	21	45
		Heavy oil	In Japan	KL	0	3	11	10	0
				GJ	10	116	414	377	0
		Kerosene	In Japan	KL	208	258	278	320	276
				GJ	7,635	9,469	10,203	11,745	10,129
		Steam	In Japan	GJ	0	0	0	0	0
	Gasoline (Plants and R&D centers)	In Japan	KL	5	5	4	8	7	
			GJ	186	156	137	150	112	
	Gasoline (Business-use vehicles)	In Japan	KL	2,935	2,554	2,681	2,574	2,427	
			GJ	101,557	88,361	92,746	89,340	84,094	
	Total	In Japan	GJ	3,498,577	3,567,177	3,339,402	3,169,679	2,967,401	
	Energy use by entire group	Electricity	Entire group	1,000kWh	250,445	253,147	233,166	216,865	209,678
				GJ	2,439,421	2,366,436	2,270,529	2,108,908	2,039,611
		City gas	Entire group	1,000m ³	36,799	39,079	37,117	35,388	33,095
				GJ	1,655,966	1,758,555	1,671,450	1,593,608	1,490,315
		LPG	Entire group	t	60	58	62	59	59
				GJ	3,040	2,969	3,152	2,989	2,989
		LNG	Entire group	t	1,361	0	0	0	0
				GJ	74,330	0	0	0	0
		Light oil	Entire group	KL	77	1,908	1,795	261	141
				GJ	2,900	71,934	67,661	63,835	64,652
		Heavy oil	Entire group	KL	10	11	11	10	0
				GJ	401	438	414	377	0
Kerosene		Entire group	KL	208	258	278	320	276	
			GJ	7,635	9,469	10,203	11,745	10,129	
Steam		Entire group	GJ	49,750	44,021	45,833	48,894	48,793	
Gasoline	Entire group	KL	10,851	7,499	7,247	7,222	7,243		
		GJ	376,938	259,454	250,748	200,323	196,152		
Thermal energy	Entire group	GJ			5,683	978	0		
Entire group	Entire group	GJ	4,664,152	4,618,657	4,327,129	4,031,656	3,852,642		
Fluorocarbons	Fluorocarbon leakage	In Japan	t-CO ₂		1,312	546	977	1,207	
Water resources	Water used and discharged by group companies in Japan	Service water	In Japan	1,000m ³	1,230	1,165	1,079	1,040	958
		Industrial water	In Japan	1,000m ³	8,764	7,600	7,443	7,182	5,899
		Ground water	In Japan	1,000m ³	1,874	2,221	1,789	1,645	2,038
		Total water used	In Japan	1,000m ³	11,868	10,986	10,311	9,867	8,894
		Effective water use volume	Entire group	1,000m ³	1,034	1,052	455	391	98
		Water discharged	In Japan	1,000m ³	10,834	9,934	9,856	9,476	8,797
	Water used and discharged by group companies outside Japan	Water used	Outside Japan	1,000m ³	641	547	517	526	461
		Effective water use volume	Outside Japan	1,000m ³	164	111	89	193	147
		Water discharged	Outside Japan	1,000m ³	477	436	428	333	314
	Water used and discharged by the entire group	Water used	Entire group	1,000m ³	12,509	11,534	10,828	10,393	9,356
		Effective water use volume	Entire group	1,000m ³	1,198	1,163	545	584	245
		Water discharged	Entire group	1,000m ³	11,311	10,370	10,283	9,809	9,111
	Water recycled in Japan (Kobe City recycles water)	Purchases by Asubio Pharma (ASB)	ASB	1,000m ³	8	11	7	0	0
	Water used in water-stressed regions	Water used	Entire group	1,000m ³		256	215	213	160

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Water pollution	Water pollution loads	BOD	In Japan	t	7.9	9.8	10.3	12.7	10.7
		COD	In Japan	t	12.1	14.1	13.8	12.2	11.9
		BOD	Outside Japan	t	35.4	24.0	21.6	18.9	17.6
		COD	Outside Japan	t	77.1	55.4	47.3	41.9	39.5
		BOD	Entire group	t	43.3	33.8	31.9	31.6	28.3
		COD	Entire group	t	89.2	69.5	61.1	54.1	51.4
Waste	Waste at group companies in Japan	Waste generated	In Japan	t	19,676	20,610	14,682	14,684	17,371
		Waste treated externally	In Japan	t	15,675	15,648	10,281	10,933	10,421
		Waste recycled	In Japan	t	5,955	5,485	3,771	3,045	3,744
		Recycling rate	In Japan	%	38.0	35.0	36.7	27.8	35.9
		Final disposal	In Japan	t	91	143	63	74	50
		Final disposal rate	In Japan	%	0.46	0.69	0.43	0.51	0.29
	Waste at group companies outside Japan	Waste treated externally	Outside Japan	t	2,088	2,168	2,065	2,360	1,944
		Waste recycled	Outside Japan	t	1,222	945	1,014	950	1,032
		Final disposal	Outside Japan	t	762	1,071	778	952	535
	Waste by the entire group	Waste treated externally	Entire group	t	17,763	17,816	12,346	13,293	12,366
		Waste recycled	Entire group	t	7,177	6,429	4,786	3,995	4,776
		Final disposal	Entire group	t	853	1,214	840	1,027	584
Office paper used	Amount	In Japan	10,000 sheets	5,469	5,355	5,360	5,109	4,320	
Air pollution	SOx emissions	Outside Japan	t	0.3	1.2	0.3	0.8	0.5	
		In Japan	t	0.5	0.3	0.2	0.6	0.8	
		Entire group	t	0.8	1.5	0.5	1.5	1.3	
	NOx emissions	Outside Japan	t	5.5	7.1	5.6	4.7	5.7	
		In Japan	t	45.5	48.9	36.4	40.6	45.4	
		Entire group	t	51.0	56.1	42.0	45.3	51.1	
PRTR substances	Amounts handled	In Japan	t	3,686	3,182	1,278	1,798	2,301	
	Amounts discharged and transferred (Air)	In Japan	t	83	49	5	7	4	
	Amounts discharged and transferred (Water)	In Japan	t	0	0	0	0	0	
	Amounts discharged and transferred (Sewers)	In Japan	t	120	120	0	0	0	
	Amounts discharged and transferred (Water + sewers)	In Japan	t	120	120	0	0	0	
	Amounts discharged and transferred (Waste)	In Japan	t	667	428	1,211	1,626	2,040	
VOC	100 VOCs specified by Japan's Ministry of the Environment	Amount emitted into the atmosphere	In Japan	t	26	1.4	1.4	1.1	1.5
Containers and packaging	Containers and packaging collected and recycled (obligatory recycling amount)	Glass bottle (colorless)	In Japan	t	158	175	158	159	153
		Glass bottle (brown)	In Japan	t	386	300	266	266	267
		PET plastic bottles	In Japan	t		0.1	0.3	0.3	0.1
		Plastic containers and packaging	In Japan	t	1,436	1,413	1,341	1,386	1,309
		Paper containers and packaging	In Japan	t	59	115	42	43	43
		Total	In Japan	t	2,039	2,003	1,807	1,854	1,772
Environmental efficiency	CO ₂ carbon intensity	CO ₂ emissions/sales in Japan	In Japan	t-CO ₂ /million yen	0.307	0.297	0.271	0.265	0.240
	CO ₂ environmental efficiency	Sales in Japan/CO ₂ emissions	In Japan	Million yen/t-CO ₂	3.26	3.37	3.69	3.77	4.17
	CO ₂ environmental efficiency index	Relative to the value of 100 for the base year of FY2015	In Japan	-	100	103	113	116	128
	Waste generation intensity	Waste generated/sales in Japan	In Japan	t/million yen	0.034	0.035	0.024	0.025	0.029
	Waste and environmental efficiency	Sales in Japan/waste generated	In Japan	Million yen/t-CO ₂	29.2	28.9	41.7	40.2	34.7
	Waste and environmental efficiency index	Relative to the value of 100 for the base year of FY2015	In Japan	-	100	99	143	138	119
	Water use intensity	Water use/sales in Japan	In Japan	1,000m ³ /million yen	0.021	0.018	0.017	0.017	0.015
	Water and environmental efficiency	Sales in Japan/water use	In Japan	Million yen/1,000m ³	48.4	54.2	59.4	59.8	67.7
	Waste and environmental efficiency index	Relative to the value of 100 for the base year FY2015	In Japan	-	100	112	123	123	140

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Intensity	CO ₂ carbon intensity	CO ₂ Emissions/Group Sales	Entire group	t-CO ₂ /million yen	0.251	0.253	0.238	0.231	0.211
	CO ₂ environmental efficiency	Group Sales/CO ₂ Emissions	Entire group	million yen/t-CO ₂	3.99	3.96	4.20	4.33	4.74
	CO ₂ environmental efficiency index	Relative to the value of 100 for the base year FY2015	Entire group	—	100	99	105	109	119
	Waste generation intensity	Waste generated/Group Sales	Entire group	t/million yen	0.018	0.019	0.013	0.014	0.013
	Waste and environmental efficiency	Group Sales/Waste generated	Entire group	million yen/t	55.5	53.6	77.8	69.9	79.4
	Waste and environmental efficiency index	Relative to the value of 100 for the base year FY2015	Entire group	—	100	97	140	126	143
	Water use intensity	Water consumption/Group Sales	Entire group	1,000m ³ /million yen	0.013	0.012	0.011	0.011	0.010
	Water and environmental efficiency	Group Sales/Water consumption	Entire group	million yen/1,000m ³	78.9	82.8	88.7	89.5	104.9
	Water and environmental efficiency index	Relative to the value of 100 for the base year FY2015	Entire group	—	100	105	112	113	133
	CO ₂ carbon intensity (Employees)	CO ₂ Emissions/Employees	Entire group	t-CO ₂ /person	16.2	16.4	15.8	14.4	13.5
	Office paper used intensity (sales)	Office paper used/Sales (billion yen)	In Japan	10,000 sheets/billion yen	9.5	9.0	8.7	8.7	7.2
	PRTR emission intensity (sales)	PRTR emissions (air, water)/Sales (billion yen)	In Japan	t/billion yen	1.2	0.7	2.0	2.8	0.0
	Water use intensity (sales)	Water consumption (Group)/Sales (billion yen)	In Japan	1,000 m ³ /billion yen	12.7	12.1	11.3	11.2	9.5
Water consumption/Sales (billion yen)		20.7			18.4	16.8	16.7	14.8	
Management	Status of acquisition of ISO 14001 certification	Number of sites certified	Outside Japan	sites	1	1	1	4	5
			In Japan	sites	7	6	6	6	6
			Entire group	sites	8	7	7	10	11

*1: Includes Daiichi Sankyo Co., Ltd., Daiichi Sankyo Chemical Pharma Co., Ltd., and Daiichi Sankyo Happiness Co., Ltd

*2: Includes Daiichi Sankyo Co., Ltd.

*There were no fines, etc. with respect to the environment.



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