



Daiichi Sankyo Group Environmental Data Book 2019



Position of This Book

The information of this book complements Daiichi Sankyo Group Value Report 2019 and the environmental data on our website. Please see them in addition.

Contents

1 Environmental Management System	P 1
2 Conserving Energy and Combating Global Warming	P 7
3 Effective Use of Resources and Reduction of Environmental Burdens	P 13
4 Reduction of Environmental Risks	P 15
5 Climate Change and Water Risks	P 17
6 Initiatives for Biodiversity Conservation	P 18
7 Environmental Communication	P 20
8 Site Data	P 22
9 ESG Data (Environment)	P 23

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.

1

Environmental Management System

1-1 Our Stance on Environmental Management

Environmental issues such as global warming and extreme weather could be seen as very closely related to our lifestyles and work. We are practicing environmental management on a global scale in accordance with the Daiichi Sankyo Group Global 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 CSR challenges, while 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 CSR challenges into consideration, we promote environmental management by following the Fourth Medium-term Environmental Management Policy, which contains our targets for fiscal 2020.

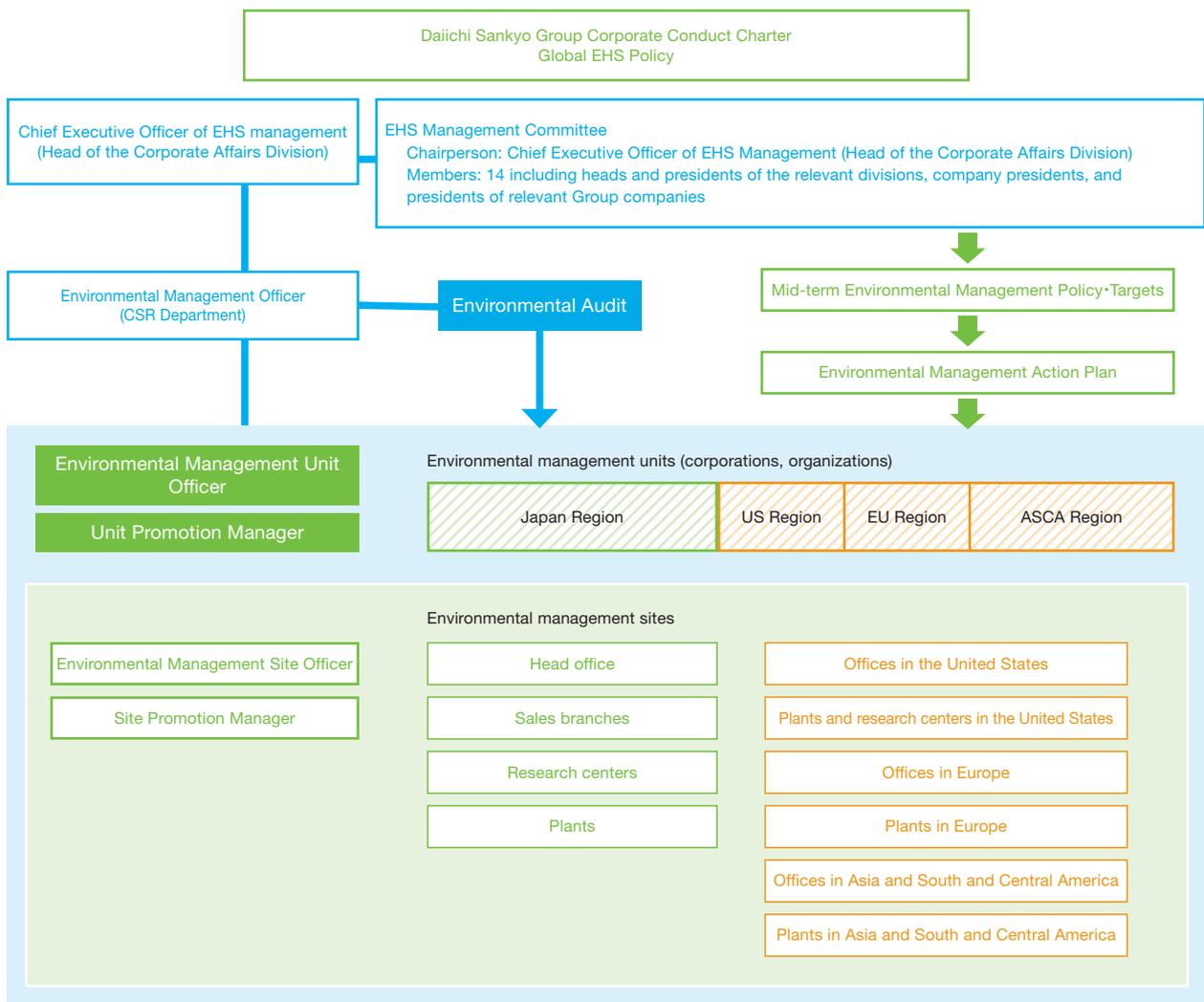
Fourth Medium-Term Environmental Management Policy and Goals (Numerical Targets and Main Activities)

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 the CSR Department promotes environmental management as the environmental management officer. As a system for promoting environmental management, we have established an environmental management unit that takes business activities into consideration, and each environmental management unit establishes an environmental management site that considers regions and functions as necessary and manages the goals. 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 Global 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 2019)

	Company	Site	ISO 14001 Acquisition Period
Daiichi Sankyo Group (multisite certification)	Daiichi Sankyo Co., Ltd.	CSR Department	January, 1998
		Pharmaceutical Technology Division (Hiratsuka)	
		Biologics Division (Tatebayashi)	
	Daiichi Sankyo Propharma Co., Ltd.	Hiratsuka Plant	
		Technology Department	
		Takatsuki Plant	
	Daiichi Sankyo Chemical Pharma Co., Ltd.	Onahama Plant	
		Tatebayashi Plant	
		Biologics Technology Department (Tatebayashi)	
		Odawara Plant	
		Technology Department (Hiratsuka, Odawara)	
Daiichi Sankyo Biotech Co., Ltd.	Kitamoto Site		
Daiichi Sankyo Happiness Co., Ltd.	(Hiratsuka)		
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 FY2018 CO ₂ emissions)	Japan	100%	
	Entire group	82.0%	

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	<p>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.</p> <p>(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</p>
Cooperation with Suppliers	<p>We ascertain the amount of CO₂ emissions from our major suppliers and how much water they use. We also ask of any supplier that has no CO₂ reduction target to set one as a good opportunity for improvement. These efforts are based on the Science Based Targets* initiative.</p> <p>*An international initiative that calls on companies to set CO₂ 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.</p>
Cooperation with logistics partners	<p>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.</p>
Cooperation for environment audit	<p>Partner companies storing and delivering our products and promotional goods cooperate for the environment audit on environment-related laws and regulations including waste management.</p>

1-6 Environmental Auditing

Operating sites Subject to an Environment Audit in Fiscal 2018

Company	Operating site, etc.
Daiichi Sankyo Propharma	Takatsuki Site
Daiichi Sankyo Chemical Pharma	Odawara Site
	Onahama Site
Kitasato Daiichi Sankyo Vaccine (present: Daiichi Sankyo Biotech)	Kitamoto Site
Luitpold (present: American Regent)	Shirley Plant
	Ohio Plant
Daiichi Sankyo Brasil Farmacêutica	Alphaville Plant

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

1-7 Emergency preparedness and response

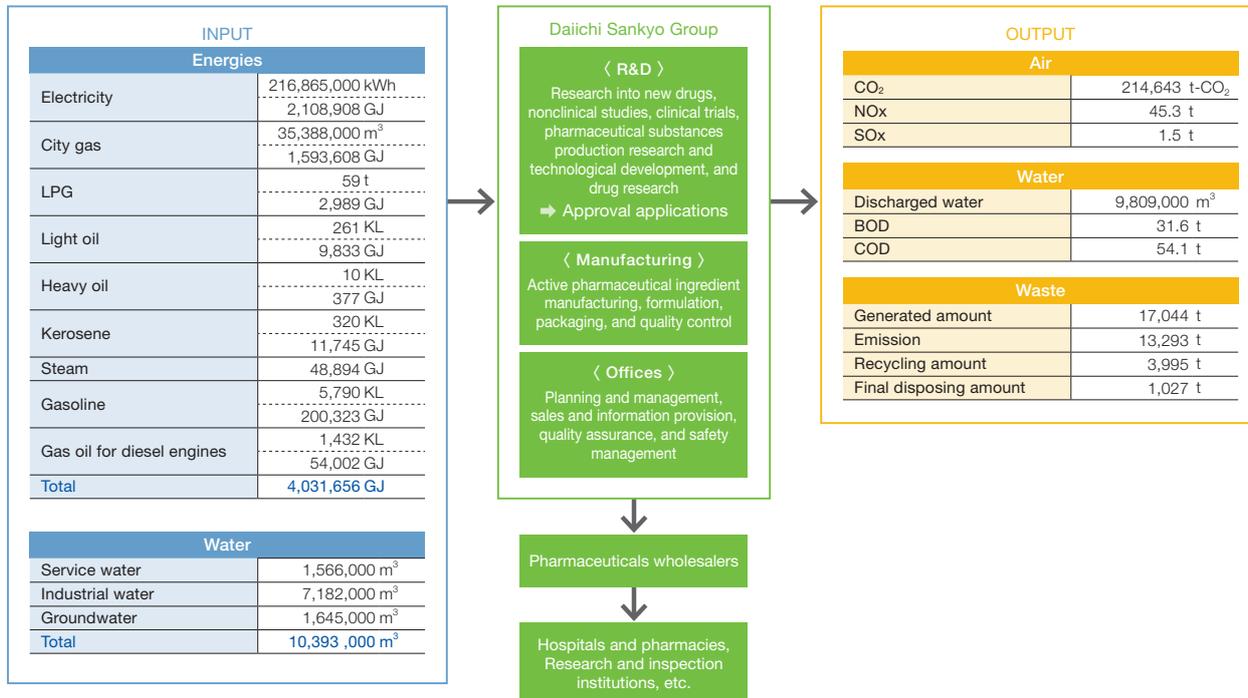
Plants and research facilities with particularly high environmental risks have protocols to prepare for and respond to emergencies, including prevention and mitigation of environmental pollution due to disasters and accidents. They also conduct periodic education and emergency drills while maintaining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

Emergency Drills Conducted (Plants and Research Facilities)

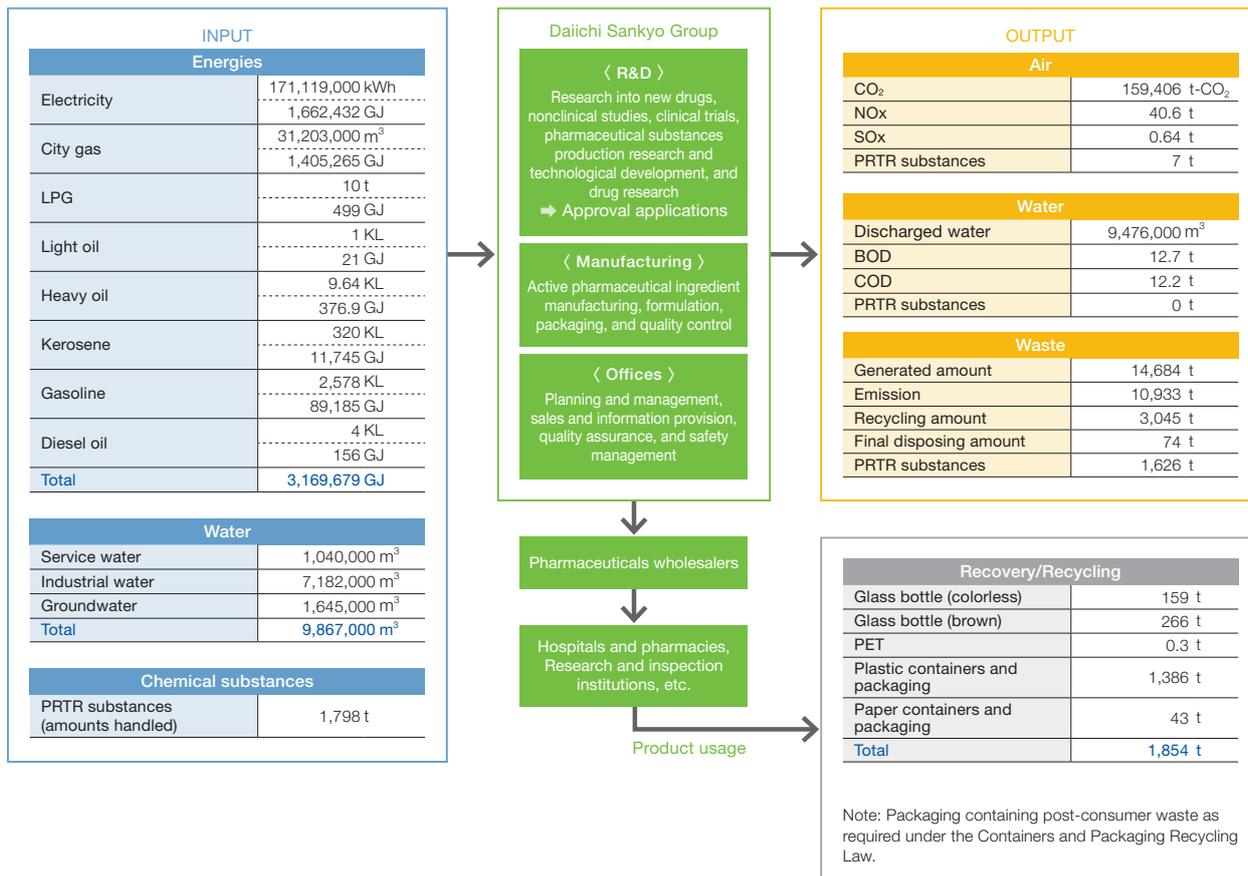
Company	Operating site	Details of Emergency Drills (Possible accidents/incidents)	Number of Emergency Drills	Total Number of Participants
Daiichi Sankyo	Shinagawa R&D Center	Large-scale earthquake, fire, emergency report	12 drills	1,818
	Kasai R&D Center	Large-scale earthquake, fire, handling of hazardous materials	12 drills	1,580
Daiichi Sankyo Propharma	Hiratsuka Plant	Large-scale earthquake, fire, leakage, and emergency report	39 drills	1,931
	Takatsuki Plant	Large-scale earthquake, fire, leakage, wastes, noise	20 drills	747
Daiichi Sankyo Chemical Pharma	Onahama Plant	Large-scale earthquake, fire, and leakage and workplace accidents	26 drills	826
	Tatebayashi Plant	Large-scale earthquake, fire, and leakage	26 drills	753
	Odawara Plant	Large-scale earthquake, fire, leakage, and emergency report	74 drills	1,892
Kitasato Daiichi Sankyo Vaccine	Kitamoto Site	Large-scale earthquake and fire	4 drills	743

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	FY2017		FY2018	
	Investment	Cost	Investment	Cost
Pollution Prevention Cost	487	153	309	0
Global Environmental Conservation Cost	1,542	517	3,346	21
Resource Circulation Cost	131	430	9	315
Upstream / Downstream Costs	0	66	0	58
Administration Cost	57	758	49	655
R&D Cost	0	30	0	30
Social Activity Cost	0	1	0	0
Environmental Remediation Cost	97	76	11	0
Total	2,315	2,032	3,724	1,079

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

Economic Benefit (Group in Japan)

Unit: million yen

	FY2018
Value of sales of valuables	0.9

Environmental Conservation Benefit (Group in Japan)

	Unit	FY2017	FY2018	Increase/Decrease Compared to the Previous Year	Increase/Decrease Rate Compared to the Previous Year
Total volume of energy consumed	GJ	3,339,402	3,169,679	△ 169,722	△ 5.1%
Water used	1,000m ³	10,311	9,867	△ 444	△ 4.3%
PRTR substances used	t	1,202	1,798	520	40.7%
CO ₂ emission	t-CO ₂	165,933	161,088	△ 4,845	△ 2.9%
Total volume of waste	t	14,682	14,684	2	0.0%
Waste emissions (= Outsourced treating volume)	t	10,281	10,933	652	6.3%
Volume of recycled waste	t	3,771	3,045	△ 727	△ 19.3%
Final disposing amount of waste	t	63	74	12	18.9%
Recycling rate	%	36.7	27.8	—	9.4%
Recovered or recycled volume of containers and packages	t	1,807	1,854	47	2.6%
SOx emissions	t	0.2	0.64	0.4	229.3%
NOx emissions	t	36	41	4	11.7%

1-10 Environmental Efficiency (Group in Japan)

Environmental Efficiency Index	Index Definition	FY2014	FY2015	FY2016	FY2017	FY2018
CO ₂	Sales/CO ₂ emissions	91	100	103	113	116
Waste	Sales/Total waste emissions	78	100	99	143	138
Water	Sales/Water consumption	84	100	112	123	123

* 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

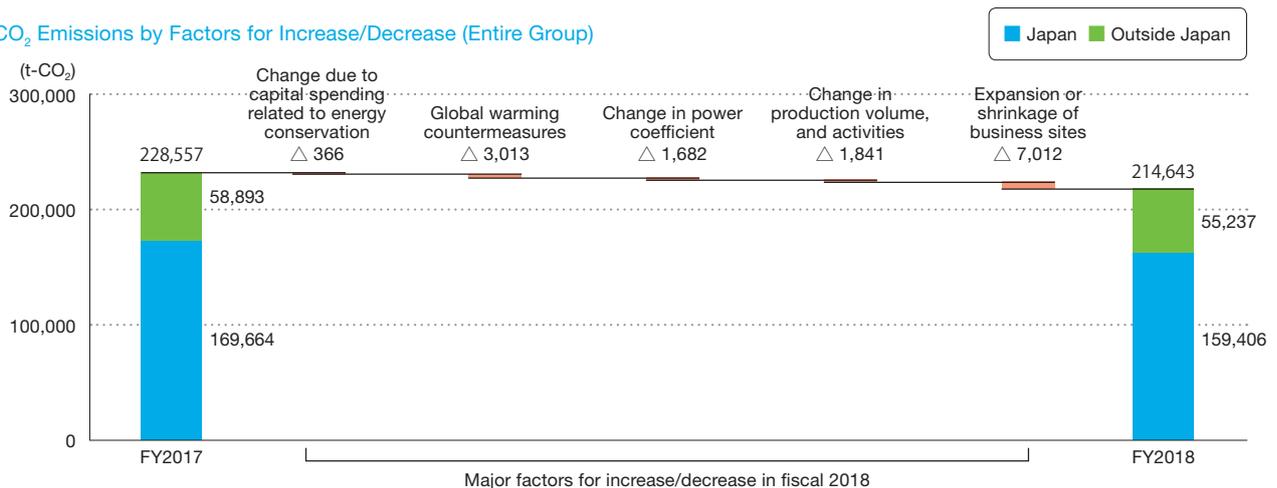
To facilitate responsible corporate activities that address climate change, we have set a CO₂ emissions target for fiscal 2020 the final year of the 5-year business plan of pursuing a 5.6% reduction from fiscal 2015 based on our long-term CO₂ emissions target for fiscal 2030 and the approach of the Science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

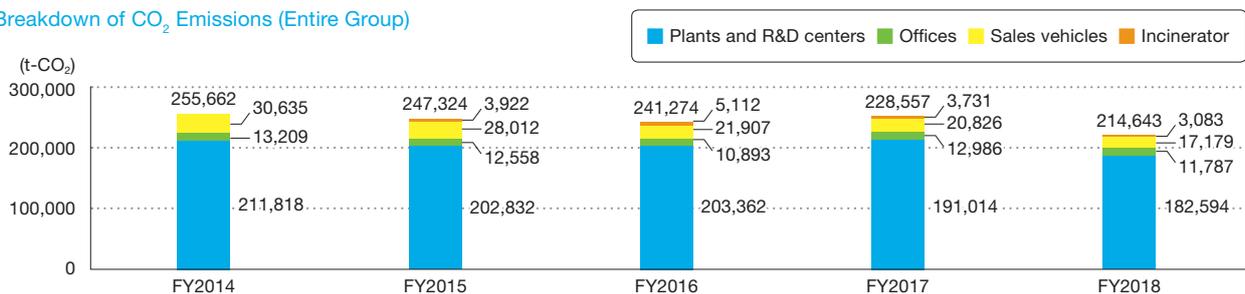
*An international initiative that encourages companies to set CO₂ reduction targets based on scientific evidence in order to help accomplish the goal of the Paris Agreement of keeping the average increase in global temperature below 2°C

2-2 Target and Result of CO₂ Emissions Reduction

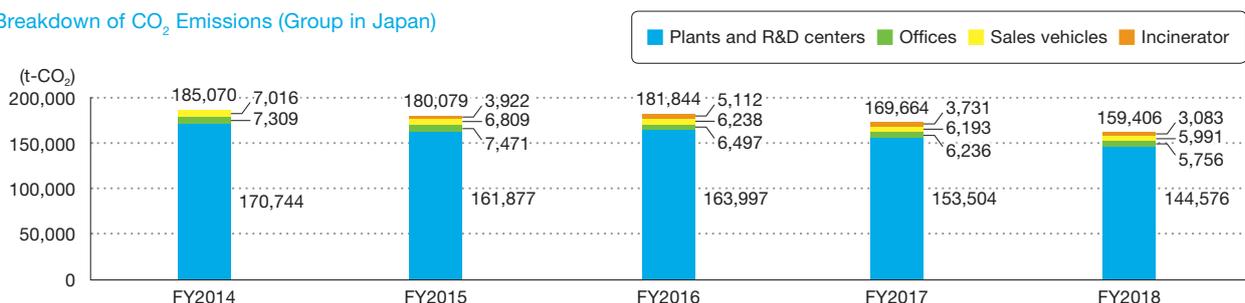
CO₂ Emissions by Factors for Increase/Decrease (Entire Group)



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	79,505	79,901	159,406
Outside Japan	20,998	34,239	55,237
Total	100,503	114,140	214,643

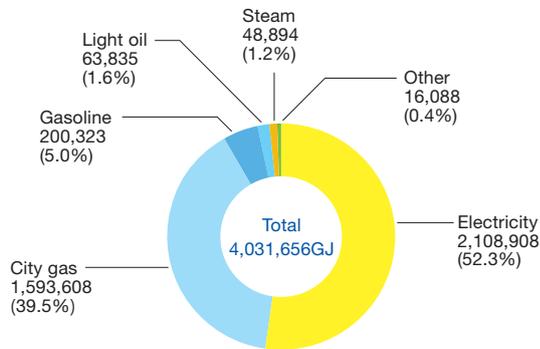
2-4 Supply Chain GHG Emission (Scope 3) (Group in Japan)

Sources	CO ₂ emissions (t-CO ₂) FY2018	CO ₂ emissions (t-CO ₂) FY2017	Increase/Decrease Rate Compared to the Previous Year (%)	Emissions Calculation Methodology	Explanation
Purchased goods and services	644,322	646,985	△0.41%	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	50,017	79.72%	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	6,364	△4.81%	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	9,571	△6.38%	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	7,657	30.01%	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	16,193	△6.36%	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	3,057	△9.10%	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	21,723	△22.36%	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	1,681	15.35%	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	6,943	△48.70%	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	—	—	—	—	—

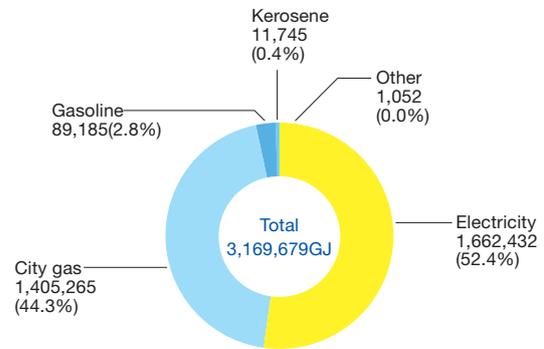
* Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver. 2.6), Policy on Emissions Unit Values for Accounting of Greenhouse Gas Emissions, etc., by Organizations Throughout the Supply Chain (Ver. 2.6), and the Emissions Unit Value Database (Ver. 2.6)

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	9,067	Purchased by our group companies in Germany.
Biomass power generation	500	Purchased by group companies in Japan. Not subtracted from the amount of emissions in Scope 2.
Biomass heat	1,619	Purchased by our group companies in Germany. Not subtracted from the amount of emissions in Scope 2.
Other renewable energies	5,584	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.

4 Third-party assurance

An external examining organization conducted inspections covering the Daiichi Sankyo Group's production and non-production sites in Japan and two production sites overseas. GHG emissions included in the assurance are Scopes 1 and 2: energy-related CO₂ emissions and CO₂ emissions from non-energy consumption derived from incineration of wastes, and Scope 3: category 1: (purchased raw materials and goods). The assurance also includes production water usage for 12 domestic and overseas sites, waste discharge from 10 domestic sites, and water quality (BOD, COD) for 5 domestic sites that discharge into Area of Public Waters. The period subject to reporting is from April 1, 2018 to March 31, 2019.

SGS ASSURANCE STATEMENT

本書は、第一三共株式会社のパリユレポート2019及び環境データブック2019に示されるサステナビリティ活動に対するSGSジャパン株式会社の保証報告書である。

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本保証業務においては、我々の基準を採用し、中程度の保証レベルによって、以下の業務を行った。

- 内容の正確性についての評価。
- AA1000アカウンタビリティ原則(2008)に対する報告書内容及びサポートするマネジメントシステムのAA1000アカウンタビリティスタンダード（2008）タイプ2の評価。
- ISO14064-3(2006)による評価。

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保証意見
 前述の範囲に基づいて実施した保証手続きの範囲において、当報告書に含まれている情報やデータは、2018年4月1日から2019年3月31日における組織のサステナビリティ活動を公正かつ適切に表現したものでないと思われる重要な事項は見られなかった。

SGS ASSURANCE STATEMENT

SGS Japan's Report on Sustainability Activities in the Daiichi Sankyo Co., Ltd. Annual Report 2019 and Environmental Data Book 2019.

NATURE AND SCOPE OF THE ASSURANCE
 SGS Japan Inc. was commissioned by Daiichi Sankyo Co., Ltd. (hereinafter referred to as "the Organization") to conduct an independent assurance of its Annual Report 2019 and Environmental Data Book 2019 (hereinafter referred to as "the Report"). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the stakeholder management process, data on greenhouse gas(GHG) emissions (Scope 1, 2, and category 1 of Scope 3), energy consumption, amount of water, amount of wastes, the information of BOD/COD and the management systems supporting the reporting process. The Scope of each assurance is limited to it indicated on their home page.

The information contained in the Report is the responsibility of the directors or governing body and the management of the organization. SGS Japan Inc. has not been involved in the preparation of any of the material included in the Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of assurance with the intention to inform all the organization's stakeholders.

The SGS protocols are based upon internationally recognized guidance, including the Principles contained within the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines for accuracy and reliability and the guidance on levels of assurance contained within the AA1000 series of standards and guidance for Assurance Providers.

This report has been assured at a moderate level of scrutiny using our protocols for:

- evaluation of content veracity.
- AA1000 Assurance Standard (2008) Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountabiltiy Principles (2008).
- evaluation against the ISO14064-3 (2006).

The assurance comprised a combination of pre-assurance research, interviews with the management and the person in charge of producing the report, onsite visits (Daiichi Sankyo Co., Ltd. Shirogawa R&D Center and Daiichi Sankyo Propharma Co., Ltd. Hiratsuka Plant), verification and confirmation of vouchers, review of related materials and records, and analytical procedures.

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

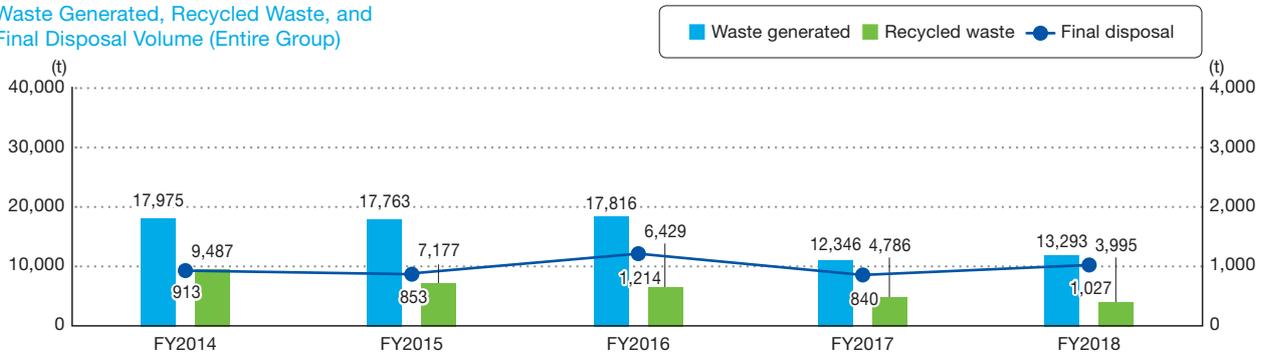
STATEMENT OF INDEPENDENCE AND COMPETENCE
 The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; and environmental, social and sustainability report assurance. SGS Japan Inc. affirms our independence from the organization, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on the knowledge, experience and qualifications of the each of the team members for this assignment, and comprised auditors registered with lead auditors of ISO9001, ISO14001, ISO45001, and lead verifiers of greenhouse gas emissions.

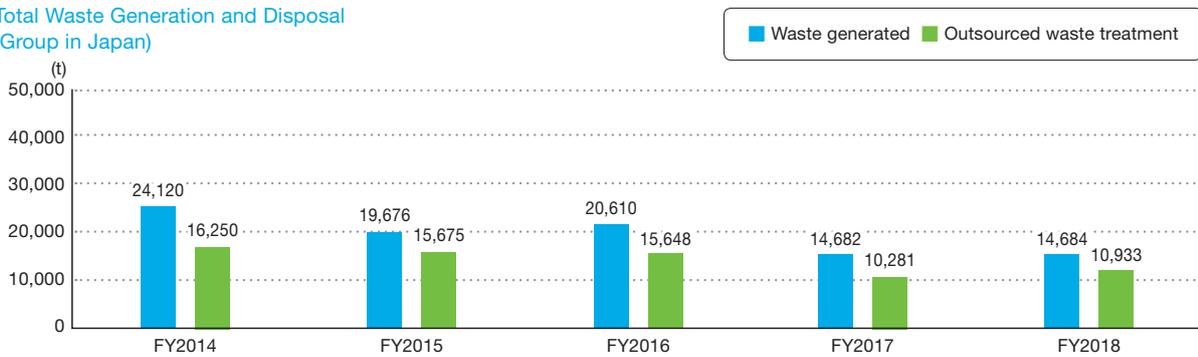
3 Effective Use of Resources and Reduction of Environmental Burdens

3-1 Waste Reduction Targets and Achievements

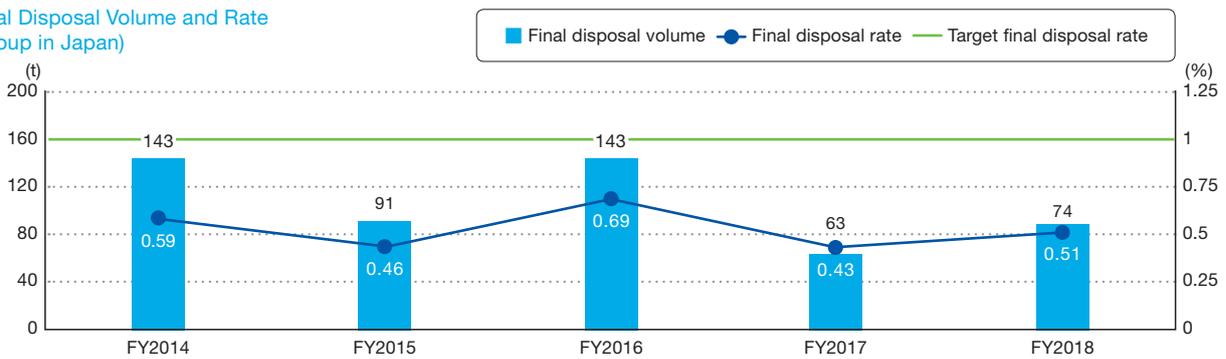
Waste Generated, Recycled Waste, and Final Disposal Volume (Entire Group)



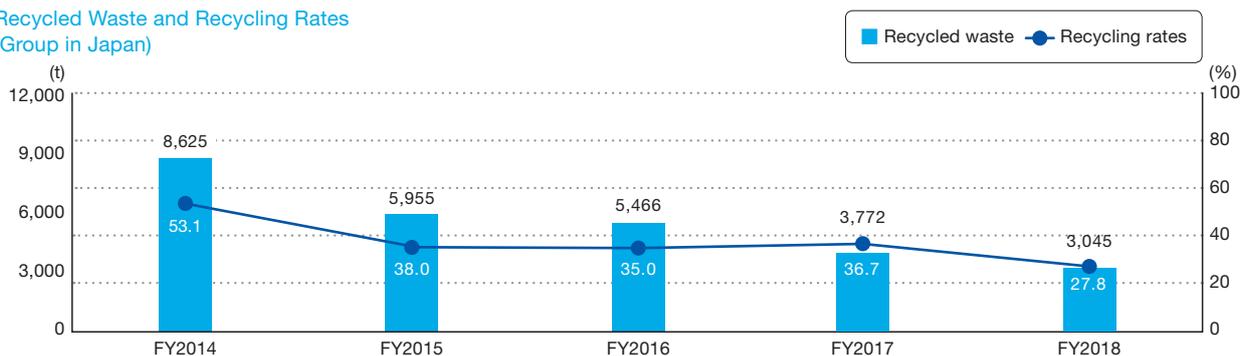
Total Waste Generation and Disposal (Group in Japan)



Final Disposal Volume and Rate (Group in Japan)



Recycled Waste and Recycling Rates (Group in Japan)

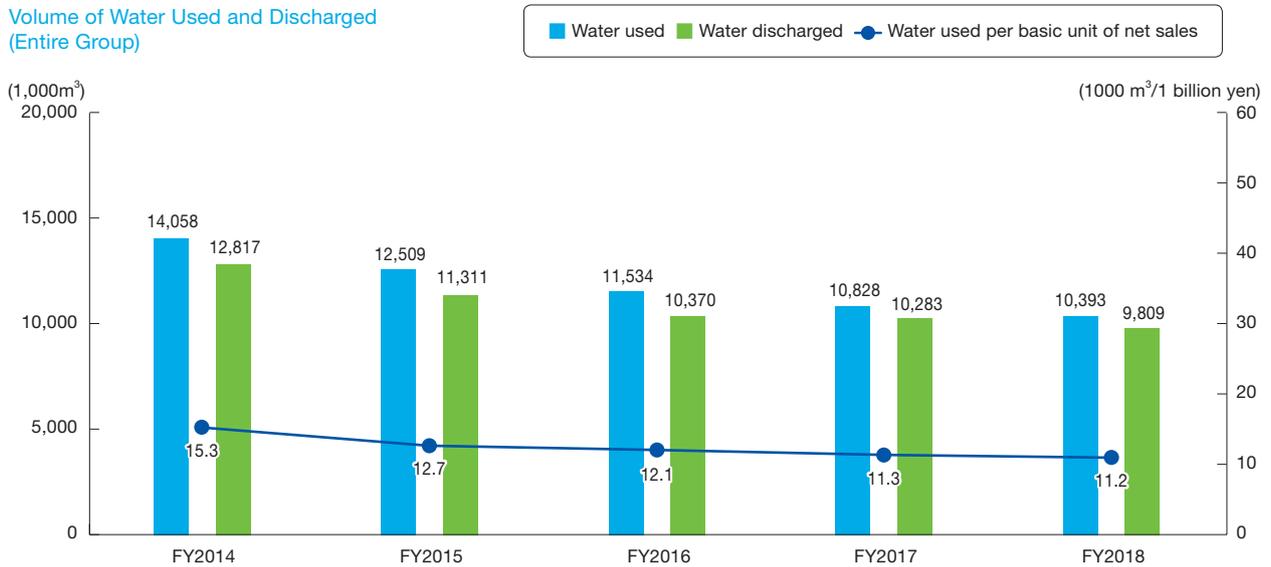


3-2 Efforts to Reduce Waste

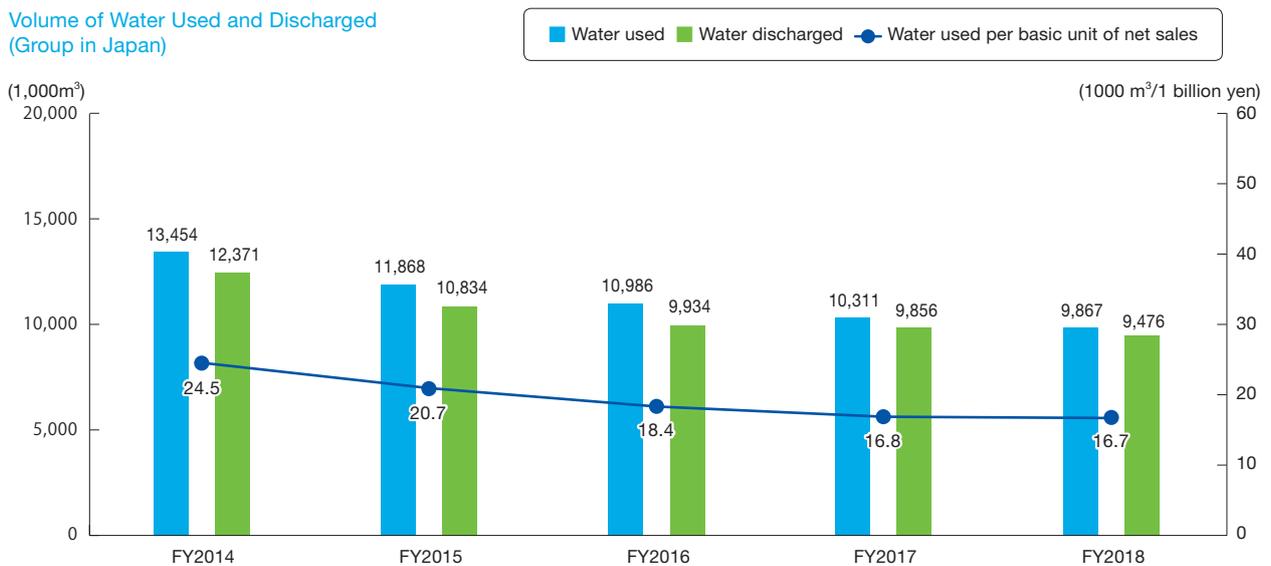
Name of Operating site, etc.	Main Efforts
Offices, sales branches, plants, etc.	Reduce office paper consumption
Headquarters, R&D centers, etc.	Promote the reuse of stationery, devices, and equipment
Plants, etc.	Reuse collected organic solvents
Cooperation between plants/research facilities and waste 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)

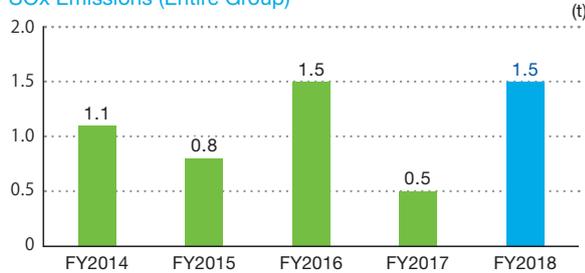


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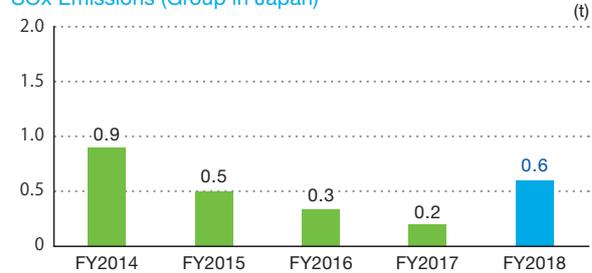
Reduction of Environmental Risks

4-1 Preventing Air and Water Pollution

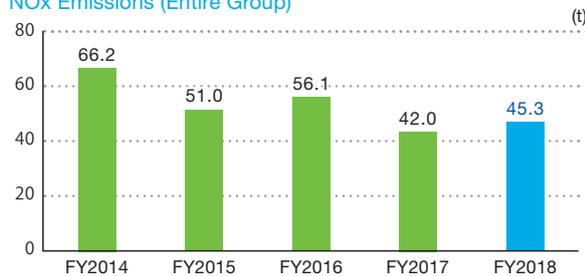
SOx Emissions (Entire Group)



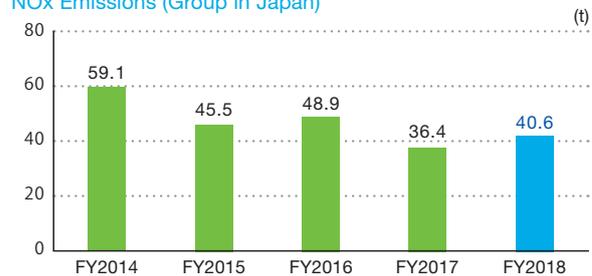
SOx Emissions (Group in Japan)



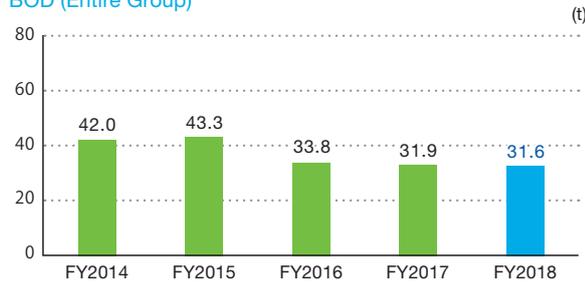
NOx Emissions (Entire Group)



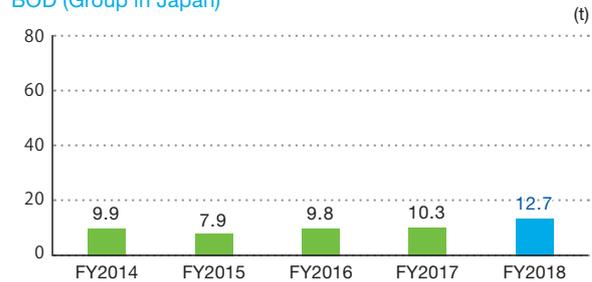
NOx Emissions (Group in Japan)



BOD (Entire Group)



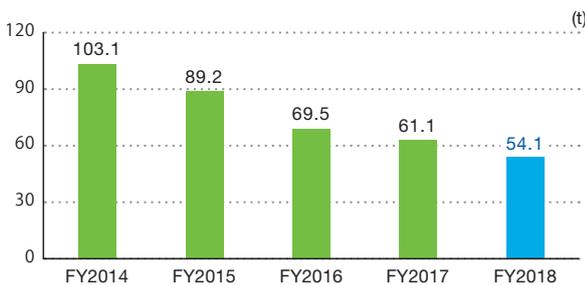
BOD (Group in Japan)



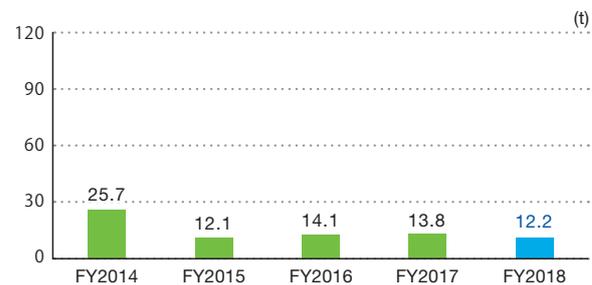
*Public water only

*Public water only

COD (Entire Group)



COD (Group in Japan)



*Public water only

*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 according to Tokyo municipal ordinance. As a result, contamination was found in a part of soil. Thus we performed purification work appropriately on discussion with the governmental offices.
Takatsuki Plant Daiichi Sankyo Propharma Co., Ltd. (Takatsuki City, Osaka)	We continue to perform groundwater monitoring and to take countermeasures after purification work of soil contaminated with VOC* and arsenic in 2004.

*Volatile Organic Compounds

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	877.0	1.7	0.0	0.0	0.0	749.9
Chloroform	26.4	0.4	0.0	0.0	27.0	0.0
Cyanamide	5.6	0.0	0.0	0.0	5.6	0.0
Dichloromethane (also known as methylene chloride)	11.0	0.9	0.0	0.0	10.1	0.0
N,N-Dimethylformamide	161.0	0.0	0.0	0.0	0.0	119.7
N,N-Dimethylacetamide	5.3	0.0	0.0	0.0	0.0	5.2
Dimethylamine	2.6	0.0	0.0	0.0	0.0	2.6
Toluene	625.9	2.4	0.0	0.0	623.7	0.0
Triethylamine	66.8	0.4	0.0	0.0	0.0	66.4
Pyridine	5.6	0.0	0.0	0.0	0.0	5.5
N-Hexane	10.7	0.7	0.0	0.0	0.0	10.0
Total	1,797.9	6.5	0.0	0.0	666.4	959.3
Dioxins	—	0.015	0.000	0.010	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.	2,961	0	2,961
PCB-containing oil	0	0	0
PCB-adhering materials	0	0	0
Other electric devices	5	0	5
Other polluted products	2	0	2

*As a result of a review of PCB and other wastes, conducted in fiscal 2018, we discovered again the presence of PCB waste at the DSPP Hiratsuka Plant and Pharmaceutical Technology Division (inside a building rented by DSHP).

5 Climate Change and Water Risks

5-1 Climate Change Risks

Climate Change Risks That Have the Potential to Affect Our Business

Risk Driver		Description	Potential Impact
Risks driven by changes in regulation	Cap and trade schemes	If it is subject to the greenhouse gas cap and trade scheme, an emissions credit must be purchased when the required reduction volume is not satisfied.	Increased operational cost
	International agreements	If regulations in each country are strengthened in accordance with the ratification of the Paris Agreement, necessary measures must be taken to ensure compliance with the regulations.	Increased operational cost
Risks that are driven by change in physical climate parameters	Change in highest and lowest temperatures	Temperature control costs will rise at research facilities and plants of our group.	Increased operational cost
	Increase in the number of typhoons, etc.	An increase in the number of localized torrential rainfall and large-scale typhoons will hamper the supply chain of our group's business operations.	Increased operational cost
	Change in disease structure, etc.	A change in disease structure, etc. due to climate change will cause quantitative and qualitative impact to the humanitarian assistance activities of our group, including providing access to medical care and pharmaceutical products.	Increased operational cost
Reputation-driven risks	Evaluation by external stakeholders	Evaluation by external stakeholders on our group's efforts to mitigate and adapt climate change will adversely affect our stock price.	Drop in our stock price (market valuation)

Climate Change Opportunities that Have the Potential to Affect Our Business

Opportunity Driver		Description	Potential Impact
Opportunities that are driven by changes in regulation	Emission reporting obligations	Energy costs will be reduced by taking various measures to mitigate greenhouse gases and energy.	Reduced operational costs
	Cap and trade schemes	Appropriate response to the emissions trading scheme will provide scheme-based incentives.	Reduced operational costs
Opportunity that are driven by changes in physical climate parameters	Change in disease structure	Development and sales of pharmaceutical products in response to an increased number of tropical infectious diseases or regional changes in disease patterns will augment revenue.	New products/business services
	Increase in the number of floods	Taking appropriate measures against flood damage in plants will ensure stable supply of products.	Increase in demand for existing products
Reputation-driven opportunities	Evaluation by external stakeholders	Evaluation by external stakeholders of our group's efforts to mitigate and adapt to climate change will positively affect our stock price.	Increased stock price (market valuation)

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.

Volume of Water Used at the Offices at the Highest Water Risk in Group

	Volume of Water Used (Withdrawn)	Volume of Water Discharged	Volume of Water Actual Used
FY2018	213,000m ³	146,000m ³	68,000m ³

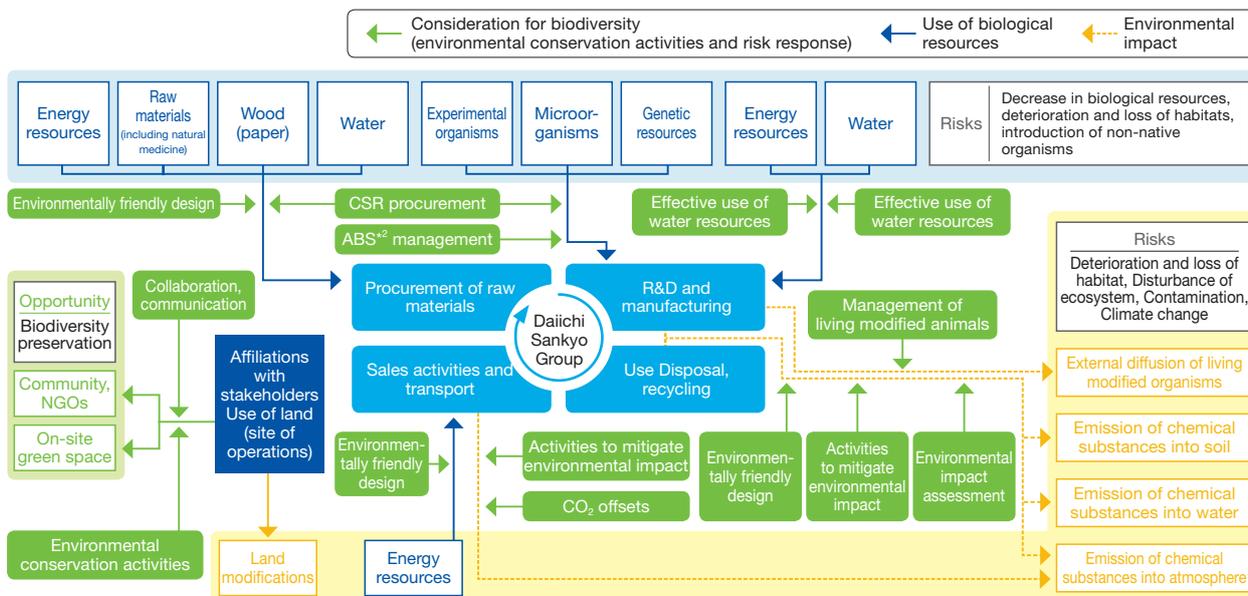
6 Initiatives for Biodiversity Conservation

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

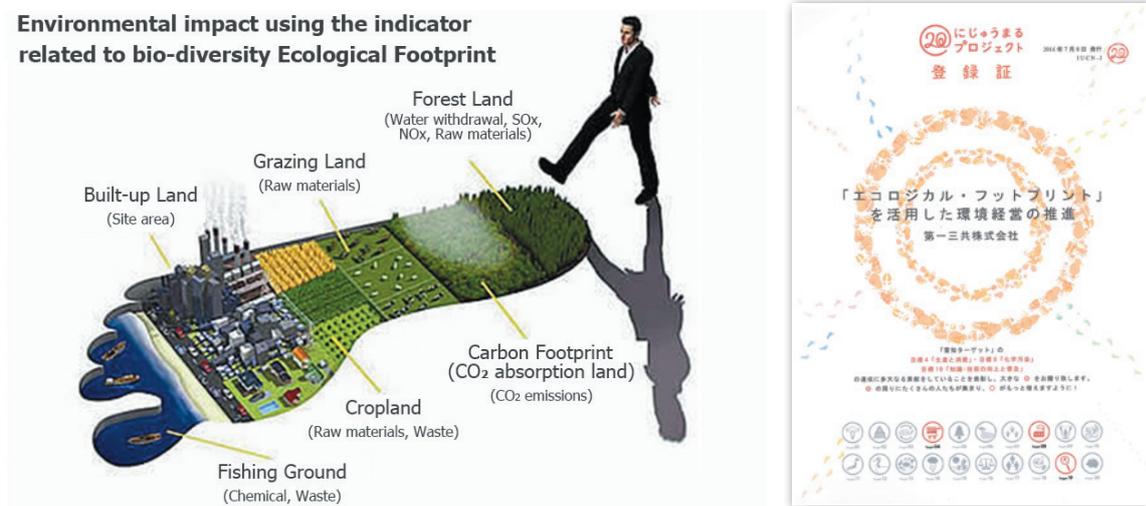
6-2 Initiatives for Biodiversity Conservation

● Assessment of the biodiversity indicator called ecological footprint

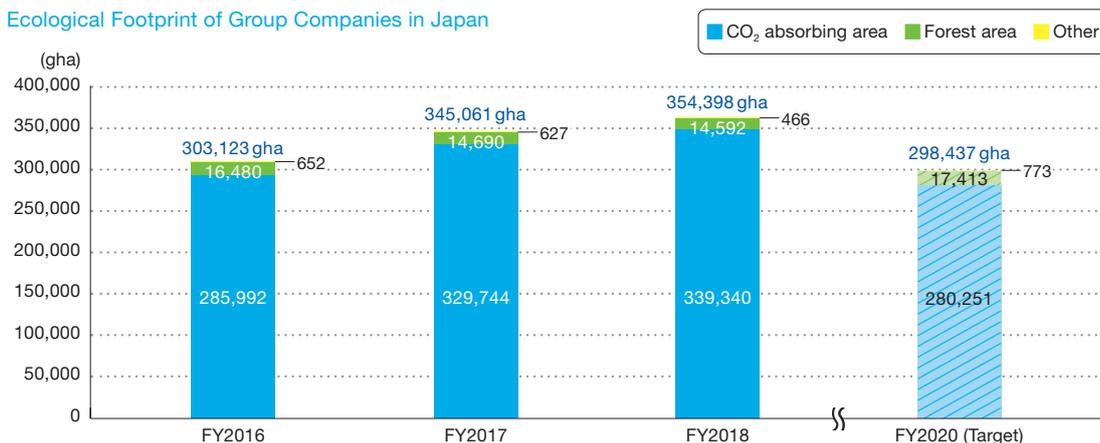
We have been assessing our ecological footprint (EF), an indicator of biodiversity, jointly with experts from the NGO Global Footprint Network since fiscal 2014 to examine all environmental impacts resulting from the business activities of group companies in Japan. Moreover, we are using the assessed 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.

Environmental impact using the indicator related to bio-diversity Ecological Footprint



Ecological Footprint of Group Companies in Japan



● Implementation of WET testing

In fiscal 2018, 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, February 5, 2019 Time: 13:00–16:00 Place: Daiichi Sankyo's main office building A, 4th floor, Meeting room A Target attendees: 23 employees involved in the ISO 14001 internal audit Agenda: (1) Lecture entitled "Recent International Trends on Climate Change" Yasuko Kameyama, Center for Social and Environmental Systems Research of the National Institute for Environmental Studies (2) Report on results of the ISO 14001 recertification audit
Working session on combating global warming	Date: Thursday, December 15, 2019 Time: 11:00–16:00 Place: Tatebayashi BioPharma Center and Tonegawa Brewery of Suntory Beer Ltd. Target attendees: Employees tasked with saving energy, promotion managers (30 in total) Agenda: (1) Formulating the Energy Efficiency Act (2) Initiatives at Suntory's brewery, recipient of the Grand Prize for Excellence in Energy Efficiency and Conservation (3) Brewery tour
Workshop for employees in charge of environmental issues	Date: Friday, February 22, 2019 Time: 13:00–16:00 Place: Tokyo Eco Factory, Major Venous Japan Co., Ltd. Target attendees: 36 managers at environmental management units and sites Agenda: (1) Lecture entitled "Key Points of an Onsite Review under the Waste Management and Public Cleansing Law" and by Mr. Masazumi Horiguchi, Senior Consultant at Major Venous Japan Co., Ltd. (2) Field inspection of the onsite review process
Environmental Art Contest	We received 1,262 applications (1,284 applications for the previous contest) from Group companies in and outside of Japan. Categories Images: 351 works (349 works) from Group companies in Japan and 185 works (179 works) from those outside Japan "Senryu" and slogans: 702 works (742 works) from Group companies in Japan and 24 works (14 works) from those outside Japan The awards ceremony was held on Monday, November 14, 2018.
Environmental e-learning	Theme: "Basic Knowledge of Environmental Problems and Environmental Management" Number of participants: 9,548 (participation rate: 97.1%)
COOL CHOICE Program	Period: June 18–September 7 Number of enrollees: 1,127 (1,206 for the previous program)
Participation in the Light-Down Campaign	We turned off external signage, internal lighting, etc., on June 21 and July 7 of 2018. Number of participating facilities: 71 business sites (66 business sites in the previous campaign) Electricity saved: 2,100 kWh (equivalent to that covering the daily power consumption of about 300 households and to a reduction of about 1.25 t-CO ₂ emissions) A press release from the Ministry of the Environment is available at http://www.env.go.jp/press/104357.html . Companies that joined the campaign at 100 locations or more are introduced in the document.
Posters for raising environmental awareness	Posters were displayed at 140 locations.

7-2 Environment-related Awards

Daiichi Sankyo Co. Ltd.	FY2016 Kanto Bureau of Economy, Trade and Industry Director-General's Award for Excellence in Plant Energy Management
Shinagawa R&D Center, Daiichi Sankyo Co. Ltd.	Corporate Award in the Shinagawa Ward Environmental Conservation Activity Awards

8 Site Data

Business Activity and Input/Output in fiscal 2018 (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	26,804	15,550	8,966	3,652	34,087	13,158	238	12,083	45,291	
		GJ	259,768	150,400	87,076	34,863	332,247	127,184	2,297	117,561	439,231	
	City gas	1,000m ³	1,994	3,711	1,579	2,517	9,020	5,815	0	1,378	5,069	
		GJ	89,794	167,123	71,124	113,361	406,245	261,879	0	62,069	228,299	
	LPG	t	0	0	1	2	0	0	0	0	6	0
		GJ	0	0	70	102	14	10	0	0	304	0
	Light oil	t	0	0	0	0	0	0	0	0	1	0
		GJ	0	0	0	0	0	0	0	0	21	0
	Heavy oil	KL	0	0	0	6	0	0	0	0	0	3
		GJ	9	0	0	235	0	0	0	0	0	133
	Kerosene	KL	0	0	0	0	0	0	0	0	0	320
		GJ	1	0	0	0	0	0	0	0	0	11,744
Gasoline (hybrid)	KL	0	0	0	0	0	0	0	0	0	0	
Gasoline	KL	2	0	0	0	1	1	0	0	0	0	
	GJ	57	0	13	3	50	20	0	0	7	0	
Gas oil for diesel engines	KL	0	0	0	0	2	0	0	0	1	0	
	GJ	0	0	4	0	94	17	0	0	40	0	
Total	GJ		349,629	317,523	158,287	148,563	738,413	389,110	2,297	180,002	679,407	
Water	Service water	1,000m ³	118	117	77	38	346	25	1	32	286	
	Industrial water	1,000m ³	0	0	6,163	58	0	961	0	0	0	
	Groundwater	1,000m ³	16	0	0	0	1	0	33	1,595	0	
	Total	1,000m³	134	117	6,240	96	347	986	34	1,628	286	
Chemical substances	PRTR substances (amounts handled)	t	24	0	730	4	44	0	0	996	0	

OUTPUT		Unit	Shinagawa	Kasai	Onahama	Tatebayashi	Hiratsuka	Takatsuki	CP Hiratsuka	Odawara	Kitamoto
Air pollution	CO ₂	t-CO ₂	16,834	15,459	8,871	7,250	35,873	18,470	110	8,677	33,034
	NO _x	t	0.0	4.5	1.4	12.2	13.2	5.9	0	1.3	2.1
	SO _x	t	0	0.0	0.0	0.3	0.0	0	0	0.0	0.3
	PRTR substances	t	1	0	2	0	0	0	0	3	0
Water pollution	Water discharged	1,000m ³	81.2	48.5	6,157.1	67.3	253.5	860.4	34.0	1,779.1	194.9
	BOD	t	4.1	0.6	7.1	0.1	4.1	0.9	0.1	5.2	0.3
	COD	t	0	0	8.6	0.4	0	1.7	0	1.6	0.7
	PRTR substances	t	0	0	0	0	0	0	0	0	0
Waste	Generated amount	t	555	339	2,933	220	2,740	293	0	6,589	1,015
	Emission	t	555	339	2,933	220	2,012	293	0	3,566	1,015
	Recycling amount	t	449	297	38	202	444	285	0	1,010	320
	Final disposal amount	t	3	1	9	2	0	1	0	57	1
	PRTR substances	t	24	0	728	0	43	0	0	830	0

ESG Data (Environment)

Goal Reference	Classification	Breakdown	Scope	Unit	FY2014	FY2015	FY2016	FY2017	FY2018	
Basic Information	Sales		Outside Japan	Million yen	370,200	411,946	359,224	347,295	340,017	
			In Japan	Million yen	549,200	574,500	595,900	612,900	589,700	
			Entire group	Million yen	919,400	986,446	955,124	960,195	929,717	
	Employees		Entire group	Person	16,459	15,249	14,670	14,446	14,887	
CO ₂	Energy-originated CO ₂ emissions	Sales vehicles	Outside Japan	t-CO ₂	23,619	21,204	15,669	14,633	11,189	
			In Japan	t-CO ₂	7,016	6,809	6,238	6,193	5,991	
			Entire group	t-CO ₂	30,635	28,012	21,907	20,826	17,179	
		Offices	Outside Japan	t-CO ₂	5,900	5,087	4,396	6,750	6,031	
			In Japan	t-CO ₂	7,309	7,471	6,497	6,236	5,756	
			Entire group	t-CO ₂	13,209	12,558	10,893	12,986	11,787	
		Plants and R&D centers	Outside Japan	t-CO ₂	41,074	40,955	39,365	37,509	38,018	
			In Japan	t-CO ₂	170,744	161,877	163,997	153,504	144,576	
			Entire group	t-CO ₂	211,818	202,832	203,362	191,013	182,594	
		Total	Outside Japan	t-CO ₂	70,593	67,246	59,430	58,893	55,237	
			In Japan	t-CO ₂	185,070	176,157	176,732	165,933	156,323	
			Total	t-CO ₂	255,662	243,402	236,162	224,826	211,560	
	Non-energy oriented CO ₂ emissions	Incinerator	Entire group	t-CO ₂		3,922	5,112	3,731	3,083	
	Total of CO ₂ emissions	Total	Entire group	t-CO ₂	255,662	247,324	241,274	228,557	214,643	
	CO ₂ emissions by Greenhouse Gas Protocol	Scope 1		Outside Japan	t-CO ₂	33,165	30,199	23,812	23,823	20,998
				In Japan	t-CO ₂	90,795	88,967	91,662	84,283	79,505
				Total	t-CO ₂	123,960	119,165	115,474	108,106	100,503
		Scope 2		Outside Japan	t-CO ₂	37,428	37,047	35,618	35,069	34,239
				In Japan	t-CO ₂	94,274	91,112	90,182	85,382	79,901
				Total	t-CO ₂	131,702	128,159	125,799	120,451	114,140
		Category 1: Purchased goods and services	In Japan	t-CO ₂	474,824	497,843	515,388	646,985	644,322	
		Category 2: Capital goods	In Japan	t-CO ₂	85,705	53,541	44,564	50,017	89,891	
		Category 3: Activities related to fuel and energy (not included in Scopes 1 or 2)	In Japan	t-CO ₂	6,332	6,623	6,748	6,364	6,058	
		Category 4: Upstream transportation and distribution	In Japan	t-CO ₂	11,039	10,569	9,773	9,571	8,960	
		Category 5: Waste generated in operations	In Japan	t-CO ₂	10,764	8,974	10,071	7,657	9,955	
		Category 6: Business travel	In Japan	t-CO ₂	17,410	15,348	15,322	16,193	15,164	
		Category 7: Employee commuting	In Japan	t-CO ₂	2,867	3,225	3,283	3,057	2,779	
		Category 9: Downstream transportation and distribution	In Japan	t-CO ₂	15,574	15,231	16,755	21,723	16,867	
		Category 12: End-of-life treatment of sold products	In Japan	t-CO ₂	3,207	2,896	2,476	1,681	1,939	
		Category 13: Downstream leased assets	In Japan	t-CO ₂	7,712	7,451	6,617	6,943	3,562	
Scope 3		In Japan	t-CO ₂	635,434	621,701	630,996	770,193	799,497		
Scopes 1 + 2 + 3		Total in Japan	t-CO ₂	891,096	869,025	872,270	998,750	1,014,140		
Emissions by group site in Japan		Shinagawa	In Japan	t-CO ₂	19,655	18,406	17,978	17,091	16,834	
		Kasai	In Japan	t-CO ₂	17,761	17,184	16,808	16,201	15,459	
	Daiichi Sankyo Propharma (Hiratsuka)* ¹	In Japan	t-CO ₂	41,337	38,036	36,704	36,455	35,873		
	Daiichi Sankyo Propharma (Takatsuki)	In Japan	t-CO ₂	20,072	19,024	18,156	18,879	18,470		
	Daiichi Sankyo Chemical Pharma (Onahama)	In Japan	t-CO ₂	11,774	7,641	12,439	9,016	8,871		
	Daiichi Sankyo Chemical Pharma (Tatebayashi)* ²	In Japan	t-CO ₂	7,068	6,446	6,626	6,701	7,250		
	Daiichi Sankyo Chemical Pharma (Hiratsuka)	In Japan	t-CO ₂	2,353	3,464	2,296	161	110		
	Daiichi Sankyo Chemical Pharma (Odawara)	In Japan	t-CO ₂	8,969	8,191	10,345	9,017	8,677		
	Asubio Pharma (Kobe)	In Japan	t-CO ₂	5,987	5,897	5,523	4,825	0		
	Kitasato Daiichi Sankyo Vaccine	In Japan	t-CO ₂	29,209	37,587	37,120	35,159	33,034		

Goal Reference	Classification	Breakdown	Scope	Unit	FY2014	FY2015	FY2016	FY2017	FY2018	
Energy	Energy consumption by group companies in Japan	Electricity	In Japan	1,000kWh	184,002	187,102	190,635	179,783	171,119	
				GJ	1,803,212	1,821,193	1,855,855	1,749,509	1,662,432	
		City gas	In Japan	1,000m ³	33,932	33,176	35,700	32,988	31,203	
				GJ	1,526,948	1,492,942	1,607,796	1,485,679	1,405,265	
		LPG	In Japan	t	14	10	11	10	10	
				GJ	717	529	548	514	499	
		LNG	In Japan	t	2,307	1,361	0	0	0	
				GJ	125,986	74,330	0	0	0	
		Heavy oil	In Japan	KL	0	0	3	11	1	
				GJ	15	10	116	414	21	
		Kerosene	In Japan	KL	726	208	258	278	10	
				GJ	26,652	7,635	9,469	10,203	377	
		Light oil	In Japan	KL	3	2	1	5	320	
				GJ	95	89	36	200	11,745	
	Steam	In Japan	GJ	25,516	0	0	0	0		
	Gasoline (Plants and R&D centers)	In Japan	KL	6	5	5	4	8		
			GJ	214	186	156	137	156		
	Gasoline (Business-use vehicles)	In Japan	KL	2,920	2,935	2,554	2,681	2,574		
			GJ	101,039	101,557	88,361	92,746	89,185		
	Total	In Japan	GJ	3,609,892	3,498,577	3,567,177	3,339,402	3,169,679		
	Energy use by entire group	Electricity	Entire group	1,000kWh	242,135	250,445	253,147	233,166	216,865	
				GJ	2,370,592	2,439,421	2,366,436	2,270,529	2,108,908	
		City gas	Entire group	1,000m ³	37,996	36,799	39,079	37,117	35,388	
				GJ	1,709,822	1,655,966	1,758,555	1,671,450	1,593,608	
		LPG	Entire group	t	65	60	58	62	59	
				GJ	3,325	3,040	2,969	3,152	2,989	
		LNG	Entire group	t	2,307	1,361	0	0	0	
				GJ	125,986	74,330	0	0	0	
		Heavy oil	Entire group	KL	0	10	11	11	261	
				GJ	15	401	438	414	63,835	
		Kerosene	Entire group	KL	726	208	258	278	10	
				GJ	26,652	7,635	9,469	10,203	377	
		Light oil and diesel	Entire group	KL	72	77	1,908	1,795	320	
GJ				2,708	2,900	71,934	67,661	11,745		
Steam		Entire group	GJ	87,023	49,750	44,021	45,833	48,894		
Gasoline		Entire group	KL	13,055	10,851	7,499	7,247	7,222		
			GJ	451,214	376,938	259,454	250,748	200,323		
Thermal energy		Entire group	GJ				5,683	978		
Entire group		Entire group	GJ	4,748,243	4,664,152	4,618,657	4,327,129	4,031,656		
Fluorocarbons		Fluorocarbon leakage	In Japan	t-CO ₂			1,312	546	977	
Water resources		Water used and discharged by group companies in Japan	Service water	In Japan	1,000m ³	1,179	1,230	1,165	1,079	1,040
			Industrial water	In Japan	1,000m ³	10,502	8,764	7,600	7,443	7,182
	Ground water		In Japan	1,000m ³	1,773	1,874	2,221	1,789	1,645	
	Total water used		In Japan	1,000m ³	13,454	11,868	10,986	10,311	9,867	
	Effective water use volume		Entire group	1,000m ³	1,240	1,198	1,163	545	391	
	Water discharged		In Japan	1,000m ³	12,371	10,834	9,934	9,856	9,476	
	Water used and discharged by group companies outside Japan	Water used	Outside Japan	1,000m ³	603	641	547	517	526	
		Effective water use volume	Outside Japan	1,000m ³	157	164	111	89	193	
		Water discharged	Outside Japan	1,000m ³	447	477	436	428	333	
	Water used and discharged by the entire group	Water used	Entire group	1,000m ³	14,058	12,509	11,534	10,828	10,393	
		Effective water use volume	Entire group	1,000m ³	1,240	1,198	1,163	545	584	
		Water discharged	Entire group	1,000m ³	12,817	11,311	10,370	10,283	9,809	
	Water recycled in Japan (Kobe City recycles water)	Purchases by Asubio Pharma (ASB)	ASB	1,000m ³	8	8	11	7	0	
Water used in water-stressed regions	Water used	Entire group	1,000m ³			256	215	213		

Goal Reference	Classification	Breakdown	Scope	Unit	FY2014	FY2015	FY2016	FY2017	FY2018
Water pollution	Water pollution loads	BOD	In Japan	t	27	21	23	10	12.7
		COD	In Japan	t	29	16	17	14	12.2
		BOD	Outside Japan	t	32	35	24	22	18.9
		COD	Outside Japan	t	77	77	55	47	41.9
		BOD	Entire group	t	58.8	56.4	47.5	31.9	31.6
		COD	Entire group	t	106.5	93.2	72.3	61.1	54.1
Waste	Waste at group companies in Japan	Waste generated	In Japan	t	24,120	19,676	20,610	14,682	14,684
		Waste treated externally	In Japan	t	16,250	15,675	15,648	10,281	10,933
		Waste recycled	In Japan	t	8,625	5,955	5,485	3,771	3,045
		Recycling rate	In Japan	%	53.1	38.0	35.0	36.7	27.8
		Final disposal	In Japan	t	143	91	143	63	74
		Final disposal rate	In Japan	%	0.59	0.46	0.69	0.43	0.51
	Waste at group companies outside Japan	Waste treated externally	Outside Japan	t	1,724	2,088	2,168	2,065	2,360
		Waste recycled	Outside Japan	t	863	1,222	945	1,014	950
		Final disposal	Outside Japan	t	860	762	1,071	778	952
	Waste by the entire group	Waste treated externally	Entire group	t	17,975	17,763	17,816	12,346	13,293
		Waste recycled	Entire group	t	9,487	7,177	6,429	4,786	3,995
		Final disposal	Entire group	t	913	853	1,214	840	1,027
Office paper used	Amount	In Japan	10,000 sheets	5,950	5,469	5,355	5,360	5,109	
Air pollution	SOx emissions	Outside Japan	t	0.3	0.3	1.2	0.3	0.8	
		In Japan	t	0.87	0.50	0.34	0.20	0.6	
		Entire group	t	1.13	0.78	1.54	0.53	1.5	
	NOx emissions	Outside Japan	t	7	5	7	6	4.7	
		In Japan	t	59	45	49	36	40.6	
		Entire group	t	66	51	56	42	45.3	
PRTR substances	Amounts handled		In Japan	t	2,726	3,686	3,182	1,278	1,798
	Amounts discharged and transferred (Air)		In Japan	t	37	83	49	5	7
	Amounts discharged and transferred (Water)		In Japan	t	4	0	0	0	0
	Amounts discharged and transferred (Sewers)		In Japan	t	23	120	120	0	0
	Amounts discharged and transferred (Water + sewers)		In Japan	t	27	120	120	0	0
	Amounts discharged and transferred (Waste)		In Japan	t	594	667	428	1,211	1,626
VOC	100 VOCs specified by Japan's Ministry of the Environment	Amount emitted into the atmosphere	In Japan	t	60	26	1	1	1
Containers and packaging	Containers and packaging collected and recycled (obligatory recycling amount)	Glass bottle (colorless)	In Japan	t	202	158	175	158	159
		Glass bottle (brown)	In Japan	t	474	386	300	266	266
		PET plastic bottles	In Japan	t			0	0	0.3
		Plastic containers and packaging	In Japan	t	1,557	1,436	1,413	1,341	1,386
		Paper containers and packaging	In Japan	t	30	59	115	42	43
		Total	In Japan	t	2,263	2,039	2,003	1,807	1,854
Environmental efficiency	CO ₂ /carbon intensity	CO ₂ emissions/sales in Japan	In Japan	t-CO ₂ /million yen	0.337	0.307	0.297	0.271	0.265
	CO ₂ environmental efficiency	Sales in Japan/CO ₂ emissions	In Japan	Million yen/t-CO ₂	2.97	3.26	3.37	3.69	3.77
	CO ₂ environmental efficiency index	Relative to the value of 100 for the base year of FY2015	In Japan	-	101	111	114	125	116
	Waste generation intensity	Waste generated/sales in Japan	In Japan	t/million yen	0.044	0.034	0.035	0.024	0.025
	Waste and environmental efficiency	Sales in Japan/waste generated	In Japan	Million yen/t-CO ₂	22.8	29.2	28.9	41.7	40.2
	Waste and environmental efficiency index	Relative to the value of 100 for the base year of FY2015	In Japan	-	170	218	216	311	138
	Water use intensity	Water use/sales in Japan	In Japan	1,000m ³ /million yen	0.024	0.021	0.018	0.017	0.017
	Water and environmental efficiency	Sales in Japan/water use	In Japan	Million yen/1,000m ³	40.8	48.4	54.2	59.4	59.8
Waste and environmental efficiency index	Relative to the value of 100 for the base year FY2015	In Japan	-	113	134	150	164	123	

Goal Reference	Classification	Breakdown	Scope	Unit	FY2014	FY2015	FY2016	FY2017	FY2018
Intensity	CO ₂ intensity (sales)	CO ₂ emissions/sales (million yen)	Entire group	t-CO ₂ /million yen	0.278	0.251	0.253	0.238	0.231
	CO ₂ intensity (sales) (year-on-year comparison)	Intensity compared to the preceding fiscal year	Entire group	%	125	90	101	94	97
	CO ₂ intensity (number of regular employees)	CO ₂ emissions/number of employees	Entire group	t-CO ₂ /person	15.5	16.2	16.4	15.8	14.4
	CO ₂ intensity (sales)	CO ₂ emissions/sales (million yen)	In Japan	t-CO ₂ /million yen	0.337	0.307	0.297	0.271	0.265
	Office paper use intensity (sales)	Amount of office paper used/sales (billion yen)	In Japan	10,000 sheets/billion yen	10.8	9.5	9.0	8.7	8.7
	PRTR emission intensity (sales)	PRTR emissions (air, water)/sales (billion yen)	In Japan	t/billion yen	0.00065	0.00068	0.00045	0.00118	2.8
	Water use intensity (sales)	Water use/sales (billion yen)	In Japan	1,000 m ³ /billion yen	0.854	0.820	0.786	0.750	16.7
Management	Status of acquisition of ISO 14001 certification		Outside Japan	sites	1	1	1	1	4
			In Japan	sites	7	7	6	6	6
			Entire group	sites	8	8	7	7	10

*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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