

Daiichi Sankyo Group Environmental Data Book 2024

Position of This Book

The information of this book complements

Daiichi Sankyo Group Value Report 2024 and the
environmental data on our website. Please see them in
addition.

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Daiichi Sankyo Group EHS Policy

The Daiichi Sankyo Group has established a global policy to express its commitment to protecting the environment and ensuring the health and safety of our employees as fundamental corporate responsibilities.

The Daiichi Sankyo Group has implemented EHS initiatives based on the recognition that protecting the environment and ensuring the health and safety of our employees throughout every aspect of its corporate activities constitutes key management issues.

We comply with the related applicable laws and regulations of each country as well as international agreements for protecting the environment and ensuring the health and safety while setting even higher goals that we strive to exceed.

We maintain a management system, in which organizational roles and responsibilities are clearly defined for continuous improvement as a means of thoroughly protecting the environment and ensuring the health and safety of our employees.

We strive to increase the knowledge of our employees through training and educational activities in order to raise their awareness of the need and means for environmental issues and concerns.

We actively communicate information to stakeholders on the Daiichi Sankyo Group's efforts to protect the environment and ensure the health and safety of our employees.

Basic Environmental Management Policy

- 1. Reduce environmental impact in the Group's business processes and supply chain, from research and development to production, distribution, use, consumption, and disposal
- 2. Improve the working environment so that employees can work safely and maintain and promote their health
- 3. Establish, operate, evaluate, and improve the EHS management system
- 4. Comply with environmental and health and safety related laws and regulations
- 5. Reduce EHS risks and eliminate sources of hazards
- 6. Efficient use of resources and energy, reduction of greenhouse gas emissions, appropriate use of water and wastewater management, waste reduction and recycling, respect for biodiversity, and prevention of deforestation
- 7. Prevent health hazards and occupational accidents
- 8. Engage in EHS education and awareness-raising activities
- 9. Participate in EHS communication and consultation with internal and external stakeholders

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

The Daiichi Sankyo Group seeks to appropriately address environmental issues through our medium- and long-term business activities with due consideration for what society demands and expects from us. Our sustainability issues are reducing environmental impact primarily through energy and resource conservation; contributing to a sustainable society by addressing environmental issues such as climate change, water risks and biodiversity; and mitigating environmental risks by practicing legal compliance and operating an environmental management system. We have designated KPIs and environmental targets for these issues and implement appropriate communication and information disclosure both in and outside the Group to promote environmental management. The following quantitative and qualitative targets have been designated as our environmental goals under the fifth five-year business plan.

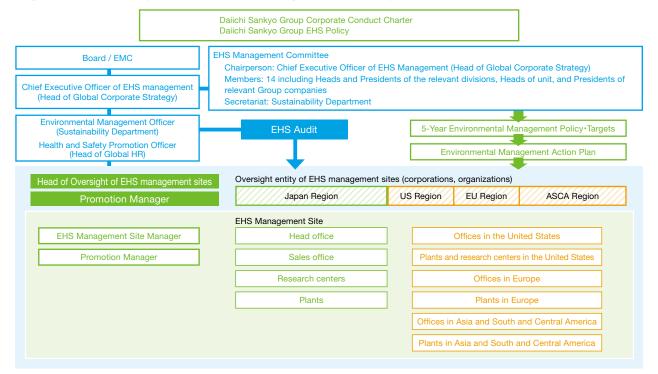
EHS Management Policy and Environmental Management Target (FY2021-FY2025)

EHS Management Policy	Environmental Management Target		
Lower the environmental impact of our operations and supply chain by conserving energy and resources, and reducing greenhouse gas emissions and waste.	CO ₂ emissions (Scope 1 + Scope 2): 42% reduction from FY2015 CO ₂ emissions intensity based on sales (Scope3, Cat1): 15% reduction from FY2020 Business partner engagement (Scope 3, Cat 1): more than 70% of business partners set targets aligned with the 1.5°C scenario Energy consumption intensity based on sales: 30% reduction from FY2015 Waste emission intensity based on sales: 10% reduction from FY2020 Promote waste reduction and recycling		
Realize a sustainable society by taking a leading role in addressing environmental issues such as climate change, resource recycling, water risk and biodiversity.	Renewable electricity utilization rate: more than 60% utilization rate Water consumption intensity based on sales: 10% reduction from FY2020 Waste plastic recycling rate: Over 70% maintained Flood disaster manual maintenance rate: 100% at research laboratories and production sites in Japan Promotion of Innovative Environmental Technologies for Decarbonized Community Continuing Reduction of Pollutant Emissions to Atmosphere and Water Area Promotion of the sustainable use of ecosystem services and resources		
Minimize EHS risks by complying with related laws and continual improvement of management systems.	Disposal of hazardous waste: 10% reduction from FY2020 ISO14001 acquisition rate: 100% at manufacturing sites Establishment of EHS management system Implementation of periodic EHS audits Reducing EHS Risks through Collaboration with Supply Chains		
Encourage employees to practice EHS by internal communication such as EHS education and enlightening activities.	Education and awareness-raising for the prevention of environmental accidents Education for all employees and professional training in EHS Measures to improve employee motivation related to EHS		
Ensure the reliability from society by enhancing information to disclose and enhancing communication with stakeholders.	Third-party assurance coverage: 100% Periodic Verification and Disclosure Based on TCFD Recommendations Promoting Partnership for Sustainable Development		

1-3 Environmental Management System

The head of the Head of Global Corporate Strategy. of Daiichi Sankyo serves as the The Head of EHS Management 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 "Oversight entity of EHS management sites" that deliberates on business activities, and each "Oversight entity of EHS management sites" establishes an "EHS Management Site" and discusses regions and functions as necessary while overseeing targets. In addition, we have established the EHS Management Committee, chaired by The Head of EHS Management of environmental 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 EHS Audit

Operating Sites Subject to an EHS Audit in Fiscal 2023

Company	Operating Site and Branches
Daiichi Sankyo Co., Ltd.	Head Office Site Shinakawa Site Kasai Site
Daiichi Sankyo Healthcare Co., Ltd.	Headquarters Research Center Daiichi Sankyo Healthcare Direct*
Daiichi Sankyo (Shanghai) Pharmaceuticals Co., Ltd.	DSSH Shanghai Plant
DAIICHI SANKYO BRASIL FARMACÊUTICA LTDA	DSBR Alphaville Plant

^{*}former name:Aime

1-5 ISO 14001 Certification

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

List of ISO 14001 Certified Plants (As of the End of June 2024)

	Company	Site	ISO 14001 Acquisition Period	
		Sustainability Department		
	Daiichi Sankyo Co., Ltd.	Pharmaceutical Technology Division (Hiratsuka)		
		Biologics Division (Tatebayashi)		
	Daiichi Sankyo	Hiratsuka Plant		
	Propharma Co., Ltd.	Technology Department		
		Onahama Plant		
Daiichi Sankyo Group		Tatebayashi Plant	January, 1998	
(multisite certification)	Daiichi Sankyo Chemical Pharma Co., Ltd.	Biologics Technology Department	Canaday, 1000	
		(Tatebayashi) Odawara Plant		
		Technology Department (Onahama, Hiratsuka, Odawara)		
	Daiichi Sankyo Biotech Co., Ltd.	Kitamoto Site		
	Daiichi Sankyo Happiness Co., Ltd.	Hiratsuka		
Daiichi Sankyo Europe		Pfaffenhofen Plant	December 2019	
Daiichi Sankyo Altkirch	Sarl	Altkirch Plant	March 2019	
Sankyo Pharmaceutical (Shanghai) Co., Ltd. Daiichi Sankyo Brasil Farmacêutica ISO 14001 Certification Acquisition Rate of Production Sites (on the basis of FY2023 energy consumption)		Shanghai Plant	March 2019	
		Alphaville Plant	March, 2012	
		Japan	100%	
		Entire group	89.3%	

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

1-6 Environmental Supply Chain Management

Main Efforts	Details			
Setting of Business Partner Code of Conduct (BPCC)	The Group has set out the Business Partner Code of Conduct (BPCC) in April 2019 in relation to the Daiichi Sankyo Group Procurement Policy, in line with the revision of the Daiichi Sankyo Group Corporate Conduct Charter. This BPCC sets out expectations for the promotion of sustainable procurement to business partners that provide products and services to us. In the BPCC, the environment-related items are as follows(see 4. Promoting Environmental Management). Business Partner Code of Conduct 4. Promoting Environmental Management (1) Reduce greenhouse gas emissions (2) Appropriately manage waste and emissions (3) Prevent and mitigate spills and releases (4) Promote energy and resource conservation (5) Support biodiversity			
Conducting a "Sustainable Procurement Survey"	We conduct a "Sustainable Procurement Survey" with major business partners on a three-year cycle in order to confirm their understanding of and alignment with the Group's approach to sustainability and to strengthen interactive communications. In this survey, respondents are asked to answer 57 questions related to the following six areas based on the Business Partner Code of Conduct: "business activities with integrity based on ethical standards," "respect for human rights and labor," "health and safety," "promoting environmental management," "securing optimal quality, cost, and stable supply," and "management systems". The survey is also aligned with the principles of the Pharmaceutical Supply Chain Initiative (PSCI), a non-profit organization composed of global pharmaceutical companies.			
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 ecodriving.			
Cooperation for EHS audit	Partner companies storing and delivering our products and promotional goods cooperate for the audit on environment-related laws and regulations including waste management.			

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 the necessary equipment.

In recent years, we have also strengthened our measures to mitigate flooding risks.

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	Shinagawa Site	Large-scale earthquake, fire, emergency report, emergency meal-serving drill, and confirmation of employees' safety	9	3,419
Sankyo	Kasai Site	Large-scale earthquake, fire, emergency report, emergency meal-serving drill, and confirmation of employees' safety	14	825
Daiichi Sankyo Propharma	Hiratsuka Site	Leakage, exposure to high potency chemicals, emergency report	72	1,590
D 1.	Onahama Site	Large-scale earthquake, wind and flood damage, and leakage and emergency contact	18	605
Daiichi Sankyo Chemical Pharma	nkyo Tatebayashi Large-scale earthquake, fire, flooding, leakage, Loss of specific chemicals		25	667
mama			60	1,430
Daiichi Sankyo Biotech	Kitamoto Site	Large-scale earthquake, fire, flooding, emergency report, emergency meal-serving drill, and confirmation of employees' safety	9	1,194

1-8 Business Activity and Environmental Performance

Business Activity and Input/Output (Entire Group)

INPUT			Daiichi Sankyo Group
Ener		⟨ R&D ⟩	
Electricity (Non renewable energy)	51,260 MWh		Research into new drugs,
Electricity (Renewable energy)	204,554 MWh		nonclinical studies, clinical trials, pharmaceutical
City gas	33,723 Thousand m ³		substances production
Oily gas	406,901 MWh		research and technological
LPG	8 t		development, and drug research
LI G	120 MWh	\rightarrow	→ Approval applications
Light oil	59 KL		7 Approval applications
Light on	624 MWh		〈 Manufacturing 〉
LNG	69 KL		Active pharmaceutical
LIVO	1,044 MWh		ingredient manufacturing,
Kerosene	144 KL		formulation, packaging,
reroserie	1,460 MWh		and quality control
Gasoline	4,298 KL		
dasonne	39,885 MWh		〈 Offices 〉
Gas oil for diesel engines	1,491 KL		Planning and management,
das oil for dieser engines	15,746 MWh		sales and information provision, quality
Other non renewable energy	2 MWh		assurance, and safety
Fuels (Renewable energy)	8,305 MWh		management
Other (Renewable energy)	6,887 MWh		
Total	736,787 MWh		4
			Pharmaceuticals
Water			wholesalers
Service water	1,355 Thousand m ³		
Surface water (Industrial water)	5.327 Thousand m ³		V
Ground water	1.509 Thousand m ³		Hospitals and
Total	8,191 Thousand m ³		pharmacies, Research
Ισιαι	o, 191 Mousand III		and inspection

aiichi Sankyo Group		ОИТРИТ			
〈R&D〉		Air			
esearch into new drugs,		CO ₂	109,239 t-CO ₂		
onclinical studies, clinical trials, pharmaceutical		NOx	45.6 t		
substances production		SOx	0.8 t		
search and technological development, and drug					
research		Wate	r		
Approval applications	\rightarrow	Discharged water	8,232 Thousand m ³		
The state of the state of the		COD	14.9 t		
〈 Manufacturing 〉					
Active pharmaceutical		Wast	e		
gredient manufacturing, ormulation, packaging,		Generated amount	12,024 t		
and quality control		Emission	10,909 t		
		Recycling amount	2,744 t		
〈 Offices 〉		Final disposing amount	1,180 t		
anning and management, sales and information	L				
provision, quality assurance, and safety		Recovery/Recycling	(Group in Japan)		
management		Glass bottle (colorless)	142 t		

Recovery/Recycling	
Glass bottle (colorless)	142 t
Glass bottle (brown)	128 t
PET	0 t
Plastic containers and packaging	1,136 t
Paper containers and packaging	25 t
Total	1,432 t

Note: Packaging containing post-consumer waste as required under the Containers and Packaging Recycling Law.

1-9 Environmental Accounting

Environment Conservation Cost (Group in Japan) (Unit: million ven)

	FY2	022	FY2023		
Environmental Item	Investment	Cost	Investment	Cost	
Pollution Prevention Cost	102	68	92	142	
Global Environmental Conservation Cost	490	327	1,051	1,090	
Resource Circulation Cost	4	360	63	591	
Upstream / Downstream Costs		65		70	
Administration Cost		651		684	
R&D Cost		50		50	
Social Activity Cost		0		0	
Environmental Remediation Cost		37		704	
Total	596	1,557	1,206	3,332	

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

Economic Benefit (Group in Japan) (Unit: million yen)

	FY2023
Value of sales of valuables	0.3

Environmental Conservation Benefit (Group in Japan)

	Unit	FY2022	FY2023	Increase/Decrease Compared to the Previous Year	Increase/Decrease Rate Compared to the Previous Year
Total volume of energy consumed	GJ	2,651,601	2,916,899	265,298	10%
Water consumed	Thousand m ³	7,860	7,800	△ 60	△ 1%
PRTR substances used	t	2,074	1,340	△ 734	△ 35%
CO ₂ emission	t-CO ₂	63,127	62,658	△ 469	△ 1%
Total volume of waste	t	13,406	12,024	△ 1,383	△ 10%
Waste emissions (=Outsourced treating volume)	t	10,346	8,830	△ 1,515	△ 15%
Volume of recycled waste	t	1,437	1,467	30	2%
Final diposing amount of waste	t	479	389	△ 90	△ 19%
Recycling rate	%	13.9	16.6	_	3%
Recovered or recycled volume of containers and packages	t	2,906	1,432	△ 1,474	△ 51%
SOx emissions	t	0.8	0.6	△ 0.2	△ 30%
NOx emissions	t	47.5	41.2	△ 6.3	△ 13%

^{*}Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively.

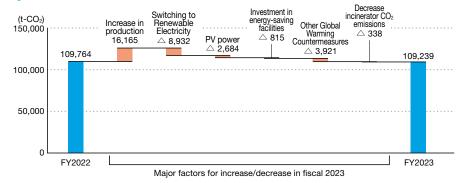
Conserving Energy and Combatting Global Warming

2-1 Our Basic Stance

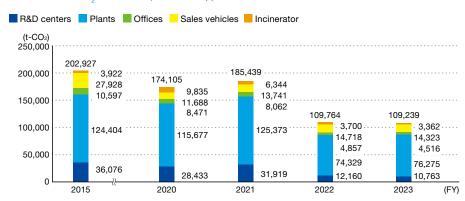
The Daiichi Sankyo Group is striving to use resources and energy efficiently under the EHS Management Policy(FY2021-FY2021), which states, "Lower the environmental impact of the entire supply chain by conserving energy and resources, and reducing greenhouse gas emissions and waste". To facilitate responsible corporate activities that address climate change, we have set the goals of reducing CO₂ emissions in FY2025 by 42% and in FY2030 by 63% compared to FY2015 based on the approach of the Science Based Targets initiative (SBTi)¹, which aims to help accomplish the goal of the Paris Agreement (keeping the average increase in global temperature below 1.5°C compared to pre-industrial revolution levels). At Daijchi Sankvo Chemical Pharma Onahama Plant, we completed construction of a new office building in March 2023 and acquired the Daiichi Sankyo Group's first "Nearly ZEB"2" certification under the Building-Housing Energy-efficiency Labeling System (BELS)³. Daiichi Sankyo Pharmaceutical (Shanghai) Co., Ltd. followed the Onahama Plant and Daiichi Sankyo Europe's Pfaffenhofen Plant in putting its solar power system into operation. In April 2022, we switched to renewable electricity (FIT non-fossil fuel energy certificates with tracking) for the electricity we use in 13 sites in Japan, including our head office, production sites, research laboratories, and training facilities. Moreover, operating sites in Europe and Brazil have reduced CO₂ emissions by expanding the use of renewable energy. We are continuing our efforts to further utilize renewable energy at our operating sites globally. Our CO₂ emissions for FY2023 were 106,721 tons (51.0% lower than in FY2015). Not limited to our efforts to "mitigate" CO₂ emissions and other environmentally hazardous actions, we facilitate initiatives to "adapt" to impacts that have become tangible or influence that is inevitable in the medium- to long-term.

2-2 Target and Result of CO₂ Emissions Reduction

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



Breakdown of CO₂ Emissions (Entire Group)



^{*}Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively.

^{*1} An international initiative that requires companies to set CO2 reduction targets based on scientific evidence to prevent the global average temperature from increasing (Well Below 2°C and to keep it under 1.5°C) which is the goal of the Paris Agreement.

^{*2} A building that is nearly a Net Zero Energy Building (ZEB: a building in which the net energy consumption (energy consumption minus energy generation) is zero), cutting net energy consumption by 75% or more.

^{*3} Building-Housing Energy-efficiency Labeling System

2-3 Supply Chain GHG Emission (Scope 3) (Entire Group)

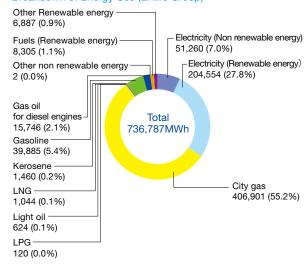
Sources	CO ₂ emissions (t-CO ₂) FY2022	CO ₂ emissions (t-CO ₂) FY2023 ⁻¹	Increase/Decrease Rate Compared to the Previous Year	Emissions Calculation Methodology
Purchased goods and services	1,892,504	3,887,790	105.43%	The procurement amount of all products and services was multiplied by the emission factor according to the guidelines. Contents included in Scope 1, 2, and other categories of Scope 3 and intra-group transactions were excluded.
Capital goods	161,326	220,563	36.72%	The amount of fixed assets acquired was multiplied by the emission factor according to the guidelines.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	24,051	28,217	17.32%	The amount of electricity and fuel used was multiplied by the emission factor according to the guideline.
Upstream transportation and distribution	47,270	49,275	4.24%	The cost of transportation, delivery, and storage outsourced by the Company was multiplied by the emission factor according to the guideline.
Waste generated in operations	10,517	11,049	2.70%	The weight of each type of waste generated from plants and laboratories was multiplied by the emission factor according to the guideline.
Business travel	34,473	44,043	27.76%	The travel costs by mode of transportation and lodging costs for business trips were multiplied by the emission factor based on the guideline. The use of business vehicles covered in Scope 1 was excluded.
Employee commuting	10,624	4,926	△53.64%	Employee commuting costs by mode of transportation were multiplied by an emission factor according to the guideline.
Upstream leased assets	_	_	-	Category 8 is excluded from the calculation because emissions from the operation of leased assets are included in Scope 1 and 2.
Downstream transportation and distribution	14,163	145,857	929.85%	The Company's consolidated net sales were multiplied by the emission factor according to the guideline.
Processing of sold products	_	_	_	Category 10 is excluded from the calculation since the relevant emissions are expected to account for a very small proportion of the total emissions, although we sell bulk pharmaceuticals to downstream companies.
Use of sold products	_	_	_	Category 11 is excluded from the calculation due to the nature of pharmaceuticals, as there is no energy use based on product use.
End of life treatment of sold products	2,747	4,072	48.22%	The weight of containers and packaging of sold products by type of material was multiplied by the emission factor according to the guideline.
Downstream leased assets	2,820	2,248	△20.29%	Floor area of buildings by use of leased assets owned by the company to other Companies was multiplied by the emission factor according to the guideline.
Franchises	_	_	-	Category 14 is excluded from the calculation because the company does not operate franchise stores.
Investments	5,485	10,945	99.54%	${ m CO_2}$ emissions (Scope 1 + 2) of each company that the Company owns shares were multiplied by the Company's shareholding ratio.
Total	2,205,979	4,408,736	99.85%	

^{*1} CO2 emissions increased in FY2023 due to changes in calculation methods, such as revision of emissions intensity allocation, and an increase in activities.

*Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively.

2-4 Breakdown of Energy Use

Breakdown of Energy Use (Entire Group)



2-5 Using Renewable Energy

Renewable Energy Usage and Breakdown

Types of Renewable Energy	Power Supply (MWh)	Remarks
Solar energy generation	131,576	Electricity generated at sites in Japan, Germany, and China and electricity purchased in Japan.
Hydroelectric power generation	62,927	Purchased by our Group companies in Japan and Germany.
Biomass heat	6,887	Purchased by our group companies in Germany.
Other renewable energies	10,920	Purchased by group companies in Japan, Germany, France, Spain, China, Brazil and other countries.

2 Conserving Energy and Combatting Global Warming

2-6 Supplementary Notes

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 CO_2 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.

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.

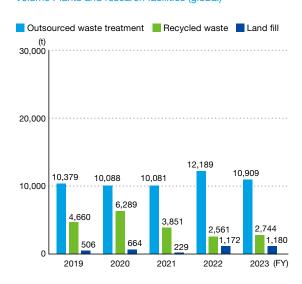
List of conversion factors in Japan

Energy Source	Conversion Factor						
Ellergy Source	Unit Calo	rific Value	CO ₂ Emission				
Electricity	_	_	Emission Factors by Electricity Supplier (Released on December 22, 2023)	t-CO₂/MWh			
A-type heavy oil	10,805.56	kWh/KL	2.75	t-CO ₂ /KL			
Diesel oil	10,555.56	kWh/KL	2.62	t-CO ₂ /KL			
Kerosene	10,138.89	kWh/KL	2.50	t-CO ₂ /KL			
LPG	13,916.67	kWh/t	2.99	t-CO ₂ /t			
City gas (13A)	11,111.11	kWh/Thousand m ³	2.05	t-CO ₂ /Thousand m ³			
LNG	15,194.44	kWh/t	2.79	t-CO ₂ /t			
Gasoline	9,277.78	kWh/KL	2.29	t-CO ₂ /KL			

Effective Use of Resources and Reduction of Environmental Impacts

3-1 Waste Reduction Targets and Achievements

Outsourced waste treatment, Recycled Waste, and Land fill Volume Plants and research facilities (global)



Total Waste Generation and Disposal (Plants and research facilities in Japan)



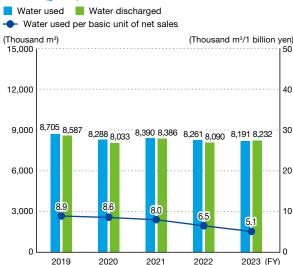
3-2 Efforts to Reduce Waste

Operating site	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	Change to a new waste disposal contractor, promote recycling

^{*}Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively

3-3 Appropriate Use of Water Resources

Volume of Water Used and Discharged Plants and research facilities (global)



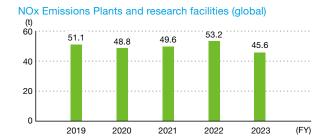
2019

2020

Reduction of Environmental Risks

4-1 Preventing Air and Water Pollution

SOx Emissions Plants and research facilities (global) (t) 3.0 2.3 2.0 1.3 1.5 1.0 0.8



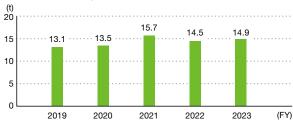
2021

2022

2023

(FY)

COD Plants and research facilities that discharge wastewater into public waters (global)



4-2 Preventing Soil and Groundwater Contamination and its Countermeasures

Progress of Measures for Soil Purification

Office	Overview
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 issued a press release announcing our decision in April 2020, and we are conducting removal work in consultation and coordination with all concerned parties. During excavation, we take due care not to affect the surrounding environment through measures such as temporarily setting up negative-pressure tents that cover the entire storage facility to prevent soil from scattering.

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 (Plants and research facilities in Japan)

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

Substance (Annual handling amount	Handling Amount	Emission (except for emission into soil)		Transfer Amount		
of 1 or more metric tonnes)	Handling Amount	Air	Public Water	Sewage	Out of Offices (Recycling)	Out of Offices (Other)
Chloroform	2.1	0.1	0.0	0.0	2.0	0.0
Cobalt and its compounds	1.1	0.0	0.0	0.0	0.0	0.0
Dichloromethane	9.5	0.6	0.0	0.0	8.9	0.0
Triethylamine	140.3	0.3	0.0	0.0	140.0	0.0
Toluene	773.8	0.5	0.0	0.0	7.1	570.0
N-Hexane	10.9	0.8	0.0	0.0	7.8	1.8
Tetrahydrofuran	397.4	0.2	0.0	0.0	0.0	300.0
Methyl ethyl ketone	4.3	0.0	0.0	0.0	0.0	0.0
Total	1,339.5	2.6	0.0	0.0	165.8	871.8
Dioxins	0.0	0.0	0.0	0.0	0.0	0.0

*Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively

Climate Change and Water Risks

5-1 Climate Change Risk

Setting a Target to Reduce CO₂ (by 63% Compared to 2015) with Consideration for Long-Term Goals

Dailchi Sankyo Group has set a target to reduce greenhouse gases, which was approved by the Science Based Targets initiative (SBTi)*. Our target to reduce greenhouse gases emitted through the Group's business activities falls in line with the necessary degree of reduction for keeping the average increase in global temperature below 1.5°C.

In FY2023, we reduced CO_2 emissions by 51.0% from the FY2015 level. Emissions in FY2023 were reduced due to increased purchases of electricity derived from renewable energy sources, solar power generation at plants, and investment in energy-saving facilities. We will continue to take energy-saving measures, procure electricity with low emission coefficients, and utilize renewable energy, aiming to achieve our FY2030 target of reducing CO_2 emissions by 63% from FY2015 levels.

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

Breakdown of CO₂ Emissions (Entire Group)



Disclosure based on TCFD recommendations

The Daiichi Sankyo Group announced its support for the TCFD recommendations in May 2019 and disclosed information in line with the TCFD disclosure framework, including governance and scenario analysis results in 2020. We will further reinforce our governance and business strategy with respect to climate change by promoting information disclosure in response to the revisions that were made to the TCFD recommendations in October 2021.



Governance

The Daiichi Sankyo Group established the EHS Management Committee in an effort to protect the environment and ensure the health and safety of employees and to operate and promote management in an integrated manner. The committee is chaired by the Chief Executive Officer of EHS Management and comprise the Heads and Presidents of relevant divisions, including Directors, and the Presidents of Group companies. It meets twice a year to discuss and report on policies, target setting, and activities related to global EHS management, and it reports on the content of its deliberations and reporting to the Board of Directors, which supervises the committee's activities.

In FY2023, the committee discussed promoting business partner engagement in reducing Scope 3 emissions and development of a net-zero transition plan.

<Read more here>

Corporate Governance

https://www.daiichisankyo.co.jp/about_us/governance/

Environmental Management Promotion System

https://www.daiichisankyo.co.jp/sustainability/the_environment/policy-system/#anc03

Climate Change and Water Risks

Risk management

The EHS Management Committee plays an important role in determining the risks and opportunities presented by climate change to our business, assessing and managing the financial impact, and enhancing our resilience. We strive to identify and address risks that may require changing our business activities, such as those related to climate change and water. Any significant risk concerns are reported to the Board of Directors and integrated into our overall risk management. In addition, the committee discusses and decides on mid-term and short-term targets and implementation plans for our transition toward carbon neutrality over the long term.

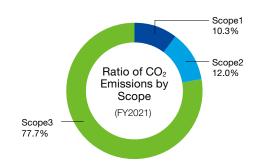
Risk	
1.5°C Scenario	Introduction of carbon taxes, increased costs for introducing renewable energy facilities, and reputational risk attributable to insufficient disclosure
4°C Scenario	Supply chain disruption, temporary suspension of operations at company sites, increased air conditioning costs due to rising temperatures, and difficulty in operation due to water withdrawal risk, and reduced productivity of products derived from natural compounds
Opportunity	
1.5°C Scenario	Measures to achieve Science Based Targets (SBTs)
4°C Scenario	Contribution to diseases that will increase with climate change

<Source> 1.5°C Scenario, IEA WEO 2021 SDS, IEA NZE 2050; 4°C Scenario, IPCC RCP8.5

Strategy

As the impact of various environmental factors increases, we will need to realize 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 weather-related disasters and a decline in the supply capacity of pharmaceuticals are major risks, both from business and social perspectives. On the other and, 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). Based on this recognition, we conducted a scenario analysis to understand the impact of climate change on our businesses and to clarify the resilience of our plans.

Ratio of CO₂ emission by scope used in TCFD analysis



Scenario Analysis for the Daiichi Sankyo Group

In fiscal 2021, we set up a cross-sectional task team to organize study sessions for relevant divisions to provide an overview of scenario analysis and the IEA and IPCC scenarios, and to consider the risks and opportunities for our business beyond 2030. Applying the IEA and IPCC scenarios, we identified risks and opportunities across our entire value chain for both the transitional and physical aspects. The risks and opportunities identified were discussed, evaluated, and approved by the EHS Management Committee. Specifically, we identified risks and opportunities in terms of procurement, direct operations, and demand for goods and services, and we classified them into six categories. We selected the 1.5°C scenario, where decarbonization is achieved, and the 4°C scenario, where decarbonization is not achieved, both provided by the IEA and IPCC, and determined that it is important to assume and prepare in advance for extreme cases with regard to both the physical and transition risks. We categorized the potential impact and resilience of our business with regard to each risk in terms of frequency of occurrence, business impact, and investor interest and conducted a comprehensive evaluation of the risks and opportunities through to 2030 and 2050 by taking into account financial impacts as well as investor perspectives.

5 Climate Change and Water Risks

• Results of scenario analysis

For each value chain, we categorized the potential impact and the resilience of our business, and we conducted a comprehensive evaluation, taking into account financial impacts as well as investor perspectives.

Scenario	Change in Business Environment	Risks and Opportunities	Potential Impact on Daiichi Sankyo	Impact*1	Actions for Ensuring Dailchi Sankyo's Resilience	Business Risk ²
		Introduction of carbon taxes	*Assuming that the carbon tax rises to 130 dollars /t-CO ₂ as of 2030, the annual cost burden will be about 1.5 to 3.0 billion yen.	Minor	• Financial impact is limited and will be further minimized by promoting upgraded climate change measures aligned with the 1.5°C target.	Minor
	1.5°C Tightening of policies and regulations related to decarbonization	Avoidance of the carbon tax burden by introducing renewable energy	It will be important to reduce emissions by procuring renewable energy as a countermeasure to the future introduction of carbon taxes and increase in tax rate.	Minor	Avoid the annual carbon tax burden by approximately 1.6 to 3.2 billion yen as of 2030 by making active use of renewable energy. Shift to renewable energy for 100% of electricity used at domestic and overseas business sites by fiscal 2030.	Opportunity
Scenario		Higher cost of introducing renewable energy facilities	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 per year.	Minor	Reduce costs by promoting our measures, as additional costs for renewable energy and energy-saving facilities are on a downward trend.	Minor/ Opportunity
advanced transition)		Higher cost of energy	Decarbonization measures will be implemented by energy utilities, but if installation and operating costs for the measures themselves increase, it may lead to higher energy procurement costs.	Minor	• While the cost of fossil fuel-derived energy is expected to rise, the impact is currently limited.	Minor
		Prices passed on to procurement costs	*Reducing emissions across the supply chain is important because procurement costs may increase as business partners pass on their own carbon tax burden to prices.	Medium	Work with business partners to reduce Scope 3 emissions, thereby avoiding the carbon tax burden and limiting the rise in procurement costs.	Minor/ Opportunity
	Greater impact of decarbonization efforts on corporate reputation	Enhanced corporate value	*Our decarbonization efforts are appreciated by ESG investors, which will lead to enhanced corporate value, including a higher stock price.	Major	Improve our reputation by working toward a decarbonized society, proactively respond to TCFD recommendations, and disclose information that meets the expectations of shareholders and investors.	Opportunity
	Increased frequency and scale of weather- related disasters (such as heavy rains, floods, and typhoons)	Supply chain disruption	Heightened risk of disruptions to stable supply. Risk of plant shutdown or decline in sales due to the inability to produce or ship.	Major	Strengthen inventory control to ensure stable supply in the event of a disaster. Purchase from multiple suppliers and consider alternative suppliers for raw materials currently being procured from a single supplier.	Medium
		Temporary suspension of operations at company sites	Key research centers may be flooded (total cost of flooding damage is approximately 9.4 billion yen). While some of our manufacturing bases are located near a river, they are unlikely to be flooded. However, traffic disruption may lead to temporary suspension of operations.	Major	Continue to strengthen our operating bases by conducting flooding risk evaluations in light of our BCP. Strengthen our response and countermeasures for flooding in our	Minor
		Deadstock caused by extreme weather (inundation)	Possible damage to product inventory as well as a shutdown of operations due to flooding of distribution centers and other sites.		emergency drills and establish and verify our flood disaster manual.	
4°C Scenario (world with		Increased prevalence of diseases associated with climate change	Increased demand for pharmaceuticals related to malignant melanoma, cardiovascular, respiratory, and tropical diseases, greater demands and expectations from society. Potential decrease in demand for existing products due to changes in disease structure.	Major	Secure production lines to meet growing demand and strengthen inventory control. Consider conducting research and development, along with the possibility of collaborating with external resources, to address unmet medical needs and diseases for which there is a strong social demand for treatment, including structural changes in diseases and pandemics.	Medium/ Opportunity
increasing physical	Rise in temperature	Increase in air conditioning costs	In principle, our operations are performed indoors at our head office, research and development bases, and manufacturing bases, so the cost of air conditioning is expected to increase as the temperature rises. However, the impact will be limited.	Negligible	Continue to improve energy efficiency, although the financial costs are within an absorbable range and their impact is small.	Minor
impacts)	pacts)	Increase in insurance and BCP costs	Fire insurance premiums are already on the rise due to the growing severity of wind and flood damage caused by rising temperatures. However, prospects for future premium increases are limited.	Negligible	• In Japan, flood frequency is expected to increase by a factor of 4 when the temperature rises by 4°C. However, even if insurance premiums rise several times as a result, the financial impact will be negligible.	Minor
	Water shortages	Temporary suspension of operations at corporate bases	Plants in China and Brazil are at greatest water withdrawal risk and are likely to be shut down because of flooding. Possibility of unexpected short-term drought at other locations.	Medium	Promote drought countermeasures such as installation of rainwater tanks and use of recycled water. Consider emergency supply measures, such as using other manufacturing sites and outsourcing manufacturing, in line with trends in pharmaceutical regulations in the event of a prolonged drought.	Medium
	Loss of biodiversity	Reduced productivity of products derived from natural compounds	• If production is halted due to unavailability of raw materials caused by the loss of biodiversity, the expected annual loss will be approximately 2.0 billion yen.	Medium	*Take prompt action before the risk materializes, as we have secured several years' worth of inventories for raw materials.	Minor

^{*1} The degree of impact is evaluated based on a scale of: Negligible (below 0.1 billion yen); Minor (between 0.1 to 5.0 billion yen); Medium (between 5.0 to 10.0 billion yen); Major (between 10.0 to 30.0 billion yen).

^{*2} Business risks are comprehensively assessed based on the degree of impact and frequency of occurrence.

^{*3} Calculated by multiplying carbon emissions after 2030 by the carbon price.

^{*4} Installation of water storage tanks at the Daiichi Sankyo Brazil plant (at a cost of approximately 4.5 million yen).

Climate Change and Water Risks

While we recognize that the direct impact of transition risks on our business activities will be limited, our supply chain may be impacted by future increases in costs such as carbon taxes and transition measures. As for physical risks, there are concerns that intensifying weather disasters may affect stable supply. Based on the results of this analysis, we will address transition risks by avoiding carbon taxes and other burdens to cut costs and create business opportunities through the effective use of renewable energy, introduction of decarbonization technology, and collaboration with business partners.

in addition to our ongoing energy conservation measures. With regard to physical risks, we will strengthen our BCP, including flood countermeasures, implement preventive measures to enhance supply chain stability, ensure diversity, secure supportive and alternative measures to avoid damage to the Group, and aim to sustainably increase corporate value.

The EHS Management Committee and the Board of Directors will manage the progress of important risk measures that were assessed and identified in the scenario analysis for the entire Group.

Indicators and Targets

We have set KPIs and environmental targets in the 5-Year Business Plan as indicators and targets for evaluating and managing potential business impacts and climate-related risks and opportunities for each value chain. Based on the progress of the 5-Year Business Plan, we reviewed KPIs related to climate change in FY2021. As a result, we raised Scope 1 and Scope 2 targets to the level of 1.5°C targe., For Scope 3, we updated the supplier engagement target by requesting suppliers to set their CO_2 emission reduction target to "1.5°C level," and in June 2023, we obtained certification for the "1.5°C target" from the SBT Initiative.

<For more information>

EHS Management Policy and Environmental Management Targets under the Five-Year Business Plan (FY2021-FY2025) https://www.daiichisankyo.com/sustainability/the_environment/climate_strategy/

Overview of Executive Compensation System

https://www.daiichisankyo.com/about_us/governance/compensation/

CO ₂ emissions (Scope 1+Scope 2)	2025 target: 42% reduction from FY2015 2030 target: 63% reduction from FY2015
CO ₂ emission intensity based on sales (Scope 3, Cat1)	2025 target : 15% reduction in CO_2 emission intensity based on sales compared to FY2020
Business partner engagement (Scope 3, Cat1)	2025 target : Have more than 70% or business partners set targets based on the 1.5°C
Renewable electricity utilization rate	2025 target : 60% or more 2030 target : 100%

CO₂ emissions

(Unit: t-CO₂)

	FY2021	FY2022	FY2023
Scope 1	89,405	86,006	85,245
Scope 2	96,033	23,758	23,994

Calculation Method

Scope 1: Japan's carbon dioxide and energy conversion factors are based on the Law Concerning the Promotion of the Measures to Cope with Global Warming. For countries other than Japan, the values are based on the standards of the authorities in the source regions or GHG protocols.

Scope 2: Calculated using emission factors based on electricity purchase contracts (market standard).

*Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively.

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 one plant in China and one plant in Brazil. Water withdrawal restrictions and other strengthened regulations are considered to be major risk factors.

Water use by plants located in high water risk areas (FY2023)

(Unit: Thousand m³)

Site	River basin	Water withdrawals	Water discharges	Water consumption
Shanghai Plant (China)	Yangtze River	41.4	33.8	7.6
Alphaville Plant (Brazil)	Parana	10.1	5.5	4.6
Total		51.5	39.3	12.3



Initiatives for Biodiversity Conservation

6-1 Our Basic Stance

Basic Biodiversity Principles and Action Guidelines

Basic Policy

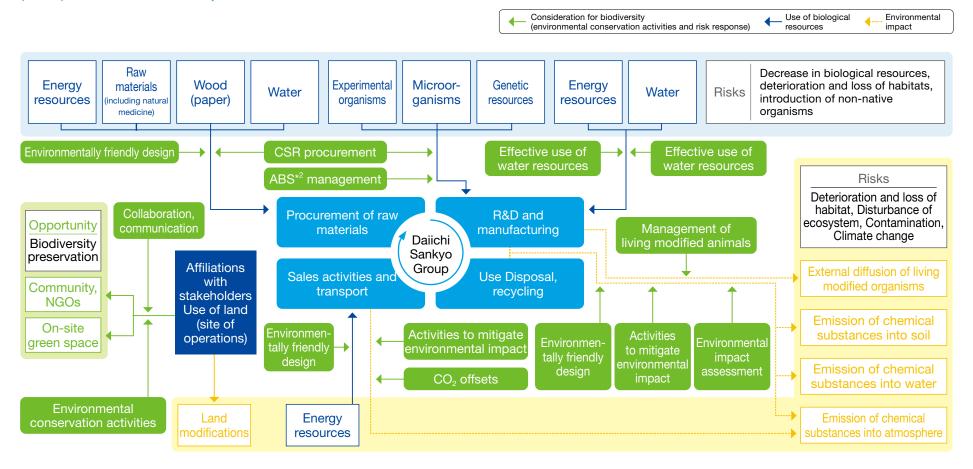
- Our Basic Environmental Management Policy states that, "Safeguarding the environment is the bedrock of all Group operational management." We have therefore acted to prevent pollution and global warming and contribute to recycling. Through our initiatives, we have used biological resources properly 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
 and water emissic
- Under take ongoing endeavors to avoid or reduce operational impacts on biodiversity, devoting particular attention to lowering the environmental impacts of air and water emissions and wastes.
- 2. Identify the biodiversity impacts of ecosystem services, using those services sustainably
- 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
- 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.
- Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization
- 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.
- Communicate with stakeholders and improve inhouse awareness
- 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.

6 Initiatives for Biodiversity Conservation

Map of Corporate Activities and Biodiversity*1



^{*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)

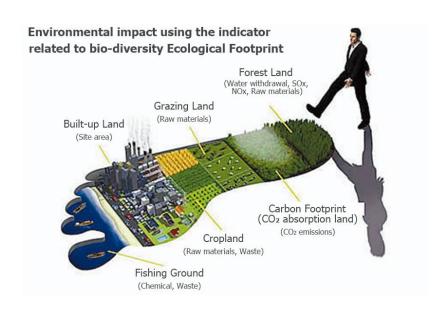
^{*2} Access to genetic resources and benefit sharing

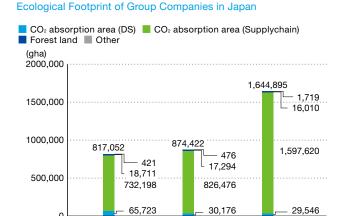
6 Initiatives for Biodiversity Conservation

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).





FY2022

FY2023

FY2021

Implementation of WET testing

In fiscal 2023, 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.

Environmental Communication

7-1 Main Efforts

Efforts	Details
Reporting of ISO 14001 Audit Results	Date: Monday, January 22, 2024 Target attendees: employees involved in the ISO 14001 internal audit Video conference: Agenda: Report on results of the ISO 14001 surveillance audit
Lecture for Employees Involved in Environmental Operations / Working Session on Combating Global Warming	Date: Monday, March 18, 2024 Target attendees: employees tasked with saving energy and promoting environmental management units and site Agenda: Part 1: Lecture for Employees Involved in Environmental Operations "Points of Amendment to the Act on the Rational Use of Energy and Practical Points for Preparing Periodic Reports" Part II: Working Session on Combating Global Warming "High-efficiency, high-temperature heat pumps for industrial use"
Environmental Art Contest	We received 1,796 applications from Group companies in and outside of Japan. Categories Images: 529 works from Group companies in Japan and 130 works from those outside Japan "Senryu" and slogans: 1,059 works from Group companies in Japan and 78 from those outside Japan. The awards ceremony was held online on Wednesday, January 17, 2024.
Environmental e-Learning 2022	Theme: "Current Status of Biodiversity and Its Impact on Our Lives" Number of participants: 9,666 (participation rate: 97.3%)
COOL CHOICE Program	Period: June 12-September 1 Number of enrollees: 2,123
One DS Climate Action Program for Internal Implementation of Decarbonization Management	Date: January 15 - 29, 2024 Number of participants: 705 people (99 teams) in Japan and 262 people (36 teams) from those outside Japan. Program Description: Participants' CO ₂ emission reductions will be visualized in real time to deepen their understanding of global warming issues and decarbonization. We donated \$1 for every 10 kg of CO ₂ emission reduction through an organization that contributes to environmental conservation.

7-2 Environment-related Awards

list for forth consecutive year	CDP Climate Change
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Site Data

FY2023 Results by Site

Group in Japan

			Daiichi Sankyo		Daiichi Sankyo Propharma	Daiich	i Sankyo Chemical Pha	ırma	Daiichi Sankyo Biotech
INPUT		Unit	Shinagawa	Kasai	Hiratsuka	Onahama	Tatebayashi	Odawara	Kitamoto
	Electricity (Non renewable energy)	MWh	0	0	72	0	0	0	0
	Electricity (Renewable energy)	MWh	26,066	16,609	47,123	26,043	6,669	13,760	42,650
	City gas	Thousand Nm ³	1,766	3,091	10,400	3,884	2,223	882	4,853
Energies	City gas	MWh	22,065	38,631	129,970	48,540	26,310	11,028	60,677
	Other non renewable energy	MWh	1	0	54	20	18	87	1,489
	Other Renewable energy	MWh	0	0	0	0	0	0	0
	Total	MWh	48,133	55,241	177,219	74,603	32,997	24,876	104,817
	Service water	Thousand m ³	111	98	333	133	41	18	231
Water	Industrial water	Thousand m ³	0	0	0	5,262	65	0	0
vvalei	Groundwater	Thousand m ³	4	0	34	0	0	1,471	0
	Total	Thousand m ³	115	98	367	5,395	106	1,489	231
OUTPUT		Unit							
	CO ₂	t-CO ₂	3,620	6,337	21,361	7,968	4,320	1,830	10,315
Air	NOx	t	3	3	19	3	10	2	1
	SOx	t	0	0	0	0	0	0	0
	Discharged water	Thousand m ³	66	34	277	5,392	78	1,878	141
Water	COD	t	0	0	0	11	0	1	1
	Generated amount	t	396	189	1,360	3,962	384	4,930	803
\\/+	Emission	t	396	189	1,103	3,962	384	1,994	803
Waste	Recycling amount	t	171	76	364	236	202	29	390
	Landfill amount	t	12	2	66	43	115	151	0

Site Data

Outside Japan

			American Regent		Daiichi Sankyo Europe	Daiichi Sankyo Altkirch	Daiichi Sankyo Pharmaceutical (Shanghai)	Daiichi Sankyo Brasil Farmaceutica	
INPUT		Unit	Shirley	Columbus	Brea	Pfaffenhofen	Altkirch	Shanghai	Alphaville
	Electricity (Non renewable energy)	MWh	9,922	19,564	1,258	0	761	7,739	40
	Electricity (Renewable energy)	MWh	0	0	0	12,321	890	559	5,772
	City and	Thousand Nm ³	1,121	2,152	243	602	610	504	(
Energies	City gas	MWh	14,648	28,111	3,177	7,869	7,969	6,584	(
	Other non renewable energy	MWh	2,008	0	11	636	45	0	1,122
	Other Renewable energy	MWh	0	0	0	9,069	0	0	211
	Total	MWh	26,577	47,675	4,445	29,896	9,665	14,881	7,149
	Service water	Thousand m ³	76	131	8	59	65	41	10
Water	Industrial water	Thousand m ³	0	0	0	0	0	0	(
vvaler	Groundwater	Thousand m ³	0	0	0	0	0	0	(
	Total	Thousand m ³	76	131	8	59	65	41	10
OUTPUT		Unit							
3011 01	CO ₂	t-CO ₂	8,205	13,608	806	1,420	1,474	5,564	212
Air	NOx	t	2	0	0	1	0	0	(
	SOx	t	0	0	0	0	0	0	(
	Discharged water	Thousand m ³	76	131	7	48	65	34	6
Water	COD	t	0	0	0	0	1	0	(
	Generated amount	t	0	0	0	0	0	0	(
10/	Emission	t	228	322	194	678	362	119	182
Waste	Recycling amount	t	72	71	60	530	345	67	131
	Landfill amount	t	156	252	134	147	0	51	50



ESG Data (Environment)

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2020	FY2021	FY2022	FY2023
Basic	Sales	Sales	Entire group	Million yen	986,446	962,516	1,044,892	1,278,478	1,601,688
Information	Employees	Employees	Entire group	Person	15,249	16,033	16,458	17,435	18,726
			Outside Japan	t-CO ₂	21,204	7,344	9,090	10,017	9,753
		Sales vehicles	In Japan	t-CO ₂	6,725	4,345	4,652	4,700	4,570
			Global	t-CO ₂	27,928	11,688	13,741	14,718	14,323
			Outside Japan	t-CO ₂	4,549	3,543	3,099	2,270	2,178
		Offices	In Japan	t-CO ₂	6,047	4,928	4,963	2,587	2,338
	Energy-originated CO ₂ emissions		Global	t-CO ₂	10,597	8,471	8,062	4,857	4,516
	Energy-originated GO ₂ emissions		Outside Japan	t-CO ₂	23,524	32,682	29,467	30,649	31,288
		Plants and R&D centers	In Japan	t-CO ₂	136,955	111,428	127,824	55,840	55,750
			Global	t-CO ₂	160,480	144,111	157,291	86,489	87,038
			Outside Japan	t-CO ₂	49,277	43,570	41,655	42,937	43,219
		Total	In Japan	t-CO ₂	149,728	120,701	137,439	63,127	62,658
			Global	t-CO ₂	199,005	164,270	179,094	106,064	105,877
	Non-energy oriented CO ₂ emissions	Incinerator	Global	t-CO ₂	3,922	9,835	6,344	3,700	3,362
	Total of CO ₂ emissions	Scope 1+ 2	Global	t-CO ₂	202,927	174,105	185,439	109,764	109,239
		Scope 1+2+3	Global	t-CO ₂	-	1,842,394	2,128,195	2,315,743	4,517,975
	CO ₂ emissions by Greenhouse Gas Protocol Scope1, Scope2	Scope 1	Outside Japan	t-CO ₂	29,756	18,148	20,659	21,617	21,398
CO ₂			In Japan	t-CO ₂	75,236	69,103	68,747	64,388	63,848
002			Global	t-CO ₂	104,992	87,252	89,405	86,006	85,245
		Scope 2	Outside Japan	t-CO ₂	19,522	25,421	20,997	21,320	21,821
			In Japan	t-CO ₂	78,414	61,432	75,036	2,439	2,173
			Global	t-CO ₂	97,936	86,853	96,033	23,758	23,994
		Category 1: Purchased goods and services	Global	t-CO ₂	-	1,483,630	1,687,965	1,892,504	3,887,790
		Category 2: Capital goods	Global	t-CO ₂	-	75,261	148,989	161,326	220,563
		Category 3: Activities related to fuel and energy (not included in Scopes 1 or 2)	Global	t-CO ₂	-	18,950	20,133	24,051	28,217
		Category 4: Upstream transportation and distribution	Global	t-CO ₂	-	25,778	29,281	47,270	49,275
		Category 5: Waste generated in operations	Global	t-CO ₂	_	11,055	8,147	10,517	10,800
	CO ₂ emissions by Greenhouse Gas Protocol Scope3	Category 6: Business travel	Global	t-CO ₂	_	9,343	13,329	34,473	44,043
	Scopes	Category 7: Employee commuting	Global	t-CO ₂	-	10,691	9,546	10,624	4,926
		Category 9: Downstream transportation and distribution	Global	t-CO ₂	-	17,706	13,817	14,163	145,857
		Category 12: End-of-life treatment of sold products	Global	t-CO ₂	-	2,367	2,501	2,747	4,072
		Category 13: Downstream leased assets	Global	t-CO ₂	-	2,913	2,913	2,820	2,248
		Category 15: Invests	Global	t-CO ₂	-	10,595	6,134	5,485	10,945
		Scope3 total	Global	t-CO ₂	-	1,668,290	1,942,756	2,205,979	4,408,736

9 ESG Data (Environment)

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2020	FY2021	FY2022	FY2023
		Electricity (Non renewable energy)	Global	MWh	203,370	196,642	207,846	50,792	51,260
		Electricity (Renewable energy)	Global	MWh	10,087	16,505	21,596	179,962	205,423
		011	Global	Thousand m ³	29,263	29,260	30,621	29,615	32,320
		City gas	Global	MWh	367,617	365,683	382,690	370,124	406,901
		LPG	Global	t	60	52	60	22	8
		LPG	Global	MWh	832	736	853	315	120
		Light oil	Global	KL	77	228	150	549	59
		Light oil	Global	MWh	812	2,390	1,569	5,750	624
		LNG	Global	KL	0	0	0	40	69
		LING	Global	MWh	0	0	0	610	1,044
Energy	Energy consumption	Kerosene	Global	KL	208	228	236	196	144
Lifergy			Global	MWh	2,110	2,323	2,405	1,997	1,460
		Gasoline	Global	KL	10,813	3,644	4,049	4,433	4,298
			Global	MWh	100,346	35,024	38,919	42,608	39,885
		Gas oil for diesel engines	Global	KL	1,427	1,250	1,570	1,521	1,491
		Gas on for dieser engines	Global	MWh	15,071	13,092	16,435	15,929	15,746
		Other non renewable energy	Global	MWh	3	12	37	6	2
		Fuels (Renewable energy)	Global	MWh	286	2,235	4,210	6,010	8,305
		Other Renewable energy	Global	MWh	1,491	6,296	6,811	6,540	6,887
		Total	Global	MWh	702,025	640,938	683,371	680,643	737,657
		Renewable electricity utilization rate	Global		4.7%	7.7%	9.4%	78.0%	80.0%
	Fluorocarbons	Amount of leakage	In Japan	t-CO ₂	977	1,056	260	1,014	1,081
		Withdrawal: Total municipal water supplies	Plants and research facilities (global)	Thousand m ³	822	1,299	1,353	1,323	1,355
		Withdrawal: Fresh surface water (lakes, rivers, etc.)	Plants and research facilities (global)	Thousand m ³	7,735	5,370	5,305	5,315	5,327
		Withdrawal: Fresh groundwater	Plants and research facilities (global)	Thousand m ³	1,754	1,619	1,731	1,623	1,509
	Water use by plants and research facilities	Withdrawal: Total	Plants and research facilities (global)	Thousand m ³	10,310	8,288	8,390	8,261	8,191
	(global)	Discharge: Public water	Plants and research facilities (global)	Thousand m ³	5,045	5,288	7,642	7,378	7,490
		Discharge: Sewage	Plants and research facilities (global)	Thousand m ³	4,866	643	744	711	742
Water		Discharge: Total	Plants and research facilities (global)	Thousand m ³	9,912	8,033	8,386	8,090	8,232
		Water consumption	Plants and research facilities (global)	Thousand m ³	398	255	3	171	-41
		Withdrawal	Plants and research facilities (global)	Thousand m ³	50	53	49	53	52
	Water use by plants located in high water risk areas	Discharge	Plants and research facilities (global)	Thousand m ³	46	46	36	43	39
		Water consumption	Plants and research facilities (global)	Thousand m ³	4	7	12	11	12
	Water pollution	COD	Plants and research facilities that discharge wastewater into public waters (global)	t	14	14	16	14	14.9

SSG Data (Environment)

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2020	FY2021	FY2022	FY2023
	Waste desposed (outsourced disposal)	Total Waste disposed (including hazardous waste)	Plants and research facilities (global)	t	-	9,979	9,970	12,189	10,909
		disposed	Plants and research facilities (global)	t	-	6,701	5,622	4,995	5,435
		recycled/reused	Plants and research facilities (global)	t	-	6,289	3,851	2,561	2,744
	Waste	disposed (except total Waste recycled/reused)	Plants and research facilities (global)	t	-	412	1,771	2,434	2,691
		incinerated without energy recovery	Plants and research facilities (global)	t	-	340	1,637	1,955	2,302
Waste		landfilled	Plants and research facilities (global)	t	-	664	229	1,172	1,179
		disposed	Plants and research facilities (global)	t	-	5,606	4,348	7,194	5,474
	hazardous waste	incinerated with energy recovery	Plants and research facilities (global)	t	-	5,229	3,952	6,880	5,102
	nazardous waste	incinerated	Plants and research facilities (global)	t	-	377	396	314	372
		landfilled	Plants and research facilities (global)	t	-	0	0	0	0
		Waste plastic recycling rate	Plants and research facilities (global)	%	-	76.1	59.3	69.3	72.4
	Air pollutant emissions	SOx emissions	Plants and research facilities (global)	t	1	2	1	2	0.8
		NOx emissions	Plants and research facilities (global)	t	51	49	50	53	45.6
	PRTR substances	Amounts handled	Plants and research facilities in Japan	t	3,686	2,063	1,569	2,074	1,340
		Amounts discharged and transferred (Air)	Plants and research facilities in Japan	t	83	3	2	1	3
		Amounts discharged and transferred (Water)	Plants and research facilities in Japan	t	0	0	0	0	0
Air pollution		Amounts discharged and transferred (Sewers)	Plants and research facilities in Japan	t	120	0	0	0	0
		Amounts discharged and transferred (Water + sewers)	Plants and research facilities in Japan	t	120	0	0	0	0
		Amounts discharged and transferred (Waste)	Plants and research facilities in Japan	t	667	1,861	1,562	2,072	1,038
	VOC 100 VOCs specified by Japan's Ministry of the Environment	Amount emitted into the atmosphere	Plants and research facilities in Japan	t	26	1	1	1	0.8
		Glass bottle (colorless)	In Japan	t	158	203	172	515	142
		Glass bottle (brown)	In Japan	t	386	252	200	472	128
Containers and	Containers and packaging collected and	PET plastic bottles	In Japan	t	0	0	1	1	0.1
packaging	recycled (obligatory recycling amount)	Plastic containers and packaging	In Japan	t	1,436	1,265	1,205	1,903	1,136
		Paper containers and packaging	In Japan	t	59	39	31	14	25
		Total	In Japan	t	2,039	1,758	1,609	2,906	1,432

9 ESG Data (Environment)

Goal Reference	Classification	Details	Scope	Unit	FY2015	FY2020	FY2021	FY2022	FY2023
	CO ₂ carbon intensity	CO ₂ emissions/Group sales	Global	t-CO ₂ / million yen	0	0	0	0	0.068
	CO ₂ environmental efficiency	Group sales / CO ₂ emissions	Global	million yen/ t-CO ₂	5	6	6	12	14.66
	CO ₂ environmental efficiency index	Relative to the value of 100 for the base yaer	Global	_	100	114	116	240	302
	Waste generation intensity	Waste generated/Group sales	Plants and research facilities (global)	t/million yen	-	0	0	0	0.007
	Waste generation efficiency	Group sales/Waste generated	Plants and research facilities (global)	million yen/t	-	96	105	105	146.8
Intensity	Waste generation efficiency index	Relative to the value of 100 for the base yaer	Plants and research facilities (global)	-	-	100	109	109	152
	Water use intensity	Water consumption/group sales	Plants and research facilities (global)	Thousand m ³ / million yen	-	0	0	0	0.00511
	Water use efficiency	Group sales/Water consumption	Plants and research facilities (global)	million yen/ Thousand m ³	_	116	125	155	195.5
	Water use efficiency index	Relative to the value of 100 for the base yaer	Plants and research facilities (global)	_	_	100	107	133	168
	CO ₂ carbon intensity(Employees)	CO ₂ emissions/Employees	Global	t-CO ₂ / person	13	11	11	6	5.8
			In Japan	sites	5	5	5	5	5
Management System	Status of acquisition of ISO14001 certification	Number of sites certified	Outside Japan	sites	1	4	4	4	4
Cyclom	Continuation		Global	sites	6	9	9	9	9
Compliance	Environmental laws and regulations	Number of fines of \$10,000 or more for violations	Global	number of fines	0	0	0	0	0

^{*}Each environmental performance data reflects the impact of past acquisitions and divestitures of affiliates retroactively, except sales and employee numbers.



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