Daiichi-Sankyo

Daiichi-Sankyo Group Environmental Data Book 2014

Position of this book

The information of this book complements Daiichi Sankyo Group Value Report 2014 and the environmental data on our website. Please see them in addition.

Contents

1 Environmental Management System

1-1 Promoting Environmental Management

Third Mid-term Environmental Management Targets (Fiscal 2013–2017) (Group in Japan/Entire Group)

Policy	Targets for FY2017	
Use energy efficiently and reduce carbon dioxide emissions in all operations to help prevent global warming	Group in Japan	• CO_2 emissions: 12% reduction compared to fiscal 2007 • CO_2 emissions per basic unit of net sales: 5% improvement from fiscal 2012 • Promote the recognition of supply chain's CO_2 emission volume
	Entire group	• CO_2 emissions per basic unit of net sales: maintenance of the level in fiscal 2012 • CO_2 emissions: controlled less than 25.0% increment compared to fiscal 2007
Leverage the 3Rs (reduce, reuse, and recycle) to save energy and reduce waste reduction, helping to build a recycling-oriented society	Group in Japan	• Maintenance of zero emissions (annual final disposal rate: less than 1%) • Amount of office paper consumed: 30% reduction compared to fiscal 2007 • Office paper consumed per basic unit of net sales: 20% improvement from fiscal 2012
	Entire group	• Waste generated per basic unit of net sales: 5% or more improvement from fiscal 2012 • Promote waste reduction and recycling
Lower environmental risks by complying strictly with environmental regulations, preventing pollution, and properly managing chemical substances, thus helping to decrease environmental risks	Group in Japan	• PRTR substances discharged to air and water per basic unit of net sales: 5% improvement from fiscal 2012
	Entire group	• Thorough compliance with the law through self-assessment such as environmental audit, the recognition and evaluation of environmental risks and the implementation of countermeasures against such risks • Thorough monitoring through the visualization of emission volume and basic units
Undertake operations and green procurement that reflects a commitment to biodiversity and ecosystem services, therefore contributing to social sustainability	Entire group	• Promote environmentally-friendly material procurement and intensive environment conservation activities created in cooperation with our business partners • Promote social contribution measures which contribute to biodiversity conservation • Promote biodiversity-conscious business activities based on the basic biodiversity principles and action guidelines • Water use per basic unit of net sales: 5% improvement from fiscal 2012
Continue to improve our environmental management systems and engage in environmental communications with stakeholders	Entire group	• Maintain and improve the number of employees who participate in environmental awareness-raising activities and environmental education courses • Strengthen communication and collaboration with business partners, regional communities, and private nonprofit organizations

Targets and Results for Fiscal 2013/Targets for Fiscal 2014

Policy	Index		Unit	Targets for FY2012	Results for FY2013	Targets for FY2014
Use energy efficiently and reduce carbon dioxide emissions in all operations to help prevent global warming	Group in Japan	CO_2 emissions	t-CO_2	187,100	171,554	174,000
		CO_2 emissions per basic unit of net sales	t-CO_2 / million yen	0.330	0.309	0.306
		Promote the recognition of supply chain's CO_2 emission volume	t-CO_2	Results for fiscal 2012 694,796	679,077	679,000
	Entire group	CO_2 emissions	t-CO_2	571,136	537,404	425,000
		CO_2 emissions per basic unit of net sales	t-CO_2 / million yen	0.523	0.499	0.523
Leverage the 3Rs (reduce, reuse, and recycle) to save energy and reduce waste reduction, helping to build a recycling-oriented society	Group in Japan	Zero emissions (annual final disposal rate: less than 1%)	%	Maintenance of less than 1%	0.46	Maintenance of less than 1%
		Amount of office paper consumed	10,000 pieces	6,900	6,759	6,600
		Office paper consumed per basic unit of net sales	10,000 pieces / billion yen	12.1	12.2	11.9
	Entire group	Waste generated per basic unit of net sales	t / million yen	0.614	0.640	0.390
Lower environmental risks by complying strictly with environmental regulations, preventing pollution, and properly managing chemical substances, thus helping to decrease environmental risks	Group in Japan	PRTR substances discharged to air and water per basic unit of net sales	t / million yen	0.218	0.204	0.202
Undertake operations and green procurement that reflects a commitment to biodiversity and ecosystem services, therefore contributing to social sustainability	Group in Japan	Water used	1,000 m³	13,535	13,460	13,460
		Water use per basic unit of net sales	1,000 m³/ billion yen	25.4	24.3	24.1
	Entire group	Water used	1,000 m³	16,199	15,617	14,828
		Water use per basic unit of net sales	1,000 m³/ billion yen	15.0	14.5	16.1

*Sales of entire group used to calculate the goal per basic unit for fiscal 2014 do not include the sales of Ranbaxy group.

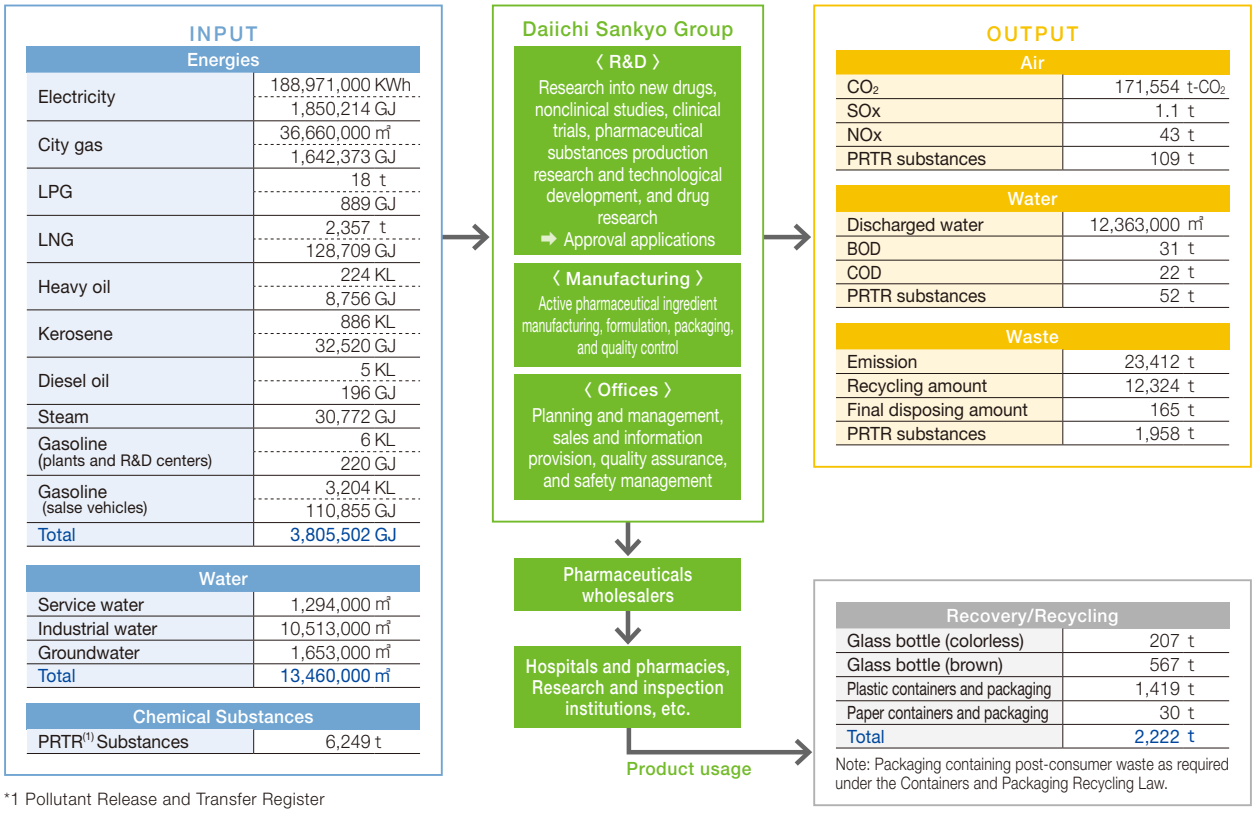
1-2 ISO 14001 Certification Progress

List of ISO 14001 Certified Plants (As of the End of March 2014)

Company	Site
Daiichi Sankyo Propharma Co., Ltd. *1 Includes Daiichi Sankyo Research Center *2 Includes Daiichi Sankyo Research Center and Daiichi Sankyo Happiness Co., Ltd *3 Includes Daiichi Sankyo Logistics Co., Ltd.	• Akita Plant • Onahama Plant • Tatebayashi Plant*1 • Hiratsuka Plant*2 • Takatsuki Plant*3
Daiichi Sankyo Chemical Pharma Co., Ltd.	• Hiratsuka Office and Plant • Odawara Plant
Daiichi Sankyo Brasil Farmacêutica	• Alphaville Plant
Ranbaxy Laboratories Limited	• Toansa Plant • Dewas Plant • Mohali Plant • Malanpur Plant • Paonta Sahib Plant • Baddi Plant • Solrex Plant

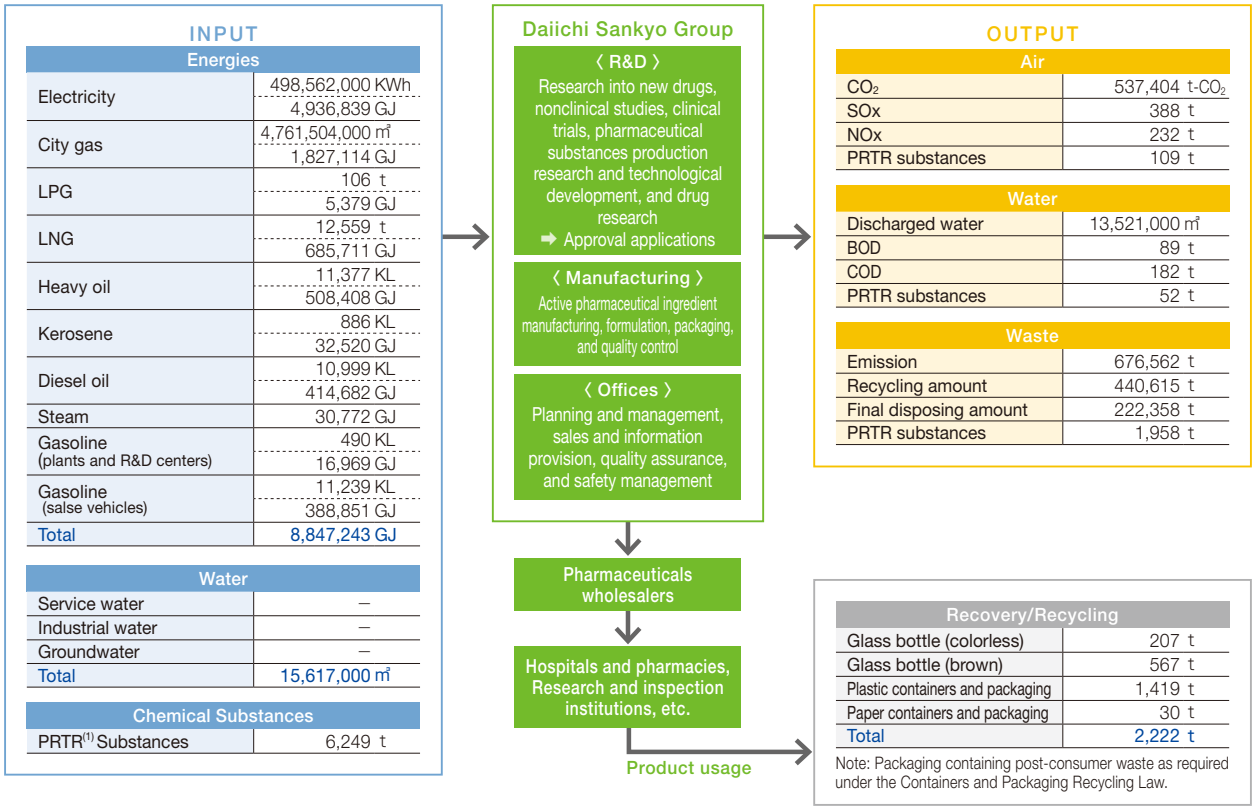
1-3 Business Activity and Environmental Performance

Business Activity and Input/Output (Group in Japan)



*1 Pollutant Release and Transfer Register

Business Activity and Input/Output (Entire Group)



Note: As for the PRTR substances and Recovery/Recycling, the data of the group in Japan are shown.

1-4 Environment Conservation Cost (Group in Japan)

Environment Conservation Cost

Unit: million yen

Environmental Item	FY2012		FY2013	
	Investment	Cost	Investment	Cost
Pollution Prevention Cost	98	353	235	451
Global Environmental Conservation Cost	1,075	333	453	230
Resource Circulation Cost	89	1,057	0	621
Upstream / Downstream Costs	0	56	0	49
Administration Cost	32	846	2	729
R&D Cost	0	30	0	31
Social Activity Cost	0	4	0	4
Environmental Remediation Cost	25	469	0	359
Total	1,320	3,147	691	2,475

Not includes depreciation

Economic Benefit

Unit: million yen

	FY2012	FY2013
Value of sales of valuables	98	353

Environmental Conservation Benefit

	Unit	FY2012	FY2013	Increase/Decrease Compared to the Previous Year	Increase/Decrease Rate Compared to the Previous Year
Total volume of energy consumed	GJ	3,659,268	3,805,502	146,234	4.0%
Water used	1,000m³	13,535	13,460	△ 75	△ 0.6%
PRTR substances used	t	6,087	6,249	162	2.7%
CO_2 emission	t-CO_2	164,914	171,554	6,640	4.0%
Total volume of waste	t	39,421	35,925	△ 3,496	△ 8.9%
Waste emissions (= outsourced treating volume)	t	26,824	23,412	△ 3,412	△ 12.7%
Volume of recycled waste	t	12,894	12,324	△ 570	△ 4.4%
Final disposing amount of waste	t	158	165	7	4.4%
Recycling rate	%	48.1	52.6	–	9.4%
Recovered or recycled volume of containers and packages	t	2,380	2,222	△ 158	△ 6.6%
BOD	t	42	31	△ 11	△ 26.2%
SOx emissions	t	0.6	1.1	0.5	83.3%
NOx emissions	t	35	43	8	22.9%

1-5 Environmental Efficiency (Group in Japan)

Environmental Efficiency Index	Index Definition	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
CO_2	Sales/CO_2 emissions	100	91	97	107	107	112	113
Waste	Sales/Total waste emissions	100	87	93	109	90	97	112
Water	Sales/Water consumption	100	91	89	100	93	99	105
SOx	Sales/SOx emissions	100	222	204	229	851	1,376	788
NOx	Sales/NOx emissions	100	339	403	415	361	512	437
BOD	Sales/BOD	100	65	67	69	79	81	115
COD	Sales/COD	100	83	90	119	161	166	182

Note: The figures as of fisical 2005 have been set to 100. Higher index shows higher level of efficiency.

2 Initiatives to Prevent Global Warming

2-1 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	Large offices in Tokyo are required the reduction of total emission of greenhouse gases under the Tokyo Cap and Trade Program. In the case of unachievement, it may cause the use of emission credits outside the Tokyo area, or the use of Green Electricity Certificates.	Increased operational cost
	Emission reporting obligations	The requirements for the status reports Green Housing Gas Emissions and mid-term plan may be increased by the revision of laws relevant to global warming prevention.	Increased operational cost
	International agreements	We may be obligated to local regulations accompanied with the international framework of reduction after 2020 based on the Durban Agreements	Increased operational cost
Risks that are driven by change in physical climate parameters	Change in temperature extremes	It may affect the thermal management of our research and productive facilities.	Increased operational cost
	Tropical cyclones (hurricanes and typhoons)	Increasing occurrence of localized torrential rainfall and large-scale typhoons may affect our facilities and equipment directly. It may also interrupt our supply chains.	Increased operational cost
Risks that are driven by changes in other climate-related developments	Reputation	Our reputation may be affected in rankings, etc. by corporate responsiveness to climate change.	Reduced stock price (market valuation)
	Increasing humanitarian demands	We implement humanitarian supports, such as improving an access to medicine in India and Africa. There is the risk of increasing the expense accompanying quantitative and qualitative alterations.	Increased operational cost

2-2 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	The hedge of energy risk and the cost reduction are expected by implementing various measures for CO_2 and energy reduction.	Reduced operational costs
	Cap and trade schemes	The increase of allowances is expected by the adequate correspondences to Cap and trade schemes. We also expect to avoid purchasing emission credits by the achievement of the obligated reduction target.	Reduced operational costs
Opportunity that are driven by changes in physical climate parameters	Induced changes in natural resources	In the case of increasing tropical diseases, we expect the sales increase by the development and sales of the drugs for such diseases.	New products/ business services
Opportunity that are driven by changes in other climate-related developments	Reputation	Since the action for improvement of climate change is evaluated by the stakeholder, our reputation may be affected in rating of responsiveness to climate change and so on.	Increased stock price (market valuation)

2-3 Total CO_2 Emissions

Total CO_2 Emissions by Region (Scope 1 and Scope 2)

($t\text{-}CO_2$)

Region	Scope 1	Scope 2	Total
Group in Japan	100,166	71,388	171,554
Group outside of Japan	110,158	255,691	365,850
United States of America	26,538	27,290	53,828
India	64,379	202,830	267,209
Europe	14,270	9,990	24,260
Africa	1,475	3,354	4,829
Asia (except for India)	2,821	11,873	14,694
Latin America	676	354	1,029
Entire Group	210,324	327,079	537,404

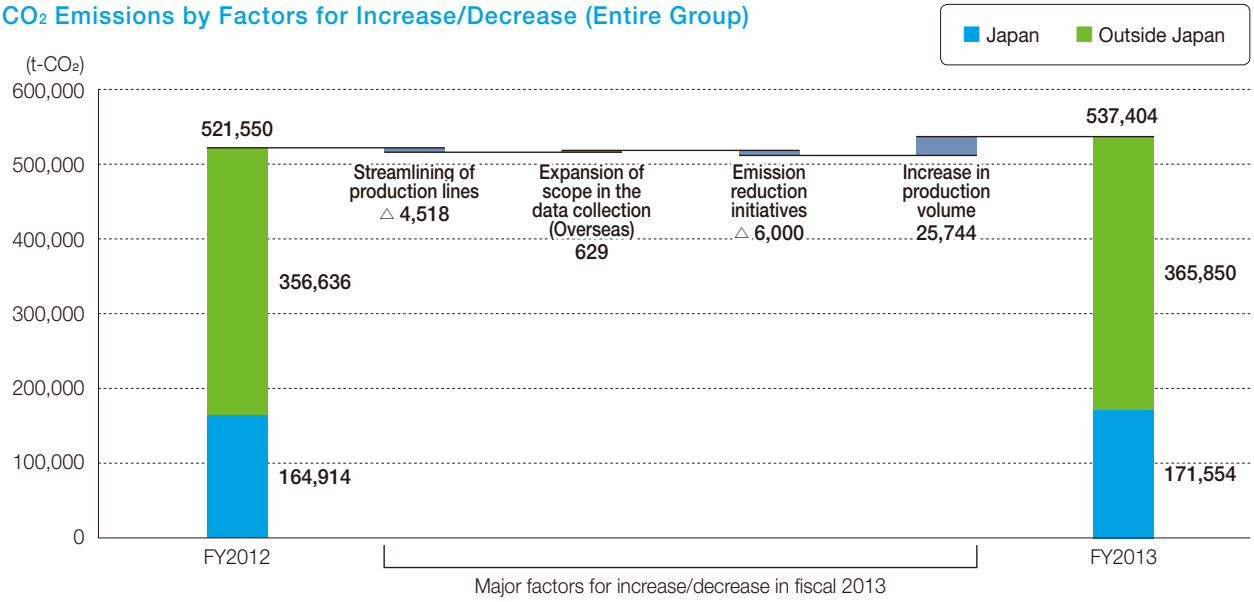
Total CO_2 Emissions by Activity (Scope 1 and Scope 2)

($t\text{-}CO_2$)

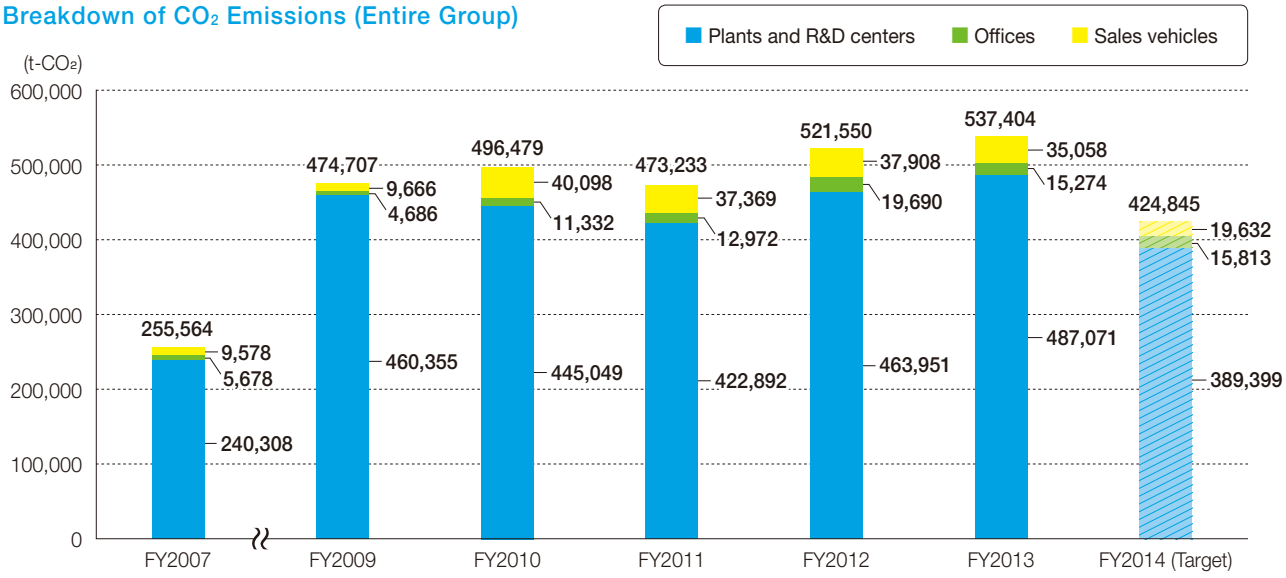
Activity	Scope 1	Scope 2	Total
Plants and R&D centers	174,728	312,344	487,071
Offices	539	14,735	15,274
Sales vehicles	35,058	0	35,058
Total	210,324	327,079	537,404

2-4 CO_2 Reduction Targets and Achivements

CO_2 Emissions by Factors for Increase/Decrease (Entire Group)



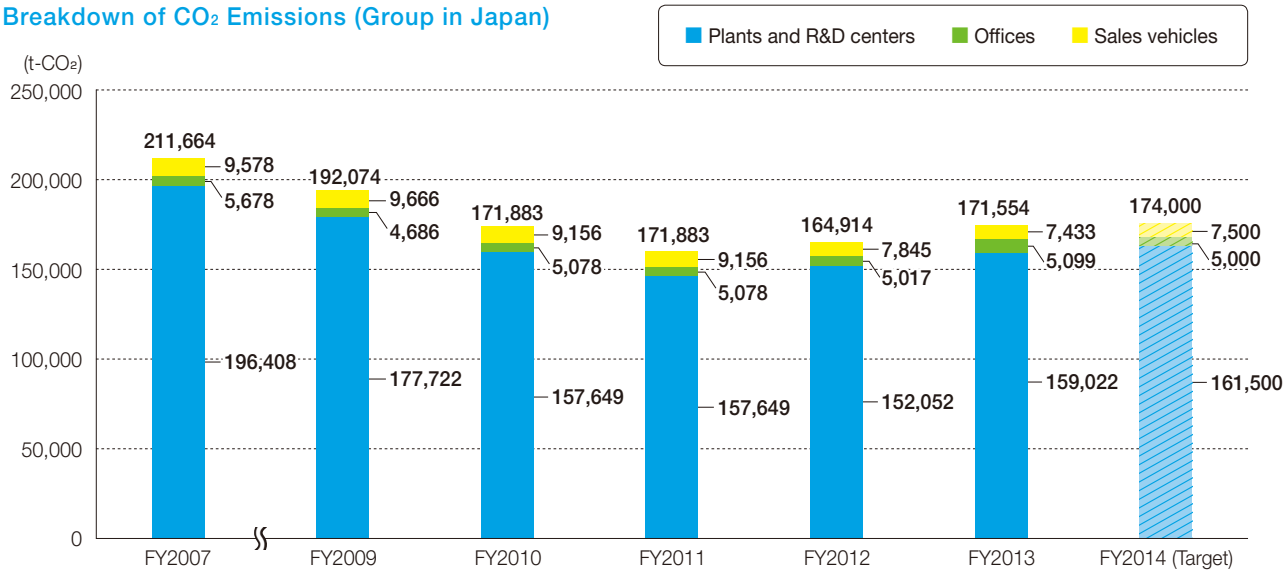
Breakdown of CO_2 Emissions (Entire Group)



※Includes Ranbaxy Laboratories Limited from fiscal 2009

2 Initiatives to Prevent Global Warming

Breakdown of CO_2 Emissions (Group in Japan)



CO_2 Reduction Mid-term Targets and Achievements of fiscal 2013

(t-CO_2)

	Base Year	Base Year Emissions	Rate of FY2017 from Base Year	Achievements of FY2013	Change from Base Year
Group in Japan	FY2007	211,664	△12.0%	171,554	△18.9%
Entire group	FY2012	521,550	25.0%	537,404	3.0%

(Reference) CO_2 Emissions by Scopes in Base year

(t-CO_2)

	Base Year	Scope 1	Scope 2
Group in Japan	FY2007	128,949	82,715
Entire group	FY2012	217,257	304,293

CO_2 Intensity Mid-term Target and Achievements of fiscal 2013

	Base Year	Base Year Intensity	Rate of FY2017 from Base Year	Achievements of FY2013	Change from Base Year
Group in Japan	FY2012	0.312	△5.0%	0.309	△1.0%
Entire group	FY2012	0.523	0%	0.499	△4.5%

Definition: CO_2 emissions per net sales (t-CO_2/mil. JPY)

Other CO_2 Intensity Achievements of fiscal 2013 (Entire Group)

		Achievements of FY2013	Increase/Decrease Rate Compared to the Previous Year
CO_2 emissions per sales	(t-CO_2/mil. JPY)	0.499	△4.5%
CO_2 emissions per employee	(t-CO_2/person)	16.4	1.3%
CO_2 emissions per production values	(t-CO_2/mil. JPY)	0.628	△18.2%

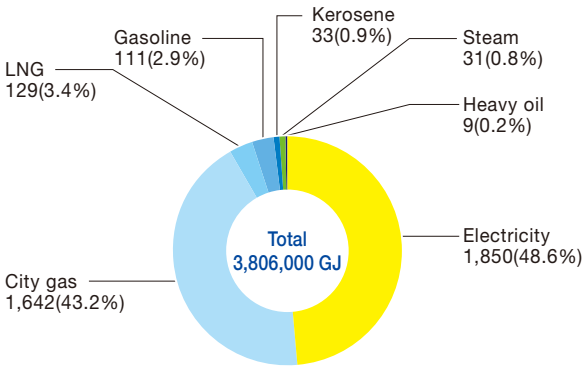
CO_2 intensity mid-term target and achievements of fiscal 2013

(Reference) Usage of hybrid cars (Group in Japan)

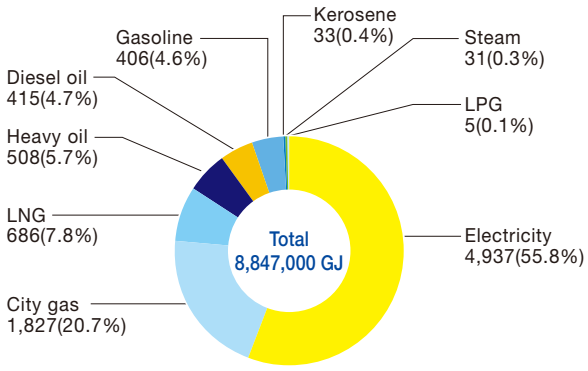
	FY2011	FY2012	FY2013
Number of hybrid cars	1,588	1,800	1,926
Introduction rate (%)	59.7	69.6	74.5

2-5 Breakdown of Energy Use

Breakdown of Energy Use (Group in Japan)



Breakdown of Energy Use (Entire Group)



2-6 Using Renewable Energy

Breakdown of Renewable Energy

Type of Renewable Energy	Amount of Energy (MWh)	Remarks
Photovoltaic power generation	36	It is the amount of photovoltaic facilities installed at plants and R&D centers. It has not included as an amount of energy.
Green electricity	1000	The renewable energy (Electricity originated by Biomass) issued by Japan Natural Energy Company Ltd. was purchased and the bond is received. It has not deducted from Scope 2.

2-7 Emissions Trading, etc.

Carbon Offset

Offset Amount	Project Type	Project ID	Certification Standards
30t-CO_2	Biomass Energy	Project reference No. 0298: 4.5 MW Biomass (low density Crop Residues) based Power Generation unit of Malavalli Power Plant Pvt Ltd.	Gold Standard CER

2-8 Supply Chain GHG Emission (Scope 3) (Group in Japan)

(t-CO_2)

Sources	FY2012	FY2013	Increase/Decrease Rate Compared to the Previous Year (%)	Emissions Calculation Methodology	Explanation
Purchased goods and services	485,096	532,469	9.8	It computed based on the purchased amount of raw materials, packaging, products and CO_2 emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan.
Capital goods	148,690	88,807	△40.3	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)	7,033	7,117	1.2	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	10,496	11,687	11.3	It computed based on the freight ton-km or distance of transportation from the distribution centres to medical-supplies wholesalers and CO_2 emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan.
Waste generated in operations	17,078	11,213	△ 34.3	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	1,008	997	△1.1	It computed based on the number of employee and CO_2 emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	Geographic scope is Japan. The emissions of the business trip for sales vehicles are counted in Scope 1.
Employee commuting	2,726	2,916	7.0	It was calculated adding the following emissions. ·Emissions computed based on the commuting expense of public transportation which employees use and CO_2 emission coefficients of the guidelines* issued by Ministry of Environment and Ministry of Economy, Trade and Industry	Geographic scops is Japan.
Upstream leased assets	Not calculated		—	—	It is irrelevant, because all emissions form the leased assets are counted in Scopes 1 and 2.
Investments	Not calculated		—	—	—
Downstream transportation and distribution	12,732	13,920	9.3	The emission intensity unit of this industry was guessed from the sales and CO_2 emissions indicated in the CSR reports of the main medical-supplies wholesalers in Japan. It computed based on the sales percentage of our company treated the sales of the whole medical-supplies wholesale.	Geographic scope is Japan.
Processing of sold products	Not calculated		—	—	—
Use of sold products	Not calculated		—	—	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	2,596	2,853	9.9	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.
Downstream leased assets	7,341	7,098	△3.3	It computed based on the floor area according to the purpose of using the rented assets and the following data issued by Ministry of Environment and Ministry of Economy, Trade and Industry.	It is measured for the leased assets in Japan.
Franchises	Not calculated		—	—	Since we have no franchise, it is irrelevant.

*Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver2.0), Policy on Emissions Unit Values for Accounting of Greenhouse Gas Emissions, etc., by Organizations Throughout the Supply Chain (Ver. 2.0), and the Database of emissions unit values

2-11 Supplemental Information

❶ Conversion factors and their sources

Conversion factors used in this data book are as follows.

CO_2 conversion factors except electricity and energy conversion factors are used fixed figures determined internally in reference to ones of Act on Promotion of Global Warming Countermeasures.

CO_2 conversion factors of electricity is used 0.368kg-CO_2/kWh which is the factor of Tokyo electric power company published by Ministry of the Environment on March 23, 2007. This figure is also actual emission factor described on the notice issued by Environment & Safety Committee, Japan Pharmaceutical Manufacturers Association in 2007.

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.

Energy Source		Conversion Factor			
		Conversion Factor		CO_2 Emission	
Electricity	General electricity utility (day time)	9.97	GJ/1,000 kWh	0.368	t-CO_2/1,000 kWh
	General electricity utility (night time)	9.28	GJ/1,000 kWh	0.368	t-CO_2/1,000 kWh
	Other	9.76	GJ/1,000 kWh	0.368	t-CO_2/1,000 kWh
A-type heavy oil		39.1	GJ/kL	2.71	t-CO_2/kL
Light 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 ㎥	2.277	t-CO_2/1,000 ㎥
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		1.00	GJ/GJ	0.060	t-CO_2/GJ

The following is CO_2 emissions of group in Japan in fisical 2013 based on the adjusted CO_2 conversion factors of each general electricity utility.

(Note) CO_2 emissions of group in Japan in fisical 2013 (based on the adjusted CO_2 conversion factors of each general electricity utility published by Ministry of the Environment on December 25, 2013)

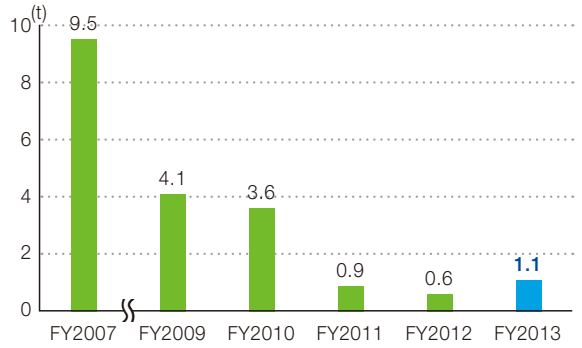
(t-CO_2)

Activity	Scope 1	Scope 2	Total
Plants and R&D centers	92,465	76,033	168,498
Offices	268	6,030	6,298
Sales vehicles	7,433	0	7,433
Total	100,166	82,062	182,229

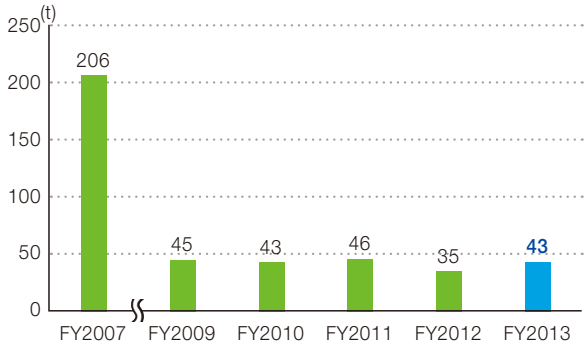
3 Reduction of Environmental Risks

3-1 Preventing Air and Water Contamination

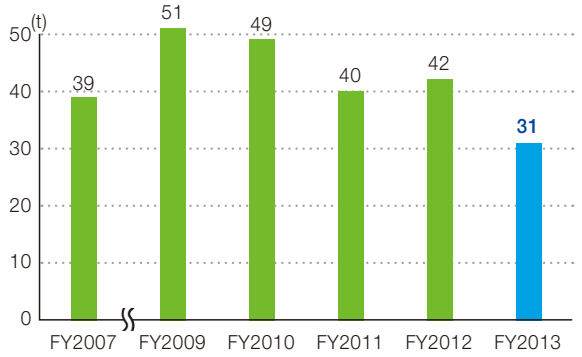
SOx Emissions (Group in Japan)



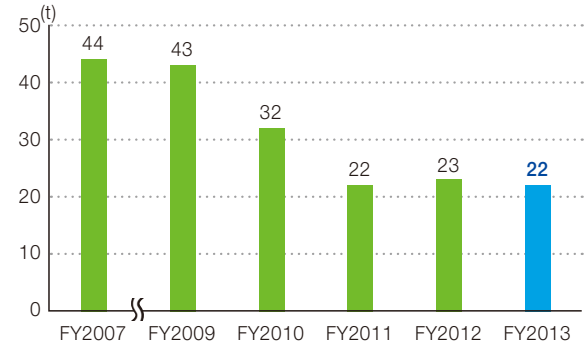
NOx Emissions (Group in Japan)



BOD (Group in Japan)



COD (Group in Japan)



Emissions of Entire Group

(t)

	SOx	NOx	BOD	COD
FY2011	598	53	68	83
FY2012	198	354	101	164
FY2013	388	232	89	182

3-2 Preventing Soil and Groundwater Contamination and its Countermeasures

Progress of Measures for Soil Purification

Office	Overview
Shinagawa R&D Center (Shinagawa-ku, Tokyo) Kasai R&D Center (Edogawa-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, Osaka)	We continue to perform groundwater monitoring and to take countermeasures after purification work of soil contaminated with VOC*1 and arsenic in 2004.
Former site of Fukuroi R&D Center (Fukuroi, Shizuoka)	We perform spontaneous investigation on discussion with governmental offices since the closing of the office in September, 2013.
Former Kyushu Sankyo Kumamoto Plant (Uto, Kumamoto)	We perform spontaneous investigation on discussion with governmental offices considering effective use of the landsite.

(1) Volatile Organic Compounds

3-3 Usage Reduction and Emission/Transfer Control of Chemical Substances

Emission/Transfer of PRTR Substances (Group in Japan)

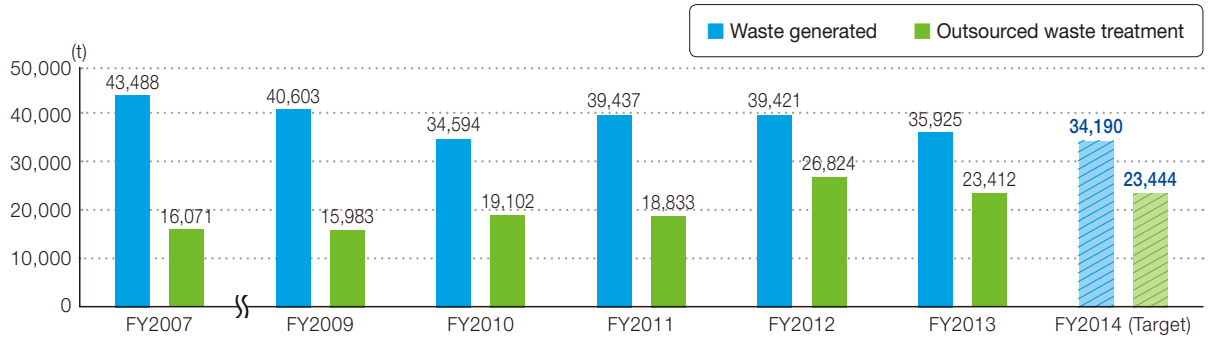
(Unit: metric ton; mg-TEQ for dioxins)

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)
sodium azide	59.6	0.0	0.0	0.0	0.0	9.8
acetonitrile	1,597.5	16.3	0.0	47.6	140.5	913.5
ethylenediamine	33.9	0.0	0.0	0.0	0.0	0.0
ferric chloride	30.9	0.0	0.0	0.0	0.0	0.0
xylene	5.9	0.0	0.0	0.0	0.0	1.0
chloroform	39.6	1.8	0.0	0.0	0.0	37.8
chloromethane	98.8	5.2	0.0	0.0	0.0	0.0
dichloromethane	14.6	4.3	0.0	0.0	0.0	10.2
N,N-dimethylacetamide	262.3	0.0	0.0	0.0	2.5	200.7
N,N-dimethylformamide	507.3	0.0	0.0	0.0	72.7	142.6
triethylamine	10.2	0.0	0.0	0.0	0.0	2.1
1,2,4-trimethylbenzene	5.7	0.0	0.0	0.0	0.0	0.0
toluene	3,530.6	76.1	0.0	0.0	1,565.9	626.9
n-hexane	19.5	4.6	0.0	0.0	0.0	13.5
boron compounds	4.3	0.0	4.2	0.0	0.3	0.0
formaldehyde	28.1	0.0	0.0	0.0	0.0	0.0
Total	6,248.8	108.5	4.4	47.7	1,782.0	1,958.0
Dioxins	—	0.049	0.099	0.000	0.001	1.343

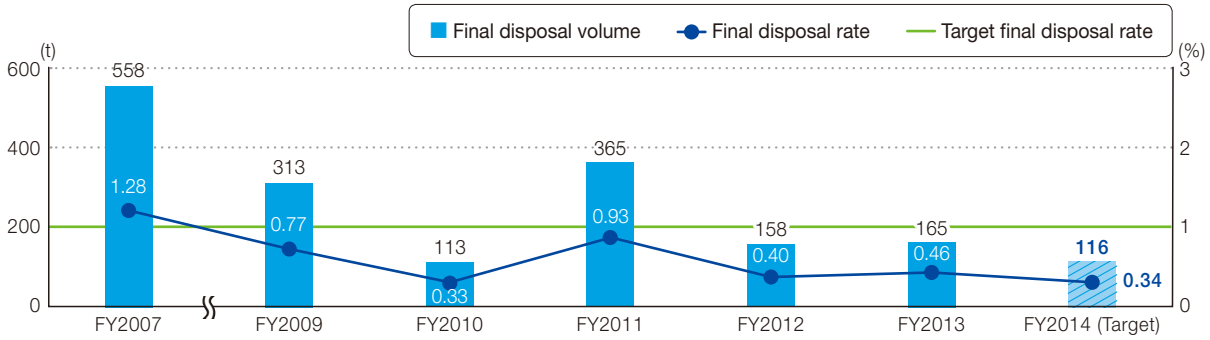
4 Effective Use of Resources

4-1 Waste Reduction Targets and Achievements

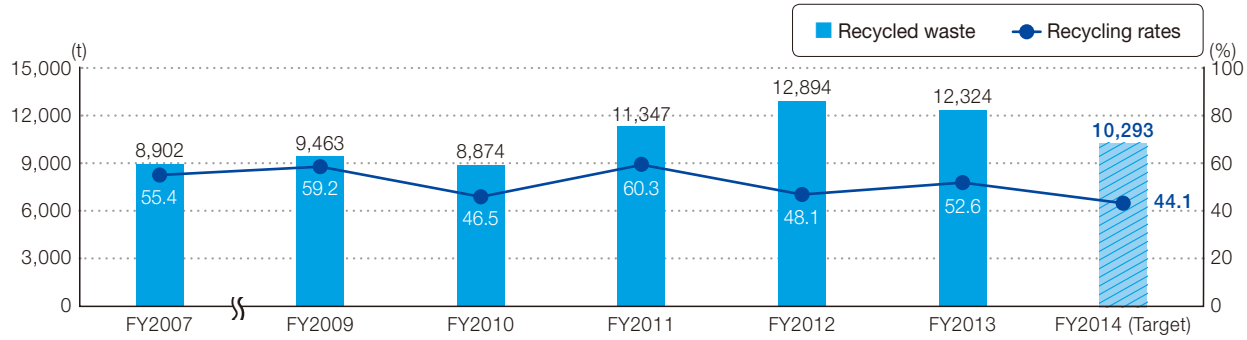
Total Waste Generation and Disposal (Group in Japan)



Final Disposal Volume and Rate (Group in Japan)



Recycled Waste and Recycling Rates (Group in Japan)



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

(t)

	Waste Generated	Recycled Waste	Final Disposal Volume
FY2012	648,221	453,644	180,805
FY2013	676,562	440,615	222,358

5 Water Risk and Appropriate Use of Water Resources

5-1 Water Risk

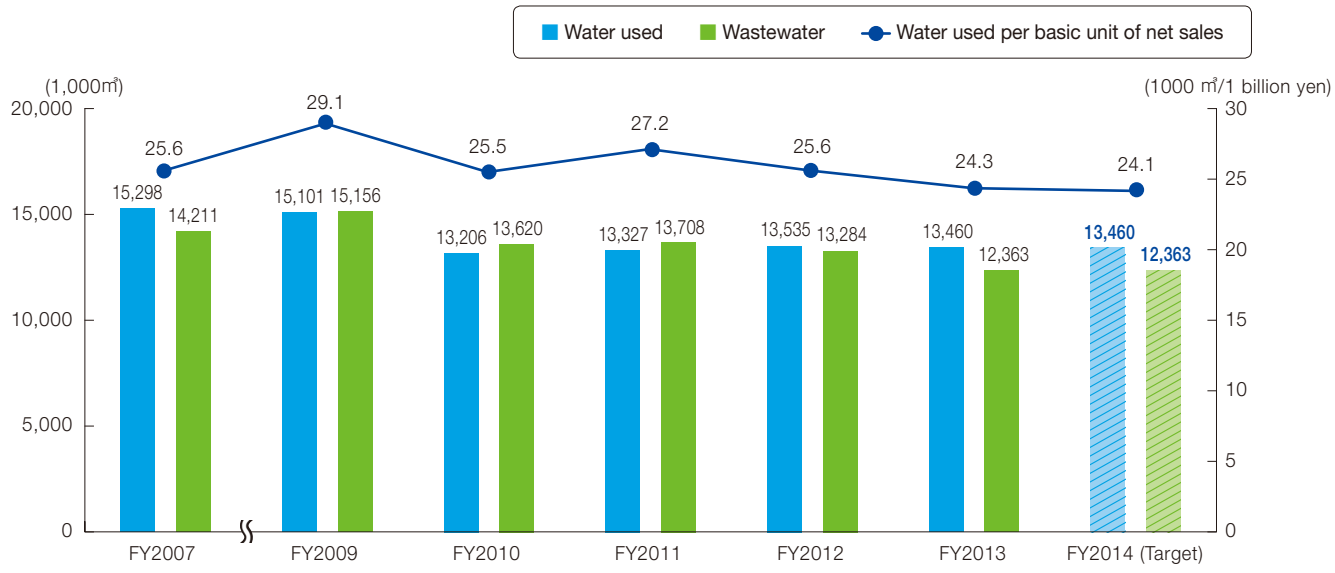
Volume of Water Used at the Offices at the Highest Water Risk in Group

(1,000㎥)

	Volume of Water Used (withdrawn)	Volume of Wastewater	Volume of Water Actual Used
FY2013	159	60	99

5-2 Appropriate Use of Water Resources

Volume of Water Used and Wastewater (Group in Japan)



※includes Kitasato Daiichi Sankyo Vaccine from fiscal 2011

Volume of Water Used and Wastewater (Entire Group)

	Volume of Water Used (withdrawn) (1,000 ㎥)	Volume of Wastewater (1,000 ㎥)	Volume of Water Actual Used (1,000 ㎥)	Water Used per Net Sales (1,000 ㎥/mil. JPY)
FY2011	15,561	14,072	1,489	16.7
FY2012	16,199	14,386	1,813	16.2
FY2013	15,617	13,521	2,096	14.5
FY2014 (Target)	14,828	—	—	16.1

6 Site Data

Business Activity and Input/Output in fiscal 2013 (Group in Japan: Plants and R&D Centers)

INPUT		Unit	Shinagawa	Kasai	Fukuroi ※1	PP Akita (1)	PP Onahama (1)	PP Tatebayashi (1)
Energies	Electricity	1,000 kWh	25,513	16,521	1,932	6,749	11,760	2,988
		GJ	247,516	159,588	18,510	65,867	114,780	29,166
	City gas	1,000㎥	2,212	5,028	–	–	–	2,285
		GJ	99,077	225,259	–	–	–	102,378
	LPG	t	–	–	1	4	4	–
		GJ	–	–	75	227	186	–
	LNG	t	–	–	–	–	2,357	–
		GJ	–	–	–	–	128,709	–
	Heavy oil	KL	–	–	221	–	–	0.3
		GJ	–	–	8,657	–	–	14
	Kerosene	KL	–	–	–	482	–	–
		GJ	–	–	–	17,693	–	–
	Diesel oil	KL	–	–	–	–	–	–
		GJ	–	–	–	–	–	–
	Steam	GJ	–	–	–	30,772	–	–
	Gasoline	KL	–	–	0.3	–	0.4	–
		GJ	–	–	11	–	15	–
	Total	GJ	346,593	384,847	27,252	114,560	243,690	131,557
Water	Service water	1,000㎥	123	160	6	31	113	34
	Industrial water	1,000㎥	–	–	8	1,801	7,665	52
	Groundwater	1,000㎥	44	–	1	–	–	–
	Total	1,000㎥	167	160	15	1,832	7,778	86
Chemical substances	PRTR substances (amounts handled)	t	35	14	–	120	97	6

OUTPUT		Unit	Shinagawa	Kasai	Fukuroi ※1	PP Akita (1)	PP Onahama (1)	PP Tatebayashi (1)
Air pollution	CO_2	t–CO_2	14,424	17,529	1,316	5,544	10,704	6,304
	NOx	t	2	5	–	1	3	14
	SOx	t	–	–	–	0.0	0.0	0.4
	PRTR substances	t	10	0.5	–	0.1	0.1	0.2
Water pollution	BOD	t	7	1	0.0	–	5	0.1
	COD	t	–	–	0.1	5	14	0.2
	PRTR substances	t	0.0	0.0	–	4	0.0	0.0
Waste	Emission	t	626	306	166	399	1,050	1,060
	Recycling amount	t	585	214	158	383	312	1,045
	Final disposing amount	t	0.5	2	0.2	11	55	0.1
	PRTR substances	t	25	13	–	40	0.1	6

(1) PP: Daiichi Sankyo Propharma
※1 : Includes the data by the end of September, 2013

Business Activity and Input/Output in fiscal 2013 (Group in Japan: Plants and R&D Centers)

INPUT		Unit	PP Hiratsuka (1)	PP Takatsuki (1)	CP Hiratsuka (2)	CP Odawara (2)	ASB (3)	KDSV (4)
Energies	Electricity	1,000 KWh	38,581	19,847	6,135	12,042	6,637	27,139
		GJ	384,655	193,217	59,787	118,734	64,393	263,168
	City gas	1,000 ㎥	10,416	4,293	698	2,016	1,157	8,437
		GJ	466,637	192,326	31,289	90,311	51,840	377,974
	LPG	t	0.1	0.1	2	6	–	–
		GJ	7	5	108	281	–	–
	LNG	t	–	–	–	–	–	–
		GJ	–	–	–	–	–	–
	Heavy oil	KL	–	–	–	–	–	2
		GJ	–	–	–	–	–	85
	Kerosene	KL	–	–	–	–	–	404
		GJ	–	–	–	–	–	14,827
	Diesel oil	KL	2	1	0.1	2	–	–
		GJ	80	22	4	90	–	–
	Steam	GJ	–	–	–	–	–	–
	Gasoline	KL	4	1	0.2	–	–	–
		GJ	139	48	6	–	–	–
	Total	GJ	851,518	385,617	91,194	209,416	116,233	656,055
Water	Service water	1,000 ㎥	370	30	85	31	34	278
	Industrial water	1,000 ㎥	–	987	–	–	–	–
	Groundwater	1,000 ㎥	–	–	127	1,481	–	–
	Total	1,000 ㎥	370	1,017	212	1,512	34	278
Chemical substances	PRTR substances (amounts handled)	t	71	1	3,801	2,069	5	31

OUTPUT		Unit	PP Hiratsuka (1)	PP Takatsuki (1)	CP Hiratsuka (2)	CP Odawara (2)	ASB (3)	KDSV (4)
Air pollution	CO_2	t-CO_2	37,930	17,084	3,855	9,044	5,077	30,210
	NOx	t	7	0.0	3	3	1	3
	SOx	t	–	–	–	3.6	–	0.7
	PRTR substances	t	0.6	0.0	93	1	0.4	0.0
Water pollution	BOD	t	9	0.1	7	3	0.0	1
	COD	t	–	0.2	–	1	0.3	0.9
	PRTR substances	t	0.0	0.0	48	0.0	0.0	0.0
Waste	Emission	t	3,481	390	7,265	7,534	87	1,048
	Recycling amount	t	724	385	3,611	4,512	86	308
	Final disposing amount	t	0.6	0.9	26	68	0.0	1
	PRTR substances	t	70	1	1,537	263	4	0.0

(1) PP: Daiichi Sankyo Propharma
(2) CP: Daiichi Sankyo Chemical Pharma
(3) ASB: Asubio Pharma
(4) KDSV: Kitasato Daiichi Sankyo Vaccine

7 ESG Data (Environment)

Goal Reference	Classification	Breakdown	Scope	Unit	FY2010 *7	FY2011	FY2012	FY2013
CO_2	Breakdown of CO_2 emissions	Sales vehicles*1	Outside Japan	t-CO_2	30,942	28,790	30,063	27,625
			In Japan	t-CO_2	9,156	8,579	7,845	7,433
			Global	t-CO_2	40,098	37,369	37,908	35,058
		Offices	Outside Japan	t-CO_2	6,254	8,068	14,673	10,175
			In Japan	t-CO_2	5,078	4,904	5,017	5,099
			Global	t-CO_2	11,332	12,972	19,690	15,274
		Plants and R&D centers	Outside Japan	t-CO_2	287,400	276,812	311,899	328,049
			In Japan	t-CO_2	142,782	146,080	152,052	159,022
			Global	t-CO_2	430,182	422,892	463,951	487,071
		Outside Japan	Total	t-CO_2	324,596	313,670	356,636	365,850
		In Japan	Total	t-CO_2	157,016	159,563	164,914	171,554
		Global	Total	t-CO_2	481,612	473,233	521,550	537,404
	CO_2 emissions by Greenhouse Gas Protocol	Scope 1	Outside Japan	t-CO_2	–	97,360	123,065	110,158
			In Japan	t-CO_2	–	85,159	94,192	100,166
			Global	t-CO_2	–	182,519	217,257	210,324
		Scope 2	Outside Japan	t-CO_2	–	216,311	233,571	255,691
			In Japan	t-CO_2	–	74,404	70,722	71,388
			Global	t-CO_2	–	290,715	304,293	327,079
	Site data	Shinagawa	In Japan	t-CO_2	17,265	13,052	15,121	14,424
		Kasai	In Japan	t-CO_2	18,651	15,153	16,510	17,529
		Fukuroi *2	In Japan	t-CO_2	4,485	4,492	4,400	1,316
		Shizuoka	In Japan	t-CO_2	1,615	1,353	–	–
		Daiichi Sankyo Propharma (Akita)	In Japan	t-CO_2	5,132	5,075	5,894	5,544
		Daiichi Sankyo Propharma (Onahama)	In Japan	t-CO_2	16,447	11,283	13,443	10,704
		Daiichi Sankyo Propharma (Tatebayashi)*3	In Japan	t-CO_2	6,521	5,686	6,232	6,304
		Daiichi Sankyo Propharma (Hiratsuka)*4	In Japan	t-CO_2	35,915	38,982	39,054	37,930
		Daiichi Sankyo Propharma (Odawara)*5	In Japan	t-CO_2	6,199	8,605	4,874	-
		Daiichi Sankyo Propharma (Takatsuki)*6	In Japan	t-CO_2	13,420	13,102	16,211	17,084
		Asubio Pharma (Kobe)	In Japan	t-CO_2	3,706	5,405	5,191	3,855
		Daiichi Sankyo Chemical Pharma (Hiratsuka)	In Japan	t-CO_2	3,570	4,072	4,446	9,044
		Daiichi Sankyo Chemical Pharma (Odawara)	In Japan	t-CO_2	6,198	2,820	3,040	5,077
		Kitasato Daiichi Sankyo Vaccine	In Japan	t-CO_2	–	17,000	17,635	30,210
Energy	Breakdown of energy use	Electricity	In Japan	1,000 GJ	197,731	184,441	187,561	188,971
		Electricity	In Japan	GJ	1,930,428	1,800,000	1,836,188	1,850,214
		City gas	In Japan	1,000㎥	24,033	30,790	32,217	36,660
		City gas	In Japan	GJ	1,081,503	1,339,000	1,443,316	1,642,373
		LPG	In Japan	t	25	21	21	18
		LPG	In Japan	GJ	1,247	1,072	1,052	889
		LNG	In Japan	t	3,674	2,366	2,944	2,357
		LNG	In Japan	GJ	200,233	129,210	160,748	128,709
		Heavy oil	In Japan	KL	2,500	889	870	224
		Heavy oil	In Japan	GJ	96,890	34,749	34,012	8,756
		Kerosene	In Japan	KL	680	926	1,040	886
		Kerosene	In Japan	GJ	24,951	33,998	38,161	32,520
		Diesel oil	In Japan	KL	7	41	5	5
		Diesel oil	In Japan	GJ	260	1,631	197	196
		Steam	In Japan	GJ	33,201	31,054	28,326	30,772
		Gasoline (Plants and R&D centers)	In Japan	KL	3	8	8	6
		Gasoline (Plants and R&D centers)	In Japan	GJ	112	257	267	220
		Gasoline (Sales vehicles)	In Japan	KL	3,944	3,697	3,382	3,204
		Gasoline (Sales vehicles)	In Japan	GJ	136,446	127,934	117,002	110,855
		In Japan	Total	GJ	3,505,271	3,498,905	3,659,268	3,805,502
	Breakdown of energy use	Electricity	Global	GJ	4,460,000	4,400,000	4,678,174	4,936,839
		City gas	Global	GJ	1,086,000	1,468,000	1,571,307	1,827,114
		LNG	Global	GJ	719,000	545,000	766,265	685,711
		Gasoline	Global	GJ	614,000	556,000	563,820	405,820
		Heavy oil	Global	GJ	609,000	582,000	418,679	508,408
		Diesel oil	Global	GJ	292,000	315,000	547,014	414,682
		Others	Global	GJ	61,000	69,000	70,385	68,671
		Global	Total	GJ	7,842,000	7,935,000	8,615,643	8,847,243

7 ESG Data (Environment)

Goal Reference	Classification	Breakdown	Scope	Unit	FY2010 (7)	FY2011	FY2012	FY2013
Water resources	Water used		Outside Japan	1,000 ㎥	–	2,324	2,664	2,157
			In Japan	1,000 ㎥	13,206	13,327	13,535	13,460
			Global	1,000 ㎥	–	15,651	16,199	15,617
	Wastewater		Outside Japan	1,000 ㎥	–	364	1,102	1,158
			In Japan	1,000 ㎥	13,620	13,708	13,284	12,363
			Global	1,000 ㎥	–	14,072	14,386	13,521
Water pollution	BOD		In Japan	t	49	40	42	31
	COD		In Japan	t	32	22	23	22
Waste	Waste generated		In Japan	t	34,594	39,437	39,421	35,925
	Outsourced waste treatment		In Japan	t	19,102	18,833	26,824	23,412
	Recycled waste		In Japan	t	8,874	11,347	12,894	12,324
	Recycling rates		In Japan	%	46.5	60.3	48.1	52.6
	Final disposal volume		In Japan	t	113	365	158	165
	Final disposal rate		In Japan	%	0.33	0.93	0.40	0.46
	Amount of office paper consumed		In Japan	10,000 pieces	7,421	7,078	6,970	6,759
Air pollution	SOx		Outside Japan	t	–	597	197	387
			In Japan	t	3.6	0.9	0.6	1.1
			Global	t	–	598	198	388
	NOx		Outside Japan	t	–	7	319	189
			In Japan	t	43	46	35	43
			Global	t	–	53	354	232
PRTR substances	Amounts handled		In Japan	t	3,474.6	5,704.0	6,087.1	6,248.8
	Amounts discharged and transferred (air)		In Japan	t	87.8	121.7	112.8	108.5
	Amounts discharged and transferred (water)		In Japan	t	7.3	3.6	3.3	4.4
	Amounts discharged and transferred (sewer)		In Japan	t	20.5	43.9	47.7	47.7
	Amounts discharged and transferred (waste)		In Japan	t	1,587.2	3,237.7	2,495.2	1,958.0
Containers	Containers and packaging recovery/recycling	Glass bottle (colorless)	In Japan	t	166	171	188	207
		Glass bottle (brown)	In Japan	t	497	484	454	567
		Plastic containers and packaging	In Japan	t	1,335	1,601	1,678	1,419
		Paper containers and packaging	In Japan	t	63	65	60	30
		Group In Japan	Total	t	2,061	2,321	2,380	2,222
Management	ISO 14001-certified sites		Outside Japan	Sites	4	6	6	8
			In Japan	Sites	8	7	8	7
			Global	Sites	12	13	14	15

*1: Carbon of offfset-type sales vehicles were leased so that CO_2 emissions from sales vehicles were entirely offset.
*2: Includes the data by the end of September, 2013
*3: Includes Daiichi Sankyo Research Center
*4: Includes Daiichi Sankyo Research Center and Daiichi Sankyo Happiness Co., Ltd.
*5: The data of Daiichi Sankyo Propharma (Odawara) is integrated into the data of Daiichi Sankyo Chemical Pharma (Odawara).
*6: Includes Daiichi Sankyo Logistics Co., Ltd.
*7: Includes the data of Kitasato Daiichi Sankyo Vaccine only at Water pollution, Amount of office paper consumed, and Air pollution.

DAIICHI SANKYO CO., LTD
CSR Department
December, 2014
This book is published on the website of Daiichi Sankyo.