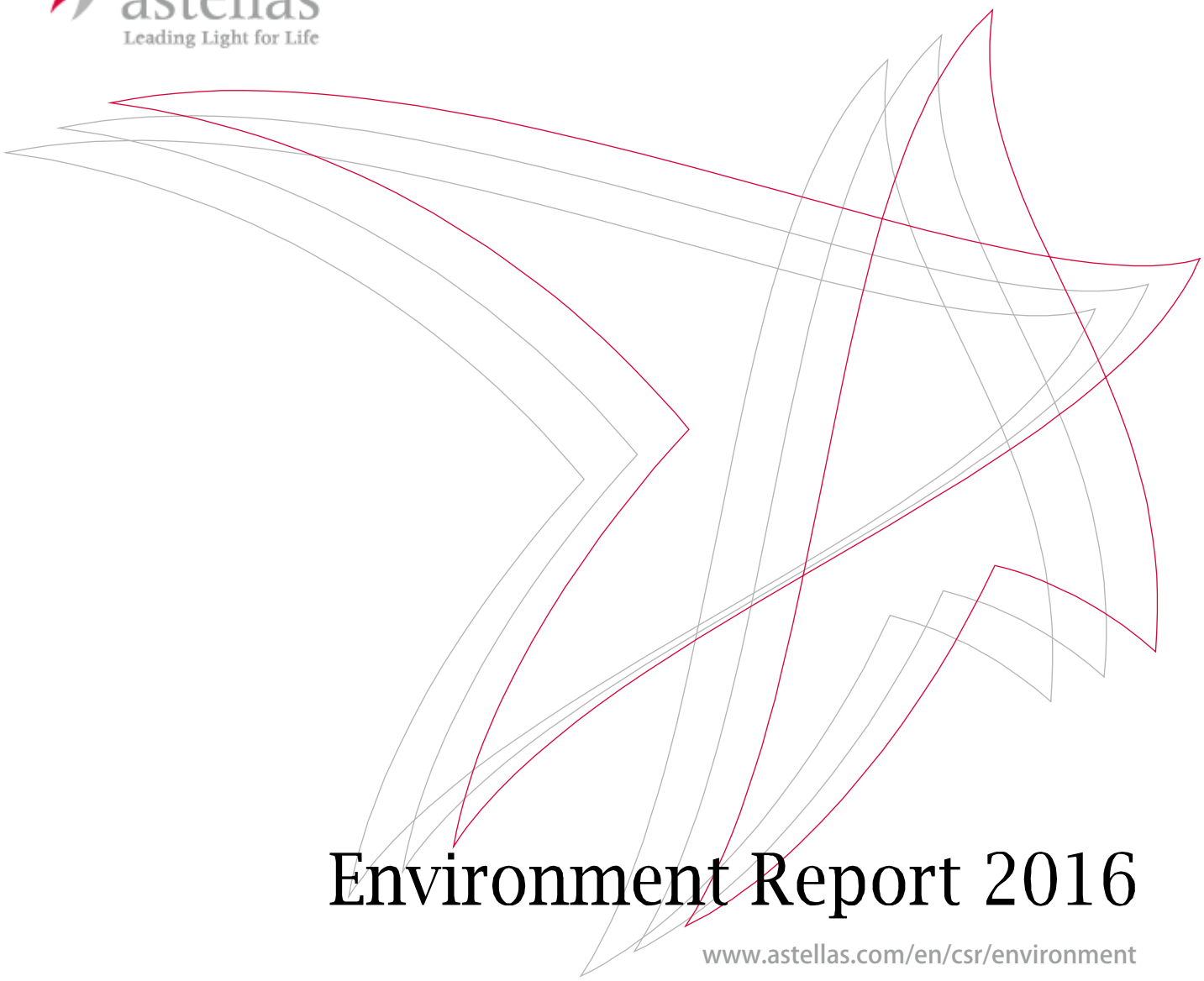
astellas
Leading Light for Life



Environment Report 2016

www.astellas.com/en/csr/environment

Astellas Pharma Inc.

Wind turbine system at Kerry Plant, Ireland
Photo: Gina Halliday (Snr. Health & Safety Officer)

1. Editorial Policy

In publishing this "Astellas Environmental Report 2015," Astellas Pharma Inc. has worked to provide a more detailed account of its activities in an easy-to-understand manner to all those who are affected by its environmental initiatives and the various stakeholders who have an invested interest. The environment is one of the CSR fields in which Astellas actively tackles issues, sets targets, and undertakes initiatives. When preparing this Report, every effort was made to include easy-to-understand explanations using specific examples, numerical data, and graphs and charts. Readers are asked to take note of the fact that due to the rounding up of figures used in numerical environmental performance data, there may be cases where the total figure given does not tally precisely with the aggregated value.

An overall picture of CSR-based management at Astellas and activities in the five fields of compliance, employees, the economy, society, and the environment is contained in the Astellas Annual Report 2016, a printed publication that is scheduled for release in September 2016. Accordingly, excerpts from the Astellas Environmental Report 2016 can be found in the Environment Section of the Annual Report 2015.

1.1. Reporting Period

As a general rule, this Report covers the activities of facilities in Japan from April 1, 2015 to March 31, 2016, and the activities of overseas facilities from January 1, 2015 to December 31, 2015. (Certain sections of this Report contain details of activities and initiatives both prior to and after these identified reporting periods.)

1.2. Reporting Coverage

This Report covers the operations of all the production facilities of Astellas group worldwide and non-production sites in Japan included in the Company's consolidated financial statements. However, the scope covered may differ depending on the item. Accordingly, details of the scope covered are identified on an individual basis in instances where a discrepancy arises.

In addition, certain environmental data includes the results of activities of subcontractors because the environment and society is affected not only by the Company's own activities but also via the supply chain.

1.3. Important Changes in Organization during the Reporting Period

The Kashima R&D Center closed at the end of fiscal 2015, and the operations of the Kiyosu Research Office were transferred to another company. However, the environmental performance track record of these two offices is included in this report. In August 2015, we opened the new Kyoto Suzaku Office, and its environmental performance track record in the current fiscal year has been included in the report.

1.4. Guidelines

The Astellas Environmental Report 2016 has been prepared with reference to the Environmental Reporting Guidelines (2012 edition) issued by Japan's Ministry of the Environment.

1.5. Notational System of Numerical Results

Total and tallies of shares may not always match due to the effect of rounding.

Information regarding publication:
Date of issue : June 2016 (available on the Company's website)
Next scheduled issue : June 2017 Copy to be posted on the Company's website

Please note there is no printed version of the Astellas Environment Report 2016.

2. Abbreviation List

Abbreviation	Explanation
GHG	Greenhouse gases. There are six categories of greenhouse gases: carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, per fluorocarbons and sulfur hexafluoride. Carbon dioxide itself can be divided into energy source and non-energy source types. Greenhouse gases other than energy-source carbon dioxide are known in Japan as the 5.5 gases. At Astellas, non-energy source CO_2 was discharged from waste fluids from our incinerators before, but only energy-source CO_2 is emitted now. In this report, GHG is used for all types of gas.
CO_2	Abbreviation for carbon dioxide. In the Environmental Plan of Action, it is referred to as carbon dioxide.
Scope1	Volume of GHGs emitted directly from Company premises as a result of the burning of fuels (city gas, fuel oil, kerosene, diesel oil, gasoline, LPG, LNG)
Scope2	Volume of GHGs emitted indirectly in the use of electric power or heat supplied to the Company from outside
Scope3	GHGs emitted indirectly at some point on the Company's value chain (production, transportation, business trips, commuting, etc.)
SOx	Sulfur oxides – emitted by the burning of fossil fuels containing sulfur
NOx	Nitrogen oxides – formed through the combination of nitrogen and oxygen in the atmosphere during the combustion of substances
BOD	Biochemical oxygen demand. Used as a benchmark for indicating extent of water pollution by organic matter in rivers.
COD	Chemical oxygen demand – indicates the amount of water pollution due to the presence of organic compounds in seas or lakes
VOC	Volatile organic compounds – organic chemical compounds that are volatile in the atmosphere at standard ambient temperatures and pressures

3. Environmental Initiatives

Astellas recognizes that maintaining a healthy global environment is important both for building a sustainable society and engaging in business activities on an ongoing basis.

At the same time, the Company is cognizant of the growing gravity of threats to the ecosystem and such environmental issues as greenhouse gas (GHG) emissions attributable to the mass consumption of fossil fuels and deterioration of the natural environment due to the excessive extraction of resources. Other issues that impact the regional environment include air and water pollution, soil contamination, the emission of chemical substances, and industrial waste.

In order to ensure sustainable growth, Astellas is conscious of the need to adhere strictly to all statutory and regulatory requirements as they relate to wide-ranging environmental issues. At the same time, the Company recognizes the critical importance of fulfilling its corporate responsibilities toward society with the understanding that any failure to do so will lead to a deterioration of its standing in society and ultimately corporate value. Because of the inherent risk that expenditure will directly impact the Company's operations, consideration must also be given to increases in energy and raw material costs reflecting the sharp rise in resource prices, as well as expenses incurred in responding to new environment-related regulations including taxes.

Accounting for each of the aforementioned, positive steps toward the effective use of energy and resources will not only reduce environmental load, but also bolster business operations.

Moving forward, Astellas will accordingly engage in activities that are in harmony with the global environment. We will put in place an ideal image of the Company from a long-term and global perspective while continuously implementing initiatives that address issues in the regional community with an eye toward tomorrow's generation.

Main Environmental Targets Achieved in Fiscal 2015(Summary)

Environmental Action Plan Numerical Targets	Fiscal 2015 Performance
[Fiscal 2005 as the base year] 1. Measures to Address Climate Change 1) Reduce GHG emissions by 35% or more compared with fiscal 2005 levels by fiscal 2020 (Global) ・ Japan : Reduce by 30% or more ・ Overseas production facilities : Reduce by 45% or more 2) Reduce CO_2 emissions generated through sales activities by 30% or more from fiscal 2005 levels by the end of fiscal 2015 (Japan) 3) Reduce electricity usage at offices to the levels of 80% or less than fiscal 2005 by fiscal 2015 (Japan)	1. 1) Ratio to FY2005 level : -30.8% Japan : -28.5% Overseas : -37.7% 2) Ratio to FY2005 level : -39.6% 3) Ratio to FY2005 level : 65.3%
[Fiscal 2005 as the base year] 2. Reduce water withdrawal to the levels of 80% or less than fiscal 2005 by fiscal 2015 (Global)	2. Ratio to FY2005 level : 76.3%
3. Final volume of waste for disposal in landfill (Japan) Reduce the final volume of waste for disposal to less than 2% of volume discharged	3. Ratio to total volume of waste discharged : 0.99%
[Fiscal 2006 as the base year] 4. Reduce the amount of volatile organic compounds (VOCs) discharged by 25% or more compared with fiscal 2006 levels by fiscal 2015 (Japan)	4. Ratio to FY2006 level : -36.8%
[Fiscal 2005 as the base year] 5. Triple the biodiversity index from the fiscal 2005 level by fiscal 2020 (Global)	5. Ratio to FY2005 level : 3.18 times

* VOC : Volatile Organic Compounds

4. Environmental Management

In accordance with its Charter of Corporate Conduct, Astellas' basic stance toward the environment as well as the health and safety of its employees is outlined under its Environmental and Safety Policy. The goals to which the Company aspires are also presented in its Environmental and Safety Guidelines. Both on a continuous and organizational basis, Astellas is engaging in activities that are designed to fulfill its obligations in each area.

4.1. Environmental and Safety Guidelines

Our Environmental and Safety Guidelines provide unified standards to be upheld in our implementation of environmental and safety measures. These guidelines indicate the stance Astellas should aim for in the future.

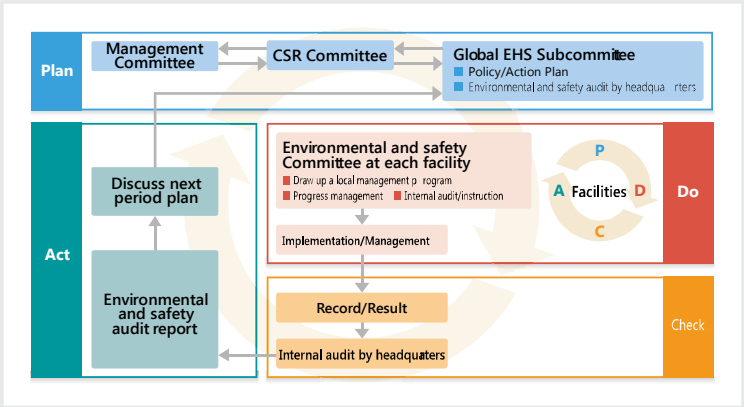
These guidelines describe that envisioned status of various countermeasures in qualitative terms. The period for realizing numerical targets and the actual numerical targets are set out separately in our short- and medium-term action plans, updated annually. In addition, based on the performance of fiscal 2015 and the results of an Environment, Health and Safety audit, and taking into account initiatives expected by society, we plan to revise the Environmental and Safety Guidelines within fiscal 2016.

4.2. Environmental and Safety Management System

Fundamental policies and action plans relating to environmental and safety matters are positioned as an important issue in CSR management, and are discussed and determined by the CSR Committee. Measures for the implementation of these decisions in specific form are then examined by the Global Environment, Health and Safety Subcommittee, which is a subordinate organization under the CSR Committee. Moreover, a director in charge of business management directly receives reports about risk management related to the Environment, Health and Safety (EHS), and issues any necessary instructions. In addition, cases such as investment in Climate Change mitigation measures and risk response related to the EHS, are discussed and decisions are made by the "Executive Committee*" or a meeting of the Board of Directors. Each business facility formulates their own action plan taking into account such factors as the status of the facility. The facilities conduct activities in accordance with the PDCA cycle, carrying out evaluations by company-wide Environment, Safety and Health audits, and the results are reflected in the following fiscal year's plans and policies. Through this system, Astellas' own PDCA cycle is rotated.

Astellas has acquired ISO 14001 certification covering all its production sites in Japan and overseas. From fiscal 2014, the five production plants in Japan were made to be audited under the Multi-site ISO 14001 Certification scheme.

*An advisory body that discusses important matters related to management of the entire Astellas Group, and makes decisions.



4.3. Environmental and Safety Audits

An audit team led by the officer in charge of CSR is organized and the team conducts a company-wide EHS audit every fiscal year, in order to evaluate the progress of environmental and safety activities throughout the Astellas Group.

The audit sets items to be audited according to the Environmental and Safety Guideline and evaluates their level of conformity to the Guideline. It also identifies issues to be resolved and promotes efforts for continuous improvement.

4.4. Environmental and Safety Assessment System

The total environmental load resulting from the production, sale, distribution and disposal of products can usually be approximated at the research and development stages. With regard to the production and sales of pharmaceutical products, it is

necessary to obtain government approval for each product. Since government approval also covers production methods and packaging specifications, when there are changes in either approved production methods or packaging, new approval must be obtained even if the changes are related to work safety or reducing the environmental impact. This entails substantial time and costs.

Therefore, Astellas has introduced an environmental and safety assessment system as a tool that requires efforts to minimize the environmental load at all stages, including research and development, production, distribution, and disposal. Under this assessment system, we examine issues such as the reduction of air pollutant emissions and the excessive use of packaging and various safety measures prior to the commencement of commercial-scale production.

4.5. Operation of the environmental and safety assessment system

An assessment team conducts environmental and safety assessments in stages for the development of products. The results determine whether development of the product can move on to the next stage.

Specifically, the assessment must identify raw materials or processes that might have a negative impact on the environment and/or employee health and safety. The progress on remedial measures must be assessed, and action plans evaluated. Countermeasures being considered are evaluated in the subsequent stages of the assessment.

4.6. Education and Training

In addition to complying with statutory and regulatory requirements, Astellas recognizes the importance of autonomous initiatives that address the needs of society. In order to promote further improvements in its EHS activities, the Company acknowledges the critical need to ensure that all employees have a correct understanding of their own roles and responsibilities. To this end, we are working to improve our skill base through a wide variety of training programs, including specialized education for employees engaged in roles requiring specialist knowledge and skills in areas such as environmental conservation or hazardous operations, and the development of employees professionally qualified in EHS matters.

We also explain our policies and site rules to construction workers at our plants, raw materials suppliers and waste disposal contractors, and request for cooperation with our EHS activities. In addition, we also devised various ways to raise awareness of environmental issues among employees at each workplace. From fiscal 2014 to fiscal 2016, the Tsukuba Research Center held the Environment Forum for employees and certified environment supporters in accordance with their degree of participation. In fiscal 2015 the Takaoka Plant conducted Environmental On-Site Training, where employees responsible for wastewater treatment served as instructors to provide on-site training. Employees gained an understanding of the system and capabilities of wastewater treatment facilities, which connected to reaffirmed awareness of the importance of complying with rules.

4.7. Response to Accidents and Emergencies

Being prepared for emergency situations caused by an accident or natural disaster can help to prevent an environmental catastrophe and minimize damage. Accordingly, we develop specific measures and procedures, conduct regular education sessions and training drills, and reconfirm and test the validity of our procedures, communication networks and the division of roles focusing particularly on risks that are recognized as a high priority. In this manner, we continue to work diligently to reduce environmental risk.

The discharge of harmful substances could lead to the pollution of rivers and seas as well as cause problems at sewage treatment plants. This in turn could have a grave impact on regional communities. In preparation for accidents and emergency situations, we are therefore systematically implementing measures for the prevention of environmental pollution, including the installation of backup equipment, while working to reduce the risk of pollution. In addition, we are bolstering efforts to monitor operations and to measure the quality of water draining out of our plants to confirm compliance with relevant effluent standards.

4.8. Compliance with Environmental Laws and Regulations

Over the past five years, there were no infractions of laws or regulations related to environmental issues that were identified at our business sites in Japan or overseas..

4.9. Environment-Related Accidents and Complaints

In fiscal 2015, there was an accident in the pharmaceutical manufacturing process at the Takahagi Facilities. As a result, the pressure in the reaction vessel became higher than normal and a part of the gas being generated was released into the

atmosphere. Because exhaust gas falls under the scope of the specific substances of the Air Pollution Control Law, we submitted an accident report, including the measures taken to prevent recurrence. Except for this accident, Astellas has not recorded an environment-related accident in Japan over the past five years.

However, with regard to the construction of a new plant building at the Yaizu Facilities, we received two complaints about interference with television signals. In both cases, we resolved the problems by adjusting and exchanging antennas.

4.10. Soil Contamination Assessments

Under the Soil Contamination Countermeasures Act of Japan and prefectural ordinances, soil contamination assessments are mandatory where projects for building or demolishing facilities exceeding a certain scale are undertaken and collectively there is a change in the characteristics of the land. To date, Astellas has undertaken soil contamination assessments based on relevant laws and ordinances as well as related voluntary evaluation to determine the existence or otherwise of contamination. In the event contamination is identified, the Company has taken purification and other remedial measures.

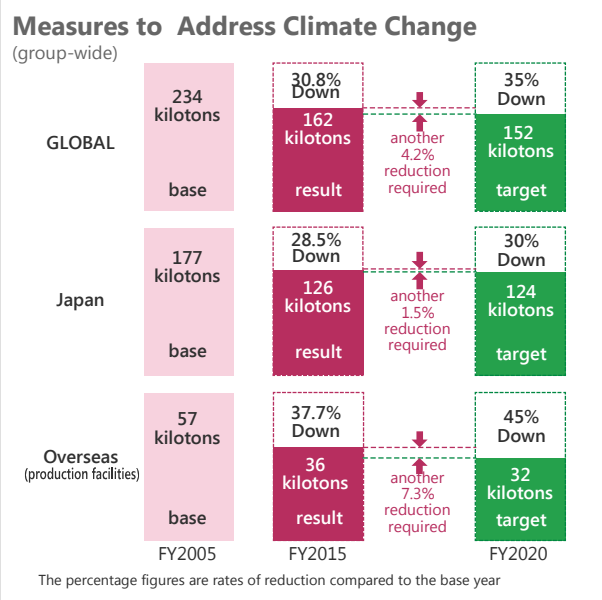
In fiscal 2015, there was no such situation that requires soil contamination assessment. Drawing on the results of soil contamination assessments completed over the past five years, no instances of contamination were detected.

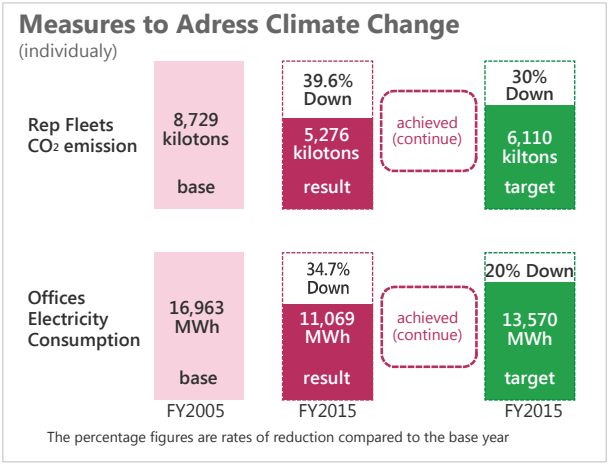
5. Environmental Action Plan

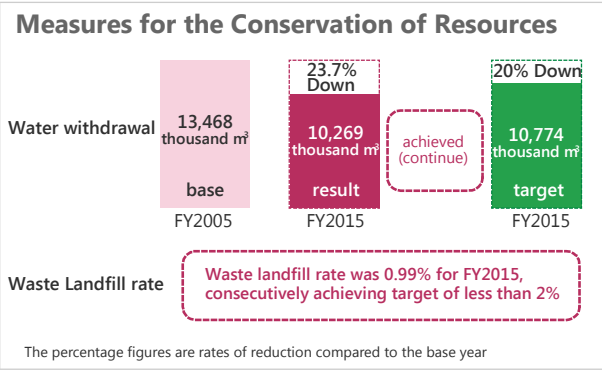
Our Environmental Action Plan sets out short-term and medium-term targets for our activities. We renew our action plans on a rolling basis, by reviewing progress and conditions during the previous year and incorporating our findings into our action plan for the following year. We are always working to achieve the targets set out in our Environmental Action Plan, which are also reflected in individual action plans drawn up by Japanese and overseas group companies.

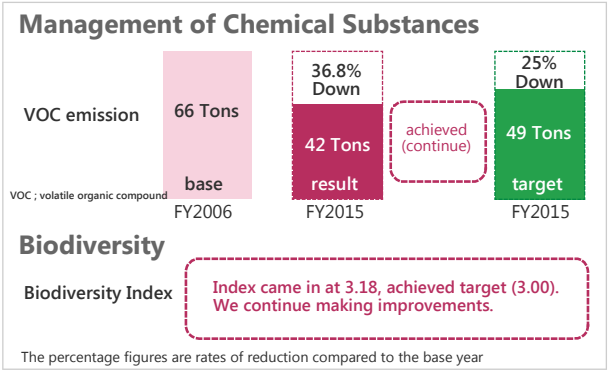
Currently, the activities of all the production facilities of the Astellas group worldwide and non-production sites in Japan fall within the scope of the Environmental Action Plan. At the same time, the activities of overseas R&D centers, offices, and other bases of operation continue to increase in line with the Group's efforts to further expand and develop its business globally. As a result, steps are being taken to keep track of the performance of overseas facilities and bases that fall outside the scope of the Environmental Action Plan, focusing particularly on energy consumption.

The results of the Environmental Action Plan for fiscal 2015 are below. To evaluate the Environmental Action Plan, we have used a coefficient of 0.330 kg-CO_2/kWh to calculate CO_2 from electricity use in Japan in fiscal 2015. Please note that these figures differ from those used in calculation of actual emissions. The figures used in calculation of actual emissions are shown in the item "Measures to Address Climate Change."









5.1. Review of the Environmental Action Plan

Attainment of the following goals was confirmed based on the fiscal 2015 results.

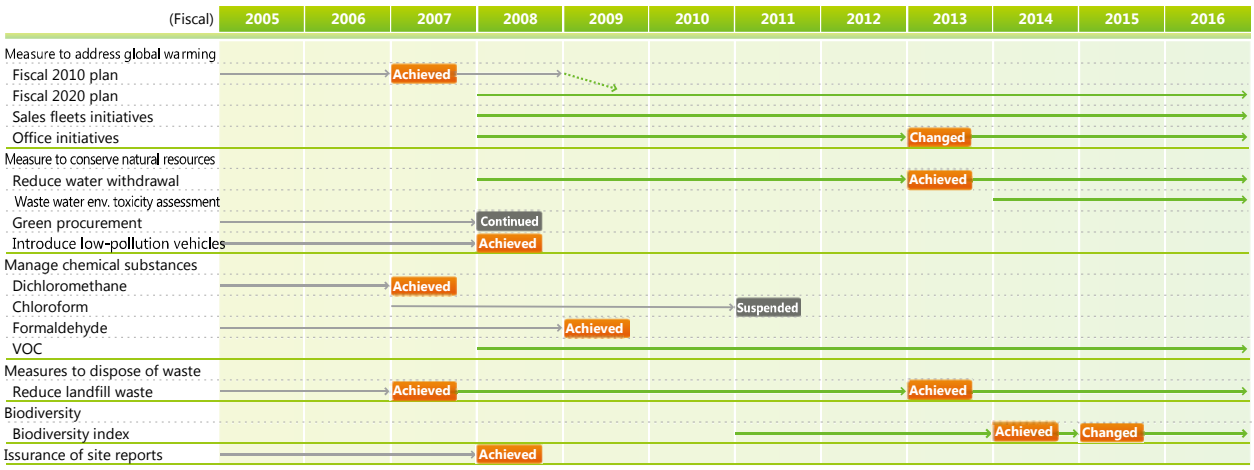
Measures for Climate Change (individual)	Measures for the Conservation of Resources
■ Reduce CO_2 emissions by sales fleets ■ Reduce electricity consumption in offices	■ Reduce water withdrawal ■ Zero emission of waste (landfill volume of less than 2.0% of amount generated)

Looking ahead, for these goals achieved, we will continue to maintain and enhance performance. From fiscal 2016, in addition to the goals that we have yet to achieve, we have set a new goal under our Environmental Action Plan about measures for the conservation of resources.

Environmental Action Plan	
1. Measures to Address Climate Change [Fiscal 2005 as the base year] Reduce GHG emissions by 35% or more by fiscal 2020 ・ Japan : Reduce by 30% or more ・ Overseas production facilities : Reduce by 45% or more	Global
2. Measures for the Conservation of Natural Resources [Fiscal 2005 as the base year] 1) Enhance water resource productivity to a level 2.5 times greater than in fiscal 2005 by the end of fiscal 2020. Indicator: Sales (Billion Yen)/Volume of water resource withdrawn (m^3) 2) Improve waste generated per unit of sales to approx. 20% of fiscal 2005 by the end of fiscal 2020. Indicator: Volume of waste generated (tons)/Sales (Billion Yen)	R & D and Production
5. Biodiversity [Fiscal 2005 as the base year] Raise the Biodiversity Index to triple the fiscal 2005 level by fiscal 2020	Global

In drawing up our action plan, we determined what kind of corporate group we wished to be from a long-term perspective, and laid down targets for individual business years as well as medium-term targets on our way to that ultimate goal. Based on progress made in previous years and changes in social conditions, among other factors, we review the plan each year and set additional items for achievement or higher targets as appropriate.

The background and history of each review of the Environmental Action Plan is presented briefly as follows



6. Interaction Between Astellas and the Environment

Japan (all business premises, Sales fleets)

INPUT			OUTPUT		
Energy	Electricity	196,829 MWh	GHGs (Scope1, 2)	Facilities	165,133 tons
	City gas	19,100 thousand m^3		Sales fleets	5,276 tons
	LPG	2,195 tons	Pollutants (atmosphere)	SOx	0 ton
	LNG	2,327 tons		NOx	25 tons
	Fuel oil	0 kiloliter		VOC	42 tons
	Kerosene	2 kiloliters	Pollutants (water body)	BOD	11 tons
	Diesel oil	27 kiloliters		COD	24 tons
	Gasoline	2,289 kiloliters		Water discharge (Drainage into rivers)	7,098 thousand m^3
	Purchased heat energy	5,794 GJ		Water discharge (Drainage into sewerage system)	318 thousand m^3
Resources	Water	9,980 thousand m^3	Waste material	Waste generated	12,398 tons
	Raw materials (by weight)	4,665 kiloliters		Waste discharged	12,333 tons
	(by volume)	636 kiloliters		Landfill volume	123 tons
	Copier paper	207 tons			

Overseas (all production facilities)

INPUT			OUTPUT		
Energy	Electricity	498,256 MWh	GHGs (Scope1, 2)	Facilities	14,185 tons
	City gas	4,956 thousand m^3			
	LPG	5 tons	Pollutants (atmosphere)	SOx	0 ton
	Diesel oil	52 kiloliters		NOx	10 tons
	Gasoline	13 kiloliters		VOC	6 tons
	Purchased heat energy (steam)	17,896 GJ	Pollutants (water body)	BOD	15 tons
Resource	Water	290 thousand m^3	Water discharge	(into rivers)	290 thousand m^3
			Waste material	Volume of waste generated	2,421 tons
				Landfill volume	122 tons

Overseas (principal office buildings, R&D centers, sales offices and sales fleets of Astellas affiliates outside Japan)

INPUT			INPUT		
Energy	Electricity	32,282 MWh	GHGs (Scope1, 2)	Facilities	18,253 tons
	City gas	1,218 thousand m^3		Sales fleets	23,449 tons
	Diesel oil	3,140 kiloliters			
	Gasoline	6,618 kiloliters			
	Bioethanol	225 kiloliters			

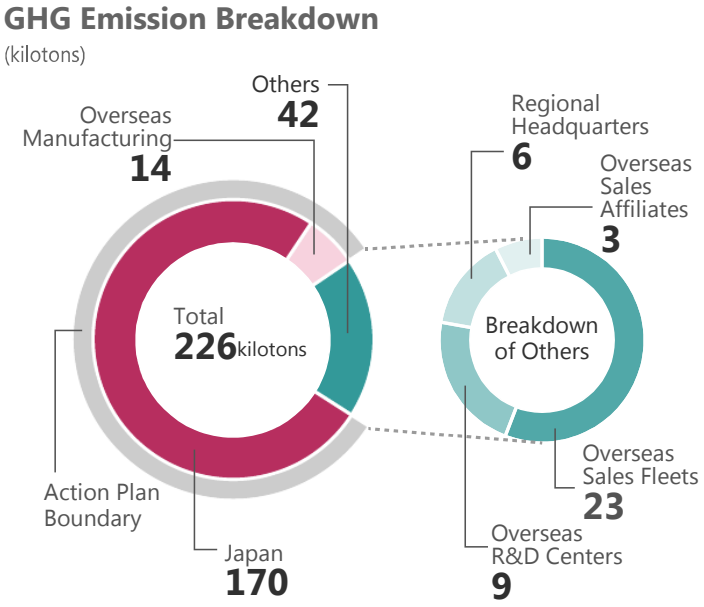
Indirect GHGs (Scope 3)

Category	Upstream GHGs	Category	Downstream GHGs
1 Purchased products & services	99,871 tons	9 Transportation and distribution (Downstream)	Not relevant
2 Capital goods	96,296 tons	10 Processing of sold products	Not relevant
3 Fuel and energy related activities (not included in scope 1 and scope 2)	28,400 tons	11 Usage of sold products	No Emissions' results
4 Transportation and distribution	4,179 tons	12 End-of-life treatment of sold products	807 tons
Truck transportation of raw materials	(220 tons)	13 Lease assets	Not relevant
Plant → warehouse	(247 tons)	14 Franchise	Not relevant
Warehouse	(1,030 tons)	15 Investment	Not relevant
Warehouse → wholesalers	(2,682 tons)		
5 Waste generated in operation	3,600 tons		
6 Business trips (By airplane)	32,578 tons		
7 Employee commuting	3,172 tons		
8 Lease assets	Not relevant		

Remark: GHG emissions (actual emissions) decreased significantly in fiscal 2015 following a review of GHG emissions accompanying the end-use electricity at overseas plants conforming to the GHG Protocol, international guidelines for calculating GHG emissions. Evaluation under an action plan for self-reliant evaluation used the IEA coefficient for each country.

Understanding GHG Emissions

GHG emissions resulting from the business activities of Astellas is reported to be 226 thousand tons globally. Among these, approximately 82% are from business sites that are understood to fall within the scope of the Environmental Action Plan. (Other than "Other" in the graph below).



The above breakdown of energy consumption is based on below table. The NOT covered by Environmental Action Plan expressed as "Other" contains the principal office buildings, R&D centers and Sales fleets of Astellas affiliates outside Japan.

Breakdown of Energy consumption at facilities covered and NOT covered by Environmental Action Plan

Covered: **Japan: all business locations and sales fleets, overseas: all production facilities**
Not Covered: **principal office buildings, R&D centers and Sales fleets of Astellas affiliates outside Japan**

(Unit: terajoule)

Action Plan	Total	Liquid fuel		Gaseous fuel		Heat purchase	Electricity		Renewable energy			
		Fuel oil	Petrol etc.	City gas	LPG LNG		Total	Renewable energy source	Total	Wind power source	Wood chip source	Photovoltaic panes
Covered	3,917	0	83	1,083	239	26	2,443	463	43	7	36	0.3
NOT covered	729	0	353	55	0	0	322	0	0	0	0	0

7. Measures to Address Climate Change

Climate change is regarded as one of the environmental problems that could threaten the very survival of the human race. Mitigating and adapting to the threat posed by climate change requires active involvement on all levels including national governments, local governments, corporations and citizens. Astellas understands that climate change could become a major constraint on the continuation of corporate activity, and considers it one of management's most important problems to address.

Tackling the problem of climate change will require a prolonged and sustained effort. The international community has agreed that industrialized countries should target a reduction in GHGs of at least 80% compared with current levels by the year 2050. As stepping stones toward achieving these targets, the Astellas group has set medium-term targets for the reduction of GHGs in its Environmental Action Plan. Under the plan, existing facilities are to reduce CO_2 emissions generated through energy consumption by 1% or more compared with the previous fiscal year and to achieve a reduction of 5 kilotons of GHGs on a fiscal year basis through strategic investments.

Regarding the CO_2 emission coefficient accompanying the end-use electricity

Regarding the CO_2 emission coefficient accompanying the end-use electricity, we are employing two types of coefficient: a coefficient for calculating the results needed to evaluate progress against the Environmental Action Plan and make investment decisions and implement countermeasures to bridge the gap between results and targets, and a coefficient to calculate GHG emissions (actual emissions) for each fiscal year presented in series.

Calculation of GHG Emissions in Japan

1. Evaluation of progress against the Environmental Action Plan 0.330kg-CO_2/kWh
2. Actual emissions Federation of Electric Power Companies of Japan's actual end-use CO_2 emissions/unit in previous fiscal year

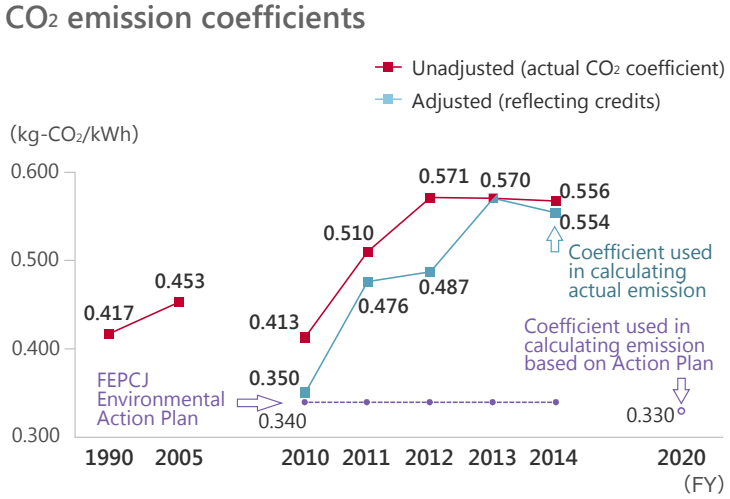
Calculation of GHG Emissions Overseas

1. Evaluation of progress against the Environmental Action Plan

   We are employing coefficients listed in "CO_2 EMISSIONS FROM FUEL COMBUSTION 2015 EDITION" published by the International Energy Agency ("IEA").

2. Actual emissions

   In accordance with GHG Protocol Scope 2 Guidance, GHG emissions emanating from electricity derived from renewable energies have been from fiscal 2015 counted as zero.



Source: Created by Astellas referring to the Federation of Electric Power Companies of Japan's "Environmental Action Plan for the Electricity Business," September 2014

7.1. Reducing GHGs emissions

Environmental Action Plan

Reduce GHG emissions by 35% or more compared with fiscal 2005 levels by the end of fiscal 2020 (Global)

- Reduce GHG emissions in Japan by 30% or more compared with fiscal 2005 levels by the end of fiscal 2020.
- Reduce GHG emissions at overseas production facilities by 45% or more compared with fiscal 2005 levels by the end of fiscal 2020.

Progress in Implementation of Environmental Action Plan

The GHG emissions volume for fiscal 2015, used in evaluating the action plan, came to 162 kilotons globally, for a decrease of 72 kilotons (30.8%) from the base year. A further reduction of 10 kilotons is required to reach the target.

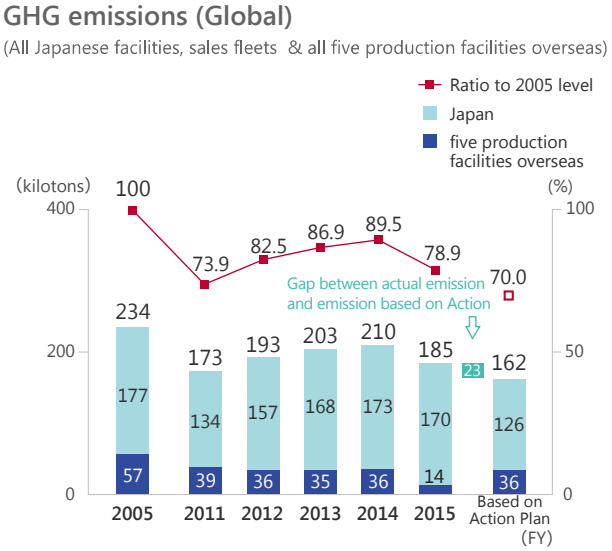
◆ GHG emissions in Japan : 126 kilotons — Down 50 kilotons (28.5%) from base year; Further reduction of 3 kilotons needed to reach target

◆ GHG emissions overseas : 36 kilotons — Down 22 kilotons (37.7%) from base year; Further reduction of 4 kilotons needed to reach target

Trend of actual emissions

(below figures indicate actual emissions trends)

The actual emissions volume of GHGs globally in fiscal 2015 came to 185 kilotons, down 49 kilotons (21.1%) from fiscal 2005.This result was obtained by reviewing the emissions accompanying end-use electricity at overseas plants worth in accordance with the GHG Protocol Scope 2 Guidance for calculating GHG emissions. The emissions volume generated through business activities in Japan amounts to about 92% of the global total. The emissions volume generated through business activities in Japan amounts to approximately 92% of the global total.

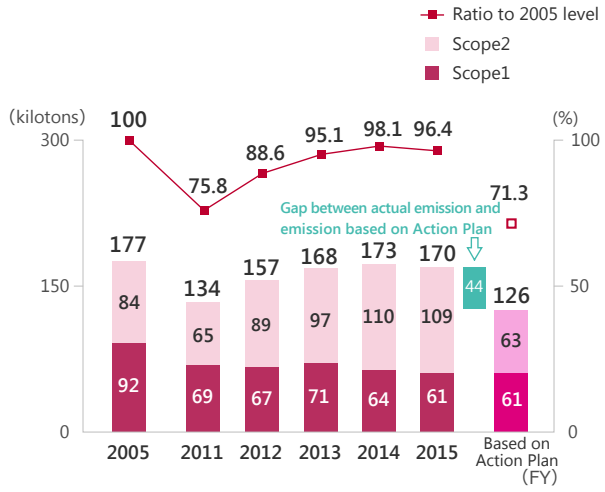


* The difference between the actual emissions volume and the emissions volume assessed by the Action Plan arises from being calculated by using the difference of two CO_2 emission coefficients accompanying the end-use electricity in Japan (0.554-0.330=0.224 kg-CO_2/kWh) . Moreover, since fiscal 2015 the calculation of the actual emissions volume of GHGs accompanying end-use electricity generated by renewable energy sources to be purchased by overseas plants has resulted in zero.

◆ **GHG emissions in Japan : 170 kilotons**

Down 6 kilotons (3.6%) from base year
But up 3 kilotons from fiscal 2014

GHG emissions (Japan)
(All facilities, sales fleets)



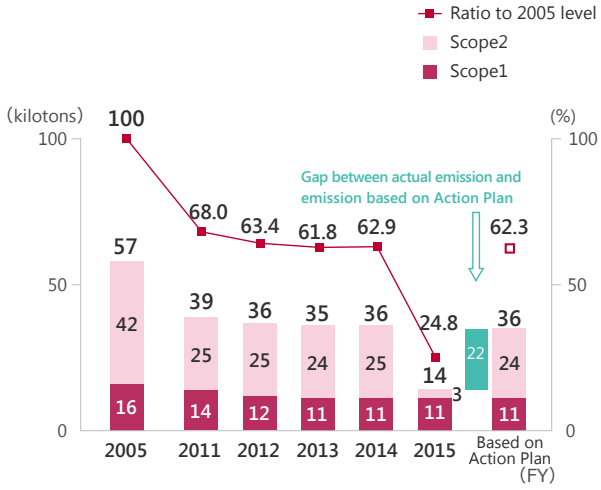
Turning to a breakdown of emissions by Scope, Scope 1* emissions decreased 3 kilotons from the previous fiscal year, but Scope 2* emissions were roughly the same as the previous fiscal year. A 25-kilotons of the decrease in Scope 2 is attributed to the improved CO_2 emissions coefficient accompanying the end-use electricity compared to the previous year, together with a 2-kilotons of decrease achieved by the efforts against climate change and other activities. However, there was a 3-kilotons of increase due to a larger amount operations activity mainly for new facilities. In comparison with fiscal 2005, Scope 1 is down 31 kilotons (34.0%) and Scope 2 is up 25 kilotons (29.8%).Looking ahead, the full-scale start of operations of new facilities opened in fiscal 2015 is projected to be behind increased emissions and closure of the Kashima R&D Center is envisaged to reduce emissions. We intend to continue taking effective steps to mitigate climate change while keeping a close watch on the balance between positive and negative factors.

* Scope 1: Volume of GHG directly emitted as a result of the burning of fuels
Scope 2: Volume of GHG emitted in the use of electric power or heat supplied from outside
* The difference between the actual emissions volume and the emissions volume assessed by the Action Plan is calculated by using the difference of two CO_2 emission coefficients accompanying the end-use electricity in Japan (0.554-0.330=0.224 kg-CO_2=/kWh)

◆ **GHG emissions overseas : 14 kilotons**

Down 43 kilotons (75.2%) from base year
Also down by 22kiloton from fiscal 2014

GHG emissions (Overseas)
(All five production facilities overseas)



Turning to a breakdown of emissions by Scope, Scope 1 emissions were roughly the same as the previous fiscal year, but Scope 2 emissions decreased significantly due to a revision of emissions from overseas plants based on GHG Protocol Scope 2 Guidance. In comparison with fiscal 2005, Scope 1 is down 4 kilotons (27.6%) and Scope 2 is down 39 kilotons (93.0%). We will continue to implement energy saving measures in overseas production bases.

* The difference between the actual emissions volume and the emissions volume assessed by the Action Plan arises from the actual emissions of GHG being recalculated as zero in accordance with the use of electricity derived from the purchase of renewable energies for use at overseas plants from fiscal 2015.

7.2. Breakdown of Scope 1 and Scope 2 for GHG Emissions

Details regarding Scope 1 - volume of greenhouse gases (GHG) directly emitted from Company premises as a result of the burning of fuels (city gas, kerosene, diesel oil, gasoline, LPG, LNG) - and Scope 2 - volume of GHGs emitted in the use of electricity or heat energy supplied to the Company from outside - are shown below.

GHG emission volumes from the use of electricity were calculated using the adjusted emission coefficients of FEPCJ. Moreover, a review of GHG emissions accompanying electricity use at overseas plants conforming to the GHG Protocol, international guidelines for calculating GHG emissions, showed that the Norman Plant purchased electricity from wind power, the Meppel Plant from hydro power and the Dublin and Kerry plants from electricity generated from renewable energy sources so GHG emissions became zero, which drastically reduced Scope 2 from fiscal 2015.

GHG emission volumes (global / Japan: all business locations and sales fleets; overseas: all production facilities) (Unit: kilotons)

Fiscal	Totaled emission volume	Scope 1 (direct emissions)			Scope 2 (indirect emissions) Emission volume		GHG equivalent from electricity generated by renewable energy sources
		Emission volume	Breakdown				
			Energy sources	Non-energy related sources			
2005	234	108	101	7			0
2011	173	83	82	0	90		11
2012	193	79	79	0	114		10
2013	203	82	82	0	121		10
2014	210	75	75	0	134		9
2015	185	72	72	0	112		22

Purchases of renewable electricity: Purchases of renewable electricity: Electricity purchased at the Norman Plant (wind power), the Meppel Plant (hydro power), and the Dublin and Kerry Plants have been deemed to be generated by renewable energy sources.

GHG emission volumes (Japan: all business locations and sales fleets) (Unit: kilotons)

Fiscal	Totaled emission volume	Scope 1 (direct emissions)			Scope 2 (indirect emissions) Emission volume		GHG equivalent from electricity generated by renewable energy sources
		Emission volume	Breakdown				
			Energy sources	Non-energy related sources			
2005	177	92	85	7	84		0
2011	134	69	68	0	65		0
2012	157	67	67	0	89		0
2013	168	71	71	0	97		0
2014	173	64	64	0	110		0
2015	170	61	61	0	109		0

Other GHGs: Waste liquid from incinerators at the Takaoka Plant and Takahagi Facilities are regarded as non-energy sources of CO_2.

GHG emission volumes (overseas: all production facilities) (Unit: kilotons)

Fiscal	Totaled emission volume	Scope 1 (direct emissions)			Scope 2 (indirect emissions) Emission volume		GHG equivalent from electricity generated by renewable energy sources
		Emission volume	Breakdown				
			Energy sources	Non-energy related sources			
2005	57	16	16	0	42		0
2011	39	14	14	0	25		11
2012	36	12	12	0	24		10
2013	35	11	11	0	24		10
2014	36	11	11	0	25		9
2015	14	11	11	0	3		22

Purchases of renewable electricity: Purchases of renewable electricity: Electricity purchased at the Norman Plant (wind power), the Meppel Plant (hydro power), and the Dublin and Kerry Plants have been deemed to be generated by renewable energy sources.

7.3. GHG emissions from facilities not covered by the Environmental Action Plan

Although the current Environmental Action Plan covers only all facilities and sales fleets in Japan and all production facilities overseas, we are also working to keep track of energy usage at the group's principal office buildings and research facilities overseas, which are not currently within the scope of the plan.

If GHGs emitted by these facilities and associated Sales fleets are included, total emissions globally by the Astellas Group in fiscal 2015 amounted to 226 kilotons, of which the current Environmental Action Plan accounts for 81.6% (185 kilotons out of a total of 226 kilotons.)

From here onward, we intend to examine options for setting new targets, depending on the amount of environmental impact of these facilities.

Energy usage and GHG emissions by principal office buildings and R&D Centers of outside Japan

Facilities	Energy consumed (GJ)		GHG emissions (GJ)	
	Electricity	City gas	Scope 1	Scope 2
Astellas US LLC	98,704	1,003	56	4,841
Astellas Pharma Europe Ltd.	24,452	8,275	412	1,172
Astellas Pharma Europe B.V.	33,409	6,593	328	1,515
Agensys Inc.	105,691	35,201	1,752	5,184
Astellas Research Institute of America LLC	6,989	0	0	343
Total	270,244	51,071	2,548	13,054

Energy usage and GHG emissions by sales affiliate office buildings of outside Japan

Facilities	Energy consumed (GJ)		GHG emissions (GJ)	
	Electricity	City gas	Scope 1	Scope 2
Americas	5,760	0	0	140
EMEA *	29,646	3,209	160	1,190
Asia/Oceania	16,200	538	27	1,134
Total	51,605	3,747	187	2,465

*EMEA: Europe (including NIS countries), the Middle East and Africa

Breakdown by region of number of Sales fleets, amount of fuel consumed, and GHG emissions

Region	Petrol cars	Diesel cars	Flex fuel cars **	Petrol consumed (kiloliters)	Diesel oil consumed (kiloliters)	Bioethanol consumed (kiloliters)	GHG emissions (tons)
Americas	1,296	0	71	5,258	0	225	12,199
EMEA *	811	1,331	0	1,360	3,137	0	11,250
Total	2,107	1,331	71	6,618	3,137	225	23,449

*EMEA: Europe (including NIS countries), the Middle East and Africa

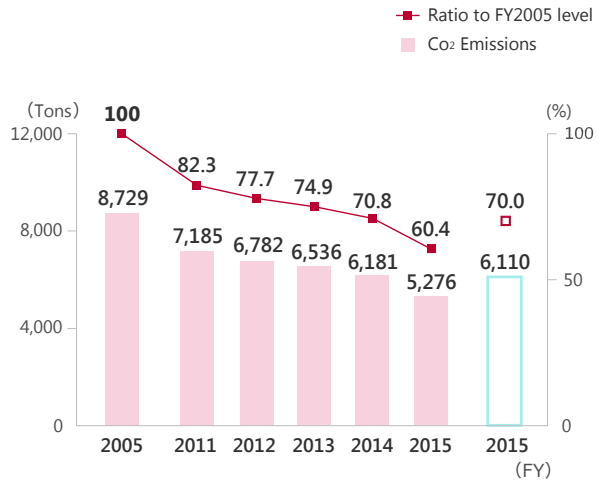
** Vehicles that can run on gasoline or a mix of gasoline and methanol/ethanol. Flex fuel vehicles are used by a sales affiliate in Brazil. Because the fuel is 100% bioethanol, the GHG emissions volume is zero.

7.4. Reduction of CO_2 Emission from Sales Activities and Offices

Environmental Action Plan

- Reduce CO_2 emissions generated through sales activities by 30% or more compared with fiscal 2005 levels by the end of fiscal 2015 (Japan)
- Reduce electricity usage to the levels of 80% or less than fiscal 2005 by fiscal 2015 (Japan)

CO_2 Emissions from Sales Fleets (Japan)

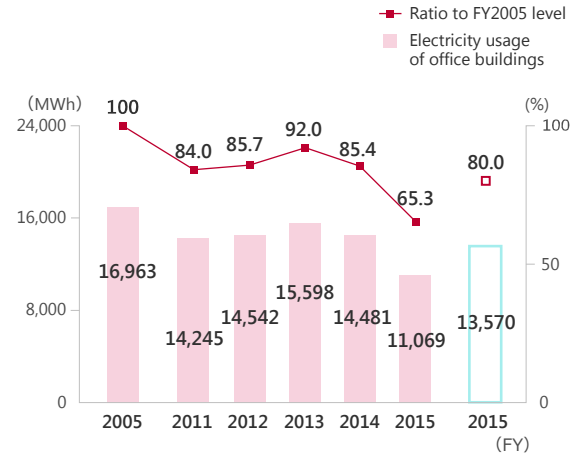


At Astellas, we have been progressively changing our leased fleets to hybrid since fiscal 2008. As of the end of fiscal 2015, some 1,782 vehicles, or 76.5%, of our 2,330 fleets were hybrid.

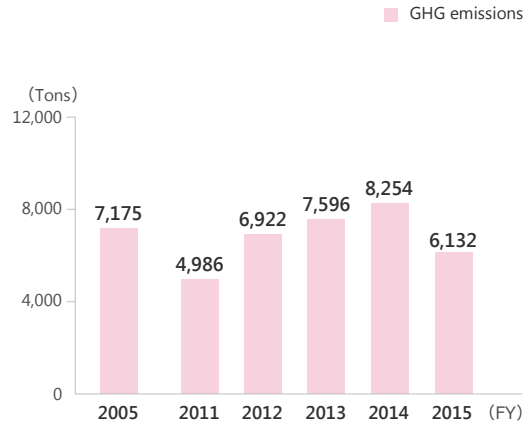
In fiscal 2015, CO_2 emissions from gasoline consumed in our sales fleets amounted to 5,276 tons. This was a 39.6% decrease compared with the base year level. These figures indicated that we achieved the targets for the Environmental Action Plan.

The electricity consumption of the group's office buildings in Japan, including Astellas head office and all branch offices and sales offices, amounted to 11,069 MWh for the reporting period, for a decrease of 3,412 MWh over the previous fiscal year and 65.3% of the base year's level (down 5,894 MWh). The main decrease factors in fiscal 2015 were that Astellas has no longer been using the former Hasune Office, and the significant reduction of electricity consumption in fiscal 2015 due to the consolidation of buildings containing sales offices that was carried out during the previous fiscal year.

Electricity Usage of Office buildings (Japan)



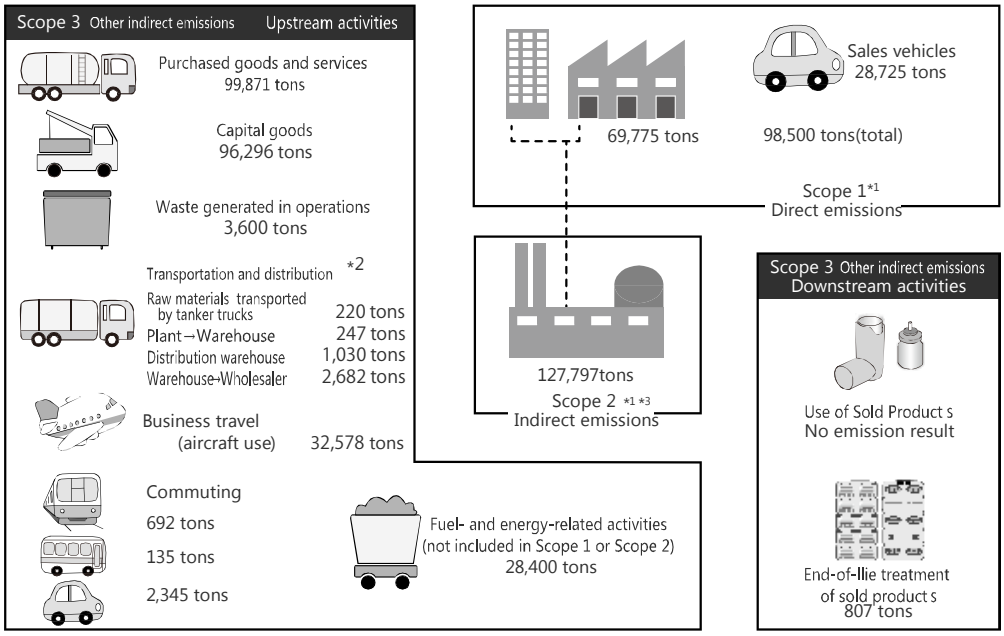
GHG emissions from Office Electricity Consumption (Japan)



7.5. GHG Emissions Resulting from Supply Chain Activities

The Environmental Action Plan contains targets that have been set to address the issue of climate change. It focuses on GHG emissions generated by the group's facilities and CO_2 emissions from energy sources through the use of electricity and heat supplied from outside sources.

In addition to knowing and publicizing their own GHG emissions, in recent years there has been more and more emphasis on emissions produced along the entire supply chain - including raw materials procurement, product distribution, employee commuting and business trips, and waste treatment. Following this trend, standards are being reviewed and developed to reflect this broader Scope, including the Greenhouse Gas Protocols, ISO standards, and guidance issued by Japan's Ministry of the Environment.



*1 Global basis (Japan: all business premises, Sales fleets / Overseas: all production facilities, sales fleets, principal offices, R&D centers and Sales affiliates)
*2 Product shipments are handled by outside contractors
*3 Emissions indicate actual emissions volume

Recognizing these social implications, we included some supply chain GHG emissions for the first time when ascertaining our environmental performance in fiscal 2011. We intend to continue taking effective steps to expand the reporting boundary.

Assumptions used to estimate Scope 3 GHG emissions

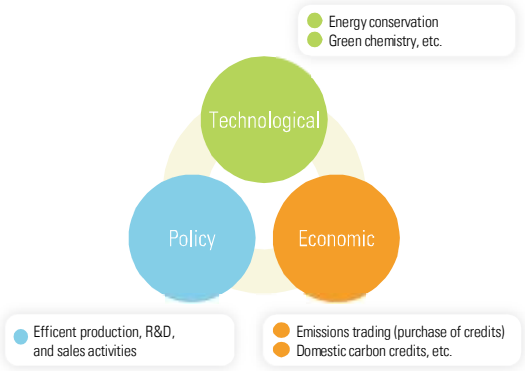
Category		Assumption used to estimate GHG emissions	
1	Purchased products & services	Purchase monetary amount	(Million yen)
2	Capital goods	Facility investment amount	(Million yen)
3	Fuel and energy related activities (not included in scope 1 and scope 2)	Usage amount of purchased energy sources	(GJ)
4	Transportation and distribution		
	Truck transportation of raw materials	Fuel consumption	(kiloliters)
	Plant → warehouse	Fuel consumption	(kiloliters)
	Warehouse	Energy consumption	(MWh)
	Warehouse → wholesalers	Fuel consumption	(kiloliters)
5	Waste generated in operation	Shipment weight x distance	(tons-km)
6	Business trips (By airplane)	Travel distance	(thousand passenger-km)
7	Employee commuting	Travel distance	(thousand passenger-km)
11	Usage of sold products	Volumes shipped (Shipments x HFC content/unit)	(tons-HFC)
12	End-of-life treatment of sold products	Weight of package (paper, glass, plastic)	(tons)

7.6. Climate Change Mitigation Framework and Initiatives

Astellas believes that it will not be possible to achieve the level of GHG emission reductions demanded of private enterprises by simply continuing with existing energy conservation measures implemented independently by each facility. Consequently, in fiscal 2009, Astellas established the Global Warming Prevention Committee as a special task force under the CSR Committee, which was chaired by a member of top management.

Astellas was pursuing measures to achieve medium to long-term numerical targets set in accordance with a group-wide strategy formulated by the Global Warming Prevention Committee. In addition to considering technological means to lower energy consumption, the Committee is also tasked with examining policy measures, such as efficient production and research systems, and utilizing economic measures, including emissions trading and a carbon credit system.

To develop our environmental protection measures on a more global scale, including countermeasures against climate change, from fiscal 2014 onward, we have set up the Global EHS Sub-Committee as a specialist subordinate unit under the CSR Committee.



Investment Plan for Mitigating Climate Change

In fiscal 2015, separately from our energy conservation measures at each facility, the Global EHS Sub-Committee took the decision to invest roughly ¥170 million in introducing more efficient facility operation and advanced technologies. However, owing mainly to changes in the bases integration plan and the production plan, certain measures had to be cancelled. The result of the investment during fiscal 2015 was that the reduction of GHG emissions expected during fiscal 2016 is about 240 tons.

In fiscal 2016, we are planning to invest approximately ¥110 million, which is expected to yield a reduction in GHG emissions of approximately 440 tons.

Participation in the Federation of Economic Organizations' Commitment to a Low-carbon Society

Astellas is participating in the commitment to a low-carbon society* formulated by the Federation of Pharmaceutical Manufacturers' Associations of Japan, which is based on requests from the Federation of Economic Organizations.

*** To reduce the amount of carbon dioxide emissions from pharmaceutical manufacturers in fiscal 2020 by 23% based on the amount of emissions in fiscal 2005.**

7.7. Our Efforts to Reduce GHG Emissions

Astellas' manufacturing plants, research centers, and offices are implementing a variety of initiatives with the aim of reducing GHG emissions.

Efforts to improve facilities, which include the introduction of high-efficiency equipment and the conversion to alternative fuels, are expected to make a significant contribution to reducing the level of GHG emissions generated by energy sources. Employees' participation in energy saving through improvements of daily work is also important. To this end, each facility adopts a two-pronged approach, comprising measures related to equipment and energy-saving activities.

Fuel Conversion

Different fuel (e.g. fuel oil, city gas, LPG) used in steam boilers and other combustion equipment emit different amount of GHG per unit of heating value. Therefore, switching to a fuel that generates less GHG helps mitigating climate change.

Because fuel oil and kerosene generally produce more GHG than city gas, Astellas has been actively converting its steam boilers so that they run on city gas, LPG, and LNG instead of fuel oil and kerosene. This conversion of steam boilers at research and production bases was completed by fiscal 2011. These fuel conversions contribute the GHG emission reduction but also reducing SOx emissions that is one of the air pollutant substances.

Installation of Heat Pump Devices

Astellas has actively introduced heat pump technology that makes effective use of heat in the air when upgrading existing air conditioning equipment or installing new equipment. Going forward, we will pursue the introduction of heat pump technology after securing a stable supply of electricity.

Introduction of Energy Monitoring Systems

Knowing exactly how much energy we use does not directly lead to lower energy consumption. However, the ability to confirm the status of energy usage can assist the elimination of wasteful practices and the formulation of new strategies.

For these reasons, we have instituted a program to introduce energy monitoring systems at our facilities.

Using Renewable Energy

The direct use of renewable energy sources, such as the solar energy and wind, is the most effective method of addressing climate change issues. Accordingly, Astellas hopes to actively introduce renewable energy technology where feasible.

The Group's Kerry Plant in Ireland brought online a wind turbine power generation station with a maximum output of 800 kW and a wood chip biomass boiler system with a maximum output of 1.8 MW from March 2012. In 2015, the full amount of 1,950 MWh produced by the wind turbine power generation station was used to power the facility. In addition, the wood chip biomass boiler also used 35,927 GJ of heat. Through these means, the total amount of GHG emission reduction came to 3,307 tons.

In Japan, the Tsukuba Research Center and Kashima R&D Center have installed photovoltaic generation systems. In fiscal 2015, the full amount of 79 MWh generated was use to power each facility. As a result of these initiatives, the amount of GHG emission reduction came to 44 tons.

Overseas plants are engaged in an initiative to purchase electricity designated as being generated from renewable energies such as wind power or hydroelectricity, and of the electricity purchased in 2015, the Norman Plant purchased 20,590 MWh, the Meppel Plant 12,956 MWh, the Dublin Plant 6,525 MWh and the Kerry Plant 6,382 MWh of electricity generated by renewable energy sources.

7.8. Breakdown of Energy Consumption

Global energy usage in fiscal 2015 by the Astellas group amounted to 3,917 terajoules (TJ), for a decrease of 3 TJ (0.09%) over the previous year. This breaks down to energy usage in Japan amounting to 3,149 TJ, for a year-on-year increase of 3 TJ (0.11%), and 768 TJ for overseas operations, down 7 TJ (0.89%) year on year.

In Japan, the proportion of total energy usage occupied by electricity is gradually increasing, having risen from 57.9% in fiscal 2005 to 62.3% in fiscal 2015. Use of renewable energy sources includes electricity generation from photovoltaic panels at the Tsukuba Research Center and the Kashima R&D Center, amounting to 302 GJ (84 MWh), all of which was used in business operations at each facility. A co-generation system generated 7,744 MWh of electricity, which was not counted toward electricity usage volume, but the pipelined city gas consumed as fuel in the system was counted as energy consumption.

Overseas, our plant at Killorglin in County Kerry in the Republic of Ireland used 36 TJ of heat produced by a woodchip boiler, and 7 TJ (1,950 MWh) was generated by wind turbine system. The combined power generated by these two forms of renewable energy rose by 1 TJ over the previous year. Overseas plants are engaged in an initiative to purchase electricity designated as being generated from renewable energies such as wind power or hydroelectricity, and of the electricity purchased in fiscal 2015, the Norman Plant purchased 20,590 MWh, the Meppel Plant 12,956 MWh, the Dublin Plant 6,525 MWh and the Kerry Plant 6,382 MWh of electricity generated by renewable energy sources. The percentage of total energy accounted for by electricity decreased from 64.9% in fiscal 2005 to 63.6% in fiscal 2015.

Breakdown of Energy consumption

(global / Japan: all business locations and sales fleets; overseas: all production facilities) (Unit: terajoule)

Fiscal	Total	Liquid fuel		Gaseous fuel		Heat purchase	Electricity		Renewable energy			
		Fuel oil	Petrol etc.	City gas	LPG LNG		Total	Renewable energy source	Total	Wind power source	Wood chip source	Photovoltaic panes
2005	4,447	350	228	942	226	55	2,648	0	0	0	0	0
2011	3,948	33	155	1,189	193	20	2,359	228	0	0	0	0
2012	3,950	2	112	1,178	240	22	2,359	203	38	5	32	0.3
2013	4,127	1	103	1,230	259	21	2,472	196	42	6	35	0.3
2014	3,923	0	96	1,118	241	21	2,403	195	43	6	37	0.3
2015	3,917	0	83	1,083	239	26	2,443	463	43	7	36	0.3

Note) Purchases of renewable electricity: Electricity purchased at the Norman Plant generated by wind power, electricity purchased at the Meppel Plant came from hydroelectricity and electricity purchased at the Dublin and Kerry plants was deemed to have come from electricity generated from renewable energy sources.

Breakdown of Energy consumption (Japan: all business locations and sales fleets)

(Unit: terajoule)

Fiscal	Total	Liquid fuel		Gaseous fuel		Heat purchase	Electricity		Renewable energy			
		Fuel oil	Petrol etc.	City gas	LPG LNG		Total	Renewable energy source	Total	Wind power source	Wood chip source	Photovoltaic panes
2005	3,425	350	225	639	226	2	1,984	0	0	0	0	0
2011	3,159	33	124	950	193	2	1,857	0	0	0	0	0
2012	3,170	2	104	951	240	2	1,870	0	0.3	0	0	0.3
2013	3,358	1	99	1,011	259	2	1,985	0	0.3	0	0	0.3
2014	3,149	0	93	898	241	3	1,913	0	0.3	0	0	0.3
2015	3,149	0	80	859	239	8	1,962	0	0.3	0	0	0.3

Breakdown of Energy consumption (overseas: all production facilities)

(Unit: terajoule)

Fiscal	Total	Liquid fuel		Gaseous fuel		Heat purchase	Electricity		Renewable energy			
		Fuel oil	Petrol etc.	City gas	LPG LNG		Total	Renewable energy source	Total	Wind power source	Wood chip source	Photovoltaic panes
2005	1,022	0	3	303	0.0	52	663	0	0	0	0	0
2011	790	0	31	239	0.1	17	502	228	0	0	0	0
2012	781	0	7	227	0.1	20	489	203	37	5	32	0
2013	769	0	4	218	0.2	18	486	196	41	6	35	0
2014	775	0	3	221	0.1	18	490	195	43	6	37	0
2015	768	0	2	223	0.3	18	481	463	43	7	36	0

8. Sustainable Biodiversity Initiatives

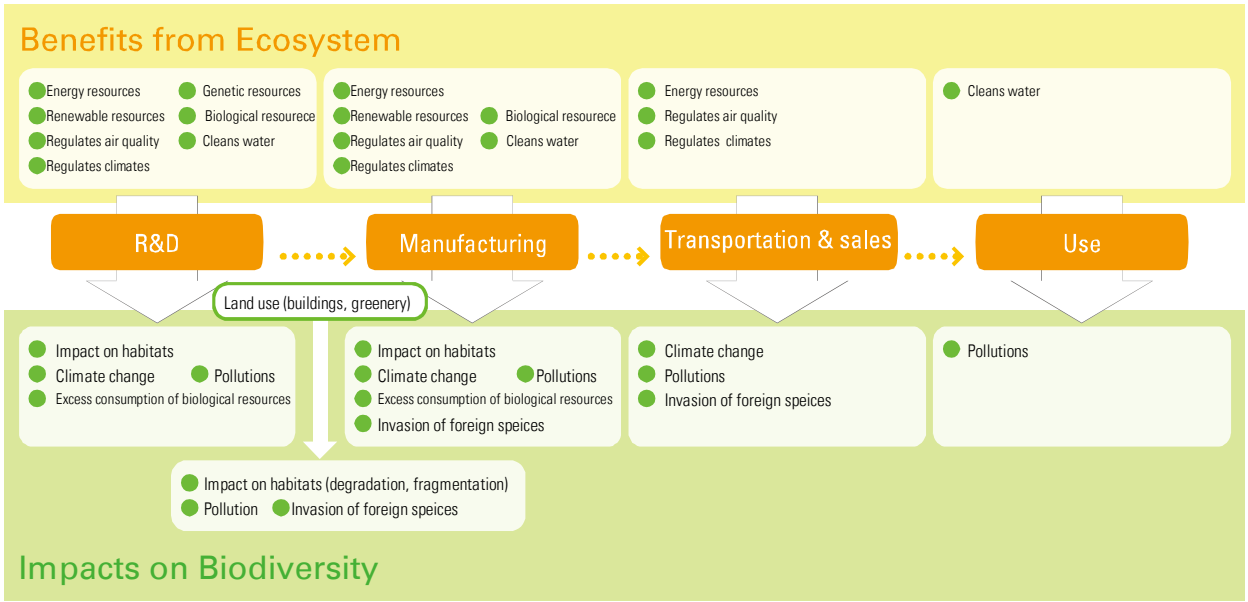
Astellas has always focused on the importance of biodiversity and has promoted the preserving activities positively.

For our business benefit from the blessing of Nature, biodiversity conservation is a very important issue. Through the efforts to deal with the biodiversity issues, Astellas makes contributions to tomorrow's Nature.

8.1. Basic Policy on Biodiversity

Astellas is thankful for the benefits brought about by biological diversity, and understands its business activities in all fields have an impact on ecosystems. We will make a positive contribution to the preservation of biodiversity by working to lessen that impact. Furthermore, we will actively contribute to the creation of a society that coexists with the natural world, enabling the preservation of biodiversity and the sustainable use of the benefits of healthy ecosystems.

- We will endeavor to lessen our overall environmental impact on biodiversity by working to mitigate climate change, minimize pollution, and promote resource recycling.
- We will endeavor to develop technologies that lessen the impact on ecosystems by lowering the burden we place on the environment and using as few natural resources as possible.
- We will endeavor to handle genetic resources in accordance with international standards and the regulations of producing nations.
- We will endeavor to broaden our efforts to preserve biodiversity with the aim of creating a sustainable society that coexists in harmony with nature. To this end, we will promote discussion within society and among affected parties, while reaching across national and geographical borders.
- We will endeavor to foster a corporate culture that will always act with respect for biodiversity and in a manner that is harmonious with our business activities, grateful for the benefits obtained from healthy ecosystems.



8.2. Biodiversity Index

The government's National Biodiversity Strategy of Japan 2010 identified the challenges the country faces due to four crises affecting biodiversity. They are (1) species and habitat degeneration due to excessive human activities and development; (2) degradation of *satochi-satoyama* natural rural areas due to insufficient management; (3) ecosystem disturbances caused by the introduction of alien species by human activity and chemical contamination; and (4) climate change.

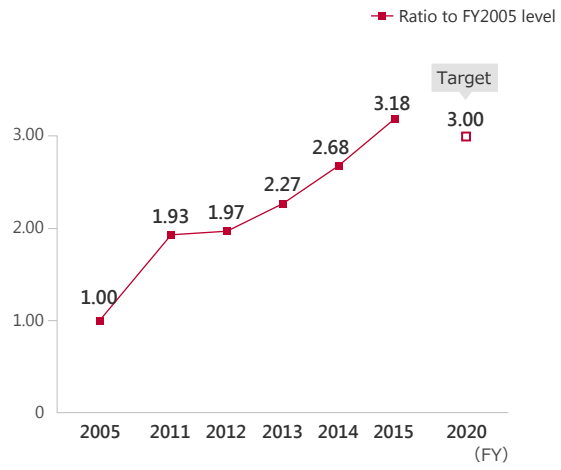
We believe that it is difficult for Astellas to participate directly in the prevention of *satochi-satoyama* degradation in the course of its business activities. Accordingly, we have excluded this crisis from the scope of our biodiversity strategy. We have created an index by reclassifying the main factors responsible for the other three crises into the categories of environmental pollution, resource consumption, and climate change.

Environmental Action Plan

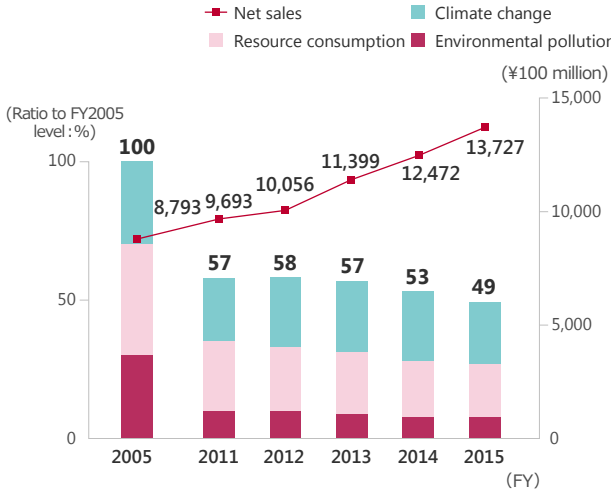
Raise the Biodiversity Index to triple the fiscal 2005 level by fiscal 2020. (Global)

In fiscal 2015 we achieved the goal of our Environmental Action Plan, that reviewed the provides fiscal year's targets, with respect to biodiversity, with the latest Biodiversity Index coming in at 3.18 times the figure recorded in fiscal 2005. We reviewed the GHG emissions in line with the international guidelines for calculating GHG emissions. In addition to the denominator components such as pollution load and resource consumption declining, the numerator of net sales increased for fiscal 2015. As a result, the overall Biodiversity Index improved 0.50 points from the previous year. Because the review was conducted shortly after the revised Action Plan, we will not change the numerical targets as we continue to improve the overall Biodiversity Index.

Biodiversity Index



Biodiversity Burden Index and Sales



Note: Consolidated sales figures were used for computing the biodiversity index, but from fiscal 2013, consolidated sales computations are based on International Financial Reporting Standards (IFRS).

(Biodiversity Index Calculation Method)

The environmental load for each sub-category in the assessment fiscal year is divided by the corresponding burden in the base year and then multiplied by the weight to derive the "Biodiversity Burden Index." The "Biodiversity Index" is calculated by dividing Astellas' consolidated sales in the assessment fiscal year by the total of all the Biodiversity Burden Index figures. Improvement can be determined by comparing this index to the base year.

$$\text{Biodiversity Index} = \frac{\text{Consolidated sales in assessment fiscal year}}{\sum\left(\frac{\text{Burden in assessment fiscal year}}{\text{Burden in the base year}} \times \text{Weight}\right)}$$

Categories	Sub-Categories	Weight (%)
Environmental pollution	NOx, SOx emissions	10
	Chemical substances emissions	10
	BOD load	10
	(subtotal)	(30)
Resource consumption	Water withdrawal (global)	20
	Biological raw material usage	10
	Landfill waste volume	10
	(subtotal)	(40)
Climate Change	GHG emissions (global)	30
	(subtotal)	(30)
Total		100

8.3. Sustainable Biodiversity Initiatives through Social Contribution Activities

Among the principal factors responsible for the deterioration of biodiversity, degradation of *satochi-satoyama* natural rural area is said to be caused by the loss of human intervention coupled with modernization. Astellas recognizes the difficulty in direct involvement with this issue in the course of our business activities. Despite this difficulty, we are keen to pursue initiatives through our social contribution activities in cooperation with external organizations.

In fiscal 2015, we held our forth event of tree planting on the slopes of Mount Tsukuba. More than 100 participants, including Astellas employees together with their family members on a volunteer basis, planted around 600 seedlings on Mount Tsukuba. Of these, roughly 100 had been grown from acorns collected by members of staff of the Tsukuba Research Center within the center's grounds.

8.4. Initiatives for Biodiversity at Astellas Business Sites

At the Dublin Plant, work continues to maintain a small creek running through the site. One aspect of this task was planting about 40 trees, including oak and rowan. To enhance the biodiversity of the creek area, several head of sheep were allowed to roam freely in the area to eat weeds and the like. By keeping the grass cut, it enables wildflowers to seed and many flowers can be enjoyed the following year.

9. Initiatives for Resources Recycling

Resolving the serious global issues of climate change and biodiversity requires changing the existing style of economic development. Namely, the whole of society must pursue a sustainable society and economy while reducing the volume of resources it consumes. Astellas too recognizes that since the use of sustainable resources is essential for continuing its business activities, it must play an active role toward the creation of a recycling-oriented society.

Astellas is moving forward with steps to effectively use water resources and recycle waste materials (reuse, recycling, and use of all thermal energy) as initiatives contributing to a recycling-oriented society.

9.1. Effective Use of Water Resources

Environmental Action Plan (Water resources)

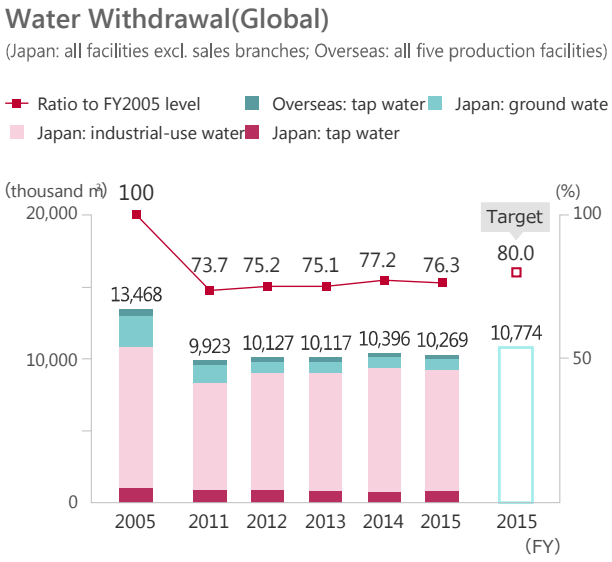
Reduce water withdrawal to the levels of 80% or less than fiscal 2005 by fiscal 2015 (Global)

The Astellas Group on a global basis does not currently draw water from river systems in areas where depletion of water resources is a concern, but as water shortages may become a problem in the future, owing to climate change, we are taking steps to minimize our dependence on such resources, and also regard this as an effective means of ensuring business continuity. Moreover, since the effective use of water resources serves as a useful indicator for gauging society's impact on biodiversity, Astellas has set numerical targets for reducing water withdrawal.

In fiscal 2015, the final fiscal year of our water reduction targets, water resources used by the group on a global basis amounted to 10,269 thousand m^3, equivalent to 76.3% of usage in the base year and a year-on-year improvement of 0.9 percentage points. This indicates that we have been able to continuously reach our target since fiscal 2011.

In the future, we aim for effective use of water resources and have set the relationship between water resources and economic activity as a "water resources productivity" indicator, and strive to improve this indicator.

In Japan, 82.0% of water withdrawal is from industrial-use municipal supply, and all of this water is obtained from rivers by local governments. We are seeking to effectively use water resources to adapt to environmental changes in the future, for example by reduction of contract volume of industrial-use water.



9.2. Waste Management

Environmental Action Plan

Reduce the final volume of waste for disposal to less than 2% of the total discharged. (Japan)

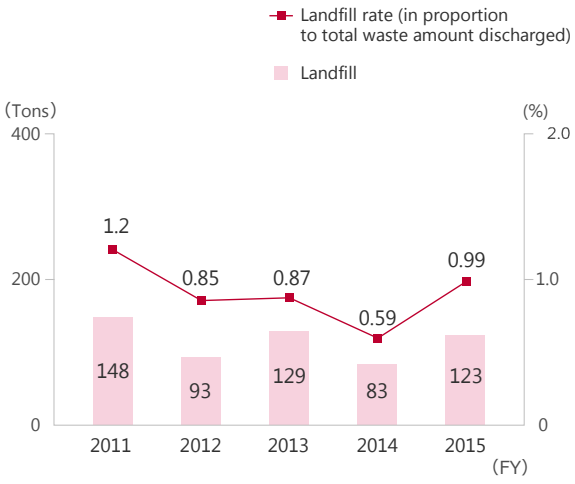
Astellas believes that efforts to reduce waste landfill volume to as close to zero as possible will encourage the recycling and reuse of waste materials. To realize this goal, we set targets for the zero emission of waste at our business facilities in Japan.

In waste management, it is also important to prevent the illegal disposal of waste and environmental pollution caused by hazardous waste generated by research centers and plants. To prevent this from happening, we first examine appropriate methods of waste disposal, and check regularly that the waste disposers selected use appropriate waste disposal methods.

Fiscal 2015 is the final fiscal year of our waste landfill volume reduction targets, the final disposal at landfill waste increased, but is still 0.99% of the total discharged over the previous fiscal year. The group has thus continued since fiscal 2008 to fulfill its zero emission targets. n the future, in addition to continuing our efforts to reduce the amount of landfill waste, we will also strive to newly improve the amount of waste generated per unit.

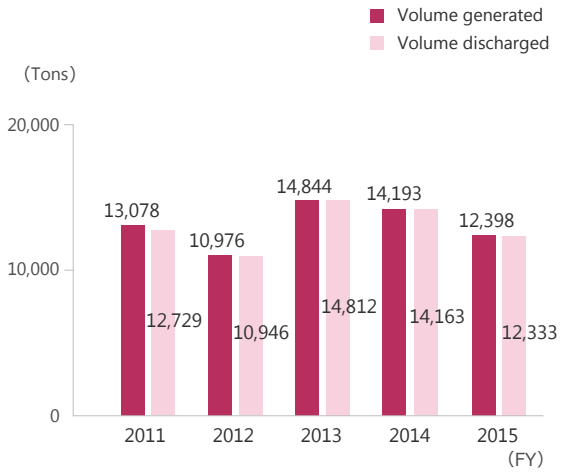
Landfill rate and landfill volume

(All Japanese facilities excl. sales branches)



Volume of Waste Generated and Discharged

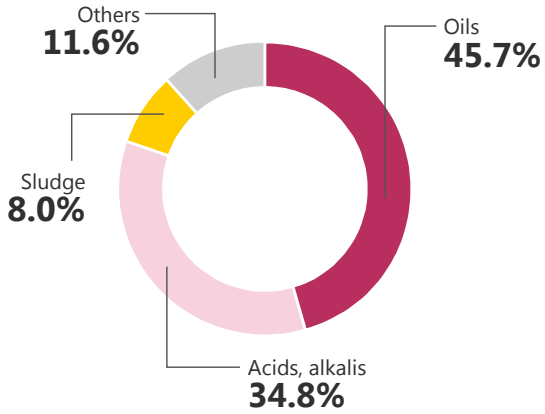
(All Japanese facilities excl. sales branches)



Note: Astellas has made changes to the fiscal 2014 figures for the volume and other data about emissions.

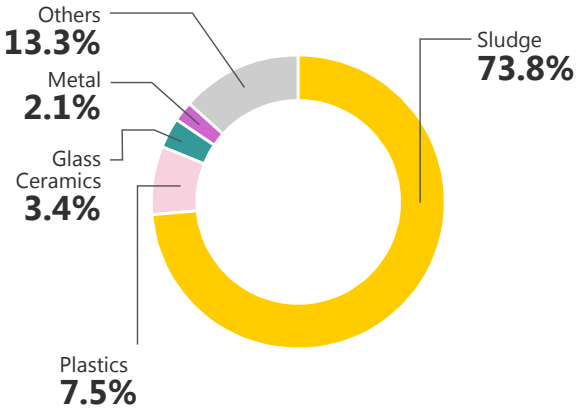
Breakdown of waste generated

(All Japanese facilities excl. sales branches)

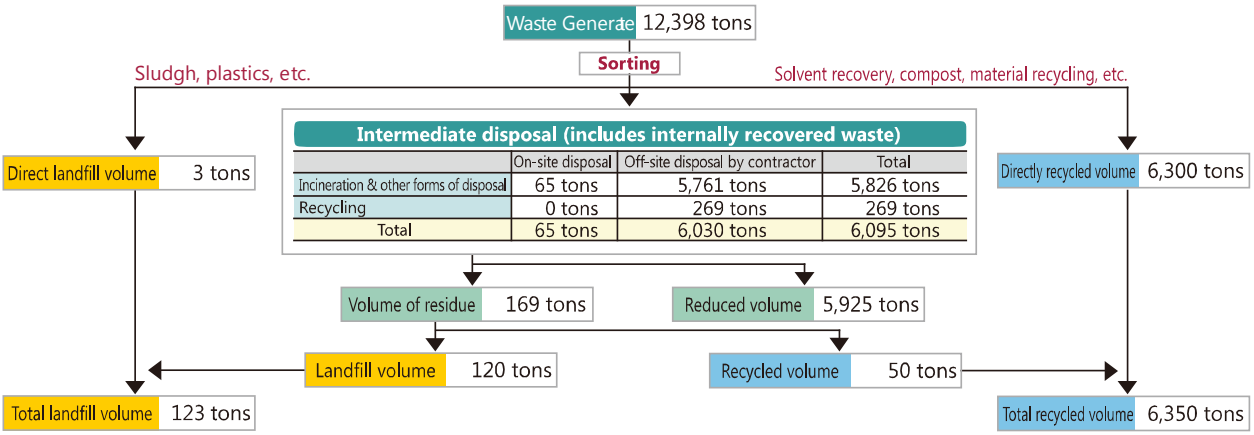


Breakdown of landfill waste

(All Japanese facilities excl. sales branches)



Waste Processing Flow Chart



9.3. State of PCB-contaminated Waste Storage

We have been systematically conducting detoxification of any equipment that is contaminated with PCBs stored by Astellas.

In fiscal 2015, we completed the disposal of 1,807 units of electrical ballasts for fluorescent lamps that were stored at the Kashima R&D Center.

Moreover, we worked to change the containers for the fluorescent lamp ballasts that are stored in the Yaizu Facilities into drums. In addition to confirming they contained no PCBs, we also discovered that up to now more fluorescent lamp ballasts have been stored than we realized. As a result, we decided to increase the number of storable fluorescent lamp ballasts containing PCB to 1,370 units, which enabled us to newly store 461 units of other containers contaminated with PCBs.

Going forward, we aim to achieve a PCB waste storage figure of zero, including by systematically carrying out load-figure registrations of fluorescent lamp ballasts.

Status	Category	Number/Volume	
Stored	Fluorescent lamp ballasts	4,137	units
	Capacitors	173	units
	Small container	1	unit
	PCB oil (Drum weight included)	37	kg
	PCB incrustation	469	units

10. Initiatives for Preventing Pollution

Among environmental initiatives, the prevention of environmental pollution in local communities is just as important as global environmental issues. The system for managing typical pollution problems in Japan has begun to fail, as illustrated by an increase in accidents involving water contamination in the past few years. Consequently, relevant laws and regulations have become increasingly severe, including the strengthening of measures to prevent the escalation of harm in the event of an accident. Meanwhile, the international community has reached an agreement on minimizing the adverse effects that the production and use of chemical substances have on human health and the environment by the year 2020. Each country is, therefore, implementing its own initiatives on the control of chemical substances.

Astellas sets its own levels which are stricter than legal standards and pollution control agreements for the major environmental management indicators used to measure air quality and water quality. In addition to reducing the discharge of contaminants, we also set voluntary targets for lowering the discharge of chemical substances into the atmosphere.

10.1. Air Pollution

Environmental Action Plan

Reduce the amount of VOCs discharged by 25% or more compared with fiscal 2006 levels by fiscal 2015. (Japan)

Astellas sets voluntary numerical targets for reducing the amount of volatile organic compounds (VOCs) it discharges accompanying the use of solvents in production and research activities, and is implementing measures to achieve these reduction targets.

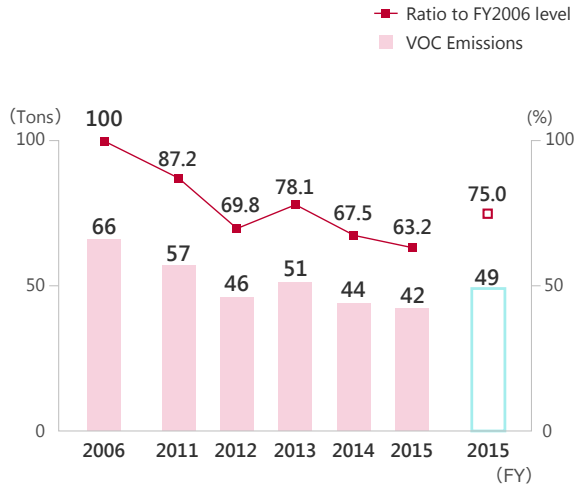
In emissions of VOCs into the atmosphere, we reached our target in fiscal 2015. Emissions totaled 42 tons, down by 36.8% (24 tons) from the base year. From here onward, we will continue our reduction efforts without setting new numerical targets. In addition to reducing atmospheric pollution, we will take other steps to minimize the impact of our business operations on our employees, the regional communities in which we work, and the global environment. Such steps will include measures to prevent environmental pollution by chemical substances as well as workplace accidents and health hazards, and will take the form of adopting new production methods that do not employ high-risk chemicals.

We have not set any numerical targets for atmospheric emissions of sulfur oxides (SOx) and nitrogen oxides (NOx), but in order to reduce them we completed the shutdown of incinerators with the aim of shifting from liquid fuel such as fuel oil to city gas. In addition, we are proceeding to replace boilers using city gas with low-NOx-type boilers.

As a result, SOx emissions were zero, and NOx emissions decreased by 2 tons from the previous fiscal year, to 25 tons.

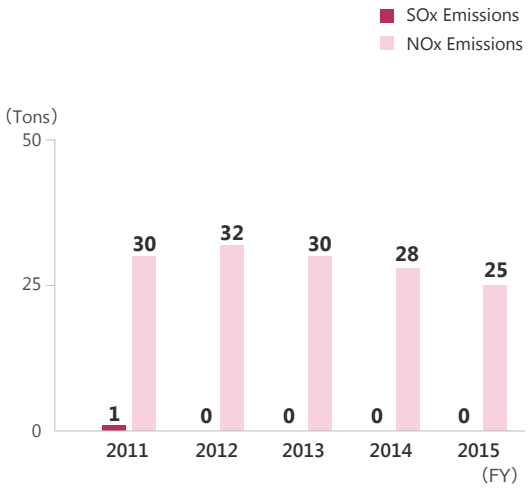
VOC emissions

(All Japanese production facilities and R&D centers)



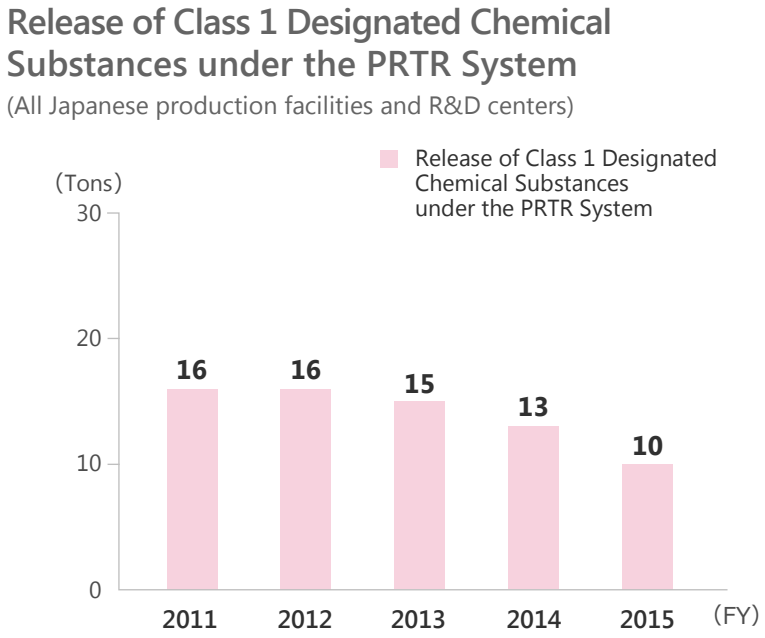
Air pollutants

(All Japanese facilities excl. sales branches)



10.2. Emission of PRTR* Chemical Substances

Japan's PRTR Act designate substances harmful to human beings and recognized to widely exist in the environment. The main aim of these laws is to confirm the nature of the emissions and movement-generated materials of a company, and to result in the company's independent assessment and improvement of its management of chemical substances. The table below shows the release and transfer of PRTR-designated substances that we identified and reported on in fiscal 2015. Our total amount of release into the environment of designated chemical substances in fiscal 2015 was 10 tons.



*) PRTR Refers to chemical substances designated under Japan's "Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof" (Pollutant Release and Transfer Register Law)

Releases and transfers of PRTR chemical substances in fiscal 2015 (unit: tons)

Substance name	Volume handled	Volume Released			Volume Transferred	
		Air	Water	Soil	Waste	Sewerage
Acetonitrile	27.551	0.452	0.000	0.000	13.600	0.000
Chloroform Toluene	22.645	4.076	0.000	0.000	18.569	0.000
Dichloromethane (also known as methylene chloride)	34.647	3.830	0.000	0.000	0.107	0.000
N,N-dimethylformamide Chloroform	13.400	0.062	0.001	0.000	7.981	0.000
Toluene	19.778	0.092	0.000	0.000	19.686	0.000
n-Hexane	6.819	1.227	0.000	0.000	5.592	0.000

10.3. Water Pollution

Astellas measures the extent of its impact on aquatic environments by adopting the Biochemical Oxygen Demand (BOD) load as an index, and makes the data available to the public.

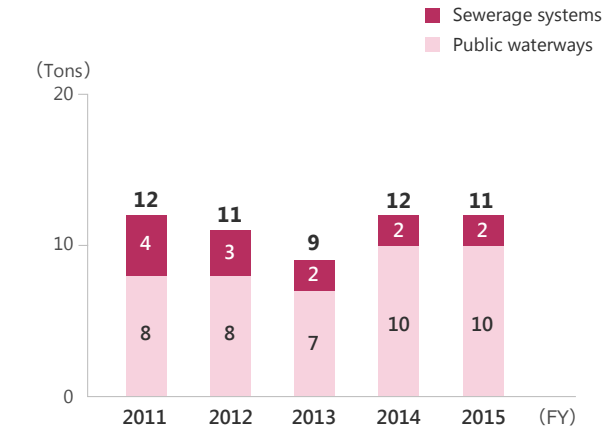
In Japan, the BOD load in fiscal 2015 was 11 tons, slightly down from the previous fiscal year. Outside Japan, the BOD in fiscal 2015 was 15 tons (excluding Meppel Plant), up from the previous year.

Since the discharge into water of chemical substances used in manufacturing processes can have a negative impact on ecosystems, we are examining ways of reducing such discharges as much as possible at all stages from R&D onward.

With respect to future drug candidate substances discovered and developed by Astellas, we are examining the impact pharmaceuticals would have on ecosystems through the evaluation of their biodegradability in the natural environment, and will take action as appropriate. In addition, in fiscal 2015 we evaluated our wastewater management method by using bioassays targeting facilities that were releasing wastewater into rivers after treatment. We confirmed that they are now less likely to have a significant impact on the ecosystem.

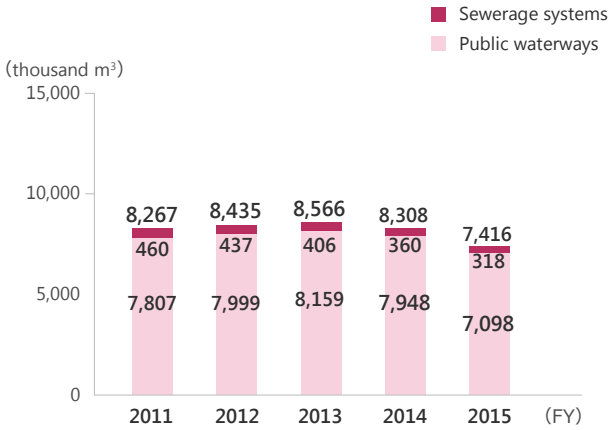
BOD Load (Japan)

(All Japanese production facilities and R&D centers)



Drainage volume (Japan)

(All Japanese facilities excl. sales branches)



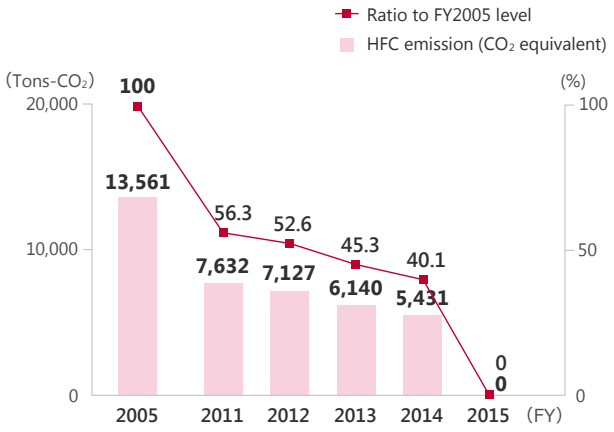
11. Environmental Impact of Products and Countermeasures

11.1. Greenhouse Gases

Although Astellas sold one pharmaceutical product that uses hydrofluorocarbons (HFCs) as a filler agent, from fiscal 2015 Astellas does not sell any products that emit GHG during use phase because at the end of March 2015 we ceased selling said products in line with our sales strategy concerning related products.

We have introduced technology that enables fine-powdered agents to be easily quantitatively inhaled by newly developed inhalation device products. We strove to reduce the environmental impact, and there are no GHGs due to the dissemination of the product.

GHG emissions from product use

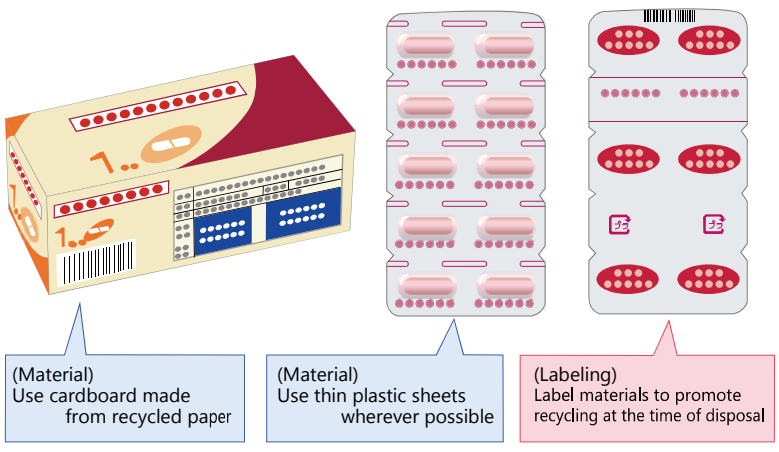


11.2. Containers and Packaging Recycling

The products manufactured and marketed by the Company are administered to patients through medical institutions. After their use, packaging materials are disposed of by hospitals, pharmacies, and general households. The waste discarded by general households is mainly comprised of PTP (plastic) packaging used for tablets and capsules. Hospitals and pharmacies discard PTP packaging as well as various types of plastics including bottles and tubes, metals, glass materials used in injectable solutions products, and such paper items as individual packaging and cardboard boxes.

In the case of pharmaceutical packaging, certain functions remain essential to ensure the safe storage of products as well as compliance with the provisions stipulated under the Pharmaceutical and Medical Device Act of Japan. In addition to these functions and requirements, Astellas selects environmentally friendly materials for use in its packaging while engaging in a variety of initiatives including the labeling of materials to promote recycling at the time of disposal.

To encourage the recycling of containers and packaging for household use in Japan, in accordance with the Containers and Packaging Recycling Law (which mandates the sorted collection of containers and packaging, and promotes their reuse in commercial products) sellers of products are responsible for defraying the costs of recycling of such waste products. The estimated total amount of plastic and paper containers and packaging used in Astellas products in fiscal 2015 is 561 tons, and the Company was requested to pay ¥16.95 million in recycling costs.



12. Environmental Accounting

Astellas calculates the costs of investment and expenses related to environmental conservation for its facilities in Japan and their outcomes based on the Ministry of the Environment's "Environmental Accounting Guidelines."

Environmental conservation costs in fiscal 2015 comprised ¥657 million in investments and ¥2,058 million in expenses (including depreciation costs). The main investments for preventing pollution were in the construction and maintenance of wastewater treatment plants and the surveying and repair of underground water-supply pipelines. Among investments in global environmental protection decided at the Global EHS Sub-Committee, we implemented those involving improved operating and management efficiency of existing equipment, but some plans were ceased mainly to change our bases integration plan and production plan. The economic benefits generated through environmental protection activities amounted to ¥127 million, which includes lower costs owing to energy savings, the sale of waste organic solvents and waste metals, lower costs of treating waste materials, and the purchase of regenerated organic solvents. The cost in fiscal 2015 of partially carrying out the disposal of electrical ballasts for fluorescent lamps found to contain high amounts of PCBs was about ¥50 million. The allowance for PCB treatment was increased and amounted to ¥323 million.

Total environmental conservation costs in fiscal 2015

(¥ million)

Category			Environmental Conservation Costs			
			Investment	Costs		
				Total	Expense	Depreciation
Business Area Cost			633	1,232	869	363
Breakdown	Pollution Prevention	Prevention of atmospheric pollution	4	127	113	14
		Prevention of water pollution	302	254	175	79
		Prevention of soil contamination	3	8	3	5
		Prevention of noise, bad odors and vibrations	0	4	3	1
		Other	4	6	3	3
		Subtotal	313	399	297	102
	Global Environmental Conservation	Mitigation of climate change	175	245	48	197
		Prevention of Ozone layer depletion	82	12	12	0
		Management of chemical substances	0	24	20	3
		Other	0	41	6	36
		Subtotal	256	322	86	236
	Resource Circulation	Efficient use of wastes	0	188	188	0
		Conservation of water	0	0	0	0
		Treatment of wastes	64	237	214	23
		Other	0	86	85	1
		Subtotal	64	511	486	25
Upstream/Downstream costs			0	53	53	0
Administration costs			0	262	262	0
R&D costs			24	36	22	12
Social activity costs			0	4	4	0
Environmental remediation costs			0	362	362	0
Total			657	1,948	1,572	375
Total environmental conservation costs, excluding environmental remediation costs			657	1,585	1,210	375

Environmental Conservation Effect

(¥ million)

Measures taken	Economic Effect Related to Environmental Conservation *
Cost reductions through energy conservation	88
Sludge drying, reduction in amount of waste liquid disposal contracted out (through increased disposal in-house)	0
Conservation of resources through reuse of solvents, and reduction in fuel purchases through conversion of solvents to fuel	44
Sale of waste solvents	4
Total	57

*) Quantifiable items only included in calculations

Environmental-related Investments and Expenses (¥ million)

Category	FY2011		FY2012		FY2013		FY2014		FY2015	
	Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses
Upstream/Downstream costs	225	489	239	479	91	438	146	303	313	324
Administration costs	730	413	465	413	289	422	206	113	256	84
R&D costs	0	432	21	441	31	465	8	462	64	431
Social activity costs	0	65	0	66	0	53	0	53	0	53
Environmental remediation costs	0	331	0	304	0	277	28	295	0	283
Upstream/Downstream costs	7	36	29	13	5	37	0	63	24	22
Administration costs	0	2	0	2	0	4	0	6	0	5
R&D costs	0	255	0	224	0	363	0	363	0	362
Total	963	2,023	753	1,943	416	2,059	387	1,657	657	1,565

13. Methods for Calculating Performance Data

13.1. Methods for Calculating Energy Consumption and GHGs

Astellas' overseas facilities use the CO_2 emission coefficients in the Conversion Coefficients table below except for electricity and steam use of the overseas plants shown in the second table.

Type	Conversion Coefficients	
	Calorific value	CO_2 emissions
Electricity	9.97 GJ/MWh	0.570 tons/MWh *1
Fuel oil	39.1 GJ/kiloliter	2.71 tons/kiloliter
Kerosene	36.7 GJ/kiloliter	2.49 tons/kiloliter
LPG	50.8 GJ/tons	3.00 tons/ton
LNG	54.6 GJ/tons	2.70 tons/ton
City gas	45.0 GJ/thousand m^3N	2.24 tons/thousand m^3N
Diesel oil	37.7 GJ/kiloliter	2.58 tons/kiloliter
Gasoline	34.6 GJ/kiloliter	2.32 tons/kiloliter
Purchased thermal energy	1.36 GJ/GJ	0.057 tons/GJ

	Electricity *2	Steam
Norman Plant	0.489 tons/MWh	-
Dublin Plant Kerry Plant	0.435 tons/MWh	-
Meppel Plant	0.452 tons/MWh	-
Shenyang Plant	0.711 tons/MWh	0.091 tons/GJ

*1 For CO_2 emissions calculations in fiscal 2015, we have used the coefficient for fiscal 2014, because at the time of the release (June 2015 of our Japanese Environmental Report, FEPC's latest CO_2 emission coefficient was unavailable.

*2 See the CO_2 emission coefficient accompanying the end-use electricity under Measures to Address Climate Change.

*3 In converting the amount of power generated by renewable energy sources such as solar and wind into energy value in Joule, we have used a conversion rate of 3.6 MJ per 1 kWh.

13.2. Scope3 Calculation Method

Category	Calculation method	Emission source unit
1 Purchased goods and services	Purchase monetary amount of raw material x emission source unit of each raw material	Target: Production bases in Japan Emission source unit: ● Source: The Ministry of the Environment's database*5; emission source units based on the industry-related table Emission source unit on monetary basis of each raw material (purchaser price basis) Example: Starch 9.07 t-CO_2 equivalent/¥million
2 Capital goods	Facility investment amount (consolidated) x emission source unit per price of capital goods	Target: Global Emission source unit: ● Source: The Ministry of the Environment's database*6; emission source units per price of capital goods (Secretariat) Pharmaceutical products 2.83 t-CO_2 equivalent/¥million
3 Fuel and energy related activities (not included in Scope 1 and Scope 2)	Usage amount of purchased fuel, electricity, heat, etc. x emission source units per usage amount for each energy type	Target: Global Emission source unit: ● Source: The Ministry of the Environment's database*7; emission source units per usage amount of electricity and heat (Secretariat) Electricity: 0.0354 t-CO_2/MWh Steam: 0.0139 t-CO_2/GJ ● Source: Carbon footprint communication program: Basic database Ver.1.01 Fuel oil : 0.214 t-CO_2/kiloliter LPG : 0.537 t-CO_2/ton Kerosene: 0.121 t-CO_2/kiloliter LNG : 0.554 t-CO_2/ton Diesel oil : 0.152 t-CO_2/kiloliter City gas: 0.484 t-CO_2/thousands Nm^3 Gasoline: 0.343 t-CO_2/kiloliter
4 Transportation and distribution	CO_2 emissions during transportation: Calculation method for CO_2 emissions from energy sources related to cargo transportation by transportation carrier stipulated by Act on the Rational Use of Energy CO_2 emissions at distribution warehouses: Electricity usage amount x emission source unit	Target: Transport in Japan Emission source unit during transportation: ● Source: Calculation of greenhouse gas emissions: reporting manual (Ver.4.0) Electricity emissions intensity: Actual fiscal 2014 end-use emission source units of the Federation of Electric Power Companies of Japan (FEPC) 0.5540 t-CO_2 / MWh
5 Waste generated in operation	CO_2 emissions generated during industrial waste transportation: Calculation method for CO_2 emissions from energy sources related to cargo transportation by transportation carrier stipulated by Act on the Rational Use of Energy	Target: Production bases in Japan Emission source unit during industrial waste transportation ● Source: Calculation of greenhouse gas emissions: reporting manual (Ver.4.0)
	CO_2 emissions generated during industrial waste treatment: Amounts of recycled industrial waste, incineration processing, and direct landfill processing x waster type/emission source unit by processing method	Emission source unit during industrial waste transportation ● Source: The Ministry of the Environment's database*8; emission source units by waste type (Secretariat) (excluding waste transportation stage) Example: Sludge (incineration) 0.1731 t-CO_2/t
6 Business travel (by airplane)	Number of persons using airplanes x distance between airports for each flight x emission source unit	Target: Global (Results compiled from all airplane flights except for Asia (excluding China) and Oceania regions) Flight distance between airports: Calculated by assuming flight is a straight line connecting two points on the earth's surface Emission source unit: ● Source: A calculation sheet made public by Defra (The Department for Environment, Food and Rural Affairs, UK) Emission source unit by flight class and distance Example: Economy class on domestic flight. 0.15757 kg-CO_2/passenger-km
7 Employee commuting	Train: Number of persons commuting by train x distance x emission source unit Bus: Number of persons commuting by bus x distance x emission source unit Car: Number of persons commuting by car x distance x emission source unit	Target: Japan Emission source units of trains and buses ● Source: The Ministry of the Environment's database*10; emission source units per traveler-km (Secretariat) Train: 0.0236 kg-CO_2/passenger-km Bus: 0.0836 kg-CO_2/passenger-km Emission source unit of cars: Car: Astellas internal regulations for private-use car commuting expenses ● Source: The Ministry of the Environment's guidelines for calculating greenhouse gas emissions from carbon offset activities (April 2011) Fuel consumption rate of gasoline by private-use car (9.09 km/Liter) ● Number of commuting days per year: 237 days
8 Use of sold products	Amount of HFC used as fillers in inhalation-type medical drugs x GWP	Target: Japan Targets sold inhalation-type medical drugs (HFC specification products)
9 End-of-life treatment of sold products	Usage volume of sold products when end-of-life treatment is approached in line with the laws on recycling containers and packaging x emission source unit	Target: Japan Emission source unit: ● Source: The Ministry of the Environment's database*8; emission source units by waste type (Secretariat) (excluding waste transportation stage) Example: Waste plastics 0.7927 t-CO_2 equivalent/ton

* The Ministry of the Environment's database: The Ministry of the Environment's emission source unit database (ver.2.2) for calculating greenhouse gas emissions through the supply chain (March 2015)

14. Corporate Data

Company Name	Astellas Pharma Inc.
Headquarters	2-5-1, Nihonbashi-Honcho, Chuo-Ku, Tokyo 103-8411, Japan
Capital	¥103,001 million (as of March 31, 2016)
Representative Director	Yoshihiko Hatanaka (President and Chief Executive Officer)
Foundation	1923

Net Sales	1,372.7 billion (Consolidated basis, as of March 31, 2016)
Employees	17,217 (Consolidated basis, as of March 31, 2016)
Professional institution affiliation	・ Japan Business Federation ・ The Federation of Pharmaceutical Manufacturers' Associations of Japan ・ Japan Pharmaceutical Manufacturers Association, etc.

■ Major consolidated subsidiaries

1. Coverage of the Environmental Action Plan

Company name	Facility	Location	Function
Astellas Pharma Inc.	Nihonbashi Office	Chuo-ku, Tokyo	Headquarters Development
	Takahagi Chemistry & Technology Development Center	Takahagi, Ibaraki	Research
	Tsukuba Research Center	Tsukuba, Ibaraki	
	Tsukuba Biotechnology Research Center	Tsukuba, Ibaraki	
	Yaizu Pharmaceutical Research Center	Yaizu, Shizuoka	
	Kiyosu Research Office	Kiyosu, Aichi	
	Kashima R&D Center	Yodogawa-ku, Osaka	
	Branches/Sales Offices	14 branches, 109 sales offices	Sales & Marketing
Astellas Pharma Tech Co., Ltd.	Nishine Plant	Hachimantai, Iwate	Manufacturing
	Takahagi Technology Center	Takahagi, Ibaraki	
	Yaizu Technology Center	Yaizu, Shizuoka	
	Toyama Technology Center	Toyama, Toyama	
	Takaoka Plant	Takaoka, Toyama	
Astellas Pharma Technologies Inc.	Norman Plant	U.S.A	
Astellas Ireland Co., Ltd.	Dublin Plant	Ireland	
	Kerry Plant		
Astellas Pharma Europe B.V.	Meppel Plant	Netherlands	
Astellas Pharma China, Inc.	Shenyang Plant	China	

Note 1) Operating sites throughout this report are in principle identified according to the name of each facility. In instances where there are multiple facilities on the same site, the following names may be applied.
- Takahagi Facilities (Takahagi Chemistry & Technology Development Center and Takahagi Technology Center)
- Yaizu Facilities (Yaizu Pharmaceutical Research Center and Yaizu Technology Center)

2. Facilities Outside the Coverage of Environmental Action Plan

Principal office buildings and research R&D Centers operated by the consolidated subsidiaries listed below:

- Astellas US LLC (U.S.A.)
- Astellas Pharma Europe Ltd. (U.K.)
- Astellas Pharma Europe B.V. (Netherlands)
- Agensys, Inc. (U.S.A.)
- Astellas Research Institute of America LLC (U.S.A.)
- and office buildings used by sales companies in the Americas, EMEA (Europe, the Middle East and Africa including NIS countries), and the Asia and Oceania regions

15. Site Data

Nishine Plant

	Item	Unit	FY2015
Energy	Electricity	MWh	10,115
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	1
	LPG	tons	2
	LNG	tons	1,170
	City gas	thousand m^3	-
	Diesel oil	kiloliter	0
	Gasoline	kiloliter	0
	Total	TJ	165
CO_2 emission from energy use		kilotons	9
Air pollutants	NOx	tons	1
	SOx	tons	-
Chemical substance	VOC	tons	14
Water withdrawal	Tap water	thousand m^3	-
	Industrial-use water	thousand m^3	-
	Ground water	thousand m^3	388
	Total	thousand m^3	388
Drainage volume	into rivers	thousand m^3	388
	Sewerage system	thousand m^3	-
Water pollution	BOD load	tons	0
	COD load	tons	1
Waste	Generated	tons	395
	Landfill	tons	5

Takahagi Facilities

	Item	Unit	FY2015
Energy	Electricity	MWh	19,874
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	1,156
	City gas	thousand m^3	-
	Diesel oil	kiloliter	0
	Gasoline	kiloliter	-
	Total	TJ	261
CO_2 emission from energy use		kilotons	14
Air pollutants	NOx	tons	6
	SOx	tons	-
Chemical substance	VOC	tons	1
Water withdrawal	Tap water	thousand m^3	32
	Industrial-use water	thousand m^3	2,363
	Ground water	thousand m^3	-
	Total	thousand m^3	2,396
Drainage volume	into rivers	thousand m^3	2,396
	Sewerage system	thousand m^3	-
Water pollution	BOD load	tons	4
	COD load	tons	8
Waste	Generated	tons	1,393
	Landfill	tons	37

Yaizu Facilities

	Item	Unit	FY2015
Energy	Electricity	MWh	48,071
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	-
	City gas	thousand m^3	5,576
	Diesel oil	kiloliter	0
	Gasoline	kiloliter	0
	Total	TJ	731
CO_2 emission from energy use		kilotons	39
Air pollutants	NOx	tons	4
	SOx	tons	-
Chemical substance	VOC	tons	0
Water withdrawal	Tap water	thousand m^3	382
	Industrial-use water	thousand m^3	-
	Ground water	thousand m^3	333
	Total	thousand m^3	714
Drainage volume	into rivers	thousand m^3	714
	Sewerage system	thousand m^3	-
Water pollution	BOD load	tons	1
	COD load	tons	2
Waste	Generated	tons	882
	Landfill	tons	1

Toyama Technology Center

	Item	Unit	FY2015
Energy	Electricity	MWh	32,651
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	0
	LNG	tons	-
	City gas	thousand m^3	3,995
	Diesel oil	kiloliter	3
	Gasoline	kiloliter	1
	Total	TJ	505
CO_2 emission from energy use		kilotons	27
Air pollutants	NOx	tons	3
	SOx	tons	-
Chemical substance	VOC	tons	10
Water withdrawal	Tap water	thousand m^3	195
	Industrial-use water	thousand m^3	2,199
	Ground water	thousand m^3	23
	Total	thousand m^3	2,417
Drainage volume	into rivers	thousand m^3	2,417
	Sewerage system	thousand m^3	-
Water pollution	BOD load	tons	3
	COD load	tons	10
Waste	Generated	tons	5,873
	Landfill	tons	45

Takaoka Plant

	Item	Unit	FY2015
Energy	Electricity	MWh	13,567
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	2,192
	LNG	tons	-
	City gas	thousand m^3	-
	Diesel oil	kiloliter	0
	Gasoline	kiloliter	1
	Total	TJ	247
CO_2 emission from energy use		kilotons	14
Air pollutants	NOx	tons	3
	SOx	tons	-
Chemical substance	VOC	tons	0
Water withdrawal	Tap water	thousand m^3	59
	Industrial-use water	thousand m^3	3,514
	Ground water	thousand m^3	22
	Total	thousand m^3	3,594
Drainage volume	into rivers	thousand m^3	3,594
	Sewerage system	thousand m^3	-
Water pollution	BOD load	tons	3
	COD load	tons	2
Waste	Generated	tons	112
	Landfill	tons	1

Kiyosu Research Office

	Item	Unit	FY2015
Energy	Electricity	MWh	1,947
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	-
	City gas	thousand m^3	255
	Diesel oil	kiloliter	-
	Gasoline	kiloliter	0
	Total	TJ	30
CO_2 emission from energy use		kilotons	2
Air pollutants	NOx	tons	0
	SOx	tons	-
Chemical substance	VOC	tons	0
Water withdrawal	Tap water	thousand m^3	6
	Industrial-use water	thousand m^3	-
	Ground water	thousand m^3	13
	Total	thousand m^3	19
Drainage volume	into rivers	thousand m^3	-
	Sewerage system	thousand m^3	19
Water pollution	BOD load	tons	0
	COD load	tons	0
Waste	Generated	tons	1,434
	Landfill	tons	0

Tsukuba Research Center

	Item	Unit	FY2015
Energy	Electricity	MWh	*1) 37,896
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	-
	City gas	thousand m^3	6,697
	Diesel oil	kiloliter	22
	Gasoline	kiloliter	1
	Total	TJ	680
CO_2 emission from energy use		kilotons	36
Air pollutants	NOx	tons	7
	SOx	tons	-
Chemical substance	VOC	tons	14
Water withdrawal	Tap water	thousand m^3	34
	Industrial-use water	thousand m^3	249
	Ground water	thousand m^3	-
	Total	thousand m^3	284
Drainage volume	into rivers	thousand m^3	-
	Sewerage system	thousand m^3	284
Water pollution	BOD load	tons	1
	COD load	tons	2
Waste	Generated	tons	828
	Landfill	tons	23

Tsukuba Bio Research Center

	Item	Unit	FY2015
Energy	Electricity	MWh	6,648
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	-
	City gas	thousand m^3	348
	Diesel oil	kiloliter	-
	Gasoline	kiloliter	0
	Total	TJ	82
CO_2 emission from energy use		kilotons	4
Air pollutants	NOx	tons	0
	SOx	tons	-
Chemical substance	VOC	tons	0
Water withdrawal	Tap water	thousand m^3	29
	Industrial-use water	thousand m^3	-
	Ground water	thousand m^3	-
	Total	thousand m^3	29
Drainage volume	into rivers	thousand m^3	-
	Sewerage system	thousand m^3	29
Water pollution	BOD load	tons	0
	COD load	tons	-
Waste	Generated	tons	1,161
	Landfill	tons	3

*1) 52 MWh generated by photovoltaic panels contained

Kashima R&D Center

	Item	Unit	FY2015
Energy	Electricity	MWh	*2) 12,718
	Fuel oil	kiloliter	-
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	-
	City gas	thousand m^3	1,644
	Diesel oil	kiloliter	-
	Gasoline	kiloliter	-
	Total	TJ	297
CO_2 emission from energy use		kilotons	11
Air pollutants	NOx	tons	1
	SOx	tons	-
Chemical substance	VOC	tons	1
Water withdrawal	Tap water	thousand m^3	20
	Industrial-use water	thousand m^3	97
	Ground water	thousand m^3	-
	Total	thousand m^3	117
Drainage volume	into rivers	thousand m^3	-
	Sewerage system	thousand m^3	117
Water pollution	BOD load	tons	0
	COD load	tons	0
Waste	Generated	tons	205
	Landfill	tons	3

*2) 33 MWh generated by photovoltaic panels contained

Kyoto Suzaku Office

	Item	Unit	FY2015
Energy	Electricity	MWh	2
	Kerosene	kiloliter	-
	LPG	tons	-
	LNG	tons	-
	City gas	thousand m^3	277
	Diesel oil	kiloliter	-
	Gasoline	kiloliter	-
	Purchased heat energy	TJ	4
	Total	TJ	41
CO_2 emission from energy use		kilotons	2
Air pollutants	NOx	tons	-
	SOx	tons	-
Chemical substance	VOC	tons	0
Water withdrawal	Tap water	thousand m^3	8
	Industrial-use water	thousand m^3	-
	Ground water	thousand m^3	-
	Total	thousand m^3	8
Drainage volume	into rivers	thousand m^3	-
	Sewerage system	thousand m^3	8
Water pollution	BOD load	tons	0
	COD load	tons	-
Waste	Generated	tons	12
	Landfill	tons	0

(English version edited: JULY 15th. Japanese original version issued on June 15th, 2016)