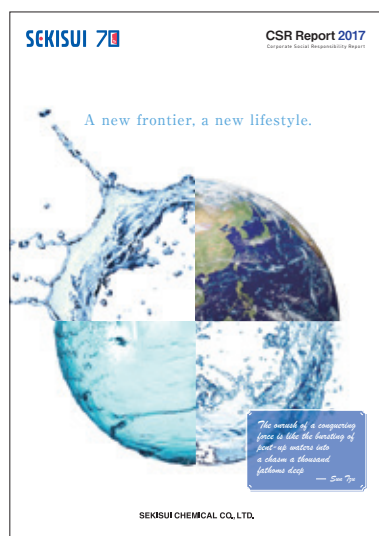


## Corporate Social Responsibility Report

# CSR Report 2017

## Data Book



### Scope of This Report

**Entities Encompassed by This Report:** The basic function of this report is to comment on the activities of the Sekisui Chemical Group, focusing chiefly on the business facilities that play key roles in those activities.

**Timeframe Encompassed by This Report:** April 2016-March 2017 (Includes some activities that occurred outside this timeframe.)

### Scope of Independent Practitioner's Assurance

The environmental and social information contained in the CSR Report 2017 (the Report version and PDF Data Book) is subject to independent practitioner's assurance for the appropriateness of calculation methods and the accuracy of calculation results. Information that falls within the scope of independent practitioner's assurance is identified by  mark. The Independent Practitioner's Assurance Report is included in the CSR Report.

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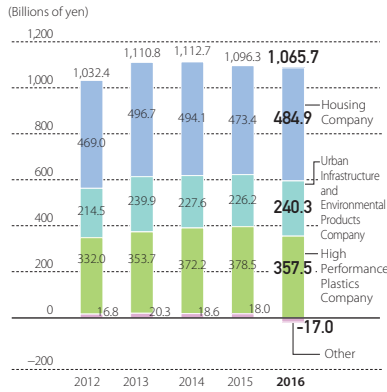
### Disclaimer

Readers are requested to note the following: The information in this report includes not only past and present facts concerning Sekisui Chemical Co., Ltd, and its affiliates but also future forecasts based on current plans and projections and management plans and management policies as of the time of publication. Changes in various factors could cause the results of business activities in the future and other circumstances to differ from these forecasts. Also, since the figures in the tables and graphs contained in this report have been adjusted through rounding off and other means, in some cases total figures may not be equal to the sums of their parts. In addition, for some items data for past fiscal years has been revised in line with expansion in the scope of summation, revision of calculation methods, and changes to environmental load coefficients.

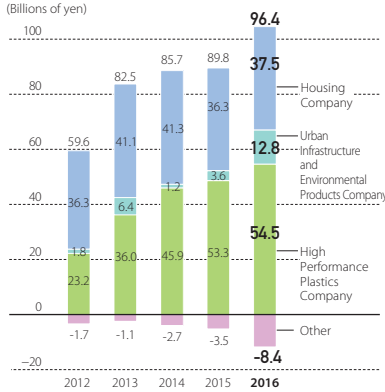
# Management Benchmarks (Consolidated)

\* Fiscal 2012: Performance for overseas subsidiaries is for the 15-month period January 2012 through March 2013 (in connection with standardization of the fiscal years of consolidated subsidiaries to end in March beginning with fiscal 2012).

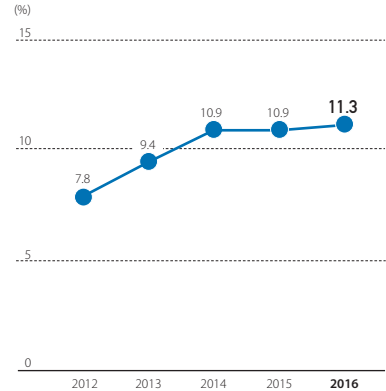
## Sales (by Each Division Company)



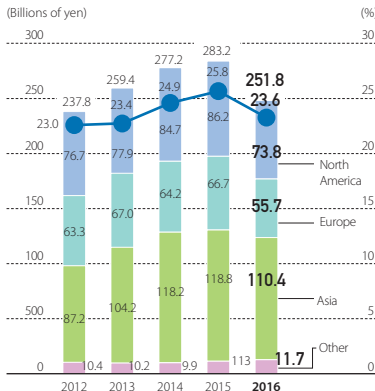
## Operating Income (by Each Division Company)



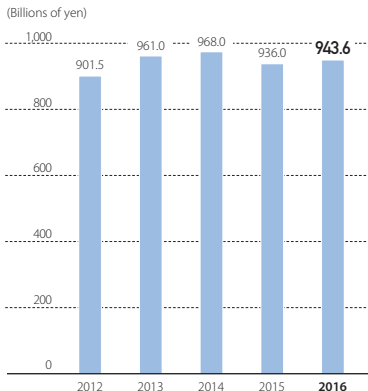
## ROE



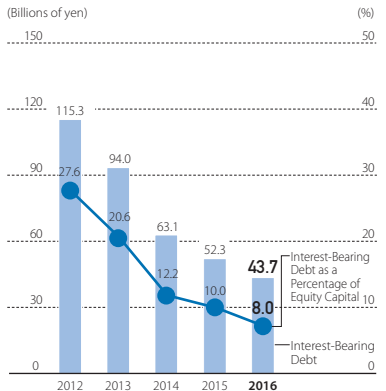
## Overseas Sales and Sales Ratio



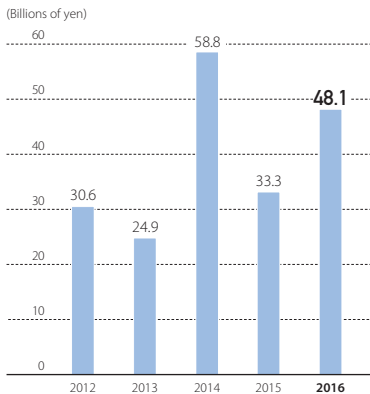
## Total Assets



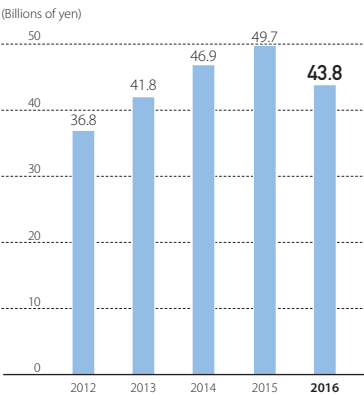
## Interest-Bearing Debt and Interest-Bearing Debt as a Percentage of Equity Capital



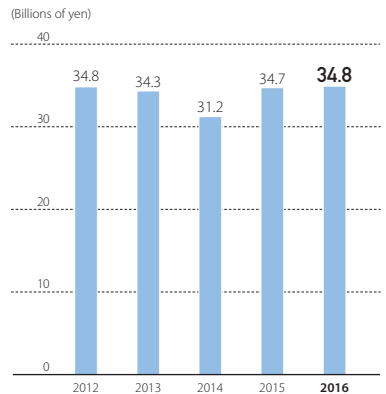
## Free Cash Flows



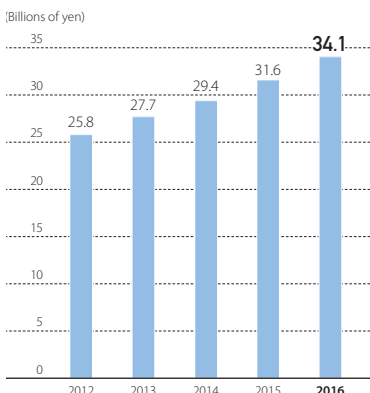
## Capital Expenditures



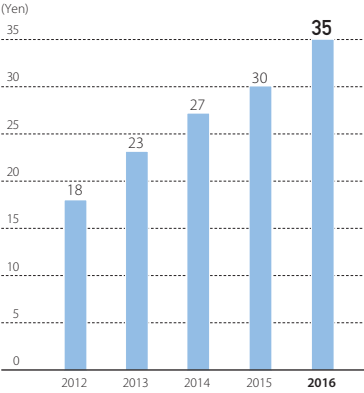
## Depreciation and Amortization



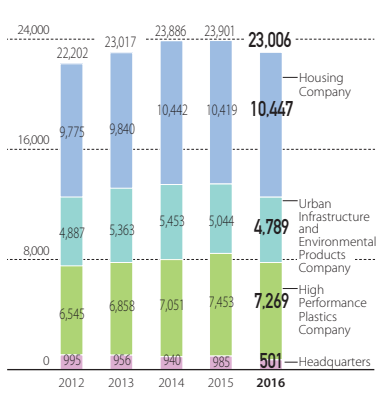
## R&D Costs



## Annual Dividend per Share



## Number of Employees



## Environment-Related Data Sources

### Coverage of the Environmental Performance Data

#### Japan

##### Housing Company

**R&D institutes**      **One company and one business site**

Sekisui Chemical Co., Ltd. Tsukuba R&D Site

**Production plants**    **11 companies and 10 business sites**

Hokkaido Sekisui Heim Industry Co., Ltd. / Kanto Sekisui Heim Industry Co., Ltd.  
Tohoku Sekisui Heim Industry Co., Ltd. / Tokyo Sekisui Heim Industry Co., Ltd.  
Chushikoku Sekisui Heim Industry Co., Ltd. / Chubu Sekisui Heim Industry Co., Ltd.  
Kyusyu Sekisui Heim Industry Co., Ltd.  
Sekisui Board Co., Ltd., etc.

**Sales and construction companies**      **26 companies and 122 business sites**

Sekisui Heim sales companies  
Construction and service companies

**38 companies and 133 business sites in total**

##### Urban Infrastructure and Environmental Products Company

**R&D institutes**      **One company and one business site**

Sekisui Chemical Co., Ltd. Kyoto Research & Development Laboratories

**Production plants**    **26 companies and 19 business sites**

Sekisui Chemical Co., Ltd. Shiga-Ritto Plant / Sekisui Chemical Co., Ltd. Gunma Plant  
Sekisui Chemical Hokkaido Co., Ltd. / Toto Sekisui Co., Ltd. Ota Plant  
Nara Sekisui Co., Ltd. / Shikoku Sekisui Co., Ltd. / Kyushu Sekisui Industry Co., Ltd.  
Hanyu Sekisui Co., Ltd. / Yamanashi Sekisui Co., Ltd.  
Sekisui Seikei, Ltd. / Sekisui Hinomaru Co., Ltd., etc.

**Sales**      **One company and 10 business sites**

Sekisui Chemical Co., Ltd. Higashinohon Branch, Nishinohon Branch, etc.

**26 companies and 30 business sites in total**

Note: The total number of companies and business sites do not match, since some companies have two or more business sites, and some business sites are shared by two or more companies.

#### Overseas

##### Housing Company

Sekisui-SCG Industry Co., Ltd.

**One business site**

##### Urban Infrastructure and Environmental Products Company

Sekisui Polymer Innovations, LLC. Bloomsburg-north Plant  
Sekisui Polymer Innovations, LLC. Bloomsburg-south Plant  
Sekisui Polymer Innovations, LLC. Holland Plant  
Sekisui Industrial Piping Co., Ltd.  
Sekisui (Shanghai) Environmental Technology Co., Ltd.  
Sekisui (Wuxi) Plastics Technology Co., Ltd.  
Sekisui KNT (Hebei) Environmental Technology Co., Ltd.  
Sekisui Esilon B.V.  
Sekisui Rib Loc Australia Pty. Ltd.

**Nine business sites in total**

##### High Performance Plastics Company

Sekisui S-Lec America, LLC.  
Sekisui S-Lec Mexico S.A. de C.V.  
Sekisui S-Lec B.V. Film Plant  
Sekisui S-Lec B.V. Resin Plant  
Sekisui S-Lec (Thailand) Co., Ltd.  
Sekisui S-LEC (Suzhou) Co., Ltd.

##### High Performance Plastics Company

**R&D institutes**      **Two companies and two business sites**

Sekisui Chemical Co., Ltd. Minase Site  
Sekisui Medical Co., Ltd. Drug Development Solutions Center

**Production plants**    **14 companies and 19 business sites**

Sekisui Chemical Co., Ltd. Musashi Plant  
Sekisui Chemical Co., Ltd. Shiga-Minakuchi Plant  
Sekisui Chemical Co., Ltd. Taga Plant  
Sekisui Techno Molding Co., Ltd. / Sekisui Film Co., Ltd.  
Sekisui Medical Co., Ltd., etc. / Sekisui Fuller Company, Ltd.  
EIDIA Co., Ltd.  
Sekisui Nano Coat Technology Co., Ltd.  
Tokuyama Sekisui Industry Co., Ltd., etc.

**14 companies and 21 business sites in total**

##### Headquarters

**R&D institutes**      **One company and one business site**

Sekisui Chemical Co., Ltd. Development Center

**Production plants and headquarters**      **Two companies and three business sites**

Sekisui Chemical Co., Ltd. Osaka headquarters and Tokyo headquarters  
ENAX, Inc. Chubu office

**Two companies and four business sites in total**

**Total: 77 companies and 188 business sites**

Sekisui Specialty Chemicals America, LLC. Pasadena Plant  
Sekisui Specialty Chemicals America, LLC. Calvert City Plant  
Sekisui Specialty Chemicals Europe S.L.  
Sekisui Specialty Chemicals (Thailand) Co., Ltd.  
S and L Specialty Polymers Co., Ltd.  
Sekisui Voltek, LLC. Lawrence Plant  
Sekisui Voltek, LLC. Coldwater Plant  
Sekisui-Alveo B.V.  
Sekisui Alveo Ltd.  
Sekisui Alveo BS G.m.b.H.  
Thai Sekisui Foam Co., Ltd.  
Sekisui Pilon Pty. Ltd.  
Youngbo Chemical Co., Ltd.  
Youngbo HPP (Langfang) Co., Ltd.  
Sekisui High Performance Packaging (Langfang) Co., Ltd.  
Sekisui Medical Technology (China) Ltd.  
Sekisui Xenotech, LLC.  
Sekisui Diagnostics, LLC. Stamford\*  
Sekisui Diagnostics, LLC. San Diego  
Sekisui Diagnostics (UK) Ltd.  
Sekisui Diagnostics P.E.I. Inc.  
Sekisui Virotech G.m.b.H.\*  
Sekisui DLJM Molding Private Ltd. Greater Noida Plan  
Sekisui DLJM Molding Private Ltd. Tapukara Plant  
Sekisui DLJM Molding Private Ltd. Chen nai Plant  
PT.ADYAWINSA SEKISUI TECHNO MOLDING

**32 business sites in total**

\* Scope of summation up to October 2016.

## Results of the Medium-Term Environmental Plan

### Targets and Results of Initiatives under Environmental Medium-Term SEKISUI Environmental Sustainability Plan Take-Off (FY 2014-2016)

Major Target	Efforts		Subjects					Indicators	
			Production sites in Japan	Laboratories	Domestic offices	Overseas production sites	Overseas offices		Other
Expand and create Environment-Contributing Products	Increase sales of Environment-Contributing Products		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Environment-Contributing Product sales ratio (consolidated)	
	Create Environment-Contributing Products		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Number of new Environment-Contributing Product registrations	
Contribute to the return of natural capital	Reduce environmental impact	Greenhouse gases, energy	Reduce greenhouse gas emissions	Emissions reduction	<input type="checkbox"/>		<input type="checkbox"/>		GHG emissions
			Energy conservation	Reduce energy use	<input type="checkbox"/>		<input type="checkbox"/>		Energy consumption per unit of output
		<input type="checkbox"/>			<input type="checkbox"/>			Energy consumption per capita	
		<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		Energy consumption per unit of area	
		<input type="checkbox"/>			<input type="checkbox"/>		Energy consumption per unit of transportation		
	Resources, waste	Waste reduction	Reduce waste generation by production volume	<input type="checkbox"/>		<input type="checkbox"/>		Waste generated per unit of output	
			Reduce use of resources in offices		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copier paper use per capita	
			Reduce waste generation at new construction sites				<input type="checkbox"/>	Waste generated per building	
	EMS, zero emissions	EMS certification		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Number of business sites with EMS certification
		Expand zero emissions activities		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Number of business sites that have achieved zero emissions
	Other environmental impact	Reduce water use		<input type="checkbox"/>			<input type="checkbox"/>		Water usage
		Reduce atmospheric VOC emissions		<input type="checkbox"/>			<input type="checkbox"/>		VOC emissions
	Conserve natural environment	Business site activities	Improve quality of green space on business sites		<input type="checkbox"/>	<input type="checkbox"/>			JBIB Land Use Score Card™ points
Promote Sekisui Environment Week			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ratio of participants to total employees	
Activities in partnership with local communities		Japan	Activities centered on production sites	<input type="checkbox"/>	<input type="checkbox"/>				Number of business sites implementing self-guided activities
			Activities centered on sales companies			<input type="checkbox"/>			Number of activity blocs
Overseas						<input type="checkbox"/>	<input type="checkbox"/>	Five sites continue the activities at least once a year	

Medium-Term Targets (2014-2016)	Fiscal 2016 Results <input checked="" type="checkbox"/>	Evaluation	Page
50%	45.2%	×	Data Book 11
30 products	(Cumulative) 45 products	○	Report 25
Total emissions level maintained (compared with fiscal 2013)	-0.3% (Japan: -11.3%, overseas: +7.5%)	○	Report 26 Data Book 14
-3% (compared with fiscal 2013)	-2.3% (Japan: -3.9%, overseas: -6.6%)	×	Data Book 14
-3% (compared with fiscal 2013)	-9.9%	○	Data Book 15
-3% (compared with fiscal 2013)	-9.2% (Japan: -8.9%, overseas: -11.0%)	○	Data Book 17
-3% (compared with fiscal 2013)	-3.8%	○	Data Book 15
-12% (compared with fiscal 2013)	+7.5% (Japan: +9.9%, overseas: -4.2%)	×	Data Book 16
-6% (compared with fiscal 2013)	-13.8% (Japan: -16.3%, overseas: -22.7%)	○	Data Book 17
Sekisui Heim 825kg/building Two-U Home 1,375kg/building	Sekisui Heim: 1,319kg/building Two-U Home: 1,921kg/building	×	Data Book 17
9 business sites certified*	(Cumulative) 8 business sites	×	Data Book 20
12 business sites achieved*	(Cumulative) 12 business sites	○	Report 26 Data Book 16
No change in total volume (compared with fiscal 2013)	-5.0% (Japan: -9.7%, overseas: +12.2%)	○	Data Book 17
No change in total volume (compared with fiscal 2013) (Japan)	-23.5%	○	Data Book 18
+10 points (compared with fiscal 2013)	+13.4 points	○	Report 27
100%	70%	×	Report 27
23 business sites*	24 business sites	○	Data Book 28
7 blocs	7 blocs (Activities in all the blocs)	○	—
5 bases	5 bases	○	—

\* Target values revised to reflect changes in the number of business sites covered

New Medium-Term Environmental Plan Sekisui Environmental Sustainability Plan: Accelerate (FY 2017-2019)

Efforts		Indicators	
Manage progress utilizing the integrated index		SEKISUI Environmental Sustainability Index Rate of return on natural capital	
Expand and create Environment-Contributing Products	Create Environment-Contributing Products	Number of new Environment-Contributing Product registrations	
	Increase sales of Environment-Contributing Products	Environment-Contributing Product sales ratio (consolidated)	
Reduce environmental impact	Reduce greenhouse gas emissions	Reduce GHG emissions attributable to business activities	
	Energy reduction	Energy consumption per unit of output	
	Waste reduction	Reduce the amount of waste generated by production volume	Waste generated per unit of output
		Reduce the amount of resources used in offices	Copier paper use per capita
		Reduce the amount of waste generated at new construction sites	Waste generated per building
	Maintain water resources		Water usage at production sites
			Total volume of COD discharged into rivers by production sites
Reduce the impact of chemical substances	VOC emissions		
Conserve natural environment	Promote Sekisui Environment Week	Employee participation rate	
	Improve quality of green space at business sites	JBIB Land Use Score Card™ points	
		Number of business sites in harmony with the global environment	
	Forest conservation activities at Housing sales companies	Number of sales companies undertaking activities	
	Self-guided activities in partnership with local communities	Proportion of domestic business sites covered	
Number of business sites undertaking activities overseas			
Environmental education	Environmental education	Human resources index average	

Medium-Term Targets (2017-2019)	Subjects					
	Production sites in Japan	Laboratories	Domestic offices	Overseas production sites	Overseas offices	Other
90% or more	○	○	○	○	○	○
30 products	○	○		○		
60% or more	○		○	○	○	
-6% or more (compared with fiscal 2013)	○	○	○	○	○	○
-3% or more (compared with fiscal 2016)	○			○		
-3% or more (compared with fiscal 2016)	○			○		
-3% or more (compared with fiscal 2016)		○	○		○	
-10% or more (compared with fiscal 2016)						○
-3% or more (compared with fiscal 2016)	○			○		
-3% or more (compared with fiscal 2016)	○			○		
-3% or more (compared with fiscal 2016)	○			○		
100%	○	○	○	○	○	
+5 points (compared with fiscal 2016)	○	○				
5 business sites	○	○				
7 sales companies			○			
50% or more	○	○				
5 business sites				○	○	
+20 points (compared with fiscal 2016)	○	○	○	○	○	

To promote efficient environmental management and fulfill corporate accountability responsibilities, the Sekisui Chemical Group employs environmental accounting that makes it possible to ascertain the costs and effects of environmental conservation activities. Calculation is conducted by referring to the Environmental Accounting Guidelines 2005 issued by the Japanese Ministry of the Environment, with the addition of the Sekisui Chemical Group's own concepts, such as external economic benefits (estimated effects).

In fiscal 2016, the number of production business sites with collectible data decreased mainly due to business transfers.

Total costs increased year on year, reflecting higher costs within business areas, despite decreases in upstream and downstream costs as well as administration expenses

and R&D spending.

With regard to investments, while spending for global warming countermeasures increased, there was a decrease in those for R&D, leading to a decline in investments compared with the previous fiscal year. Turning to economic effects, profit on sales of valuable resources decreased, and there was an increase in earnings from the sale of electricity generated at megasolar power plants that have been recorded since 2013. Moreover, cost reductions from energy conservation activities decreased, while cost savings from waste reduction activities all fell. External economic effects increased steadily due to factors such as the sale of homes with solar power generation systems.

Summation of Environmental Accounting Data

(1) Summation period: April 1, 2016, to March 31, 2017

(2) Scope of summation: 40 target production sites (as listed on page 3 of this Data Book) + five laboratories + each department of headquarters + back offices of division companies + 15 housing sales companies.

Under the scope of data collection in fiscal 2014, there were 47 target production sites + five laboratories + each department of headquarters + back offices of division companies + 15 housing sales companies.

Under the scope of data collection in fiscal 2015, there were 45 target production sites + five laboratories + each department of headquarters + back offices of division companies + 14 housing sales companies.

The following business sites were removed from the scope of data collection in fiscal 2015:

Sekisui Chemical Co., Ltd. Tokyo Plant (plant closure), Sekisui Aqua Systems Co., Ltd. Shizuoka Plant (plant closure)

Housing sales company Sekisui Heim Kyushu Co., Ltd. was unable to collect data following the 2016 Kumamoto Earthquake.

The following business sites were removed from the scope of data collection in fiscal 2016:

Deletions: four Sekisui Film production facilities (removed from the scope of consolidation), Sekisui Medical Amagasaki Plant (business transfer)

(3) Principles of summation

- Depreciation amounts are the same as those for financial accounting.
- Investment amounts are based on budget approvals during the summation period.
- Expenditures and investments that contain other than environmental conservation activities are distributed pro-rata in 10% increments.

Environmental Conservation Costs (Sekisui Chemical Group)

(Millions of yen)

Category	Items	FY2014		FY2015		FY2016	
		Costs	Investments	Costs	Investments	Costs	Investments
1) Costs within business areas	Prevention of air, water, and noise pollution, etc.	1,284	318	1,170	229	1,391	265
	Countermeasures against global warming (energy saving), etc.	503	1,026	442	383	383	706
	Waste reduction, recycling, disposal, etc.	4,442	84	4,203	119	5,370	80
2) Upstream/downstream costs	Cost increases due to URU, switching to packaging/packing methods involving reduced environmental impact, greener purchasing, etc.	231	0	243	0	144	6
3) Administrative costs	Environmental education, EMS maintenance, running costs for green action organization, information disclosure, etc.	2,077	37	2,069	1	1,687	5
4) Research & development costs	Research and development on environmental conservation	2,849	230	5,483	1,369	5,349	804
5) Social activities costs	Social contributions, etc.	331	0	337	1	291	0
6) Environmental damage costs	Nature restoration, etc.	32	0	30	0	27	0
Total		11,748	1,694	13,977	2,103	14,640	1,866
Total amount of R&D costs* and investment in the fiscal period (million yen)		29,453	18,560	31,693	23,949	34,169	20,220
Ratio of amount related to environmental conservation activities to total (%)		9.7	9.1	17.3	8.8	15.7	9.2

\* R&D costs are the total for all consolidated companies.

Environmental Conservation Benefits (Sekisui Chemical Group)

Description of effects		Environmental conservation benefits						Environmental performance criteria: per unit of output; Total				Self-evaluation		
		Item	Unit	FY2014	FY2015	FY2016	Effect (16-15)	See page	Item	Unit	FY2015		FY2016	
Effects within business areas	Effects on invested resources	Amount of energy usage 1	(1) Electricity	TJ	3,423	3,234	3,023	-212	Data Book 14	(1) Energy usage per unit of output (electricity + fuel) 1	GJ/ton	1.71	1.63	○
			(2) Fuel	TJ	2,172	2,113	2,254	141	Data Book 14					
	Effects on environmental impact and waste	(3) CO <sub>2</sub> emissions 2	Thousand tons	311.6	297.6	292.3	-5.3	Data Book 14	—	—	—	—	○	
		(4) Volume of environmental pollutants discharged 3	Tons	630.9	533.7	567.3	33.6	Data Book 19	—	—	—	—	×	
		(5) Waste generated 4	Thousand tons	34.1	31.7	32.6	0.9	Data Book 16	(2) Waste generated per unit of output	kg/ton	35.2	37.1	×	
		(6) Outsourced disposal 5	Thousand tons	0.04	0.02	0.00	-0.02	—	(3) Outsourced disposal per unit of output	kg/ton	0.02	0.00	◎	
Upstream/downstream effects	Effects related to products/services	CO <sub>2</sub> reduction by photovoltaic power generation, etc. (cumulative)	Thousand tons	362	394	425	31	—	—	—	—	○		
Other benefits to environmental conservation	Others 6	Business sites attaining ISO 14001 and other certifications	New acquisitions	Sites	2	3	3	—	—	Business sites attaining ISO 14001 and other certifications 7	Total number of business sites	97	100	○
			Renewals	Sites	15	15	12	—	—					
		Number of business sites achieving zero emissions 8	Sites	2	6	4	—	—	Number of business sites achieving zero emissions 8	Total number of business sites	158	162	○	
		CO <sub>2</sub> reduction from use of megasolar facilities	Thousand tons	5.32	5.06	5.18	0.12	—	—	—	—	—	—	—

1 Conversion into thermal units uses the coefficient published by the Ministry of Economy, Trade and Industry. 2 Emissions at the time of manufacturing and conversion to CO<sub>2</sub> use coefficients used in environmental medium-term SEKISUI Sustainable Plan Take-Off (Data Book p.14) 3 Class I Designated Chemical Substances specified by PRTR Law. 4 Amount discharged + Amount disposed of at price + Amount incinerated within own premises. 5 Simple incineration + Landfill. 6 Including business sites not subject to environmental accounting summation, such as overseas business sites. 7 A cumulative total number of sites reviewed for factors, such as consolidation and return of certifications for housing sales companies. 8 A business site affiliated to multiple companies is counted as one.

Economical Effects Related to Environmental Conservation Measures (Sekisui Chemical Group)

(Millions of yen)

Description of effects		FY2014	FY2015	FY2016	Remarks
Revenue	(1) Profit on sales of valuable resources	165	160	129	Profit on sales of valuable resources from promotion of waste segregation and recycling
	(2) Revenues from sale of electricity	393	365	379	Revenues from sale of electricity generated by megasolar facilities
Cost savings	(3) Savings from simplified packaging	5	4	0	
	(4) Cost savings through energy-saving activities	669	974	486	
	(5) Cost savings through waste-reduction activities, etc.	1,118	1,170	646	Including resource-saving activities
Subtotal (actual effects)		2,350	2,673	1,639	
(6) Contribution to environmental conservation activities 9		7,150	6,755	6,694	Contribution of environmental conservation activities to added value at business sites 10
(7) External economic effect		23,898	28,761	30,647	Monetary conversion of impact from photovoltaic generation systems and No-Dig pipe rehabilitation method
Subtotal (estimated effects)		31,049	35,516	37,341	
Total		33,399	38,189	38,980	

9 Excluding housing sales companies 10 (Added value from business sites) × ((Costs within business areas + Administrative costs)/(Total production costs excluding materials costs))



**Environmental Conservation Costs (by Each Division Company)**

(Millions of yen)

Category	Items	Housing Company1		Urban Infrastructure & Environmental Products Company		High Performance Plastics Company		Sekisui Chemical Group2	
		Costs	Investments	Costs	Investments	Costs	Investments	Costs	Investments
1) Costs within business areas	Prevention of air, water, and noise pollution, etc.	1,093	13	47	20	250	232	1,391	265
	Countermeasures against global warming (energy saving), etc.	113	74	156	165	107	466	383	706
	Waste reduction, recycling, disposal, etc.	4,785	23	193	6	382	51	5,370	80
2) Upstream/downstream costs	Cost increases due to URU, switching to packaging/packing methods involving reduced environmental impact, greener purchasing, etc.	107	6	12	0	16	0	144	6
3) Administrative costs	Environmental education, EMS maintenance, running costs for green action organization, information disclosure, etc.	522	0	292	0	449	5	1,687	5
4) Research & development costs	Research and development on environmental conservation	847	16	2,367	0	519	0	5,349	804
5) Social activities costs	Social contributions, etc.	169	0	49	0	21	0	291	0
6) Environmental damage costs	Nature restoration, etc.	0	0	0	0	27	0	27	0
Total		7,637	133	3,117	192	1,772	753	14,640	1,866
Total amount of R&D costs <sup>3</sup> and investment in the fiscal period (million yen)		4,491	5,980	5,742	4,063	18,035	8,168	34,169	20,220
Ratio of amount related to environmental conservation activities to total (%)		18.9	2.2	41.2	4.7	2.9	9.2	15.7	9.2

1 Including 42 business sites of housing sales companies. 2 Total of three division companies and departments of headquarters. 3 R&amp;D costs are the total for all consolidated companies.

**Environmental Conservation Costs (by Environmental Conservation Measure)**

(Millions of yen)

Category	Description of main activities	Housing Company1		Urban Infrastructure & Environmental Products Company		High Performance Plastics Company		Sekisui Chemical Group2	
		Costs	Investments	Costs	Investments	Costs	Investments	Costs	Investments
1. Prevention of global warming	Reduction of CO <sub>2</sub> emissions, etc.	104	49	167	152	116	374	393	575
2. Ozone layer protection	Reduction of chlorofluorocarbon emissions, etc.	7	25	1	13	0	92	8	129
3. Conservation of air quality	Prevention of air pollution by reducing polluting substances	328	5	35	2	59	101	422	107
4. Prevention of noise and vibration	Prevention of noise and vibration pollution	2	2	5	3	9	45	17	50
5. Conservation of water environment, soil environment, ground quality	Preservation of water quality, prevention of subsidence	199	6	21	7	189	33	410	46
6. Waste reduction and recycling	Reduction and treatment of waste, recycling, etc.	4,869	29	202	6	400	51	5,480	86
7. Reduction of chemical substances	Risk management of chemical substances, etc.	531	0	1	8	10	42	543	50
8. Conservation of natural environment	Nature conservation, etc.	39	0	87	0	40	5	211	5
9. Others	Others	1,557	16	2,598	1	949	12	7,156	817
Total		7,637	133	3,117	192	1,772	753	14,640	1,866

1 Including 42 business sites of housing sales companies. 2 Total of three division companies and departments of headquarters.

**Environmental Conservation Benefits (by Each Division Company)**

Environmental conservation benefits				Housing Company1			Urban Infrastructure & Environmental Products Company			High Performance Plastics Company			Sekisui Chemical Group2			See Data Book page		
Description of effects	Items		Unit	FY2015	FY2016	Effect (16-15)	FY2015	FY2016	Effect (16-15)	FY2015	FY2016	Effect (16-15)	FY2015	FY2016	Effect (16-15)			
Effects within business areas	Effects on invested resources	Amount of energy usage <sup>4</sup>	(1) Electricity	TJ	374	398	24	1,232	1,530	298	1,063	1,078	15	3,234	3,023	-212	14	
			(2) Fuel	TJ	101	116	14	91	90	-2	1,703	2,047	344	2,113	2,254	141	14	
	Effects on environmental impact and waste	(3) CO <sub>2</sub> emissions <sup>5</sup>	Thousand tons			27.4	29.7	2.3	75.6	92.6	16.9	149.1	169.0	19.9	297.6	292.3	-5.3	14
				(4) Volume of environmental pollutants discharged <sup>6</sup>	Tons	5.0	1.7	0.2	51.3	54.7	3.4	477.6	511.0	33.4	537.2	567.3	33.6	19
				(5) Waste generated <sup>7</sup>	Thousand tons	5.6	6.3	0.6	6.8	7.8	1.0	17.5	18.6	1.1	31.7	32.6	0.9	16
				(6) Outsourced disposal <sup>8</sup>	Thousand tons	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	-0.02	0.02	0.00	-0.02	—
Upstream/downstream effects	Effects related to products/services	CO <sub>2</sub> reduction by photovoltaic power generation, etc.	Thousand tons	394	425	31	—	—	—	—	—	—	394	425	31	—		
Other benefits to environmental conservation	Others <sup>9</sup>	New acquisitions/Renewals	Business sites attaining ISO 14001 and other certifications	Sites	0	0	—	1	0	—	2	3	—	3	3	—	—	
			Number of business sites achieving zero emissions <sup>10</sup>	Sites	4	5	—	3	5	—	7	2	—	15	12	—	—	
			CO <sub>2</sub> reduction from use of megasolar facilities	Thousand tons	0	0	—	1	3	—	5	1	—	6	4	—	—	
				Thousand tons	3.20	3.19	-0.01	0.72	0.90	0.18	1.13	1.08	-0.05	5.06	5.18	0.12	—	

 4 Conversion into thermal units uses the coefficient published by the Ministry of Economy, Trade and Industry. 5 Emissions at the time of manufacturing and conversion to CO<sub>2</sub> use the coefficients used in the environmental medium-term SEKISUI Sustainable Plan Take-Off (see Data Book, p.14). 6 Class I Designated Chemical Substances specified by PRTR Law. 7 Amount discharged + Amount disposed of at price + Amount incinerated within own premises 8 Simple incineration + Landfill 9 Including business sites not subject to environmental accounting summation, such as overseas business sites 10 A business site affiliated to multiple companies is counted as one.

**Economic Effects Related to Environmental Conservation Measures (by Each Division Company)**

(Millions of yen)

Description of effects		Housing Company1	Urban Infrastructure & Environmental Products Company	High Performance Plastics Company	Sekisui Chemical Group2	Remarks
Revenue	(1) Profit on sales of valuable resources	16	33	79	129	Profit on sales of valuable resources from promotion of waste segregation and recycling
	(2) Revenues from sale of electricity	235	66	78	379	Revenues from sale of electricity generated by megasolar facilities
Cost savings	(3) Savings from simplified packaging	0	0	0	0	
	(4) Cost savings through energy-saving activities	16	81	389	486	
	(5) Cost savings through waste-reduction activities, etc.	27	59	560	646	Including resource-saving activities
Subtotal (actual effects)		293	238	1,106	1,639	
(6) Contribution to environmental conservation activities <sup>11</sup>		976	1,612	4,107	6,694	Contribution of environmental conservation activities to added value at business sites <sup>12</sup>
(7) External economic effect		22,371	8,275	—	30,647	Monetary conversion of impact from photovoltaic generation systems and No-Dig pipe rehabilitation method
Sub-total (estimated effects)		23,347	9,887	4,107	37,341	
Total		23,640	10,125	5,213	38,980	

11 Including housing sales companies 12 (Added value from business sites) ÷ ((Costs within business areas + Administrative costs)/(Total production costs excluding materials costs))

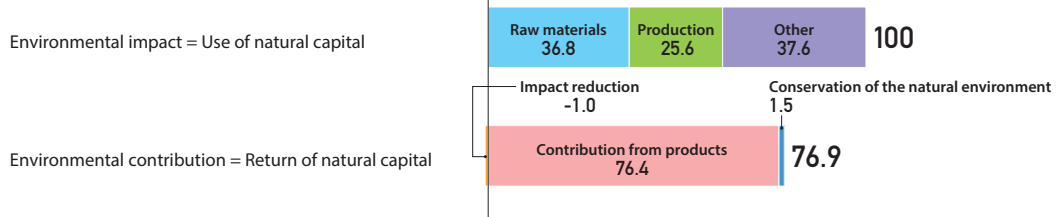
**What is the SEKISUI Environmental Sustainability Index?**

The SEKISUI Environmental Sustainability Index is a single indicator of the level of impact on the environment caused by the corporate activities of the Sekisui Chemical Group (i.e. its use of natural capital) and the Group's contributions to the environment (i.e. its return of natural capital). This index integrates all of the effects of the key implementation objectives of the Group's medium-term plan, such as reducing environmental impact from a variety of sources, increasing products and services that contribute to the environment, and conserving the natural environment.

**Results of calculation**

Based on fiscal 2016 performance, the SEKISUI Environmental Sustainability Index was calculated as follows. With environmental impact equal to 100 representing the use of natural capital, the return of natural capital as contributions back to the environment is 76.9, representing a 0.5% increase compared with fiscal 2015.

**Results of Fiscal 2016 Calculation**



**Calculation Method**

(1) Gather quantitative data on the level of environmental impact and benefits of environmental activities by category

Environmental impact and environmental activities (i)

- Raw material usage
- Water used
- Environmental contribution of each product
- GHG emissions
- Emissions of chemical substances
- Employee participation rate in activities to conserve the natural environment
- Volume of waste generated
- Area of land used

(2) A database of coefficients collected by experts to calculate environmental impact was used for calculating the impact (negative factors) and contributions (positive factors) by category

$$\text{Raw data by category } A_i \times \text{Coefficient } k_i = \text{Environmental impact } (T_i)$$

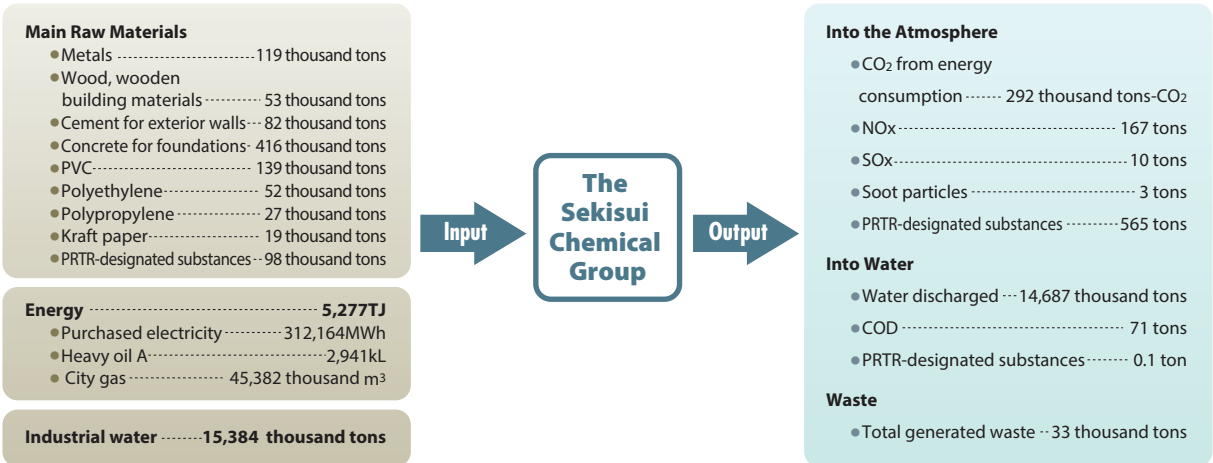
(3) Total of environmental impact and contribution for each category (integrated total)

$$\sum (\text{Raw data for each category } A_i \times \text{Coefficient } k_i) = \sum (\text{Environmental impact } T_i)$$

Note: Units are the amount of damage calculated (= amount necessary to restore the environment to the original conditions [living organisms, plants, and global warming] if our activities damaged the environment)

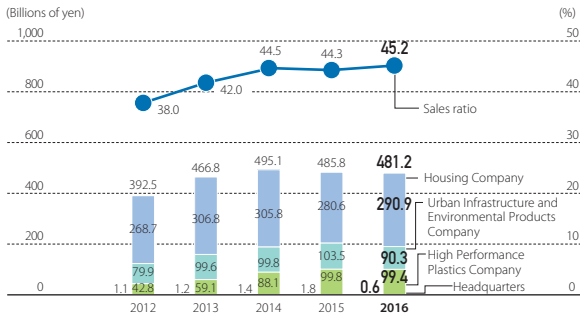
After collecting the raw data in (1) above, stages (2) and (3) are calculated using a customized version of the Life-Cycle Impact Assessment Method based on Endpoint modeling 2 (LIME2) developed in Japan by Professor Norihiro Itsubo at Tokyo City University. (See p. 34 of this Data Book for calculation basis.)

**Material Balance (in Japan)**



Note: Certain main raw materials are undisclosed for business strategy reasons

Environment-Contributing Products Sales and Sales-Ratio Trends

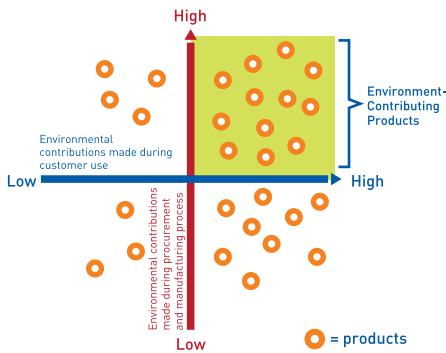


Prerequisites for Environment-Contributing Products

Environments targeted <sup>1</sup>	Natural/social environments
Scope of contribution <sup>2</sup>	All/society-wide
Level of contribution <sup>3</sup>	A level above conventional products/systems

- 1 Excluding living environments
- 2 Excluding own business activities
- 3 Set approved standards for each type of environmental contribution

Conceptual Diagram of Environment-Contributing Products



Criteria for Environment-Contributing Products

Definition (products that satisfy the two conditions below)

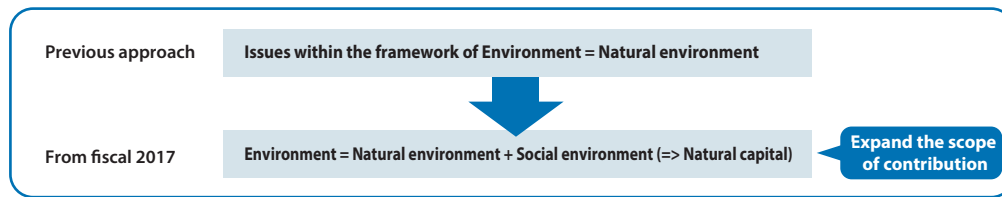
- Products and businesses able to reduce environmental impact of our customers and society as a whole.
- Products or systems having at least a certain degree of effect in reducing environmental impact compared with similar conventional products and systems

Types of Environmental Contribution

- Able to reduce CO<sub>2</sub> emissions and generate energy
- Able to reduce waste
- Able to achieve resource conservation
- Able to save water and improve aquatic environments
- Able to prevent chemical substance pollution
- Able to directly preserve biodiversity
- Interlayer materials essential for functionality of end-user products that contribute to the environment
- Able to reduce environmental impact during disasters

Evolution of Frameworks for Environment-Contributing Products

Frameworks for environment-contributing products have been evolving since fiscal 2017. While product contributions had been limited to targeting the natural environment through fiscal 2016, since fiscal 2017 these have been expanded to encompass all areas of natural capital, which includes such social environments as human capital and social capital. Aiming to improve the global environment and the lives of people through its businesses, the Sekisui Chemical Group focuses mainly on “addressing climate change,” “promoting human health and welfare,” and “building strong infrastructure,” while Group products that contribute to solving these issues are now included within the scope “environment-contributing products.” In accordance with Sustainable Development Goals (SDGs) being promoted by the United Nations, the Sekisui Chemical Group will address the above issues by contributing to the realization of these SDGs.

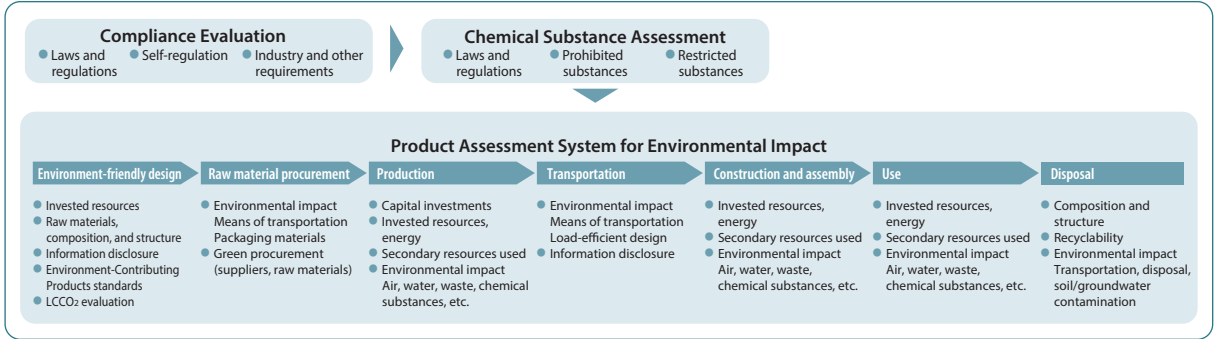


Definition, revised scope

	Current Environment-Contributing Products	Evolution of Environment-Contributing Products
Definition	<ul style="list-style-type: none"> <li>● Products and businesses steadily contributing to reductions in the environmental impact of our customers and society as a whole.</li> <li>● Products or systems having at least a certain degree of effect in contributing to the environment compared with similar conventional products and systems</li> </ul>	<ul style="list-style-type: none"> <li>● Products and businesses that steadily contribute to the global natural environment + social environment (=&gt; Natural capital)</li> <li>● Products or systems having at least a certain degree of effect in reducing environmental impact compared with similar conventional products and systems</li> </ul> <p>Redefining into two categories environment-contributing products in order to verify and perpetuate the existing framework for these products</p> <p>(1) Products that contribute to the natural environment (biological capital, material capital): Products with a strong contribution impact on customers’ natural environments</p> <p>(2) Products that contribute to the social environment (human capital, social capital) Products with a strong contribution impact on customers’ social environments</p>
Scope	Items generally cited as environmental issues: greenhouse gas reductions, waste reduction, raw material usage reduction, water/water cycle conservation, pollution prevention, biodiversity protection, disaster prevention/mitigation	Global social issues that the Sekisui Chemical Group must solve For example: Various social issues addressed by SDGs, extending healthy lifespan, building strong infrastructure

## Product Assessment System for Environmental Impact

Targets: Products and processes  
Scope: All stages of the product lifecycle



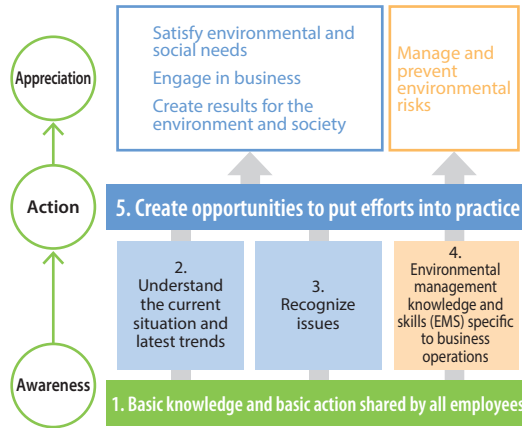
## Biodiversity

### Initiatives Envisioned under Biodiversity Guidelines

1. Assessment and reduction of the impact of business activities on biodiversity	<ul style="list-style-type: none"> <li>● Developing assessment methods and conducting assessments, reducing impact</li> <li>● Promoting biodiversity-conscious purchasing</li> <li>● Greening of business sites (promoting landscaping and biotope development)</li> </ul>
2. Development and promotion of related technologies and products	<ul style="list-style-type: none"> <li>● Incorporating biodiversity assessments at the product development stage</li> </ul>
3. Raising employees' awareness	<ul style="list-style-type: none"> <li>● Conducting nature conservation activities at all business sites</li> <li>● Expanding Sekisui Nature Study Course and nature conservation activities</li> </ul>
4. Dialogue and cooperation with external stakeholders	<ul style="list-style-type: none"> <li>● Supporting innovations inspired by nature, and holding periodic forums</li> <li>● Supporting nonprofit and other organizations through Keidanren (Japan Business Federation)</li> </ul>
5. Transmittance of information	<ul style="list-style-type: none"> <li>● Exhibiting at eco-products exhibitions and other events</li> <li>● Providing information through CSR reports, site reports, and the Company's website</li> <li>● Educating the next generation (Children's Nature Study Course, school visits)</li> </ul>

The Sekisui Chemical Group maintains environmental training programs based on the policies of its long-term vision.

With the aim of fostering ideal employees who can take us one step closer to achieving our vision, the Sekisui Chemical Group developed educational programs in 2014. We are making environmental education a core value to ensure that all employees think and act on their own in terms of contributing to the environment through actions for realizing an Earth with maintained biodiversity.



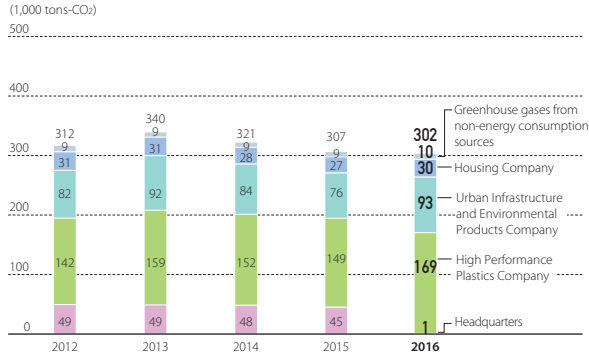
Environmental Education Programs (Implement between 2014 and 2016)

	Japan	Overseas	Education Program	Education Classification	Training Format	Eligible Employees
1	○	○	Vision Guidebook (Basic Guide)	1 Basic knowledge, basic action, skills	Reading materials	All employees
2	○	○	Visions Guidebook (Practical Guide)	1 Basic knowledge, basic action, skills	Reading materials	All employees
3	○	○	Environment Week	1 Basic knowledge, basic action, skills	Activities, participation-style workshops	All employees
4	○		Environment e-learning	1 Basic knowledge, basic action, skills	Reading materials	All employees
5		○	Environmental issues compilation	1 Basic knowledge, basic action, skills	Reading materials	All employees
6	○	○	Environment-Contributing Products pamphlet	1 Basic knowledge, basic action, skills	Reading materials	All employees
7	○	○	Provision of environmental information via internal newsletter	1 Basic knowledge, basic action, skills	Reading materials	All employees
8	○		Environmental e-learning for new employees	1 Basic knowledge, basic action, skills	Reading materials	New employees
9	○	○	EMS educational materials	2 Understand the current situation and latest trends	Activities, participation-style workshops	Production, Research
10	○		New employee training	2 Understand the current situation and latest trends	Classroom lectures + workshops	New employees
11	○		Training for employees newly appointed to the position of assistant manager	2 Understand the current situation and latest trends	Classroom lectures + workshops	High-ranked employees
12	○		Outside educational courses	2 Understand the current situation and latest trends	Classroom lectures + seminars	Management positions
13	○		National Environment Competition: Business site case studies	2 Understand the current situation and latest trends	Classroom lectures + seminars	Production, Research
14	○		Environmental e-learning for management	2 Understand the current situation and latest trends	Reading materials	Top management
15	○		Newly appointed manager training	3 Recognize issues	Classroom lectures + workshops	Management positions
16		○	Overseas environment manager training sessions	3 Recognize issues	Classroom lectures + workshops	Production, Research
17	○		Internal environmental audit member training	4 Environmental risk management (EMS)	Classroom lectures + workshops	Production, Research
18			ISO 14001 revision briefing session	4 Environmental risk management (EMS)	Classroom lectures + workshops	Production, Research
19	○	○	ISO 14001 revision guide distribution	4 Environmental risk management (EMS)	Reading materials	Production, Research
20	○		Safety and environmental training	4 Environmental risk management (EMS)	Classroom lectures + workshops	Production, Research
21	○		External Advisory Board lecture	5 Practical opportunities	Classroom lectures + seminars	Top management
22	○		Domestic 7 Bloc Activities (Create Sekisui Chemical Forests)	5 Practical opportunities	Activities, participation-style workshops	Sales, staff
23		○	Activities by five overseas bases	5 Practical opportunities	Activities, participation-style workshops	All employees

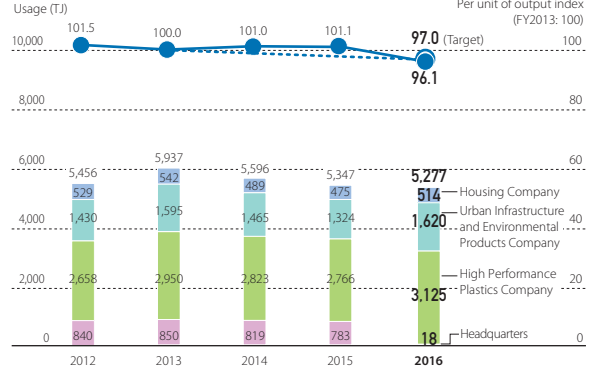
\* Programs listed in blue were implemented in fiscal 2016.



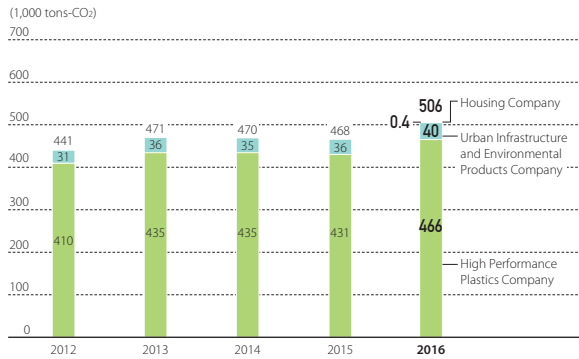
Greenhouse Gas (GHG) Emissions during Manufacturing / Japan



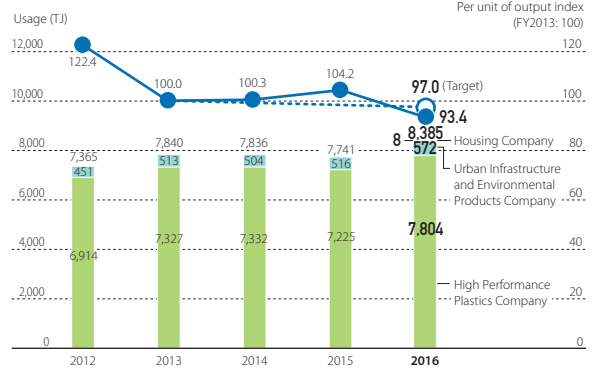
Energy Usage and per Unit of Output (Index) during Manufacturing / Japan



Greenhouse Gas (GHG) Emissions during Manufacturing / Overseas

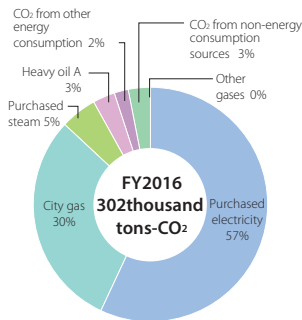


Energy Usage and per Unit of Output (Index) during Manufacturing / Overseas

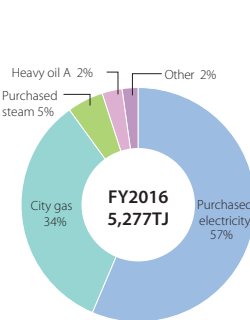


\* The per unit of output index has been revised retroactively for past fiscal years to improve precision.

Breakdown of Greenhouse Gas (GHG) Emissions / Japan



Breakdown of Energy Usage / Japan



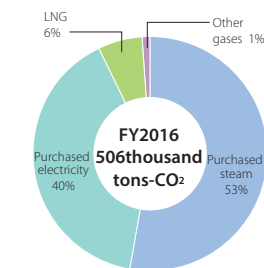
CO<sub>2</sub> Emission Coefficients (SEKISUI Environmental Sustainability Plan Take-Off)

We aim to reduce all types of greenhouse gases under the environmental medium-term SEKISUI Environmental Sustainability Plan Take-Off. The conversion coefficients for CO<sub>2</sub> emissions are the values specified (as of March 2009) under the greenhouse-gas emissions calculation, reporting, and disclosure system established by Japanese law, with uniform figures used for each fiscal year.

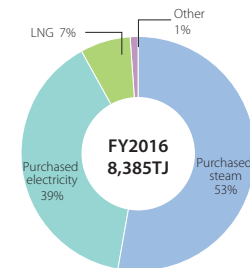
Purchased electricity	0.555 tons-CO <sub>2</sub> /MWh
Heavy oil A	2.71 tons-CO <sub>2</sub> /kL
City gas	2.08 tons-CO <sub>2</sub> /thousand Nm <sup>3</sup>
LNG	2.70 tons-CO <sub>2</sub> /ton
Heating oil	2.49 tons-CO <sub>2</sub> /kL
Diesel oil	2.62 tons-CO <sub>2</sub> /kL
Gasoline	2.32 tons-CO <sub>2</sub> /kL
LPG	3.00 tons-CO <sub>2</sub> /ton
Purchased steam	0.179 tons-CO <sub>2</sub> /ton

Source: Calculation and Reporting Manual for Greenhouse Gas Emissions (published in March 2009 by Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry)

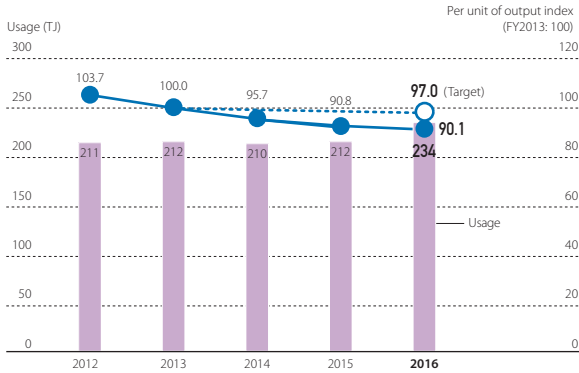
Breakdown of Greenhouse Gas (GHG) Emissions / Overseas



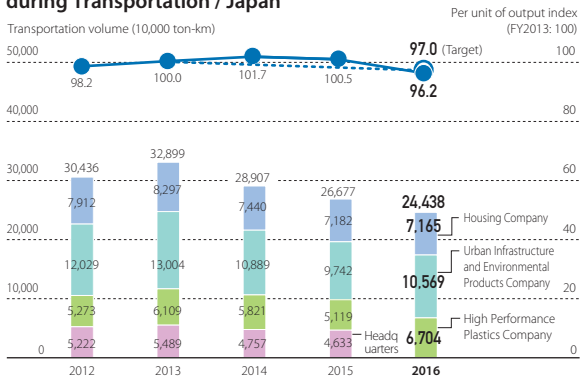
Breakdown of Energy Usage / Overseas



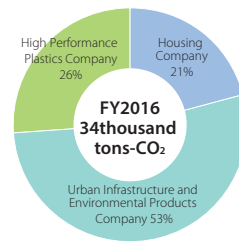
### Laboratory Energy Usage and per Unit of Output (Index)



### Transportation Volume and Energy per Unit of Output (Index) during Transportation / Japan



### CO2 Emissions at the Transportation Stage / Japan

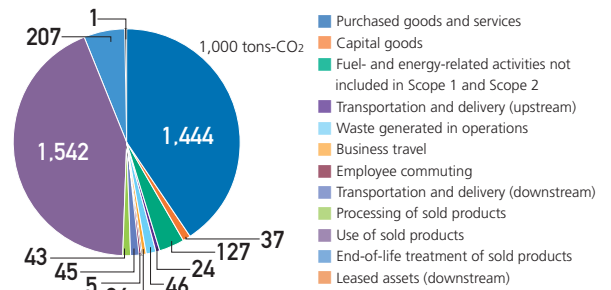


- Amount transported in fiscal 2016: 240 million ton-kilometers
- Calculation method: Either the improved ton-kilometer method, fuel consumption method, or fuel cost method, depending on the product and transportation method

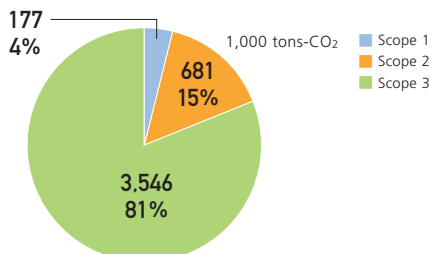
### Greenhouse Gas Emissions from Supply Chain

(1,000 tons-CO<sub>2</sub>)

Category		Estimated emissions
Upstream	Purchased goods and services	1,444
	Capital goods	37
	Fuel- and energy-related activities not included in Scope 1 and Scope 2	127
	Transportation and delivery (upstream)	24
	Waste generated in operations	46
	Business travel	26
	Employee commuting	5
	Transportation and delivery (downstream)	45
Downstream	Processing of sold products	43
	Use of sold products	1,542
	End-of-life treatment of sold products	207
	Leased assets (downstream)	1
	<b>Total (upstream/downstream)</b>	<b>3,546</b>

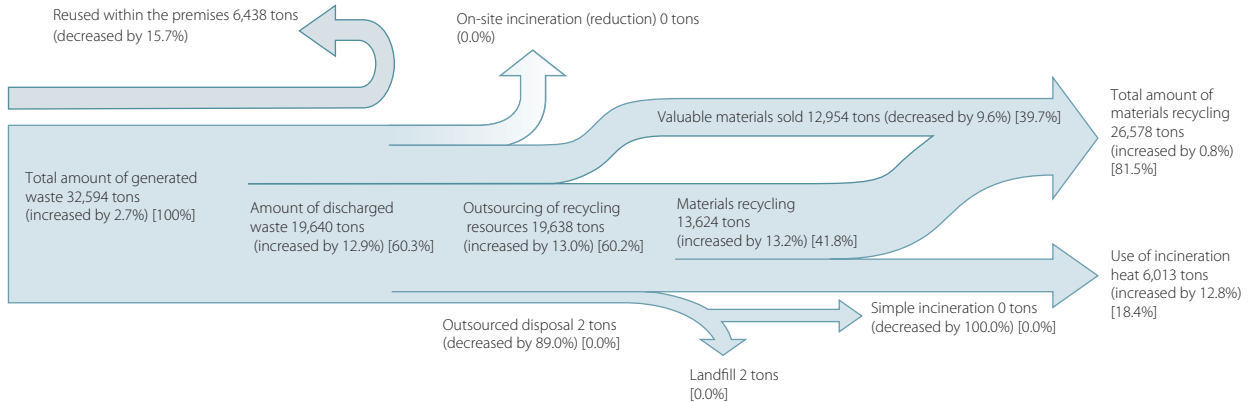


### Greenhouse Gas Emissions from Business Activities (Classified by Scope)





**Fiscal 2016 Annual Production Site Waste Generation and Disposal Conditions / Japan** Change over previous year is in ( ) and proportion of total waste generation is in [ ] .



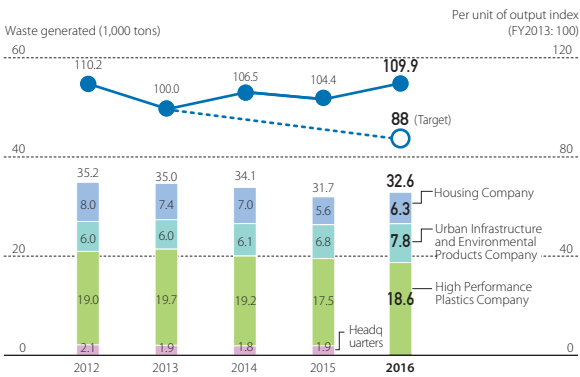
**Zero Emissions Achievement Criteria and Accreditation System of the Sekisui Chemical Group**

- (1) Not engaging in any outside incineration without thermal utilization (thermal recycling), or landfill outside or inside of facilities (recycling ratio: 100%)
  - (2) If the waste quantity is small and it is a type of waste that has never been recycled before, recycling methods and relevant contractors must be identified and a service agreement must be executed.
- Also, we have established uniform evaluation criteria known as the Zero Emissions Achievement Evaluation List. We have established a system designed to conduct internal checks and issue approvals for the status of observance of the evaluation criteria as well as legal compliance, rules and signage for waste segregation and storage, management of related facilities, and waste reduction planning and management. The list obliges us to conduct inspections of outside contractors and to clarify treatment routes in order to enhance the management system through these activities.

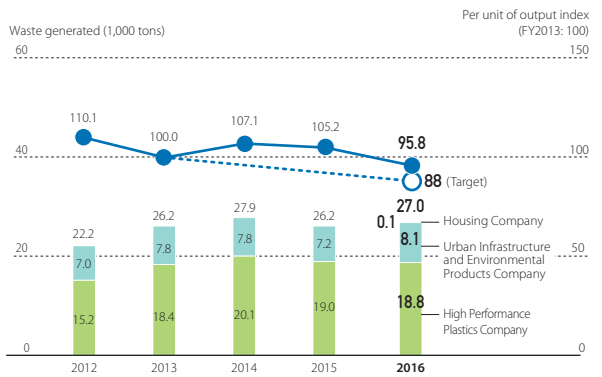
**Status of Zero Emissions Achievement**

Production sites	Achieved at 45 plants in Japan and 12 overseas plants, including those of affiliates. (Includes three plants in Japan and one overseas plant that achieved zero emissions in fiscal 2016)
Laboratories	Achieved at all laboratories by fiscal 2012
New house construction sites	Achieved at all locations by fiscal 2003
House renovation sites	Achieved at all locations by fiscal 2004
Osaka and Tokyo Headquarters buildings	Achieved as of fiscal 2005
Home demolition sites	As of end of fiscal 2016, 99% recycling rate for Designated Construction Materials (scrap concrete and wood chips)

**Waste Generated by Production Sites and per Unit of Output (Index) / Japan**



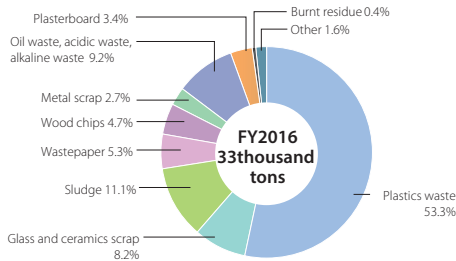
**Waste Generated by Production Sites and per Unit of Output (Index) / Overseas**



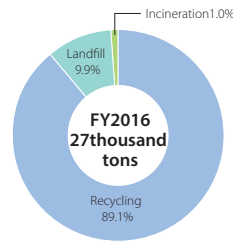
\* The per unit of output index has been revised retroactively for past fiscal years to improve precision.



### Breakdown of Generated Waste / Japan

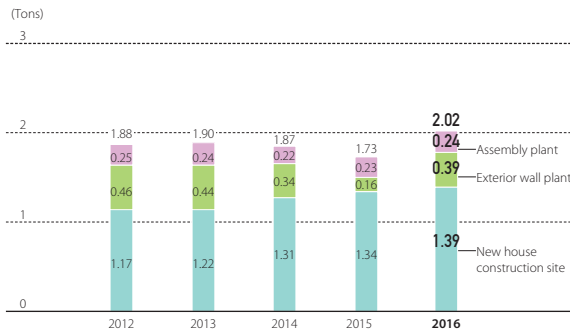


### Waste Treatment Methods / Overseas

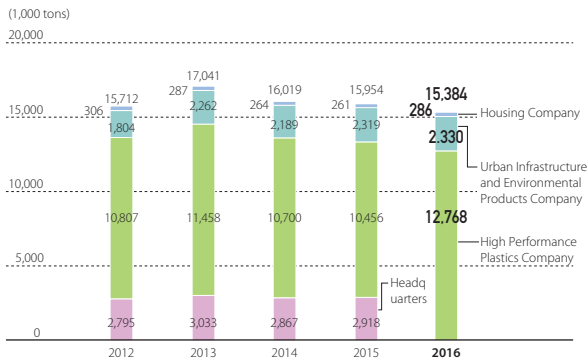


Note: See page 3 of this Data Book for scope of summation

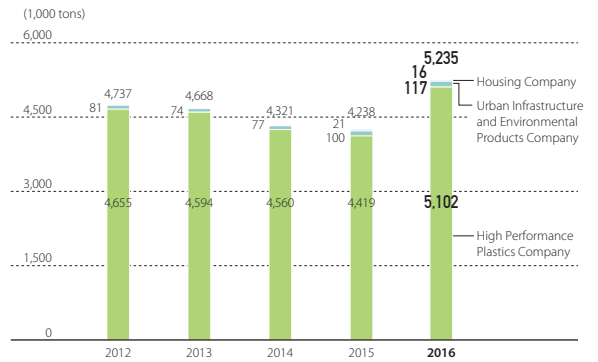
### Waste Generated by New House Construction (per House) / Japan



### Amount of Water Extracted for Use at Production Sites / Japan



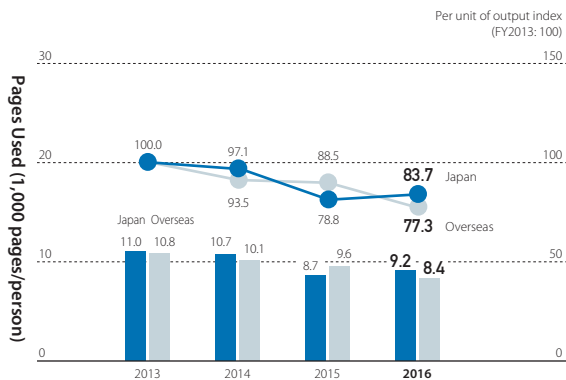
### Amount of Water Extracted for Use at Production Sites / Overseas



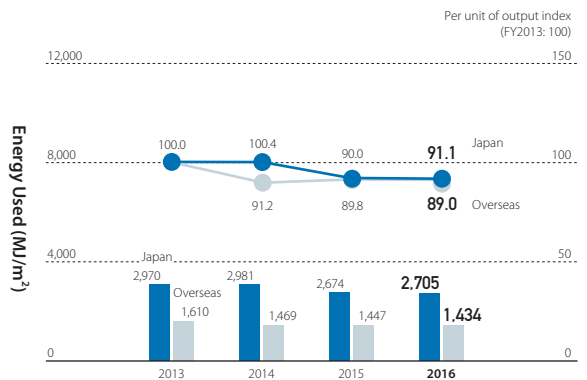
Note: See page 3 of this Data Book for scope of summation

## Environmental Performance in Offices

### Copier Paper Use at Offices per Unit of Output (Index)



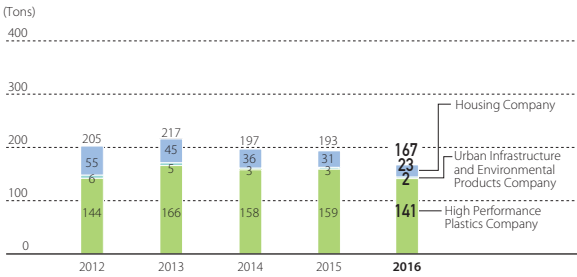
### Energy Usage at Offices per Unit of Output (Index)



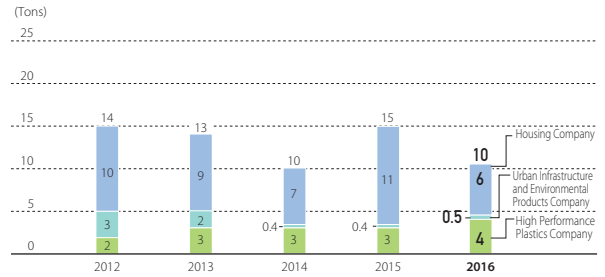
Note: Calculated using electricity and fuel for company cars for Japan, only electricity for overseas.

## Atmospheric and Water-Related Emissions (in Japan)

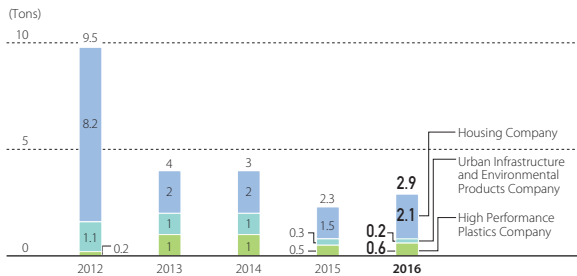
### NOx Emission Volume



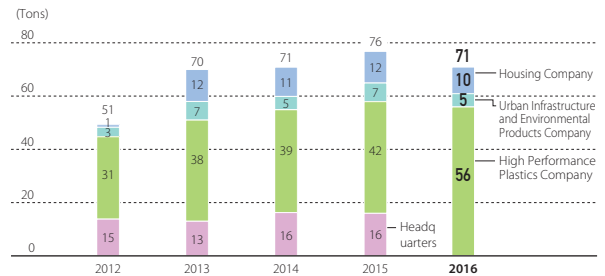
### SOx Emission Volume



### Soot and Dust Emission Volume



### COD Discharge Volume



## Preventing Pollution

The Sekisui Chemical Group is working to meet the targets of legal and regulatory restrictions and to reduce discharge of pollutants through appropriate maintenance and control and periodic inspection of the wide range of equipment it uses.

## Disposal and Storage of Machines and Equipment That Contain PCBs and Management of Machines and Equipment That Employ Various Types of Chlorofluorocarbons

Transformers and condensers that contain PCBs are being disposed of steadily, where PCB treatment facilities are available. Machines and equipment in storage that contain PCBs are managed strictly and thoroughly, through means including locked storage and periodic inspection.

Steps are taken to ensure awareness toward and the strict management of compliance requirements, including periodic inspections of machines and equipment that employ various types of chlorofluorocarbons in accordance with Japan's Fluorocarbons Emission Control Law (revised).

## Environmental Incidents, Complaints, and Emergency Responses (in Japan)

### Environmental Incidents, Complaints, etc.

Six complaints were received in fiscal 2016.

We have implemented measures to prevent a reoccurrence of environmental complaints.

#### Environmental Complaints, etc.

	Details	Countermeasures
Complaints	Noise from factory machinery and equipment malfunction alarms	Remove factory machinery and equipment malfunction alarms
	Noise from steam emissions during the drying process	Attach silencers to safety valves
	Noise from exhaust blowers	Undertake noise measurements and background explanations
	Noise from chainsaws when trimming hedges	Take into consideration work hours
Odor	Odors from factories	Strengthen odor monitoring
Other	Rain water inflows into sewage basins	Block rain water flow routes

### Emergency Response

In order to prevent the occurrence and spread of environmental contamination in the event of an emergency, at least once every year each of our business sites carries out emergency response and reporting drills, assuming a variety of hypothetical cases relevant to the nature of each business site. The major drills performed in fiscal 2016 are as follows:

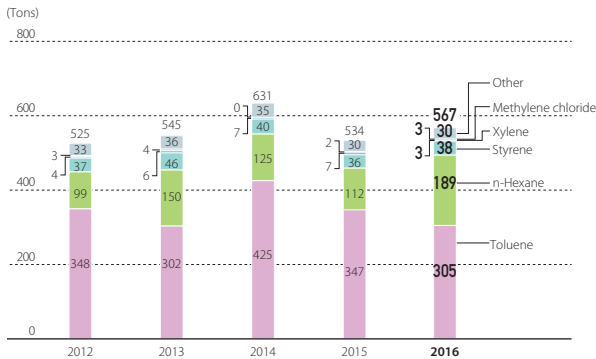
#### Emergency Response and Reporting Drills

Simulated emergency situation	No. of times drills performed
Leakage and outflow of oils	42
Atmospheric discharge of solvents	0
Fire	28
Earthquake	10
Emergency communication training	13
Comprehensive disaster drills	33
Responding to other equipment-related emergencies	14

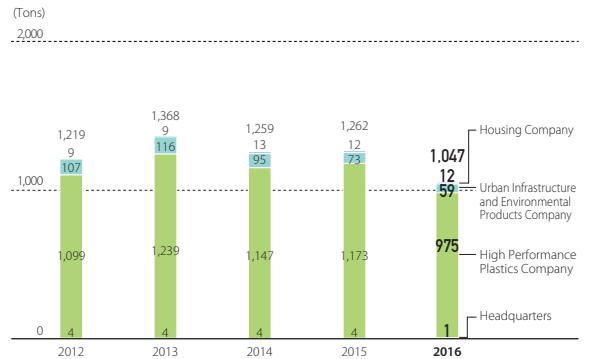
**Summation Results Based on the PRTR Law (Calculations have been made for substances with handling volume of one ton or more at the individual business sites surveyed.)**

Substance	Govt. ordinance notification no.	Transaction volume	Emission volume				Transfer volume			Detoxification
			Atmospheric	Public water areas	In-house soil	In-house landfill	Sewage system	Transfer in waste disposal	Transfer in waste recycling	
Ethyl acrylate	[3]	1.1	0.036	0	0	0	0	0	0.17	0.89
Acrylic acid and aqueous salt solutions thereof	[4]	15.2	0	0	0	0	0	0	1.52	13.66
n-Butyl acrylate	[7]	238.2	0.25	0	0	0	0	0	2.2	236
Acrylonitrile	[9]	444.4	3.4	0	0	0	0	0	0.011	440
Acetaldehyde	[12]	232.2	0.17	0	0	0	0	0	0	232
Acetonitrile	[13]	112.7	9.0	0	0	0	0	0	104	0
2,2'-Azobisisobutyronitrile	[16]	4.5	0	0	0	0	0	0	0	4.5
Antimony and its compounds	[31]	10.6	0	0	0	0	0	0	1.1	0
Isobutyraldehyde	[35]	93.6	1.3	0	0	0	0	0	0	92
Ethylbenzene	[53]	2.0	2.0	0	0	0	0	0	0	0
ε-Caprolactam	[76]	53.5	0	0.017	0	0	0	0	0	53
Xylene	[80]	30.4	2.6	0	0	0	0	0	0	28
Vinyl chloride	[Special 94]	91,648.5	4.0	0.13	0	0	0	0	0	91,644
Chloroform	[127]	8.5	0	0	0	0	0	0	0	8.5
Vinyl acetate	[134]	46.4	3.2	0	0	0	0	0	2.3	41
Inorganic cyanide compounds (not including complex salts and cyanate)	[144]	29.7	0	0	0	0	0	0	0	30
Cyclohexylamine	[154]	8.3	0.46	0	0	0	0	0	0	7.9
Methylene chloride	[186]	225.5	2.9	0	0	0	0	0	0	223
Divinylbenzene	[202]	2.1	0	0	0	0	0	0	0	2.1
2,6-di-t-butyl-4-cresol	[207]	58.6	0	0	0	0	0	0	0	58.6
N,N-dimethylacetamide	[213]	4.7	0	0	0	0	2.3	0	2.4	0
N,N-dimethylformamide	[232]	1.6	0	0	0	0	0	0	0	1.6
Organic tin compounds	[239]	123.7	0	0	0	0	0	0	0.50	0
Styrene	[240]	1,702.7	38	0	0	0	0	0	0.012	857
Terephthalic acid	[270]	73.8	0	0	0	0	0	0	0	73.8
1,2,4-Trimethylbenzene	[296]	1.7	1.7	0	0	0	0	0	0	0
Toluene	[300]	666.1	305	0	0	0	0	0	36	310
Lead compounds	[Special 305]	660.6	0	0.0017	0	0	0	0	2.1	0
Nickel compounds	[Special 309]	1.2	0	0	0	0	0	0	0.52	0
Phenol	[349]	41.4	0	0	0	0	0	0	0.016	38
Bis-(2-ethylhexyl) phthalate	[355]	135.4	0	0	0	0	0	0	2.9	0
n-Hexane	[392]	212.5	189	0	0	0	0	0	6.8	17
Benzaldehyde	[399]	2.0	0	0	0	0	0	0	0	2.0
Poly (oxyethylene) = alkyl = ether (C = 12-15 and other blends)	[407]	1.9	0	0	0	0	0	0	0	0
Formaldehyde	[Special 411]	29.7	0.017	0	0	0	0	0	0	30
Manganese and its compounds	[412]	6.4	0	0	0	0	0	0	6.4	0
Methacrylate	[415]	200.9	1.1	0	0	0	0	0	0.005	200
Methyl methacrylate	[420]	147.9	1.3	0	0	0	0	0	0	147
Methylnaphthalene	[438]	7.6	0.038	0	0	0	0	0	0	7.6
Methylenebis (4,1-phenylene) = diisocyanate	[448]	1,023.2	0	0	0	0	0	0	1.4	0
<b>Total</b>		<b>98,311.0</b>	<b>565</b>	<b>0.15</b>	<b>0</b>	<b>0</b>	<b>2.3</b>	<b>0</b>	<b>170</b>	<b>94,799</b>

**Emission and Transfer Volume by Substance (PRTR Law)**



**Discharge of Volatile Organic Compounds (VOCs) into the Atmosphere**



Environmental Management System Third-Party Certified Business Sites

**Housing Company**

Sekisui Chemical Co., Ltd. Tsukuba R&D Site\*  
 Hokkaido Sekisui Heim Industry Co., Ltd.  
 Tohoku Sekisui Heim Industry Co., Ltd.  
 Kanto Sekisui Heim Industry Co., Ltd.  
 Tokyo Sekisui Heim Industry Co., Ltd.  
 Chubu Sekisui Heim Industry Co., Ltd.  
 Kinki Sekisui Heim Industry Co., Ltd.  
 Chushikoku Sekisui Heim Industry Co., Ltd.  
 Kyushu Sekisui Heim Industry Co., Ltd.  
 Sekisui Board Co., Ltd. Minakuchi Plant  
 Sekisui Board Co., Ltd. Gunma Plant  
 Sekisui-SCG Industry Co., Ltd.  
 SCG-Sekisui Sales Co., Ltd.

**Urban Infrastructure and Environmental Products Company**

Sekisui Chemical Co., Ltd. Shiga-Ritto Plant  
 Sekisui Chemical Co., Ltd. Gunma Plant  
 Sekisui Chemical Co., Ltd. Kyoto R & D Laboratories  
 Chiba Sekisui Industry Co., Ltd.  
 Sekisui Chemical Hokkaido Co., Ltd.  
 Toto Sekisui Co., Ltd. Ota Plant  
 Okayama Sekisui Industry Co., Ltd.  
 Shikoku Sekisui Co., Ltd.  
 Kyushu Sekisui Industry Co., Ltd.  
 Nara Sekisui Co., Ltd.  
 Hanyu Sekisui Co., Ltd.  
 Yamanashi Sekisui Co., Ltd.  
 Sekisui Home Techno Co., Ltd.  
 Sekisui Hinomaru Co., Ltd. Tosu Plant  
 Sekisui Hinomaru Co., Ltd. Kanto Plant  
 Sekisui Seikei, Ltd. Chiba Plant  
 Sekisui Seikei, Ltd. Kanto Plant  
 Sekisui Seikei, Ltd. Hyogo Plant  
 Sekisui Seikei, Ltd. Hyogo-Takino Plant  
 Sekisui Seikei, Ltd. Izumo Plant  
 Sekisui Polymer Innovations, LLC. Bloomsburg Plant  
 Sekisui Polymer Innovations, LLC. Holland Plant  
 Eslon B.V.  
 Sekisui Rib Loc Australia Pty. Ltd.  
 Sekisui Refresh Co., Ltd.  
 Sekisui Industrial Piping Co., Ltd.  
 Sekisui (Wuxi) Plastics Technology Co., Ltd.  
 Sekisui (Qingdao) Plastic Co., Ltd.  
 Sekisui (Shanghai) Environmental Technology Co., Ltd.


**High Performance Plastics Company**

Sekisui Chemical Co., Ltd. Musashi Plant  
 Sekisui Chemical Co., Ltd. Shiga-Minakuchi Plant  
 [Sekisui Fuller Company, Ltd. Shiga Plant]  
 Sekisui Chemical Co., Ltd. Taga Plant  
 Sekisui Chemical Co., Ltd. Minase Site  
 Sekisui Techno Molding Co., Ltd. Nara Plant  
 Sekisui Techno Molding Co., Ltd. Mie Plant  
 Sekisui Techno Molding Co., Ltd. Aichi Plant  
 Sekisui Fuller Co., Ltd. Hamamatsu Plant  
 Sekisui Medical Co., Ltd. Iwate Plant  
 Sekisui Medical Co., Ltd. Tsukuba Plant  
 Sekisui Medical Co., Ltd. Drug Development Solutions Center ☆  
 EIDIA Co., Ltd.  
 Sekisui Nano Coat Technology Co., Ltd.  
 Tokuyama Sekisui Industry Co., Ltd.  
 Sekisui S-Lec B.V. Film Plant  
 Sekisui S-Lec B.V. Resin Plant  
 Sekisui-Alveo B.V.  
 Sekisui Alveo Ltd.  
 Sekisui Alveo BS G.m.b.H.  
 Sekisui S-Lec America, LLC.  
 Sekisui Voltek, LLC. Lawrence Plant  
 Sekisui Voltek, LLC. Coldwater Plant  
 Sekisui Specialty Chemicals America, LLC.  
 Pasadena Plant  
 Sekisui Specialty Chemicals America, LLC.  
 Calvert City Plant  
 Sekisui Specialty Chemicals Europe, S.L.  
 Sekisui S-Lec Mexico S.A. de C.V.  
 Sekisui Specialty Chemicals(Thailand) Co., Ltd  
 Sekisui S-Lec (Thailand) Co., Ltd.  
 Thai Sekisui Foam Co., Ltd.  
 Sekisui Pilon Pty. Ltd.  
 Sekisui Diagnostics (UK) Ltd.  
 Youngbo Chemical Co., Ltd.  
 Youngbo HPP (Langfang) Co., Ltd.  
 Sekisui High Performance Packaging (Langfang) Co., Ltd.  
 Sekisui S-LEC (Suzhou) Co., Ltd.  
 Sekisui Medical Technology (China) Ltd.  
 Sekisui DLJM Molding Private Ltd. Greater  
 Nodia Plant

[ ]: Organizations in square parentheses are included in the scope of certification. Some sites not shown above may include related sections that have attained ISO 14001 certification.  
 ☆ Eco Action 21; others ISO 14001  
 \* The Sekisui Chemical Co., Ltd. Tsukuba R&D Site and Development Center share a single certification

**Headquarters**

Sekisui Chemical Co., Ltd. Development Center\*  
 ENAX. Inc. Headquarters, Chubu office

**Number of Issues of Concern in Environmental Auditing for Fiscal 2016**   
 (for production sites and laboratories, as of end of March 2017) (Cases)

		Number of cases	Correction completed	Undergoing correction
Headquarters environmental auditing* (18 business sites)	Issues of concern	74	53	21
	Issues to work on	192	121	71
	Proposals	8	6	2
	Total	274	180	94
Auditing by certification body	Renewal (12 business sites)	Nonconformity (major)	0	0
		Nonconformity (minor)	2	2
		Observations	44	19
	Total	46	21	
Surveillance (35 business sites)	Nonconformity (major)	0	0	
	Nonconformity (minor)	20	12	
	Observations	129	95	
	Total	149	107	
Internal auditing of business sites (47 business sites, 49 audits)	Nonconformity (major)	5	5	
	Nonconformity (minor)	115	73	
	Observations	397	291	
	Total	517	369	

\* Categories of instructions for Headquarters environmental auditing:  
 Issues of concern: Matters recommended for swift improvement  
 Issues to work on: Matters recommended for planned improvement  
 Proposals: Matters to be considered for improvement, advice

Quality Management System Third-Party Certified Business Sites

**Housing Company**

Sekisui Chemical Co., Ltd. Housing Company (integrated certification)  
 Housing Product Research & Development Department  
 Technology Departments  
 Hokkaido Sekisui Heim Industry Co., Ltd.  
 Tohoku Sekisui Heim Industry Co., Ltd.  
 Kanto Sekisui Heim Industry Co., Ltd.  
 Tokyo Sekisui Heim Industry Co., Ltd.  
 Chubu Sekisui Heim Industry Co., Ltd.  
 Kinki Sekisui Heim Industry Co., Ltd.  
 Chushikoku Sekisui Heim Industry Co., Ltd.  
 Kyushu Sekisui Heim Industry Co., Ltd.  
 Sekisui Global Trading Co., Ltd.  
 Sekisui Heim Supply Co., Ltd. Technology Department  
 Sekisui Board Co., Ltd. Minakuchi Plant

**Headquarters**

Sekisui Chemical Co., Ltd. R&D Center, LB Project  
 Sekisui Insurance Service Co., Ltd.

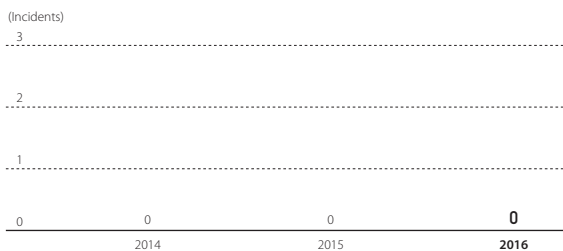
**Urban Infrastructure and Environmental Products Company**

Sekisui Chemical Co., Ltd. Gunma Plant  
 Sekisui Chemical Co., Ltd. Shiga-Ritto Plant  
 Sekisui Aqua Systems Co., Ltd. Plant Engineering Division  
 Sekisui Aqua Systems Co., Ltd. Civil Engineering & Water Treatment Division  
 Sekisui Aqua Systems Co., Ltd. Water Supply & Drainage Division  
 Sekisui Home Techno Co., Ltd.  
 Hanyu Sekisui Co., Ltd.  
 Yamanashi Sekisui Co., Ltd.  
 Sekisui Chemical Hokkaido Co., Ltd.  
 Toto Sekisui Co., Ltd. Headquarters, Ota Plant  
 Chiba Sekisui Industry Co., Ltd.  
 Okayama Sekisui Industry Co., Ltd.  
 Shikoku Sekisui Co., Ltd.  
 Kyushu Sekisui Industry Co., Ltd.  
 SEKISUI PIPE RENEWAL BV  
 Sekisui Polymer Innovations, LLC. Bloomsburg Plant  
 Sekisui Polymer Innovations, LLC. Holland Plant  
 Sekisui Rib Loc Australia Pty. Ltd.  
 Eslon B.V.  
 Sekisui Refresh Co., Ltd.  
 Sekisui (Shanghai) Environmental Technology Co., Ltd.  
 Sekisui (Wuxi) Plastics Technology Co., Ltd.  
 Sekisui (Qingdao) Plastic Co., Ltd.  
 Sekisui Industrial Piping Co., Ltd.

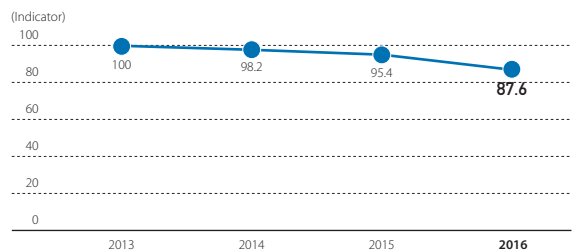
**High Performance Plastics Company**

Sekisui Chemical Co., Ltd. Musashi Plant  
 Sekisui Chemical Co., Ltd. Shiga-Minakuchi Plant  
 Sekisui Chemical Co., Ltd. Taga Plant  
 Sekisui Chemical Co., Ltd. Tsukuba Site / IM Project  
 Sekisui Techno Molding Co., Ltd. Aichi Plant  
 Sekisui Techno Molding Co., Ltd. Nara Plant  
 Sekisui Techno Molding Co., Ltd. Mie Plant  
 Sekisui Nano Coat Technology Co., Ltd.  
 Tokuyama Sekisui Industry Co., Ltd., (integrated certification)  
 Hamamatsu Plant  
 Shiga Plant  
 Tokyo Office  
 Osaka Office  
 Sekisui Medical Co., Ltd. Headquarters  
 EIDIA Co., Ltd  
 Sekisui Material Solutions Co., Ltd.  
 Sekisui High Performance Packaging (Langfang) Co., Ltd.  
 Sekisui Voltek, LLC. Lawrence Plant  
 Sekisui Voltek, LLC. Coldwater Plant  
 Sekisui Alveo(integrated certification)  
 Sekisui Alveo A.G.  
 Sekisui Alveo G.m.b.H.  
 Sekisui Alveo (Benelux) B.V.  
 Sekisui-Alveo S.A.  
 Sekisui Alveo S.r.L.  
 Sekisui Alveo Ltd.  
 Sekisui-Alveo B.V.  
 Youngbo Chemical Co., Ltd.  
 Thai Sekisui Foam Co., Ltd.  
 Sekisui Pilon Plastics Pty. Ltd.  
 Sekisui S-Lec America, LLC.  
 Sekisui S-Lec B.V.  
 Sekisui S-Lec (Suzhou)  
 Sekisui S-Lec (Thailand) Co., Ltd.  
 Sekisui S-Lec Mexico S.A. de C.V.  
 Sekisui Diagnostics, LLC.  
 Sekisui Diagnostics, LLC. San Diego  
 Sekisui Diagnostics P.E.I Inc.  
 Sekisui Diagnostics (UK) Ltd.  
 Sekisui Specialty Chemicals America, LLC.  
 Calvert City Plant  
 Sekisui Specialty Chemicals America, LLC.  
 Pasadena Plant  
 Sekisui Specialty Chemicals America, LLC.  
 Dallas HQ  
 Sekisui Specialty Chemicals Europe, S.L.  
 Tarragona Plant  
 Sekisui Medical Technology (China) Ltd.

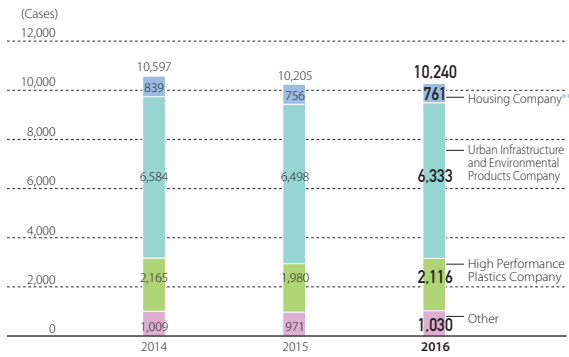
**Major Quality Issues** 



**External Failure Costs** 

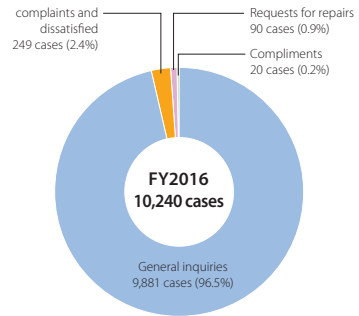


### Number of Telephone Calls Received from Customers\*

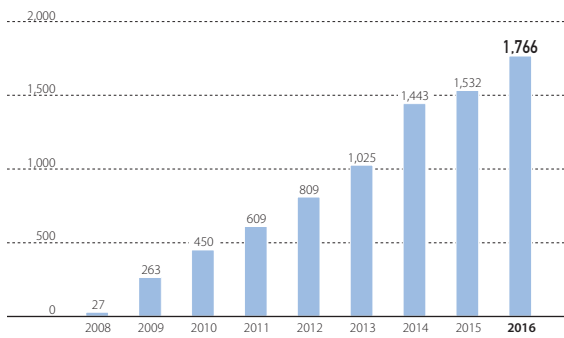


\* Calls received by Customers Consultant Section.  
 \* Housing Company-related calls were received separately at dedicated points of contact for owners in each area.

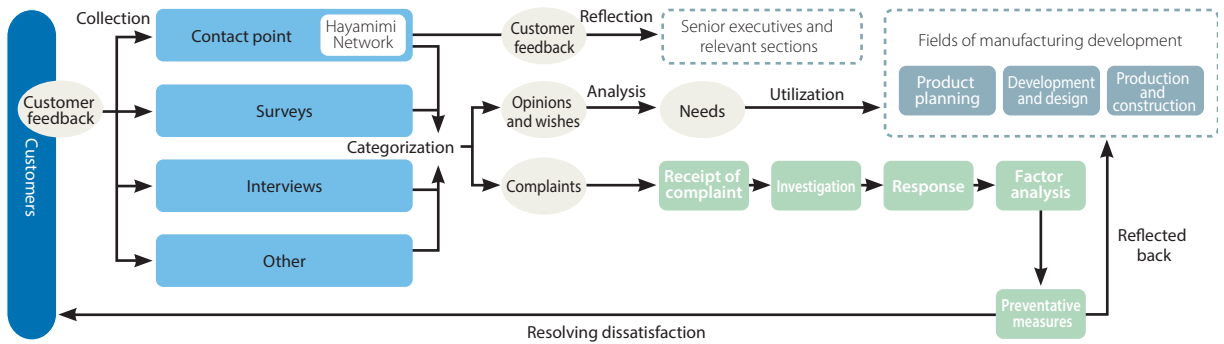
### [Fiscal 2016 Call Breakdown]



### Telephone Service Training (total numbers of participants)



### Flow of Utilizing Customer Feedback in Management



**Medium-Term Plan Targets and Results**

Measure		Medium-Term Plan (FY2014–FY2016)		FY2016 results
		Goal(s)	Main measure(s)	
Hiring	Group	Including equity-method affiliates, domestic Group companies to hire 800 people	Strengthen the Sekisui brand in the employment market	Domestic Group hires: 804 people
	Global	Global hires (Sekisui Chemical non-consolidated): 20	Develop the market for new hires	Global hires (non-consolidated): 24
	Diversity	Hiring of women (30 women at Sekisui Chemical, 210 women at Group companies in Japan, including equity-method affiliates)	Enhance hiring seminars for women	Sekisui Chemical hired 34 women, 252 hired at Group companies in Japan
Training	Group	Internal job postings: 30 positions/year (Development of core HR based on experience)	Adopt a Group HR system and provide a broad range of experience	Internal job postings: 44/year
	Global	Global talent employees in the Sekisui Chemical Group in Japan: 400 (FY2016)	Enhance the Global Trainee Program and area-specific training measures	Global talent employees in the Sekisui Chemical Group in Japan: 341
	Diversity	Women in management positions (Sekisui Chemical non-consolidated): 50 (FY2016)	Link programs for training women leaders with the HR system as a whole	Women in management positions (35 women at Sekisui Chemical, 111 women at Group companies in Japan)

**Basic Information**

**Breakdown of Number of Employees (Sekisui Chemical)**

Number of employees	2,440
Men	2,044
Women	396

**Employees' Years of Continuous Service (Sekisui Chemical)**

Average years of continuous service	16.2
Men	16.8
Women	12.9

**Breakdown of Employee Numbers (the Sekisui Chemical Group)**

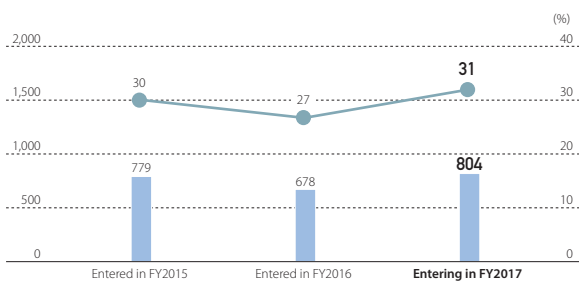
Number of employees	23,006
By region	
Japan	17,928
North America, Central and South America	1,403
Europe	973
Asia/Pacific (including China)	2,702

**Employee Turnover Rate in First Three Years of Employment (Sekisui Chemical)**

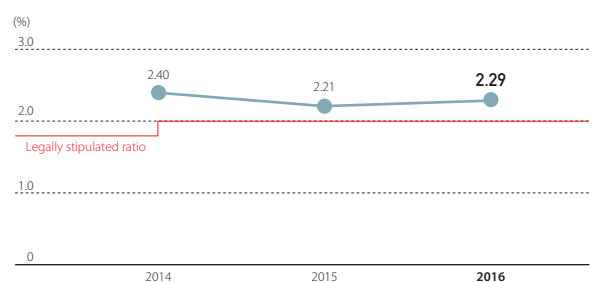
	Employed in FY2012	Employed in FY2013	Employed in FY2014
Employee turnover rate in first three years of employment (%)	5.7	10.7	7.4

**Hiring**

**Number of New-Graduate Hires/Percentage of Women among New-Graduate Hires (the Sekisui Chemical Group in Japan)**



**Employment Ratio of People with Disabilities (Sekisui Chemical) (including special provision subsidiary)**

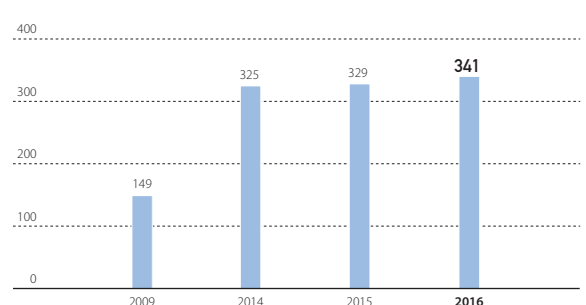


**Number of Elderly Employees Reemployed and Reemployment Rate (Sekisui Chemical)**

	FY2014	FY2015	FY2016
Number of elderly employees reemployed	83	104	65
Reemployment rate (%)	82.2*	82.5*	83.3*

Note: The reemployment rate for applicants is 100%.

**Number of Global Talent Employees in the Sekisui Chemical Group in Japan**



## Human Resources

### Number of Women Directors and Number of Female Managers

	FY2016	
Directors	2	(the Sekisui Chemical Group)
Number of female managers	111	(the Sekisui Chemical Group in Japan)

### Results of Intra-Group Job Postings

	FY2015	FY2016	Cumulative total since FY2000
Number of recruitment cases	43	44	385
Number of employees recruited	113	149	948
Number of applicants	89	83	1,635
Number of employees transferred	18	12	325

### Career Plan Training by Age

	30s	40s	50s	57	Total number of participants
Themes by age groups	Self-establishment	Market value	Continuing to work even after retirement	Preparedness and motivation	—
Training content	Recognition of abilities and interviews with superiors on career-related matters	Affirmation of specialization, values, and the meaning of work	Aiming to keep working at age 65 and thinking about succession	Putting into words desired styles for ages 60–69	—
Number of participants in FY2016	284	404	412	64	1,164
Cumulative total number of participants through FY2016	2,305	2,253	1,588	233	6,379

### Main Recruitment- and Selective-Type Training Programs

	Training	Details	Number of participants in FY2014	Number of participants in FY2015	Number of participants in FY2016
Recruitment-type training	The Saijuku School	This program combines intensive courses led by visiting university professors with practical tasks so that participants can improve their skills and knowledge to become globally oriented leaders. It is intended to develop the next generation of leaders.	35	34	33
Selective-type training	Open Seminar	These intra-group seminars aim to improve employees' business skills. Employees can select freely seminars on skills that meet their needs, to acquire skills that can be applied immediately to their daily work.	100	71	30

## Work-Life Balance

### Overtime Hours Worked (Sekisui Chemical)

(Hours)

	FY2014	FY2015	FY2016
Monthly average per person	17.5	17.5	19.2

\* Data for past fiscal years has been revised in line with expansion in the partial revision of calculation methods.

### Percentage of Paid Leave Used (Sekisui Chemical)

(%)

	FY2014	FY2015	FY2016
Average per person (not including managers)	41.0	46.4	45.9

\* Data for past fiscal years has been revised in line with expansion in the partial revision of calculation methods.

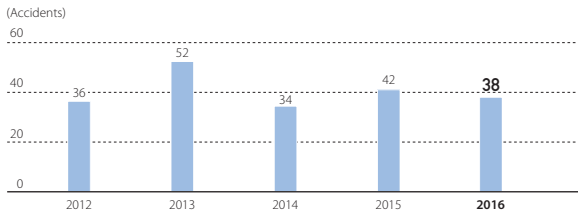
### Main Programs for Promoting Diverse Working Styles and Program Usage (Sekisui Chemical)

System		Main Content	FY2014	FY2015	FY2016
Support for childcare	Childcare leave	Can be taken until the end of the month in which the child reaches three years of age. (The statutory end date is until the child reaches eighteen months of age.)	31 (including nine males)	30 (including 12 males)	36 (including 14 males)
	Shortened working hours for childcare	Can be extended until the child starts fourth grade. (The statutory end date is, until the child reaches three years of age.)	26	30	30
	Use of flexible working hours	Times of starting and finishing work may be moved earlier or later by up to 60 minutes until the child reaches junior high school age.	3	3	7 (including one male)
Nursing care-related support	Nursing care leave	Up to a total of 93 days for each individual eligible for care (Up to a maximum of one year for the first individual eligible for care)	1	1	2 (including two males)
	Shortened working hours for nursing care	Two days per week or 4.5 hours per day for a maximum of three years for each individual eligible for care	—	—	1 (including one male)
Other support	Family leave	Three days of special paid leave per year granted until the child or grandchild starts high school. (This leave can be taken for reasons such as childbirth-related events, parents' days, athletic meets, and PTA meetings.)	104 (including 59 males)	113 (including 73 males)	120 (including 77 males)
Total number of system users			165	177	196

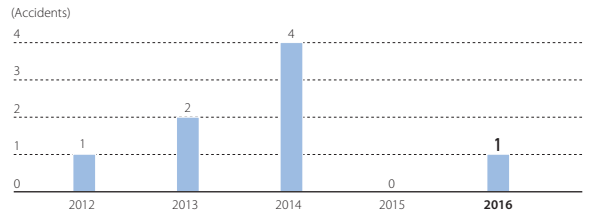


## Japan

### Number of Occupational Accidents



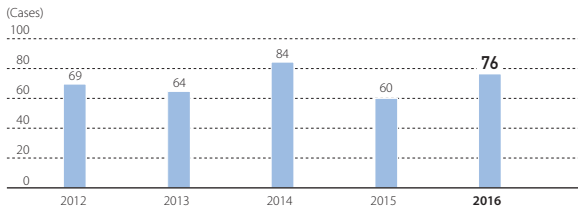
### Number of Facility Accidents\*



\* Facility accidents: Any accident that meets one or more of the following conditions (1) – (3) (Sekisui Chemical Group standards):

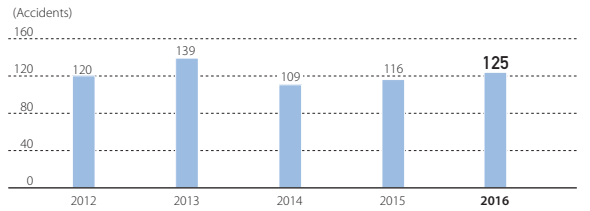
- (1) Personnel-related injury: occupational accidents accompanied by 30 or more lost working days
- (2) Property damage: 10 million yen or more
- (3) Loss of opportunity: 20 million yen or more

### Number of Cases of Extended Sick Leave\*



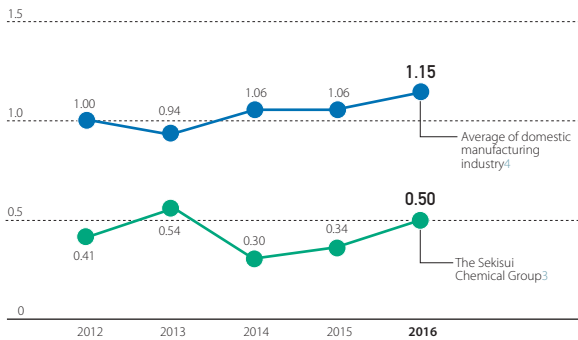
\* Extended sick leave: This refers to a new absence of 30 calendar days or longer due to illness or injury. Recurrences within six months of returning to work are not included in the above count. Absences due to occupational accidents are not considered extended sick leave.

### Number of Commuting Accidents\*

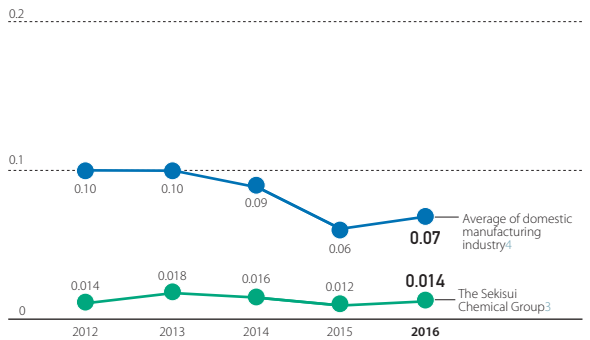


\* Number of Cases: Total number of cases in which injury was suffered or damage caused (including injury to the person and property damage).

### Frequency Rate<sup>1</sup>



### Severity Rate<sup>2</sup>



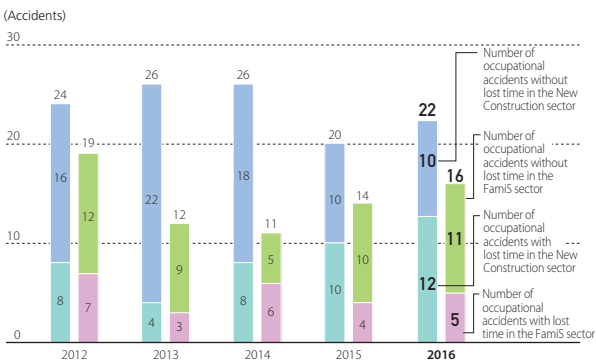
<sup>1</sup> Frequency rate = (number of deaths and injuries in occupational accidents with lost time / total work hours) × 1,000,000

<sup>2</sup> Severity rate = (number of work days lost / total work hours) × 1,000

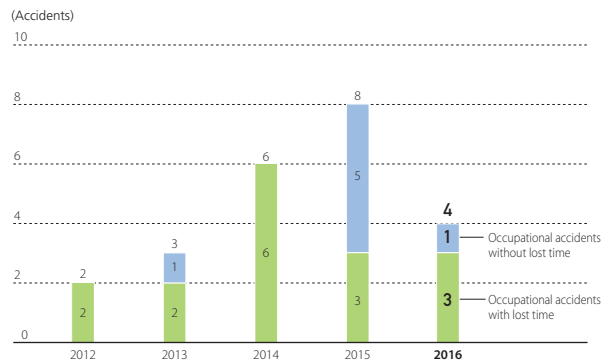
<sup>3</sup> Sekisui Chemical Group data: 43 production sites and four R&D laboratories

<sup>4</sup> Source of information for Japanese manufacturing industry: Ministry of Health, Labour and Welfare *Survey on Occupational Accidents*

### Safety Performance at Housing Company Construction Sites



### Safety Performance at Urban Infrastructure & Environmental Products Company Construction Sites



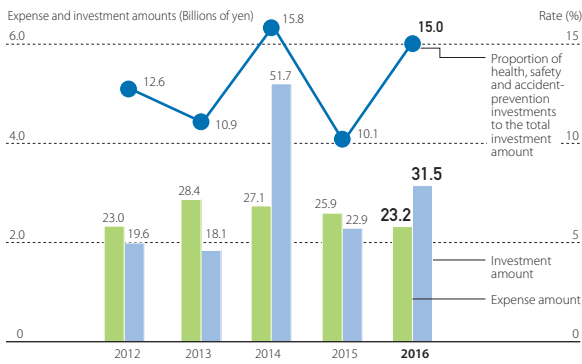
## Health, Safety and Accident-Prevention Costs

(Millions of yen)

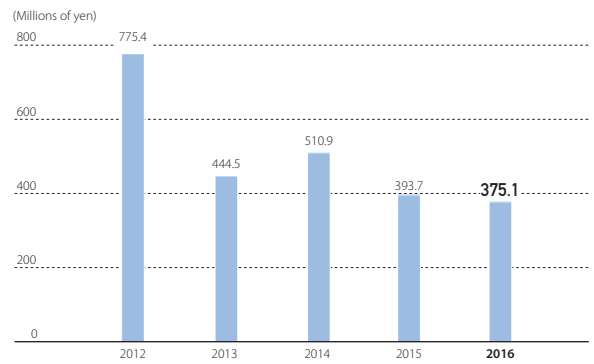
Classification	Item Details	The Sekisui Chemical Group*	
		Expense amount	Investment amount
1) Costs within business site areas	Health and safety measures, rescue and protective equipment, measurement of work environment, health management, workers' accident compensation insurance, etc.	735	3,149
2) Administrative costs	Establishment and implementation of OHSMS, safety education, personnel costs, etc.	1,576	—
3) Other	Safety awards, etc.	5	—
<b>Total</b>		<b>2,315</b>	<b>3,149</b>

\* Data above include 40 production sites and four R&D laboratories + all departments of Headquarters + back offices of division companies

## Expenses and Investments



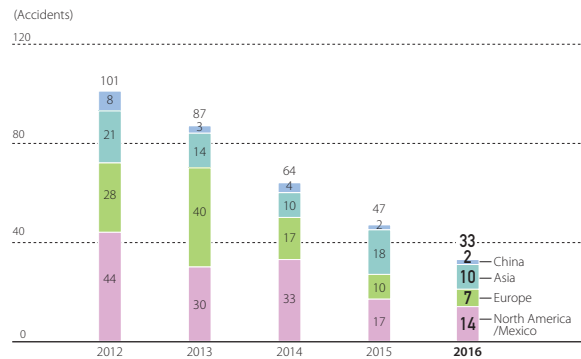
## Loss Costs\*



\* Loss costs: Expenses, including man-hours, required to respond to occupational accidents, equipment-related accidents, commuting accidents, and long-term illness absences.

## Overseas

### Number of Occupational Accidents

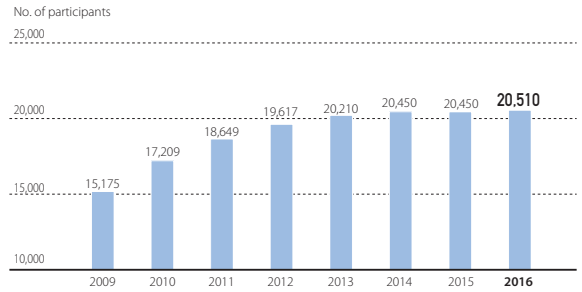


\* Past fiscal year data has been revised in line with the details survey of overseas business sites.

### FY2016 Whistle-Blowing Reports and Consultations

Reports/consultations	Number of cases
Power harassment	23
Working conditions	15
Sexual harassment	2
Misuse of expenses	2
Workplace environment	2
Incidents with business partners	2
Related to sales operations	1
Other	12
<b>Total</b>	<b>59</b>

### Trends in class participation (All Sekisui Chemical Group Employees)



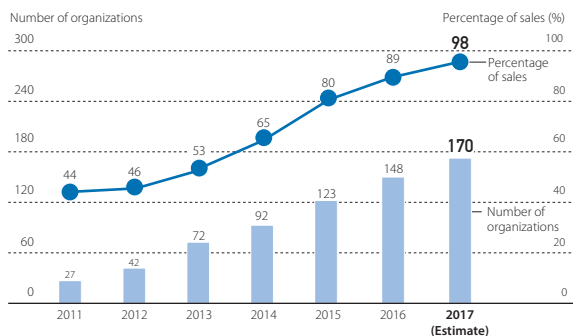
Implemented on four sessions in fiscal 2016. However, as the third and fourth sessions are under way, the abovementioned figures are averages of the results from the first and second sessions.

### FY2016 Compliance Training Courses Performed

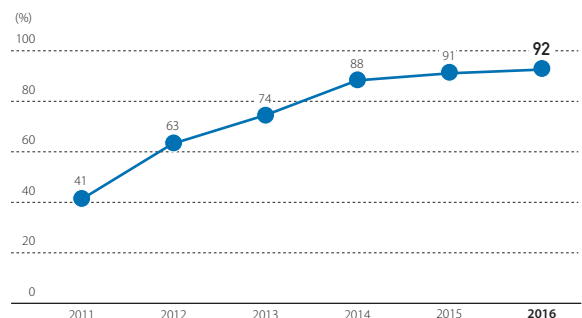
Training	Training content	Trainees	Attendance
Regular Training	Training for new employees	New employees of Sekisui Chemical and the Sekisui Chemical Group	128
	Training for new managers	New managers of Sekisui Chemical and the Sekisui Chemical Group	229
Training for specific employee ranks	Newly appointed senior management training	Sekisui Chemical and Group companies	46
	Newly appointed assistant manager training	Sekisui Chemical and Group companies	146
	Training for those responsible for management	Sekisui Chemical Group companies	12
	Training for new managers	Sekisui Chemical Group companies	16
	Newly appointed operating officer training	Sekisui Chemical	4
	Corporate auditor training	Sekisui Chemical Group companies	49
	Affiliated company full-time directors training	Sekisui Chemical Group companies	38
	Compliance training	Sekisui Chemical and Group companies	714
Area-specific training	Harassment prevention training	Sekisui Chemical and Group companies	997
	Mental health training	Sekisui Chemical and Group companies	682
	Labor management training	Sekisui Chemical Group companies	75
	Safe driving course	Sekisui Chemical Group companies	232
	Act against Delay in Payment of Subcontract Proceed, etc. to Subcontractors training	Sekisui Chemical and Group companies	142

Training	Training content	Trainees	Attendance
Area-specific training	Construction Business Act training	Sekisui Chemical Group companies	47
	Accounting compliance training	Sekisui Chemical Group companies	11
	Contract education	Sekisui Chemical and Group companies	92
	Information management training	Sekisui Chemical Group companies	8
	Training in Act against Unjustifiable Premiums and Misleading Representations	Sekisui Chemical Group companies	10
	Consumer-related legislation training	Sekisui Chemical Group companies	9
	Public Officers Election Act training	Sekisui Chemical Group companies	7
	Manufacturing division leader training	Sekisui Chemical Group companies	13
	Export controls training	Sekisui Chemical and Group companies	67
	Global training	Training for personnel posted overseas	Employees engaged in work related to overseas business
Foreign compliance training		Executive Officers of Sekisui Chemical	36
Antimonopoly law and anti-bribery and corruption prevention		Sekisui Chemical and Group companies	125
U.S. Employment Act training		Sekisui Chemical and Group companies	102
Open seminars	Legal affairs seminar	Sekisui Chemical and Group companies	1118

### Number of Organizations Employing Risk Management Activities / Percentage of Sales



### Average Utilization Rate of Disaster Prevention Systems at Business Sites



Examples of Main Environmental Contribution Activities Conducted in Fiscal 2016

	Site	Program
Activities of business sites in Japan	Tohoku Sekisui Heim Industry Co., Ltd.	Japanese beech tree planting activities at Minamizaou
	Kanto Sekisui Heim Industry Co., Ltd.	Sekisui Children's Nature Study Course (observing water bugs and testing water quality)
	Tokyo Sekisui Heim Industry Co., Ltd. Sekisui Chemical Co., Ltd. Musashi Plant	Green Trust Kurohama Lake Environs Outing (nature field trip for children)
	Chubu Sekisui Heim Industry Co., Ltd.	Forest conservation activities for local children
	Kinki Sekisui Heim Industry Co., Ltd.	Sekisui Children's Nature Study Course (living organism observation)
	Kyushu Sekisui Heim Industry Co., Ltd.	Tidal flat bird-watching with local children
	Hokkaido Sekisui Heim Co., Ltd.	Forest conservation activities at Mount Shirahata
	Sekisui Heim Tohoku Co., Ltd.	Tohoku coastal forest regeneration/Growing oak tree seedlings with local children
	Tokyo Sekisui Heim Co., Ltd.	Woodland conservation activities at Tama Zoological Park
	Sekisui Heim Kinki Co., Ltd.	Woodland conservation activities at Kaseyama, Kizugawa, Kyoto Prefecture
	Sekisui Heim Chushikoku Co., Ltd.	Forest conservation activities in Akaiwa City
	Sekisui Heim Kyusyu Corporation	Forest conservation activities, terraced rice fields in Tsuzura, Ukiha, Fukuoka Prefecture
	Chiba Sekisui Industry Co., Ltd.	Urui no Mori (Moist Forest) woodland development project
	Shikoku Sekisui Co., Ltd.	Non-native plant eradication activities along the Shinmachi River
	Hanyu Sekisui Co., Ltd.	Waterwheel plant conservation activities at Hozojinuma
	Sekisui Seikei, Ltd., Kanto Plant	Watarase Yusuichi conservation activities with NPOs
	Sekisui Seikei, Ltd., Izumo Plant	Izumo Children Nature School (living organism observation)
	Sekisui Medical Co., Ltd., Iwate Plant	Observation of living organisms with local children
	Sekisui Nano Coat Technology	Toyogawa water basin Honokuni Forest conservation activities
	Tokuyama Sekisui Industry Co., Ltd.	Sekisui no Mori forest maintenance activities
Sekisui Chemical Co., Ltd., Shiga-Ritto Plant	Yurikago (Cradle) paddy field project	
Sekisui Chemical Co., Ltd., Gunma Plant	Gunma Children's Nature Class (autumn nature observation)	
Sekisui Chemical Co., Ltd., Tsukuba Site	Afforestation activities at the base of Mt. Tsukuba and in the Kasumigaura headspring	
Sekisui Chemical Co., Ltd., Osaka Headquarters	Yodogawa/Niwakubo lagoon conservation activities	
Activities of overseas business sites	SCG-SEKISUI SALES Co., Ltd. SEKISUI -SCG INDUSTRY Co., Ltd. SEKISUI CHEMICAL (THAILAND ) Co., Ltd	Samut Songkhram mangrove afforestation activities (Thailand)
	SEKISUI S-LEC (THAILAND) CO., LTD. SEKISUI SPECIALTY CHEMICALS (THAILAND) CO., LTD. THAI SEKISUI FOAM CO., LTD.S AND L SPECIALTY POLYMERS CO., LTD. SEKISUI SYSTEMBATH INDUSTRY (THAILAND) CO., LTD	Chonburi mangrove afforestation activities (Thailand)
	Sekisui S-LEC (Suzhou) Co., Ltd. Sekisui S-LEC (Suzhou) Co., Ltd. Sekisui (Wuxi) Plastics Technology Co., Ltd. Sekisui (Shanghai) Environmental Technology Co., Ltd. Sekisui (Shanghai) International Trading Co., Ltd.	Afforestation activities in Yupingshan, Suzhou (China)
	SEKISUI CHEMICAL INDIA PRIVATE LIMITED	Yamuna River cleanup activities (India)
	SEKISUI- ALVEO B.V.	Biotope biological survey (The Netherlands)
	SEKISUI POLYMER INNOVATIONS, LLC.	Beach clean-up activities (United States)
	SEKISUI ESLON B.V.	Afforestation activities around business sites (The Netherlands)
	SEKISUI PRODUCTS, LLC.	Afforestation at community centers (United States)
	SEKISUI CHEMICAL SINGAPORE (PTE.) LTD.	Clean-up activities at seaside parks (Singapore)
	SEKISUI S-LEC MEXICO S.A. de C.V.	Afforestation activities (Mexico)

Main Social Contribution Activities Conducted in Fiscal 2016

Program	2016 Performance				Performance to Date			
	Times implemented	Number of sites	Participants	Amount	Cumulative number of times implemented	Number of sites	Cumulative participants	Amount
Heart+Action	Times implemented	Nine times	Participants	140 persons	Cumulative number of times implemented	45 times	Cumulative participants	802 persons
TABLE FOR TWO	Sites	12 sites	Number of school meals provided in developing countries	28,287 meals	Implementing sites	12 sites	Number of school meals provided in developing countries Amount of food aid to the Tohoku region*	153,895 meals 649,910 yen
TABLE FOR TWO vending machines	Sites	One site	Number of school meals provided in developing countries	5,631 meals	Implementing sites	One site	Number of school meals provided in developing countries	14,560 meals
Houses and the Environment Learning Program	Implementing schools	16 schools	Participating students	1,547 persons	Cumulative number of implementing schools	123 schools	Cumulative number of participating students	Approx. 15,100 persons
Chemical Classroom	Times implemented	24 times	Participating students	2,541 persons	Cumulative number of times implemented	200 times	Cumulative number of participating students	23,483 persons
BOOK MAGIC	Times implemented	10 times	Amount donated	115,753 yen	Cumulative number of times implemented	105 times	Cumulative amount donated	910,781 yen

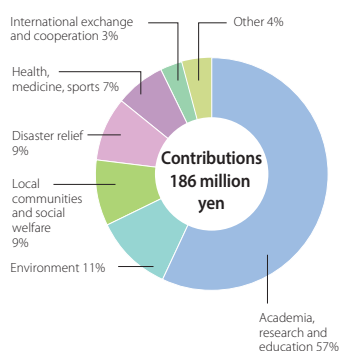
\* Food assistance to the Tohoku region from April 2013 to December 2014

## Recipients of Fiscal 2016 Sekisui Chemical Grants for Research on Manufacturing Based on Innovations Inspired by Nature

	Researcher	Affiliation/University, Title*	Supported Research Theme
Themes of Manufacturing	Yuji Hirai	Lecturer Chitose Institute of Science and Technology	Development of High Efficient Liquid Harvesting System by Perforated Metal
	Shuhei Seki	Professor Department of Molecular Engineering, Kyoto University	Optoelectronic Nanowire Networks as a Versatile Sensing Platform: Inspired by the Spider's Webs
	Naoko Yoshie	Professor Institute of Industrial Science, The University of Tokyo	Enhancing Mechanical Performance of Polymer Materials through Bioinspired Multiphase Design with Different Crosslink Densities
	Yuya Sakai	Assistant Professor Institute of Industrial Science, the University of Tokyo	Establishment of concrete recycling technology inspired by the formation process of sedimentary rocks
	Hiroshi Nonaka	Associate Professor Graduate School of Bioresources, Mie University	Natural woody material with both flame resistance and recyclability learned from flame-retardant wood
	Kazuhiro Okura	Professor Hiroshima University	A study on emergent design and evaluation of collective behavior for robotic swarm
Themes of basic research	Yuya Oaki	Associate Professor Department of Applied Chemistry, Faculty of Science and Technology, Keio University	Coating and Electrochemical Application of Conductive Polymers on Substrates through an Approach Inspired by Adhesion Protein of Marine Mussel
	Kojiro Uetani	Assistant Professor Rikkyo University, College of Science, Department of Chemistry	Development of Functional Heat-transfer Materials Inspired by Wood Cell Walls
	Takuhiro Matsumura	Assistant Professor Department of Bacteriology, Graduate School of Medical Sciences, Kanazawa University	Development of the mucosal vaccine using ingenious invasion mechanism of botulinum toxin
	Kyosuke Shinohara	Designated Associate Professor Tokyo University of Agriculture and Technology	Development of novel biomaterial inspired by cytoskeleton structure of motile cilia
	Takaya Terashima	Assistant Professor Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University	Precision Nanoaggregates with Amphiphilic Random Copolymers: Self-Assembly Control Inspired by Natural Biopolymers
	Makoto Kobayashi	Assistant Professor Institute of Multidisciplinary Research for Advanced Materials, Tohoku University	Synthesis of Titania Crystals with Growing Shapes Inspired by Ice Crystal
	Shinji Hokamoto	Professor Department of Aeronautics and Astronautics, Faculty of Engineering, Kyushu University	Collision Avoidance for Indoor Autonomous Flight by Utilizing Compound Eye System of Insects
	Tohru Suzuki	Group Leader National Institute for Materials Science	Development of toughness ceramics by control of layered structure with crystalline orientation learned from exoskeleton of crustacean
	Takayuki Narita	Associate Professor Department of Chemistry and Applied Chemistry, Faculty of Science and Engineering, Saga University	Development of a self-transporting pump driven by light / temperature difference
	Noriko Funayama	Associate Professor Department of Biophysics, Graduate School of Science Kyoto University	Skeleton building methods of sponges

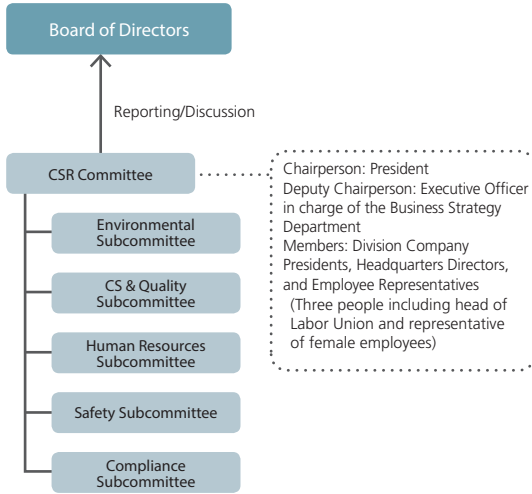
\* Affiliations, universities, and titles shown are current as of the time the grant was provided.

### Charitable Contributions

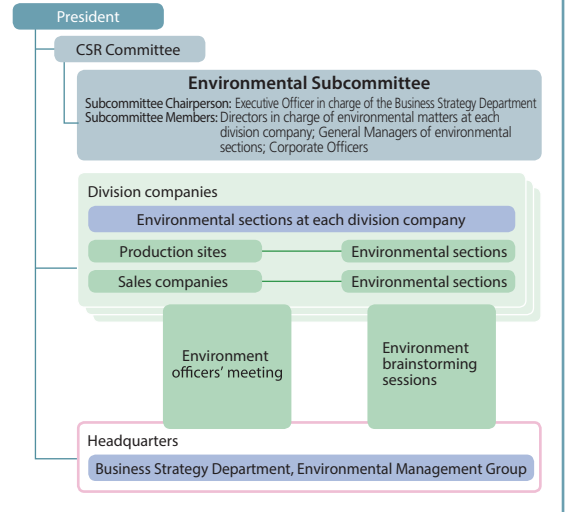


# Sekisui Chemical Group's CSR Management System

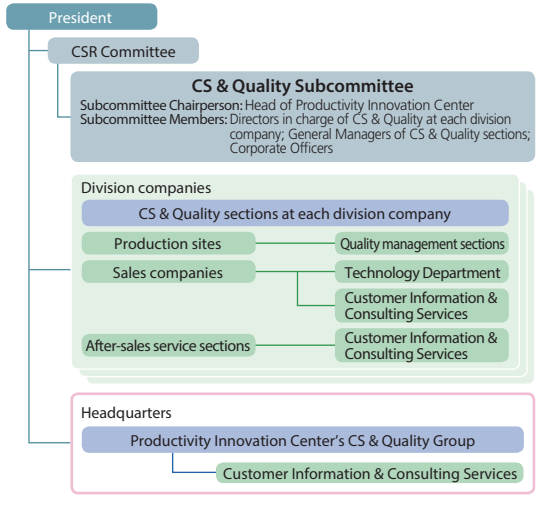
## CSR Committee/Subcommittee Structure



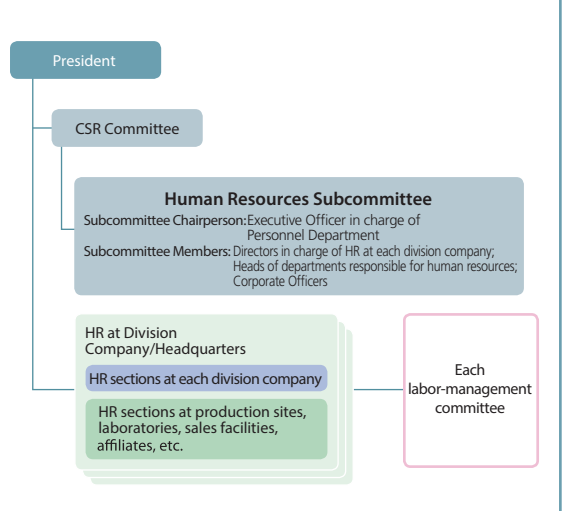
## Environmental Management System



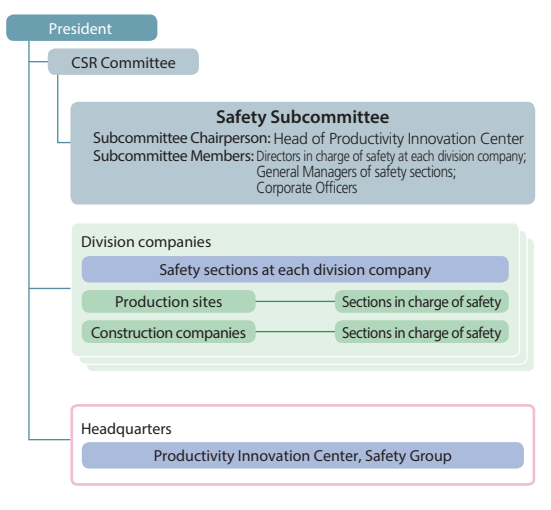
## CS & Quality Management System



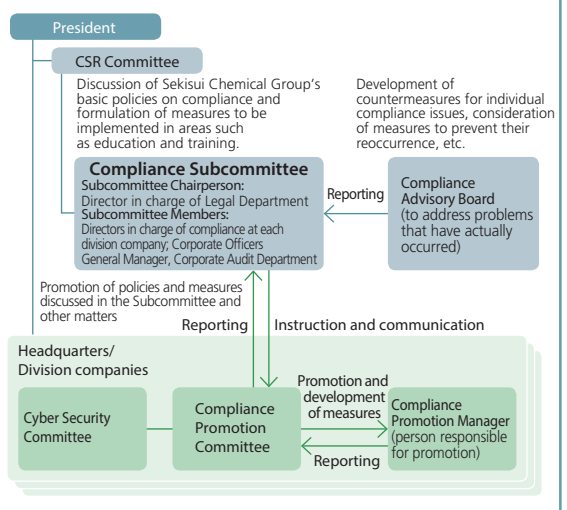
## Human Resources System



## Safety System



## Compliance Management System



## Sekisui Chemical Group Environmental Management Policy

### Mission

We, Sekisui Chemical Group, aim to be a Global Environmental Top Runner that contributes to the realization of a sustainable society by enabling the continuous growth and co-existence of ecology and the economy.

### Basic Policy

Each company in Sekisui Chemical Group advances approaches that contribute to the prevention of global warming, the preservation of biological diversity and the construction of a recycling-based society in all countries and regions where they have operations, in order to leave this beautiful Earth for our children in the future.

1. We contribute to the environment through our products and services, with consideration given to the environment at all stages of the product life cycle, from research to procurement, production, sales, use, and disposal as waste.
2. We carry out environmentally conscious business activities in all our workplaces and offices, and promote our approach to the environment through cooperation with our customers and business partners.
3. We make efforts to reduce the environmental impact of greenhouse gas emissions and hazardous chemicals, etc., and to prevent pollution by promoting the effective use of limited resources and energy.
4. We observe the relevant laws, regulations, international rules, etc.
5. We make efforts to improve environmental consciousness through education and advance continual improvements by setting our own objectives and targets.
6. We enhance trust through close communications with society.
7. We actively engage in social contribution activities such as nature conservation activities in each region.

## Sekisui Chemical Group CS & Quality Management Policy

### Mission

We, Sekisui Chemical Group, consider CS & Quality as our central concept of management and will consistently innovate to maintain the quality of products throughout all our activities, continuously provide value (goods and services) that meet customer expectations, strive for selection by our customers on an ongoing basis, and develop and grow with the customer over the long term.

### Basic Policy

We, Sekisui Chemical Group, consider Customer Feedback as a precious resource for management and strive to innovate with regard to the Quality of Products, Quality of People and Quality of Systems based on the motto "We consider customer's feedback as the beginning of our manufacturing." Furthermore, we contribute to the realization of a safe and affluent society by continuously providing our customers and their communities with new value.

- 1. Ensuring Basic Qualities**  
To ensure the reliability and safety of our manufactured products, which form the basis of Product Quality, we effectively leverage customer feedback and dedicate ourselves with a strong belief in forestalling any potential trouble and preventing any future recurrence throughout our entire value chain.
- 2. Creating Attractive Qualities**  
We aim to share the emotional values of our customers by thoroughly pursuing "what the customers value" and constantly creating attractive products and services that should realize such customer values.
- 3. Upgrading Technological Capabilities**  
For the sake of ensuring Basic Qualities and for creating Attractive Qualities, we are upgrading our technological capabilities in all fields in order to achieve superb manufacturing development.
- 4. Enhancing Communications**  
We value communication with our customers and the society and make sincere efforts when dealing with them as well as complying with the relevant laws and regulations in each country and region. We place special emphasis on resolving customer complaints or claims at an early stage by responding promptly and empathetically.
- 5. Providing Thorough Employee Education**  
To gain and maintain the full trust of and leave a lasting impression on our customers, we provide employees with continuous CS & Quality education and motivate them to achieve self-realization through customer satisfaction.

## Sekisui Chemical Group Human Resources and Human Rights Policy

### Mission

Based on our belief that “employees are precious assets bestowed on us by society,” we, Sekisui Chemical Group, are committed to developing an environment where employees can work enthusiastically. We also offer various opportunities through which we help individual employees enhance their specialties and grow as individuals.

With the recognition that it is our social responsibility to protect individual human rights, we respect the diversity, personality and individuality of each person, promote various working styles and create safe and secure work environments in response to the conditions in each country and region.

### Basic Policy on Human Resources

- 1. Creating opportunities to take on challenges**  
We encourage employees to “positively set their own goals and aggressively to take on challenges.”
- 2. Culture where employees learn and grow on their own**  
We strive to enrich our education/training programs and develop a culture where employees learn and grow on their own.
- 3. Enhancement of the performance-based remuneration system**  
We emphasize our employees’ personal commitment and strive to constantly improve the fairness and acceptance of our assessment system regarding performance and processes.
- 4. Acceptance of various working styles**  
We respect various values, develop workplaces where every employee can work with enthusiasm, and help employees achieve a balance between life and work.
- 5. Creating safe and secure work environments**  
We promote employees’ health enhancement and mental health care.

### Basic Policy on Human Rights

- 1. Respect for human rights and the prohibition of discrimination**  
Being aware of our position as a member of the international community, we appreciate and respect the cultures, customs, and values of each region and neither violate human rights ourselves nor participate in any such violations. We also never become involved in any conduct that might lead to discrimination.  
We never discriminate on the grounds of race, color, gender, age, language, religion, creed, disability, sexual orientation, nationality, geographical or social origin, property, or other status or any similar basis, and we neither violate human rights ourselves nor participate in any such violations.
- 2. Prohibition of harassment**  
We never commit sexual harassment or other actions that stain personal character.
  - 1) We do not commit sexual harassment or any conduct that might be misunderstood as sexual harassment.
  - 2) We do not misuse the power of a superior position nor use any language or conduct that could sexually annoy any person. In addition, we prevent other employees from using such offensive language or conduct.
- 3. Prohibition of forced labor and child labor**  
We shall never accept forced labor or child labor in any country or region.
  - 1) We comply with the laws for the minimum working age in each country and region and do not use child labor.
  - 2) We do not carry out any form of forced labor in any of our corporate activities.
- 4. Respect for basic labor rights**  
We respect basic labor rights, including the right of workers to organize and to bargain, in accordance with the laws and customs of each country or region, and do not infringe on these rights.

## Sekisui Chemical Group Diversity Management Policy

Based on the realization that diversity is essential to becoming a sustainable company that can maintain its strong corporate value for a century, we understand and recognize that each and every employee’s orientation to work and life and their distinctive characteristics are different and thus we actively take advantage of that. To create an organizational culture, we will continue, through employee dialogue, to provide employment and participation opportunities and a variety of environmental improvements that support growth.



## Sekisui Chemical Group Safety Policy

### Mission

We, Sekisui Chemical Group, recognize that employee safety is essential to achieving sustainable growth. We aim to be a "Safe and Secure" enterprise that establishes safe and secure work environments and has the full trust of its customers and the community as well as its employees.

### Basic Policy

Based on the concept of human dignity that "everyone is invaluable," we "prioritize safety over anything else" as a basic rule in all of our business activities from development, production, construction to servicing. We are committed to promoting comprehensive safety activities with the aim of achieving zero occupational accidents, facility accidents, commuting accidents or long-term sick leave.

1. We strive to develop a safe and comfortable workplace where everyone is taken care of both mentally and physically, which should lead to good health for each of our employees, whom we highly value.
2. We thoroughly disseminate the legal requirements concerning health and safety/disaster prevention to our employees to ensure compliance.
3. We carry out risk assessment and promote risk reduction measures in a systematic way to eliminate hazardous factors that compromise health and safety/disaster prevention.
4. We strive to raise awareness regarding health and safety/disaster prevention through employee education/training and promote continuous improvements by setting voluntary objectives/goals.
5. We proactively disclose any necessary information as well as gain a higher level of trust by having close communication with public administrations and local communities.

## Sekisui Chemical Group Social Contribution Policy

As a good corporate citizen, we, Sekisui Chemical Group, engage in activities that focus on the environment, the next generation and local communities, while contributing not only to business activities but also to society.

All employees working for the Sekisui Chemical Group are proactively involved in society and act so that they can serve as prominent human resources in society as well. In addition, their activities are supported by each company of the Group in order to generate synergistic effects.

## Sekisui Chemical Group Procurement Policy

Sekisui Chemical Group will perform its procurement of goods according to the five basic ideas set out below.

We will strengthen our harmonious and mutually beneficial partnership with our business partners through fair transactions. Also, Sekisui Chemical Group will engage in the promotion of CSR activities through the cooperation of business partners in the Group's procurement activities.

### 1-1. Procurement Policy

#### Openness

Sekisui Chemical Group opens its doors not only to domestic companies but also widely to overseas companies.

#### Impartiality and Fairness

Sekisui Chemical Group selects business partners based on impartial and fair evaluation standards with emphasis on quality, price and delivery lead-time, services, etc., as well as environmental considerations.

#### Compliance with Laws and Regulations

When engaging in purchasing transactions, Sekisui Chemical Group will comply with relevant laws, regulations and administrative instructions in Japan and overseas.

#### Mutual Trust

Along with conducting transactions with mutual trust and in fulfillment of contractual obligations, we will build and maintain relationships with our business partners that allow for our mutual profitability.

#### Environmental Considerations

Sekisui Chemical Group will further promote the purchase of raw materials and goods that have minimal negative impact on the environment and strive to establish a resource-recycling society through concerted efforts with business partners.

### 1-2. A Request to Our Business Partners Concerning Procurement

The company is aware of CSR in all spheres of its business operations based on its philosophy of contributing to society through its business activities. To do so, it is absolutely necessary to engage in activities in mutual cooperation with business partners. We ask all business partners to carry out the following activities proactively.

#### (1) Securing Excellent Product Quality

Establish a quality assurance system to improve and maintain the quality of products offered to customers

- Establish a quality assurance system in conformity with ISO 9000

#### (2) Environmental Considerations

Sekisui Chemical Group is working to reduce any negative impact its products may have the environment from the development and production stages to disposal. To do so, the environmental consideration of our suppliers concerning raw materials and goods is essential.

- Environmental management system in conformity with ISO 14001
- Reduction of harmful chemical substances, etc.; procurement of goods and materials with minimal environmental impact

#### (3) Compliance with Laws, Regulations, and Social Customs

Suppliers are requested to ensure compliance with relevant laws, regulations and appropriate social norms of the countries and regions in which they conduct business operations.

- Compliance with relevant laws and regulations in the business operations
- Prohibition of forced labor
- Prohibition of child labor
- Prohibition of discrimination toward employees

#### (4) Safety and Hygiene

Quality is built through human resources and facilities. The safety management of these resources is the basis of production. Business partners are requested to perform the following.

- Safety and hygiene control of the workplace and maintenance of employee health
- Machine safeguarding and safety and hygiene control of facilities
- Appropriate response to occupational accidents, facility disasters, accidents, etc.

# Calculation Standards of Key Performance Indicators

## Environment

Items	Indicator	Calculation Method	
Environment Efficiency	SEKISUI Environmental Sustainability Index	<p>SEKISUI Environmental Sustainability Index = Groupwide return of natural capital / Groupwide use of natural capital x 100                      Calculation of amounts of natural capital used and returned                      Our calculations use LIME2, Japanese life-cycle impact assessment method developed by Professor Norihiro Itsubo at Tokyo City University. Of the four safeguard subjects covered by LIME2, we selected three safeguard subjects (primary production, biodiversity, and damage to human health from global warming) that are regarded as having a direct relationship with the natural capital in our calculations and created a single index.                      The amount of return of the natural capital is calculated as the reduction in risk of damages to the natural capital that results from Groupwide efforts to contribute to the environment, compared to if no actions were taken.</p> <ul style="list-style-type: none"> <li>• Items included in calculation of the natural capital used                              Direct use: Land use, greenhouse gas emissions, emissions of PRTR substances and atmospheric pollutants, emissions of COD into water                              Indirect use: Procured raw materials, energy used, water used, waste generated, indirect GHG emissions (Scope 3) from supply chain</li> <li>• Items included in calculation of the natural capital returned                              Contribution from of Environment-Contributing Products to reductions in use of the natural capital, contributions from environmental preservation activities, environment-related donations, electricity generated at megasolar power plants</li> </ul> <p>Scope of calculation / breakdown of components. The following assumptions are used in the calculations.</p> <ul style="list-style-type: none"> <li>• Raw materials: Estimates of procured raw materials                              For housing, breakdown of raw materials used per housing unit multiplied by a total number of housing unit built (not including apartments)</li> <li>• Production / emission of harmful chemical substances: (Japan) PRTR substances in excess of one ton of emissions / year (Overseas) Not included</li> <li>• Production / land maintenance: Land used for buildings include the entire site area of plants and laboratories in Japan; estimates of site areas for overseas plants. Impact of land usage measured for 30 years after land purchase</li> <li>• Other: Capital goods as supply chain, other combustibles and energy-related activities, transportation and distribution, waste, business trips, employees, commutes to work, lease assets (downstream), processing, use and disposal of products sold                              Business trips and employee work commutes: Covers consolidated employees, including some estimates                              Use of products sold: Covers houses sold during the fiscal year, based on estimates of energy usage over 60 years                              Processing of products sold: Includes estimates of energy used during processing at customer locations of products likely to consume large usages of energy                              Disposal of products sold: Covers main raw materials during the fiscal year, based on estimates of products being disposed during same fiscal year</li> </ul> <p>*Product contributions: (1) A qualitative assessment is performed to evaluate the differences in environmental contribution between target products and previous technologies*1 in terms of six categories (CO<sub>2</sub> and energy reduction, waste reduction, resource conservation, water conservation and recycling, pollution prevention, and direct preservation of biodiversity) by stage of product's lifecycle (five stages from raw materials procurement, production, product distribution, product use and maintenance, and product disposal and recycling). Any significant difference identified is further investigated using the data by product unit. (2) Based on the investigation results obtained, the environmental contribution by product unit is calculated using environmental load coefficient multiples applicable for each data. (3) The environmental contribution by product is determined by multiplying the result in (2) by total units sold for the fiscal year. The effect of Environment-Contributing Products is calculated on a trial basis for approximately 86% of their sales.</p> <ul style="list-style-type: none"> <li>• Contributions from impact reduction activities: Includes gaps between environmental impact from production during the fiscal year concerned and that for fiscal 2013 x (net sales for the fiscal year concerned/net sales for fiscal 2013). There is a proportional relationship between net sales and the environmental impact from production, and this gap between sales and the environmental impact from production is equivalent to the degree of effort to reduce environmental impact.</li> <li>• Direct contribution / donations: Donations made with the intent of environmental preservation are assumed at an amount equivalent to the amount of environmental damages.</li> <li>• Direct contribution / megasolar power plants: Electricity generated is converted into CO<sub>2</sub> equivalent as total energy created</li> </ul>	
Environment-Contributing Products	Environment-Contributing Products Sales and Sales Ratio	<p>Sales of Environment-Contributing Products = Sekisui Chemical Group consolidated net sales of products certified internally as Environment-Contributing Products                      Environment-Contributing Products sales ratio = Sales of Environment-Contributing Products/consolidated net sales                      Subject: All Group businesses in Japan and overseas</p>	
Energy and Greenhouse Gases*	Greenhouse Gas (GHG) Emissions	<p>GHG emissions = <math>\Sigma</math> [volume of fuel usage purchased electricity and steam x CO<sub>2</sub> emission coefficient] + GHG emissions from non-energy consumption sources                      GHG emissions from non-energy consumption sources = CO<sub>2</sub> emissions from non-energy consumption sources*2 + <math>\Sigma</math> [non-CO<sub>2</sub> GHG emissions x global warming coefficients]                      *Include CO<sub>2</sub> emissions from sources other than the burning of fuels on the basis, both inside and outside Japan, of the Act on Promotion of Global Warming Countermeasures.                      [CO<sub>2</sub> Emission Coefficients]                      Fuels: Heavy oil A 2.71 tons-CO<sub>2</sub>/kL, city gas 2.08 tons-CO<sub>2</sub>/thousand Nm<sup>3</sup>, LNG 2.70 tons-CO<sub>2</sub>/ton, heating oil 2.49 tons-CO<sub>2</sub>/kL, diesel oil 2.62 tons-CO<sub>2</sub>/kL, gasoline 2.32 tons-CO<sub>2</sub>/kL, LPG 3.00 tons-CO<sub>2</sub>/ton                      Purchased electricity: 0.555 tons-CO<sub>2</sub>/MWh (Japan)                      Emission coefficient of each country and region announced by GHG protocols (overseas)                      Purchased steam: 0.179 tons-CO<sub>2</sub>/ton                      [Global-warming coefficients]: Coefficients established under greenhouse-gas emissions calculation, reporting, and publication systems</p>	
	Energy Usage	<p>Energy usage = <math>\Sigma</math> [volume of fuel usage purchased electricity and steam x heat generated per unit of output]</p>	
	CO <sub>2</sub> Emissions at the Transportation Stage	<p>Aggregating the results of both the fuel-based method (for transportation of modular home units, etc.) and the ton-kilometer-based method (for transportation of products other than modular home units, etc.)                      CO<sub>2</sub> emissions = <math>\Sigma</math> [volume of fuel usage x CO<sub>2</sub> emission coefficient] + <math>\Sigma</math> [transport weight (tons) x transport distance (km) x fuel usage per unit of output x CO<sub>2</sub> emission coefficient]                      Figures used for fuel usage per unit of output are those employed in the reporting system for specified consigners under the Act on the Rational Use of Energy                      Subject: domestic logistics (product shipments)</p>	
	Greenhouse Gas (GHG) Emissions from Supply Chain	Purchased goods and services	<p>CO<sub>2</sub> emissions = <math>\Sigma</math> [amount of main raw materials used listed in material balance section on page 8 of this Data Book x emission coefficient (IDEA v.1.1 (greenhouse gas emissions database compiled by the National Institute of Advanced Industrial Science and the Technology (AIST) and Japan Environmental Management Association for Industry (JEMA1)))]</p>
		Capital goods	<p>CO<sub>2</sub> emissions = <math>\Sigma</math> [year-on-year increase in buildings, structures, equipment and vehicles x emissions coefficient (per unit emissions database (v.2.0, Ministry of the Environment (MOE), Ministry of the Economy, Trade and Industry) (METI) used to calculate greenhouse gas emissions of organization throughout supply chain)]</p>
Fuel- and energy-related activities not Included in Scope 1 and 2		<p>CO<sub>2</sub> emissions = <math>\Sigma</math> [(volume of fuel usage electricity and steam purchased) x emission coefficient]                      Emission coefficients used are from IDEA v.1.1 (GHG emissions database from AIST and JEMAI) for fuel, and the Emissions per Unit Database for the Purpose of Calculating the Greenhouse Gas and Other Emissions of Organizations throughout the Supply Chain (Ver. 2.0) (MOE and METI) for electricity and steam purchased.                      Subject: domestic and overseas production sites and laboratories, domestic and overseas offices</p>	
Transportation and delivery (upstream)		<p>CO<sub>2</sub> emissions = <math>\Sigma</math> [amount (weight) of key raw materials used listed in material balance section on page 8 of this Data Book x distance traveled x emissions coefficient (IDEA v.1.1 (greenhouse gas emissions database compiled by AIST and JEMAI))] Calculation assumes distance traveled was 200 km</p>	
Waste generated in operations	<p>CO<sub>2</sub> emissions = <math>\Sigma</math> [volume of waste generated (by type) x emission coefficient (IDEA v.1.1 [GHG emissions database from AIST and JEMAI])]                      Subject: domestic and overseas production sites and laboratories</p>		

\*1 Previous technologies revamped for certain products.

\*2 Calculation of greenhouse gases influenced by inherent unknowns in incomplete scientific knowledge used to determine emissions coefficients and numerical data required to find total emissions of various gases.

Items	Indicator	Calculation Method
Energy and Greenhouse Gases (GHG)	Greenhouse Gas (GHG) Emissions from Supply Chain	Business travel CO <sub>2</sub> emissions = $\Sigma$ [transportation costs by means of transportation × emission coefficient (Emissions per Unit Database for the Purpose of Calculating the Greenhouse Gas and Other Emissions of Organizations throughout the Supply Chain [Ver. 2.0] [MOE and METI])] (Transportation costs for Group companies include estimates.) Subject: domestic and overseas Group companies
		Employee commuting CO <sub>2</sub> emissions = $\Sigma$ [amount of commuting allowances paid × emission coefficient (Emissions per Unit Database for the Purpose of Calculating the Greenhouse Gas and Other Emissions of Organizations throughout the Supply Chain [Ver. 2.0] [MOE and METI])] (Calculated by assuming all employees travel by passenger rail; commuting costs for Group companies include estimates.) Subject: domestic and overseas Group companies
		Transportation and delivery (downstream) Aggregating the results of using both the fuel-based method (for transportation of modular home units, etc.) and the ton-kilometer-based method (for transportation of products other than modular home units, etc.) CO <sub>2</sub> emissions = $\Sigma$ [volume of fuel usage × CO <sub>2</sub> emission coefficient] + $\Sigma$ [transport weight (tons) × transport distance (km) × fuel usage per unit of output × CO <sub>2</sub> emission coefficient (using figures employed in the reporting system for specified consigners under the Act on the Rational Use of Energy)] (Figures for overseas are estimates.) Subject: shipments of products of domestic and overseas Group companies
		Processing of sold products CO <sub>2</sub> emissions = $\Sigma$ [production volume of subject products × emission coefficient for processing of the subject products (IDEA v.1.1 [GHG emissions database from AIST and JEMAI])] (Subject: automotive products of domestic and overseas Group companies)
		Use of sold products CO <sub>2</sub> emissions = $\Sigma$ [number of homes sold during the fiscal year × annual volume of electricity purchased from power companies × 60 years × emission coefficient for electricity], reflecting the effects of photovoltaic (PV) systems. Figures used for annual volume of electricity purchased from power companies are from Sekisui Chemical press release ("Survey of net energy balance (volume) of homes installed with PV systems (2013)", dated March 13, 2014). For the emission coefficient for electricity, the internally used figure of 0.555 tons- CO <sub>2</sub> /MWh is used. Calculations assume a useful life of 60 years for homes.) Covers homes sold in Japan during the fiscal year
		End-of-life treatment of sold products CO <sub>2</sub> emissions = $\Sigma$ [volume of main raw materials used in products sold during the fiscal year × emission coefficient (IDEA v.1.1 [GHG emissions database from AIST and JEMAI])] (Calculations assume products sold during the fiscal year were disposed of during the same fiscal year)
		Leased assets (downstream) Calculated for construction works where machinery leased by Sekisui Chemical is used. CO <sub>2</sub> emissions = $\Sigma$ [units of relevant work × emission coefficient (IDEA v.1.1 [GHG emissions database from AIST and JEMAI])]
Waste	Waste Generated Waste = outsourced disposals + recycling resources (use of incineration heat + materials recycling + valuable materials sold) + on-site incineration, not including the following: Waste from demolition of former homes of customers, scrap construction materials from construction at business sites, disposal of equipment, office automation appliances, etc., infectious waste generated from medical treatment and activities	
	Waste Generated by New House Construction Waste generated by new house construction = waste generated by housing exterior wall plants + waste generated by housing assembly plants + waste generated at new house construction sites Waste generated by new house construction per unit = waste generated by new house construction / units of houses sold Subject: domestic housing business	
	Number of Business Sites with Zero Emissions Number of business sites that achieved zero emissions during the fiscal year	
Water, Air, Water Quality	Amount of Water Extracted Amount of water extracted = tap water volume + industrial water volume + on site groundwater intake volume	
	NOx Emissions Volume Emissions volume = $\Sigma$ (annual exhaust gas air volume × NOx concentration × 46 / 22.4)	
	SOx Emissions Volume Emissions volume = $\Sigma$ (annual SOx volume × 64/22.4)	
	Soot and Dust Emissions Volume Emissions volume = $\Sigma$ (annual exhaust gas air volume × soot/dust concentration)	
	COD Discharge Volume Volume discharged = $\Sigma$ [COD concentration (annual average of measured values) × volume of discharged water]	
Chemical Substances	Volume of Chemical Substances Handled Volume of handled substances subject to the PRTR Law Subject: Domestic production sites and laboratories	
	Volume of Chemical Substances Discharged and Transported Volume of discharged and transported substances subject to the PRTR Law Volume discharged = volume discharged into the atmosphere + volume discharged into public waters + volume discharged into soil on site + on site landfill volume Volume transported = volume transported into sewers + volume transported as waste Subject: domestic production sites and laboratories	
	Volume of Chemical Substances Detoxified Volume of detoxified substances subject to the PRTR Law Volume detoxified = volume consumed through chemical reaction + volume consumed through incineration, etc. Subject: domestic production sites and laboratories	
	VOC Emissions Volume of atmospheric discharge of volatile organic compounds (VOCs) included among substances subject to the PRTR Law and PRTR substances subject to the Japan Chemical Industry Association (JCIA)	
Management, etc.	Number of EMS-Certified Business Sites Number of business sites that acquired EMS external certifications during the fiscal year EMS external certifications: ISO 14001, Eco Action 21, etc.	
	Percentage of Employees of Business Sites That Have Attained External EMS-Certification to All Sekisui Chemical Group Employees Percentage of employees of business sites that have attained external EMS certification to all Sekisui Chemical Group employees = $\Sigma$ [number of employees of business sites that have attained external EMS certification] / consolidated total number of employees Number of employees: number of employees at end of fiscal year	
	JBIB Land Use Score Card™ Points The JBIB Land Use Score Card™ is a tool promoted by Japan Business Initiative for Biodiversity (JBIB)™ to measure the level of contributions to biodiversity on company-owned land. Each business site is scored (up to 100 points) on the size and quality of green areas, their management systems and other factors. In the fiscal year under review, each business site was assessed using the JBIB Land Use Score Card™, and the increase in points compared with fiscal 2013 is calculated. The average increase in points for all business sites is used as an index.	
	Ratio of Participants in SEKISUI Environment Week Total number of participants in SEKISUI Environment Week / Number of employees at applicable business sites × 100	
	Environmental Accounting Environmental accounting calculations are performed by referring to the Environmental Accounting Guidelines 2005 issued by the MOE, with the addition of Sekisui Chemical Group's own concepts such as external economic benefits (estimated effects). The scope of our procedures consisted of 40 production sites, five laboratories, 15 housing sales companies, headquarters departments, and back offices of division companies, all located in Japan. External economic benefits included in the economic benefits of environmental conservation measures represent the energy conservation benefits from homes sold and installed with PV systems and the benefits of the No-Dig pipe rehabilitation method for sewers, etc., converted into monetary values.	

## CS & Quality

Items	Indicator	Calculation Method
CS & Quality Performance	External Failure Costs	Costs of responding to product-related claims
	Major Quality Issues	These refer to product and service quality issues determined by the Division Company president, based on evaluations and judgments by the quality assurance manager, which could cause significant damage to customers, society, or Sekisui Chemical Group and lead to the loss of society's trust in the Group if not thoroughly resolved on an urgent basis including: 1) Problems that could have a serious impact on (or cause severe damage to) society, such as product recalls 2) All serious problems involving human safety and those acknowledged by the Division Company to be serious problems involving the safety of property 3) Compliance-related problems concerning the quality of products or services (e.g., those involving compliance with relevant laws and regulations) 4) Problems that could inflict serious financial damage on customers
	Number of Telephone Calls Received	Number of inquiries by telephone, e-mail, letter, fax, etc.
	One-Stop Response Rate	Parameters are calls received by the Urban Infrastructure and Environmental Products Company and High Performance Plastics Company; the ratio of completed telephone calls at the customers consultant section. However, excludes telephone calls received during non-office hours or from overseas.
	Breakdown of incoming telephone calls	The content of incoming calls recorded by the Hayamimi Network is classified as follows • Inquiries: Includes Sekisui Chemical Group products specifications and usage methods, construction methods, sales outlets • Complaints: Customers voicing their dissatisfaction about Sekisui Chemical Group products and responses • Requests for repairs: Repair requests and related inquiries regarding Sekisui Chemical Group products • Compliments: Customer expressions of satisfaction about Sekisui Chemical Group products and responses * Hayamimi Network: A Sekisui Chemical Group intranet site that discloses in real time telephone calls received by the customers consultant section
	Confidence in Customer Satisfaction & Quality	Conducted once every two years and targeting all Sekisui Chemical Group employees in Japan, the Employee CS & Quality Assessment grades employee responses about their confidence in customer satisfaction and quality based on a 7-level evaluation using a 100-point scale

## Human Resources

Indicator	Calculation Method
Employee Turnover Rate in First Three Years of Employment	Employee turnover rate in first three years of employment for each fiscal year
Global Talents	Japanese employees with experience working overseas (including overseas trainees)
International Hiring	Hiring of human resources meeting one of the following criteria: those of non-Japanese nationality, returnee students from abroad, those with at least one year's experience studying abroad, and those with TOEIC scores of 750 or higher
Employment Ratio of People with Disabilities	$(\text{Number of regular workers with disabilities} / \text{total number of regular workers}) \times 100$
Reemployment Rate for the Elderly	$(\text{Number reemployed} / \text{total number of employees retired at mandatory retirement age}) \times 100$ Note: The number of employees retired at mandatory retirement age includes some retirees who do not desire reemployment.
Overtime Hours Worked	$(\text{Total overtime hours worked} + \text{total time worked on weekends and holidays}) / \text{number of employees}$
Percentage of Paid Leave Used	$(\text{Days of leave taken} / \text{days of leave awarded}) \times 100$

## Safety

Items	Indicator	Calculation Method
Safety Performance	Number of Occupational Accidents	Number of occupational accidents (both those with lost time and those without lost time) at production sites and laboratories in Japan during the subject fiscal year (April through March)
	Number of Facility Accidents	Number of equipment-related downtime events (such as fires or leakages) meeting one or more of the following conditions (1) – (3) (Sekisui Chemical Group standards) at production sites and laboratories in Japan during the subject fiscal year (April through March): (1) Personnel-related damage: Occupational accidents with 30 lost working days or more (2) Property damage: 10 million yen or more (3) Loss of opportunity: 20 million yen or more
	Number of Cases of Extended Sick Leave	Number of absence cases of 30 days or longer due to injury or illness at production sites and laboratories in Japan during the subject fiscal year (April through March). Absences due to occupational accidents are not considered extended sick leave.
	Number of Commuting Accidents	Number of commuting accidents for employees at production sites and laboratories in Japan during the subject fiscal year (April through March). These include cases in which injury was suffered or damage caused (including injury to the person and property damage) while driving automobiles or other vehicles.
	Frequency Rate	Number of injuries, illness and fatalities in occupational accidents with lost time per 1,000,000 total working hours during the subject fiscal year (April through March) Formula: $\text{Number of injuries, illness and fatalities in occupational accidents with lost time} / \text{total work hours} \times 1,000,000$
	Severity Rate	Number of workdays lost per 1,000 total working hours during the subject fiscal year (April through March) Formula: $\text{Number of work days lost} / \text{total work hours} \times 1,000$
	Number Occupational Accidents at Overseas Production Sites	Number of occupational accidents (both those with lost time and those without lost time) at overseas production sites during the subject fiscal year (April through March)
	Safety Performance at Housing Company Construction Sites	Number of occupational accidents (both those with lost time and those without lost time) at construction sites under the supervision of the Housing Company during the subject fiscal year (April through March)
	Safety Performance at Urban Infrastructure & Environmental Products Company, Other Construction Sites	Number of occupational accidents (both those with lost time and those without lost time) at construction sites under the supervision of the Urban Infrastructure & Environmental Products Company and Headquarters during the subject fiscal year (April through March)
Health, Safety and Accident Prevention Costs	Scope of summation: Production sites and laboratories, headquarters departments, and back offices of division companies, all located in Japan	
	Costs within Business-Site Areas	Health and safety measures, rescue and protective equipment, measurement of work environment, health management, workers' accident compensation insurance, etc.
	Administrative Costs	Establishment and implementation of OHSMS, safety education, personnel costs, etc.
	Other	Safety awards, etc.
	Investment Amount	Amount of investments related to health, safety, and accident prevention approved during the subject fiscal year (April through March)
	Loss Costs	Expenses, including person-hours, required to respond to occupational accidents, equipment-related accidents, commuting accidents, and extended sick leave during the subject fiscal year (April through March)

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CSR Report 2017 (including the Data Book (PDF)) has been reviewed for assurance by an independent third party and as a result has been granted the sustainability report review and registration logo. This demonstrates that this report satisfies the necessary criteria established by the Japanese Association of Assurance Organizations for Sustainability Information (J-SUS; <http://www.j-sus.org/>) for the use of this logo, intended to assure the reliability of sustainability information.