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### Regarding the Explanatory Notes:

Note: Explaining the increase and decrease of individual passages

※: Comments on the entire chart

\*: Definition of words

## Environmental Data

Figure 1 Fiscal 2019 Environmental Targets and Achievements; Fiscal 2020 Company-Wide Environmental Quantitative Targets

Category	Reduce energy consumption (crude oil-equivalent)	Reduce total CO <sub>2</sub> emissions	
Scope of application	All domestic operations (non-consolidated)	All domestic operations	Total for all domestic production sites
Fiscal 2019 environmental targets	(1) Reduce the energy consumption to less than 2,529 kl of crude oil or less. (2) Reduce the energy consumption rate per non-consolidated net sales to 3.69 kl of crude oil/100 million yen or less.	(1) Reduce the CO <sub>2</sub> emissions to 7,929 tons-CO <sub>2</sub> or less. (2) Reduce the CO <sub>2</sub> emissions rate per non-consolidated net sales to 11.56 tons-CO <sub>2</sub> /100 million yen or less.	(1) Reduce the CO <sub>2</sub> emissions to 2,822 tons-CO <sub>2</sub> or less. (2) Reduce the CO <sub>2</sub> emissions per unit cost of production to 9.8 tons-CO <sub>2</sub> /100 million yen or less.
Fiscal 2019 activity results	(1) Cumulative energy consumption: 2,444 kl of crude oil (2) Energy consumption rate per non-consolidated net sales: 3.73 kl of crude oil/100 million yen	(1) Cumulative CO <sub>2</sub> emissions: 7,718 tons <sup>Note 1</sup> (2) CO <sub>2</sub> emissions rate per non-consolidated net sales: 11.77 tons-CO <sub>2</sub> /100 million yen	(1) Cumulative CO <sub>2</sub> emissions: 2,800 tons <sup>Note 2</sup> (2) CO <sub>2</sub> emissions per unit cost of production: 9.96 tons-CO <sub>2</sub> /100 million yen
Rating (1) / (2)	○/×	○/×	○/△
Fiscal 2020 company-wide environmental quantitative targets	(1) Reduce the energy consumption to less than the equivalent of 2,419 kl of crude oil. (2) Reduce the energy consumption rate per non-consolidated net sales to 3.65 kl of crude oil/100 million yen or less.	(1) Reduce the CO <sub>2</sub> emissions to 7,640 tons-CO <sub>2</sub> or less. (2) Reduce the CO <sub>2</sub> emissions rate per non-consolidated net sales to 11.54 tons-CO <sub>2</sub> /100 million yen or less.	(1) Reduce the CO <sub>2</sub> emissions to 2,772 tons-CO <sub>2</sub> or less. (2) Reduce the CO <sub>2</sub> emissions per unit cost of production to 9.58 tons-CO <sub>2</sub> /100 million yen or less.

Rating symbols: ○: Achieved; △: Improved; ×: Not Achieved

**Note 1** The difference from the CO<sub>2</sub> emissions in fiscal 2019 (8,500 tons-CO<sub>2</sub>/year) in Figure 2 is that this amount includes contracted transport whose scope of calculation is not under the jurisdiction of the logistics department.

**Note 2** The difference from the CO<sub>2</sub> emissions in fiscal 2019 (3,013 tons-CO<sub>2</sub>/year) in Figure 3 is that Kasumigaura Works is not included in the scope of calculation of Figure 1.

### KEY POINT

Based on the Actin Plan of the Industries of Electrical and Electronics on a Low Carbon Society initiative proposed by the industrial community with the aim of reconciling corporate growth and global warming policies, we are setting yearly goals towards achieving the Fiscal 2021 Company-Wide Environmental Quantitative Targets. We are also proceeding with activities that reduce our overall impact on the environment.

In fiscal 2019, we continued to focus on the conservation of electric power in response to the limited power supply caused by the 2011 Great East Japan Earthquake. We made proactive investment with energy-efficient updates to equipment such as air conditioners and lighting, resulting in electricity savings.

Compared to fiscal 2018, energy consumption per non-consolidated net sales was -0.8% and CO<sub>2</sub> emissions per non-consolidated net sales was -1.5%. However, energy consumption improved an equivalent of 2.6% in terms of crude oil, and 2.6% in CO<sub>2</sub>.

In fiscal 2019, we achieved quantitative targets for both energy consumption and CO<sub>2</sub> emissions.

Moving forward, we will take appropriate PDCA measures as part of efforts towards further reducing our impact on the environment.

Figure 2 Environmental Burden throughout Japan (Fiscal 2019)

	INPUT			OUTPUT					
		FY2018	FY2019	Compared to FY18		FY2018	FY2019	Compared to FY18	
Energy consumption and CO <sub>2</sub> emissions, resource input amount, waste generation, etc. in all business activities within Japan									
Energy consumption	GJ/yr	144,795	141,186	98	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	8,694	8,500	98
Electricity	MWh	9,178	8,933	97	Electricity	t-CO <sub>2</sub> /yr	5,094	4,958	97
Bunker A	kl	34	35	101	Bunker A	t-CO <sub>2</sub> /yr	93	94	101
LPG	t	108	96	89	LPG	t-CO <sub>2</sub> /yr	323	289	89
Kerosene	kl	0.1	0	—	Kerosene	t-CO <sub>2</sub> /yr	0.2	0	—
City gas	1,000 m <sup>3</sup>	10	10	98	City gas	t-CO <sub>2</sub> /yr	22	22	98
Gasoline	kl	489	487	100	Gasoline	t-CO <sub>2</sub> /yr	1,165	1,161	100
Diesel	kl	4	2	41	Diesel	t-CO <sub>2</sub> /yr	9	4	41
Volume of contracted transport*6	10,000 t-km	963	953	99	Volume of contracted transport*6	t-CO <sub>2</sub> /yr	1,988	1,972	99
Water consumption	m <sup>3</sup>	32,140	31,358	98	Water drainage	m <sup>3</sup>	28,971	28,311	98
Product parts and materials	t	6,879	6,449	94	Steam, water, and related emissions	m <sup>3</sup>	0	0	—
Collection of used products	t	2,825	2,976	105	Products*5	t	10,185	9,615	94
					Used product/waste disposal volume*1	t	4,102	4,102	100
					Volume transferred to recycling processes*7	t	267	257	96
					Volume recycled*2	t	3,802	3,809	100
					Other*3	t	1	1	67
					Final disposal (landfill)*4	t	32	35	111

Scope of calculation: INPUT and OUTPUT in the Figure 3 "Environmental Burden in Japan by Business Process (Fiscal 2019)" (p3) are calculated.

Calculation target: At the head office, sales, development/designs and production sites, energy consumption and associated CO<sub>2</sub> emissions, water consumption and water drainage, and waste generation; at production sites, material input in production; at domestic logistics and transportation sites, fuel consumption by company-owned vehicle operations, and contracted transport volume (from not only the logistics department but also others), and associated CO<sub>2</sub> emissions; at sites of collection, reuse and recycling, volumes of used products collected and waste generation

\*1 Waste generation: RISO classifies all unwanted substances generated from its operational processes, including valuable resources and resources to be recycled or reused, as waste

\*2 Volume recycled: Total volume of materials for recycling and thermal recycling, including valuable resources. The volume to be reused in operational processes is excluded

\*3 Other (waste generation): The volume of gas emissions from recycling processing and incineration

\*4 Final disposal (landfill): The volume to be disposed of in landfill sites, which includes residues and incinerated ash from intermediate processing such as recycling

\*5 Major products: ComColor high-speed color printers, RISOGRAPH digital duplicators, and inks, masters, and other supply products for ComColor and RISOGRAPH

\*6 Volume of contracted transport using external carriers: Volume of contracted transport (for delivery, procurement, collection, etc.) of products, parts, used products, and waste

\*7 Volume transferred to recycling processes: The amount of recycled materials to be reused as raw materials in operational processes

### CO<sub>2</sub> Emissions Calculations

Electricity: For Japan, a conversion value of 0.555kg-CO<sub>2</sub>/kWh was used throughout the year, and for overseas, conversion values in IEA statistical data for each country were applied.  
Bunker A: 2.71 kg CO<sub>2</sub>/L LPG: 3.00 kg CO<sub>2</sub>/kg Gasoline: 2.32 kg CO<sub>2</sub>/L Volume of contracted transport: According to the calculation standards of Act on the Rational Use of Energy.

## Environmental Data

Figure 3 Environmental Burden in Japan by Operational Process (Fiscal 2019)

Business process	INPUT				OUTPUT					
		FY2018	FY2019	Compared to FY18		FY2018	FY2019	Compared to FY18		
<b>Head Office and Sales</b> Scope of calculation: The head office and domestic sales bases of RISO KAGAKU CORPORATION and RISO OKINAWA CORPORATION (Data on wastes are available only for the head office.)	<b>Energy consumption and CO<sub>2</sub> emissions from the head office and sales department service activities</b>									
	Energy consumption	GJ/yr	19,964	18,570	93	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	1,112	1,034	93
	Daytime electricity	MWh	1,984	1,845	93	Daytime electricity	t-CO <sub>2</sub> /yr	1,101	1,024	93
	LPG	t	4	3	95	LPG	t-CO <sub>2</sub> /yr	11	10	95
	Kerosene	kℓ	0	0	—	Kerosene	t-CO <sub>2</sub> /yr	0	0	—
	City gas	1,000 m <sup>3</sup>	0	0	—	City gas	t-CO <sub>2</sub> /yr	0	0	—
	Water consumption	m <sup>3</sup>	4,711	4,218	90	Water drainage	m <sup>3</sup>	4,711	4,218	90
						Waste generation*1	t	19	19	98
						Volume recycled*2	t	19	18	98
						Other*3	t	0	0	—
					Final disposal (landfill)*4	t	0	0	100	
<b>Design and Development</b> Scope of calculation: RISO R&D Center	<b>Energy consumption and CO<sub>2</sub> emissions at the product development stage</b>									
	Energy consumption	GJ/yr	22,818	23,225	102	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	1,271	1,294	102
	Daytime electricity	MWh	1,629	1,664	102	Daytime electricity	t-CO <sub>2</sub> /yr	904	924	102
	Nighttime electricity	MWh	660	667	101	Nighttime electricity	t-CO <sub>2</sub> /yr	367	370	101
	LPG	t	0	0	—	LPG	t-CO <sub>2</sub> /yr	0	0	—
	City gas	1,000 m <sup>3</sup>	10	10	98	City gas	t-CO <sub>2</sub> /yr	22	22	98
	Water consumption	m <sup>3</sup>	9,958	9,788	98	Water drainage	m <sup>3</sup>	9,958	9,788	98
						Waste generation*1	t	185	201	109
						Volume recycled*2	t	183	200	109
						Other*3	t	0	0	—
					Final disposal (landfill)*4	t	1.9	1.7	89	
<b>Production</b> Scope of calculation: Tsukuba Works Ube Works Kasumigaura Works	<b>Volume of raw materials used, energy consumption, CO<sub>2</sub> emissions, and waste generation in the process of major product*5 manufacturing</b>									
	Energy consumption	GJ/yr	55,243	53,168	96	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	3,128	3,013	96
	Daytime electricity	MWh	4,482	4,278	95	Daytime electricity	t-CO <sub>2</sub> /yr	2,487	2,374	95
	Nighttime electricity	MWh	424	479	113	Nighttime electricity	t-CO <sub>2</sub> /yr	235	266	113
	Bunker A	kℓ	34	35	101	Bunker A	t-CO <sub>2</sub> /yr	93	94	101
	LPG	t	104	93	89	LPG	t-CO <sub>2</sub> /yr	312	278	89
	Kerosene	kℓ	0	0	—	Kerosene	t-CO <sub>2</sub> /yr	0	0	—
	Water consumption	m <sup>3</sup>	17,471	17,352	99	Water drainage	m <sup>3</sup>	14,302	14,305	100
	Product parts and materials	t	6,879	6,449	94	Steam, water, and related emissions	m <sup>3</sup>	0	0	—
	Metals	t	1,066	930	87	Products*5	t	10,185	9,615	94
	Plastic	t	1,180	1,124	95					
	Glass	t	0	0	87					
	Paper	t	2,052	1,947	95					
	Other	t	2,579	2,447	95					
	PRTR-regulated substances	t	15.4	15.6	101	Total PRTR substance emissions/transfers	kg	44.9	35.4	79
						Emissions into the air	kg	1.0	2.6	Note 1 260
						Emissions into the waters	kg	0	0	—
					Emissions into the soil	kg	1.7	Note 2 0	—	
					Volume transferred to waste	kg	42.2	32.8	78	
					Waste generation*1	t	1,073	906	84	
					Volume recycled*2	t	1,067	899	84	
					Other*3	t	1	1	81	
					Final disposal (landfill)*4	t	5	6	128	
<b>Sales, Logistics, and Transportation</b> Scope of calculation: Logistics and transportation in Japan, operation of company-owned vehicles	<b>Fuel consumption and CO<sub>2</sub> emissions from company-owned vehicles used in sales activities and maintenance services for customers, and energy consumption and CO<sub>2</sub> emissions from contracted transport such as product delivery and used product collection and transportation are calculated.</b>									
	Energy consumption	GJ/yr	46,770	46,223	99	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	3,162	3,137	99
	Gasoline	kℓ	489	487	100	Gasoline	t-CO <sub>2</sub> /yr	1,165	1,161	100
	Diesel	kℓ	4	2	41	Diesel	t-CO <sub>2</sub> /yr	9	4	41
	Volume of contracted transport*6	10,000 t-km	963	953	99	Volume of contracted transport*6	t-CO <sub>2</sub> /yr	1,988	1,972	99
<b>Collecting, Reusing, and Recycling</b> Scope of calculation: Used products in Japan	<b>Volumes of used products collected, reused, and recycled. Although RISO promotes the effective use of collected products, some collected components that cannot be recycled are processed for landfill disposal.</b>									
	Collection of used products	t	2,825	2,976	105	Used product disposal volume	t	2,825	2,976	105
	Digital duplicators	t	2,472	2,647	107	Volume transferred to recycling processes*7	t	267	257	96
	Ink bottles	t	317	297	94	Volume recycled*2	t	2,533	2,692	106
	Ink cartridges	t	36	32	89	Other*3	t	0	0	—
					Final disposal (landfill)*4	t	25	27	109	

\*1 Waste generation: RISO classifies all unwanted substances generated from its operational processes, including valuable resources and resources to be recycled or reused, as waste

\*2 Volume recycled: Total volume of materials for recycling and thermal recycling, including valuable resources. The volume to be reused in operational processes is excluded

\*3 Other (waste generation): The volume of gas emissions from recycling processing and incineration

\*4 Final disposal (landfill): The volume to be disposed of in landfill sites, which includes residues and incinerated ash from intermediate processing such as recycling

\*5 Major products: ComColor high-speed color printers, RISOGRAPH digital duplicators, and inks, masters, and other supply products for ComColor and RISOGRAPH digital duplicators

\*6 Volume of contracted transport using external carriers: Volume of contracted transport (for delivery, procurement, collection, etc.) of products, parts, used products, and waste

\*7 Volume transferred to recycling processes: The amount of recycled materials to be reused as raw materials in operational processes

Note 1 This fluctuates depending on the surface area of the floor cleaned.

Note 2 This is due to the change to an herbicide that does not fall under the PRTR Law.

## Environmental Data

Figure 4 Environmental Burden of Overseas Production Bases (Fiscal 2019)

Target	INPUT				OUTPUT					
		FY2018	FY2019	Compared to FY18		FY2018	FY2019	Compared to FY18		
<b>Overseas production bases</b>  Scope of calculation: All overseas production bases of the Riso Kagaku Group: RISO TECHNOLOGY CHINA CO., LTD. ZHUHAI FACTORY, RISO TECHNOLOGY CHINA CO., LTD., RISO INDUSTRIES (SHENZHEN) LTD., RISO INDUSTRY SHANGHAI CO., LTD., RISO INDUSTRY (THAILAND) CO., LTD.	<b>Volume of raw materials used, energy consumption, CO<sub>2</sub> emissions, and waste generation in overseas production bases</b>									
	Energy consumption	GJ/yr	18,568	17,216	93	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	1,313	1,213	92
	Electricity	MWh	1,714	1,598	93	Electricity	t-CO <sub>2</sub> /yr	1,214	1,127	93
	Bunker A	kℓ	0	0	—	Bunker A	t-CO <sub>2</sub> /yr	0	0	—
	Gasoline	kℓ	43	37	87	Gasoline	t-CO <sub>2</sub> /yr	99	86	87
	Diesel	kℓ	0	0	—	Diesel	t-CO <sub>2</sub> /yr	0	0	—
	Water consumption	m <sup>3</sup>	16,675	15,453	93	Water drainage	m <sup>3</sup>	13,771	12,605	92
	Product parts and materials	t	3,116	2,623	84	Steam, water, and related emissions	m <sup>3</sup>	2,325	2,221	96
	Metals	t	1,433	1,134	79	Products*5	t	3,694	3,249	88
	Plastic	t	512	430	84					
	Glass	t	1	1	61					
	Paper	t	668	589	88					
	Other	t	502	470	94					
						Waste generation*1	t	699	565	Note 1 81
						Volume transferred to recycling processes*7	t	0	0	—
					Volume recycled*2	t	663	528	Note 1 80	
					Other*3	t	10.1	11.1	110	
					Final disposal (landfill)*4	t	26.2	26.7	102	

Note 1 This is because the wastes were sold as valuables.

Figure 5 Environmental Burden of Overseas Non-Production Bases (Fiscal 2019)

Target	INPUT				OUTPUT					
		FY2018	FY2019	Compared to FY18		FY2018	FY2019	Compared to FY18		
<b>All non-production sites overseas</b>  Scope of calculation: 16 overseas subsidiaries* and sales bases*8	<b>Energy consumption and CO<sub>2</sub> emissions at the head office and sales bases of overseas subsidiaries (non-production departments)</b>									
	Energy consumption per unit	GJ/person	59.3	68.8	116	CO <sub>2</sub> emissions per unit	t-CO <sub>2</sub> /person*9	3.99	4.62	116
	Energy consumption	GJ/yr	51,042	54,318	106	CO <sub>2</sub> emissions	t-CO <sub>2</sub> /yr	3,437	3,651	106
	Electricity	MWh	1,204	1,219	101	Electricity	t-CO <sub>2</sub> /yr	820	829	101
	Natural gas	kℓ	24,419	24,583	101	Natural gas	t-CO <sub>2</sub> /yr	51	51	100
	Gasoline	kℓ	693	852	123	Gasoline	t-CO <sub>2</sub> /yr	1,608	1,976	123
	Diesel	kℓ	371	308	83	Diesel	t-CO <sub>2</sub> /yr	958	795	83
	Water consumption	m <sup>3</sup>	1,360	1,309	96	Water drainage	m <sup>3</sup>	1,360	1,309	96

※RISO, INC., RISO FRANCE S.A., RISO (Deutschland) GmbH, RISO (U.K.) LTD., RISO IBERICA, S.A., RISOGRAPH ITALIA S.R.L., RISO AFRICA (PTY) LTD., RISO KOREA LTD., RISO HONG KONG LTD., RISO (Thailand) CO., LTD., RISO INDIA PRIVATE LTD., RISO TECHNOLOGY CHINA CO., LTD., RISO LATIN AMERICA, INC., RISO EURASIA LLC, RISO TURKEY BASKI COZUMLERI A.S., RISO (SG) PTE. LTD.

\*1 Waste generation: RISO classifies all unwanted substances generated from its operational processes, including valuable resources and resources to be recycled or reused, as waste

\*2 Volume recycled: Total volume of materials for recycling and thermal recycling, including valuable resources. The volume to be reused in operational processes is excluded

\*3 Other (waste generation): The volume of gas emissions from recycling processing and incineration

\*4 Final disposal (landfill): The volume to be disposed of in landfill sites, which includes residues and incinerated ash from intermediate processing such as recycling

\*5 Major products: ComColor high-speed color printers, RISOGRAPH digital duplicators, and inks, masters, and other supply products for ComColor and RISOGRAPH digital duplicators

\*6 Volume of contracted transport using external carriers: Volume of contracted transport (for delivery, procurement, collection, etc.) of products, parts, used products, and waste

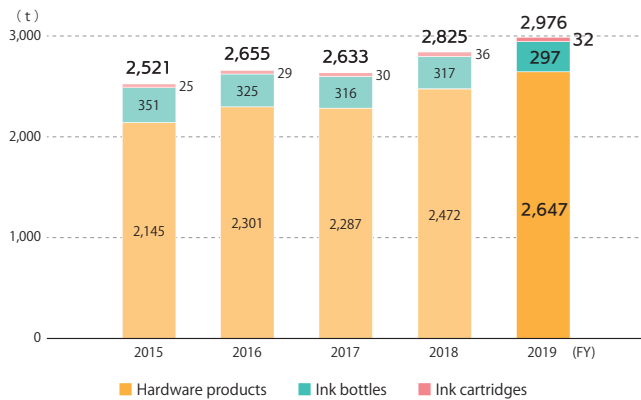
\*7 Volume transferred to recycling processes: The amount of recycled materials to be reused as raw materials in operational processes

\*8 The head office has primary responsibility for ascertaining the environmental burden of overseas non-production sites, but data collection for sales bases such as branch offices is incomplete. The data supplement rate based on the ratio of employees registered at offices/bases in fiscal 2019 was 68.8%.

\*9 Concerning overseas non-production sites, because there are large fluctuations in topics such as office movement, the increase and decrease of personnel, and the propriety of surveys, the output level is calculated using the total number of employees belonging to the site where the survey was conducted as the denominator, and represents the change in efficiency.

## Environmental Data

**Figure 6** Quantity of Used Products and Consumables Collected



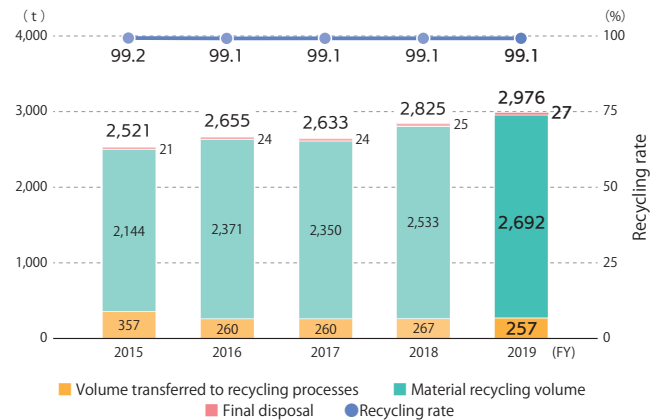
Scope of calculation: The amount of used RISO products in Japan (excluding second-hand digital duplicators that are returned or collected and then used as rental equipment)

**KEY POINT**

We are actively carrying out the collection and recycling of used hardware products and consumables based on the idea that used products are not wastes but precious resources. Even overseas, we are promoting the collection and recycling of used products based on local laws and social demands.

Until FY2015, the approximate value (error range  $\pm 1\%$ ) was obtained by multiplying the number of collected objects by the average value. From FY2016 onwards, the figures are tabulated using actual weight measurements.

**Figure 7** Recycling of Used Products and Recycling Rate



Scope of calculation: The amount of used RISO products in Japan (excluding second-hand digital duplicators that are returned or collected and then used as rental equipment)

**KEY POINT**

We continue to use products recycled from used products and to recycle parts and components which can't be reused. We continue to undertake these efforts.

**Figure 8** Specific Final Waste Disposal Rates\* for Industrial and General Waste



Scope of calculation: Industrial and general waste (including valuable resources and recyclable materials) generated at the Tsukuba Works, Ube Works, Kasumigaura Works, and R&D Division; volume of all used RISO products collected in Japan, materials recycled, and materials for other treatment processes (excluding rental equipment returned or reused by different users without refurbishment)

\*Specific final waste disposal rate: RISO calculates the amount of specific final waste disposal as the total of the amount of waste incinerated, the residue and ashes resulting from recycling processes and used for landfill, and other waste used directly for landfill. Then, RISO calculates the specific final waste disposal rate as the ratio of the specific final waste disposal amount to the total waste it generates, including valuable and recyclable substances. RISO recognizes the incineration of waste as an inefficient treatment of resources. Therefore, the amount of waste incinerated is included in the amount of other waste directly used for landfill.

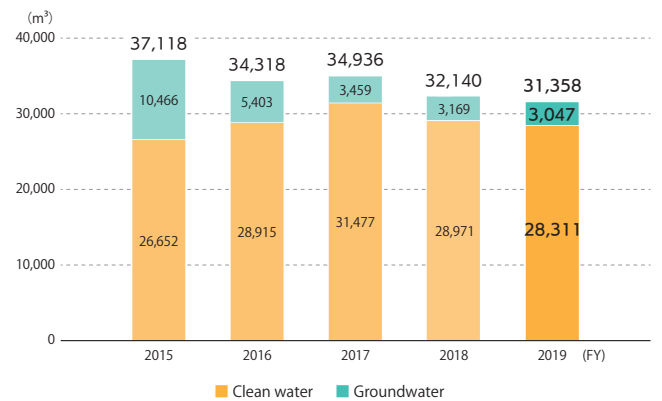
Target for reducing waste for the FY2020:

The final waste disposal rates for industrial waste and general waste will not exceed 1.0%.

**KEY POINT**

We continue to make improvements.

**Figure 9** Water Consumption



Scope of calculation: Data is collected for water consumption volume in Japan.

The target for the FY2020:

The water consumption will reduce by 3% or higher from the previous fiscal year.

**KEY POINT**

Approximately 30% of the water used at production sites are for raw materials and raw water for boiler steam, and the remaining 70% of water are for daily use such as toilets and dining halls. This water is discharged into the public waters and the sewage systems.

The amount used in fiscal 2019 decreased by approximately 782 m<sup>3</sup> (approximately 2%) from the previous fiscal year. We continue to actively engage in water conservation efforts.

## Environmental Data

**Figure 10** Breakdown of Released and Transferred Volume of PRTR-Designated Chemical Substances

(kg)

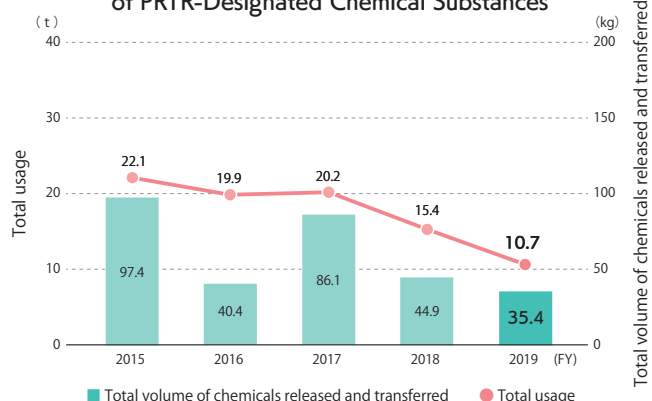
	Total usage		Total volume of chemicals released and transferred											
	FY2018	FY2019	FY2018		FY2019		Emissions into the air		Emissions into the waters		Emissions into the soil		Waste generated	
			FY2018	FY2019	FY2018	FY2019	FY2018	FY2019	FY2018	FY2019	FY2018	FY2019	FY2018	FY2019
Polyoxyethylene alkyl ether	140.4	136.8	—	—	—	—	—	—	—	—	—	—	—	—
BHT	12,300.0	7,440.0	35.5	25.2	—	—	—	—	—	—	—	—	35.5	25.2
Boron and its compounds	1,412.5	1,373.0	6.7	7.6	—	—	—	—	—	—	—	—	6.7	7.6
2-Aminoethanol	1.0	2.6	1.0	2.6	1.0	2.6	—	—	—	—	—	—	—	—
Molybdenum and its compounds	—	12.6	—	—	—	—	—	—	—	—	—	—	—	—
Sodium poly (oxyethylene) dodecyl ether sulfonate	1.7	—	1.7	—	—	—	—	—	—	—	1.7	—	—	—
Dibutyltin dilaurate	5.5	—	—	—	—	—	—	—	—	—	—	—	—	—
2,3-Epoxypropyl methacrylate	1,544.2	1,673.3	—	—	—	—	—	—	—	—	—	—	—	—
2-Ethylhexanoic acid	—	4.4	—	—	—	—	—	—	—	—	—	—	—	—
Methylenebis (4,1-phenylene) diisocyanate	14.7	12.6	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>15,420.0</b>	<b>10,655.3</b>	<b>44.9</b>	<b>35.4</b>	<b>1.0</b>	<b>2.6</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1.7</b>	<b>—</b>	<b>42.2</b>	<b>32.8</b>

Scope of calculation: Tsukuba Works, Ube Works, Kasumigaura Works, and RISO R&D Center

\*Data based on the results of environmental inspections with regard to the release and transfer of substances that RISO handled 1 kg or more in weight on an annual basis.

**Figure 11** Consumption, Release and Transfer of PRTR-Designated Chemical Substances

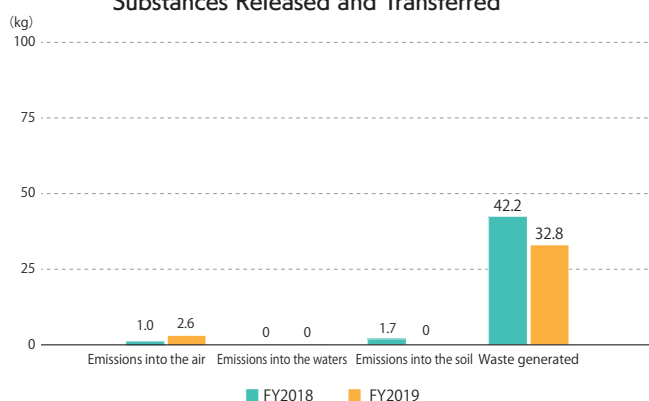
Note 1



Scope of calculation: Tsukuba Works, Ube Works, Kasumigaura Works, and RISO R&D Center

\*Data based on the results of environmental inspections with regard to the release and transfer of substances that RISO handled 1 kg or more in weight on an annual basis.

**Figure 12** Volume of PRTR-Designated Chemical Substances Released and Transferred



Scope of calculation: Tsukuba Works, Ube Works, Kasumigaura Works, and RISO R&D Center

\*Data based on the results of environmental inspections with regard to the release and transfer of substances that RISO handled 1 kg or more in weight on an annual basis.

The target to reduce PRTR-designated chemical substances for the FY2020:

The total of PRTR-designated chemical substances released and transferred will reduce by 5% or higher from the previous fiscal year.

Note 1 We had included data excluding BHT in our Data Books since 2011. From this version, we don't include the data.

### KEY POINT

We are investigating the environmental release and transfer of toxic chemicals listed in PRTR.

Based on this investigation, we examine the possibility of reducing toxic releases, or switching to alternatives, so that total releases and transfers during the manufacturing process are minimized.

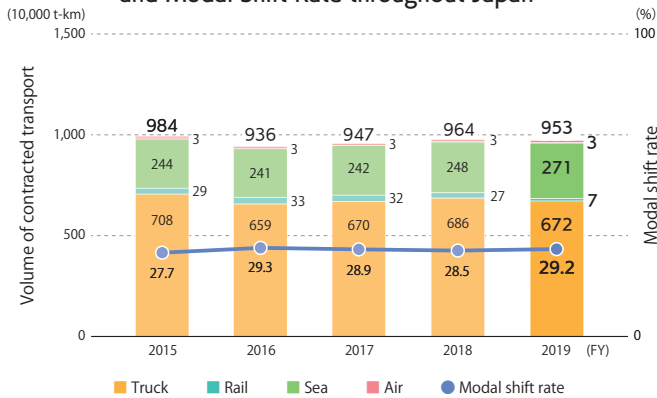
Total usage of PRTR-designated chemical substance in fiscal 2019 was 10.7 tons, a decrease of 4.8 tons compared with the previous fiscal year.

By constantly considering the use of alternative substances, we continue to strive to reduce the use of PRTR-listed substances.

\*PRTR (Pollutant Release and Transfer Register): A system whereby business operators ascertain the volumes of chemical substances that may pollute the environment (atmosphere, water, soil) as well as the volumes transferred as waste, report the results to an administrative body, and disclose the results to promote the voluntary management by business operators and prevent impediments to environmental preservation.

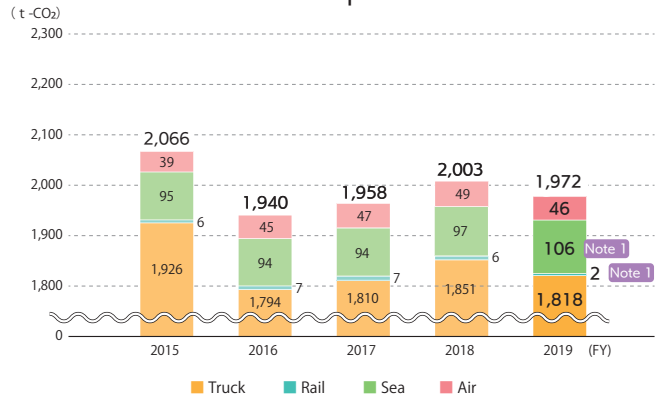
## Environmental Data

**Figure 13** Breakdown of Contracted Transport Volume and Modal Shift Rate throughout Japan



Scope of calculation: Volume of contracted transport (of products, components, raw materials, waste and used products) in Japan by the logistics department, Sales department, plants, and the Center for Recycling

**Figure 14** Breakdown of CO<sub>2</sub> Emissions from Contracted Transport



Scope of calculation: CO<sub>2</sub> emissions attributable to contracted transport (of products, components, raw materials, waste and used products) in Japan by the Logistics Dept., Sales Dept., plants and the Center for Recycling

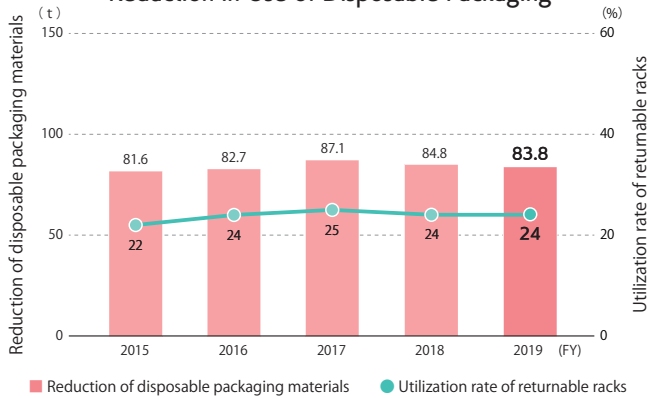
**Note 1** Due to the July 2018 Torrential Rain Disaster, shipment by rail decreased and shipment by sea increased.

### KEY POINT

Although our company is not included as a designated shipper under the Energy Conservation Act, in order to reduce environmental burden during product transportation, we are working to accurately understand the volume of contracted transport and reduce CO<sub>2</sub> emissions.

In fiscal 2019, we worked hard on a modal shift from trucks to ships for the transportation of consumables. Compared to fiscal 2018, the modal shift rate went from 28.5% to 29.2%, and CO<sub>2</sub> emissions decreased by 31 tons-CO<sub>2</sub>, or 2%. We continue to promote this.

**Figure 15** Utilization Rate of Returnable Racks and Reduction in Use of Disposable Packaging



Scope of calculation: Digital duplicators and high-speed color printers shipped from the Tsukuba Distribution Center to RISO's Japanese sales bases, sales representatives, and customers nationwide

### KEY POINT

The use of returnable racks for product shipments reduces the volume of disposable packaging materials such as cardboard and polystyrene foam.

The returnable rack usage rate was 24% in fiscal 2019, which is equivalent to an 83.8-ton reduction in packaging materials.

We continue to make efforts to improve the rate of returnable rack usage and the reduction of disposable packaging materials.

**Figure 16** Environmental Education Programs and Number of Participants (FY2019)

Type of education	Events (times)	Participants (employees)	Hours (aggregate)
Basic environmental education program	12	157	118
Internal auditor training	5	84	649
EMS activity program (waste sorting, etc.)	3	60	90
Special environmental education program	7	70	27
Accident/emergency drill	9	107	71
Disaster drill	3	579	579
Advanced business skill program	4	100	100
Advanced EMS skill program	2	406	239
Workplace health and safety program	1	44	44
<b>Total</b>	<b>46</b>	<b>1,607</b>	<b>1,917</b>

Scope of calculation: Educational and training programs provided at RISO's domestic sites in Japan

\*Table includes data for programs with an environmental focus.

### KEY POINT

In order to raise the environmental awareness of each employee and carry out environmental conservation activities, a wide variety of programs are provided from general education to specialized trainings regarding internal quality environmental auditors, EMS external qualification, ISO 9001:2015 and ISO 14001:2015 and so on.

## Environmental Accounting

## ● Calculation method and idea

- Our calculations of the environmental protection costs and the economic effects are basically made in keeping with the "Environmental Account Guidebook (2005)" of the Ministry of the Environment. However, the classification of costs is modified to our own standard. Also, expenses related to environmental protection costs do not include depreciation. The economic effects are based on income and cost decreases, both of which are considered to be actual effects (as they are calculated using actual figures), and not on presumed or estimated effects.
- Ideally, the environmental protection costs relating to environment-friendly design should be listed in the chart. However, due to the difficulty in accurately distinguishing which costs are directly related to environmental protection, the trend data presented on the securities report is based on total R&D expenditures.

● Term: Fiscal 2019 (April 1, 2018 to March 31, 2019)

● Scope of calculation: All of RISO KAGAKU CORPORATION'S domestic sites in Japan (Tsukuba Works, Kasumigaura Works, Ube Works, RISO R&D Center, the head office, and domestic sales bases). For RISO's sales network, "resource conservation and recycling" as well as "EMS establishment and maintenance activities" are included in the scope of calculation.

Figure 17 Environmental Accounting Results for Fiscal 2019

(Thousands of Yen)

Activities	Classification	Environmental protection costs			Environmental protection effect	
		Environmental protection activities	Investment	Cost	Economic effect	Actions
Global warming prevention measures	•Reduction of fuel consumption •Reduction of electricity consumption	•Replacement of boilers with high efficiency models, pursuit of a modal shift strategy •Introduction of energy-saving equipment	62,512	1,160	1,142	•Reduction of CO <sub>2</sub> emissions during manufacture and product transport •Reduction of electricity consumption
Promotion of resource conservation and recycling	•Effective utilization of used products •Effective utilization of wastes •Safe disposal of wastes	•Collection and recycling of used products •Separation and recycling of waste		391,304	414,798	•Reduction of costs through reuse •Improvement of resource recovery rates
Environmental communication	•Publication of product environmental data •Publication of information about environmental initiatives	•Acquisition of environmental label certification •Publication of the sustainability report •Participation in events and exhibitions		21,320		•Acquisition of certification under the Eco Mark Program •Publication of the sustainability report, website revisions, etc.
Green areas	•Clean-up and maintenance of green areas	•Clean-up and maintenance of green areas		3,000		•Clean-up and maintenance of green areas
Legal compliance (pollution control measures, environmental pollution control)	•Compliance activities (water, air, etc.) •Assessment of legal and regulatory trends	•Water drainage management •Gas emissions management •Inspection and maintenance of facilities •Monitoring of laws and regulations		28,657		•Environmental protection activities •Research for and understanding legal and regulatory trends in Japan and overseas
Green procurement	•Collection and registration of environmental data relating to raw materials and parts	•Implementation of an environmental information system covering REACH and other regulations		7,489		•Environmental information updates, operation and maintenance
EMS establishment and maintenance activities	•ISO	•Acquisition and maintenance of ISO 14001 certification		4,765		•Maintenance of the validity of ISO 14001:2004 certification
<b>Total</b>			<b>62,512</b>	<b>457,696</b>	<b>415,941</b>	

Figure 18 Breakdown of Costs (Investment + Actual Costs)

(Thousands of Yen)

	FY2015	FY2016	FY2017	FY2018	FY2019
Global warming prevention measures	6,814	15,997	63,469	50,347	63,672
Promotion of resource conservation and recycling	471,289	287,683	312,210	344,356	391,304
Environmental communication	17,158	22,055	18,279	18,140	21,320
Green areas	7,817	4,640	3,293	3,000	3,000
Legal compliance	26,284	30,190	18,899	29,440	28,657
Green procurement	13,475	7,528	7,692	7,684	7,489
EMS establishment and maintenance activities	7,204	4,487	3,995	9,732	4,765

Figure 19 Breakdown of Economic Effects (Revenue + Cost Saving)

(Thousands of Yen)

	FY2015	FY2016	FY2017	FY2018	FY2019
Global warming prevention measures	599	781	840	1,948	1,142
Promotion of resource conservation and recycling	469,885	421,579	398,467	410,695	414,798

\*Five categorized activities, including environmental communication, had no economic effects.

Figure 20 Status of Environmental Accounting

(Comparison of Figures Excluding Development Costs such as Environmental Design for Products)

	FY2015	FY2016	FY2017	FY2018	FY2019
Costs (investment + actual costs) (Thousands of Yen)	550,042	372,580	427,838	462,699	520,208
Economic effect (Revenue + Cost saving) (Thousands of Yen)	470,485	422,360	399,307	412,643	415,941
Economic effect ratio (%)	86%	113%	93%	89%	80%

## KEY POINT

In fiscal 2019, the cost of global warming prevention measures (investment + actual cost) increased by 13,325,000 yen in comparison with fiscal 2018. Despite making proactive investments such as switching to high energy-saving lighting and air conditioning, the positive economic effect decreased by 806,000 yen.

The number of used products collected and production using reused parts increased. Because we also promoted the production of reused parts, the cost of resource saving and recycling promotion increased by 46,948,000 yen. The positive economic effect increased by 4,104,000 yen.



## Environmental Data for Major Plants and Offices

Figure 21

### Tsukuba Works

Scope of calculation: Tsukuba Works

<b>Overview</b>	<b>Address</b>	127-7 Fukuda(Fukuda-Kougyou-danchi), Ami-machi, Inashiki-gun, Ibaraki-ken, Japan	<b>Site Area</b>	97,000m <sup>2</sup>
	<b>Commencement of Operations</b>	October 1981	<b>Total Floor Space</b>	29,326m <sup>2</sup>
			<b>Number of Employees</b>	286 (As of March 31, 2019)



**Major Products**  
RISOGRAPH digital duplicators and peripherals  
ComColor high-speed color printers, inks, and peripherals

**Registration of Specified Facilities**  
 •Facilities that generate smoke (boilers), as specified under the Air Pollution Control Act  
 •Facilities specified in the ordinance regarding the prevention of eutrophication in Kasumigaura: Purification tank  
 •Facilities specified in the Vibration Control Law: Hydraulic and mechanical presses, air compressors, shear cutters, circular saw machines

**Major Environmental Protection Activities**  
 •ISO 14001: Certification updated in October 2017  
 •Reduction of waste generation and promotion of recycling  
 •Designing environmentally friendly products to respond to the RoHS Directive and other environmental regulations  
 •Reduction of CO<sub>2</sub> emissions through energy conservation  
 •Implementation of green procurement  
 •Promotion of green purchasing  
 •Recycling of used ink bottles

#### Environmental Data

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019	YoY (%)
Electricity consumption	MWh	1,742	1,845	2,133	2,021	2,066	102
Water consumption	m <sup>3</sup>	9,903	9,795	13,019	10,044	10,669	106
Clean water	m <sup>3</sup>	9,903	9,795	13,019	10,044	10,669	106
Groundwater	m <sup>3</sup>	0	0	0	0	0	—
Water drainage	m <sup>3</sup>	9,903	9,795	13,019	10,044	10,669	106
Annual biochemical oxygen demand (BOD) emissions	kg	6.3	1.8	7.2	3.3	0.9	Note 1 26
Annual nitrogen emissions	kg	81	91	106	95	92	97
Annual phosphorus emissions	kg	3.1	3.9	10.0	9.8	8.2	83
Total waste generation	t	515	507	594	555	439	79
Final disposal (landfill)	t	2.6	3.6	4.4	3.5	3.3	95
Waste recycling rate	%	99.5	99.3	99.3	99.4	99.2	100

\*Wastewater from Tsukuba Works is drained into the public waters.

Note 1 The range of variation within the standard value

Figure 22

### Kasumigaura Works

Scope of calculation: Kasumigaura Works, including the Center for Recycling

<b>Overview</b>	<b>Address</b>	282-2 Ami, Ami-machi, Inashiki-gun, Ibaraki-ken, Japan	<b>Site Area</b>	28,265m <sup>2</sup>
	<b>Commencement of Operations</b>	August 1965	<b>Total Floor Space</b>	16,821m <sup>2</sup>
			<b>Number of Employees</b>	62 (As of March 31, 2019)



**Major Products**  
Digital duplicators

**Registration of Specified Facilities**  
Facilities as specified under the Noise Regulation Law and the Vibration Regulation Law: machine tools, including compressors and shearing machines

**Major Environmental Protection Activities**  
 •ISO 14001: Certification updated in December 2017  
 •Reduction of waste generation and promotion of recycling  
 •Recycling of used printers  
 •Reduction of CO<sub>2</sub> emissions through energy conservation

#### Environmental Data

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019	YoY (%)
Electricity consumption	MWh	859	595	477	480	511	106
Water consumption	m <sup>3</sup>	9,483	4,438	1,609	1,573	1,155	73
Clean water	m <sup>3</sup>	2,412	2,414	1,609	1,573	1,155	73
Groundwater	m <sup>3</sup>	7,071	2,024	0	0	0	—
Water drainage	m <sup>3</sup>	5,229	3,796	1,609	1,573	1,155	73
Annual biochemical oxygen demand (BOD) emissions	kg	64	34	10	29	8	Note 1 28
Annual nitrogen emissions	kg	49	75	6	90	49	Note 1 54
Annual phosphorus emissions	kg	5.8	7.2	6.3	9.9	6.2	Note 1 63
Total waste generation	t	347	399	387	293	256	87
Final disposal (landfill)	t	0.9	0.7	0.3	0.6	2.5	Note 2 417
Waste recycling rate	%	99.4	99.8	99.9	99.8	99.0	99

\*Wastewater from Kasumigaura Works is drained into the public sewage systems.

Note 1 The range of variation within the standard value

Note 2 The recycling rate declined due to changes in the processing method because our waste disposal contractor was changed.

## Environmental Data for Major Plants and Offices

Figure 23

### Ube Works

Scope of calculation: Ube Works

<b>Overview</b>	<b>Address</b>	Setobara-Kougyou-danchi, Ube-shi, Yamaguchi-ken, Japan	<b>Site Area</b>	75,871m <sup>2</sup>
	<b>Commencement of Operations</b>	June 1986	<b>Total Floor Space</b>	15,598m <sup>2</sup>
			<b>Number of Employees</b>	82 (As of March 31, 2019)

**Major Products** Inks and masters for digital duplicators

**Registration of Specified Facilities** There is no applicable facility.

**Major Environmental Protection Activities**

- ISO 14001: Certification updated in September 2017
- Reduction of waste generation and promotion of recycling
- Designing environmentally friendly products to respond to the RoHS Directive and other environmental regulations
- Reduction of CO<sub>2</sub> emissions through energy conservation
- Promotion of green purchasing
- Recycling of used ink bottles



#### Environmental Data

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019	YoY (%)
Electricity consumption	MWh	2,325	2,294	2,504	2,303	2,182	95
Water consumption	m <sup>3</sup>	6,048	6,966	6,069	5,854	5,528	94
Clean water	m <sup>3</sup>	2,653	3,587	2,610	2,685	2,481	92
Groundwater	m <sup>3</sup>	3,395	3,379	3,459	3,169	3,047	96
Water drainage	m <sup>3</sup>	2,653	3,587	2,610	2,685	2,481	92
Annual biochemical oxygen demand (BOD) emissions	kg	16	35	8	17	15	Note 1 88
Total waste generation	t	201	186	220	226	211	94
Final disposal (landfill)	t	0.3	0.3	0.2	0.6	0.2	Note 2 33
Waste recycling rate	%	99.6	99.1	99.5	99.2	99.5	100

\*Wastewater from Ube Works is drained into the public waters.

Note 1 The range of variation within the standard value

Note 2 The range of variation

Figure 24

### RISO R&D Center

Scope of calculation: RISO R&D Center

<b>Overview</b>	<b>Address</b>	2 Chome 8-1, Gakuenminami, Tsukuba-shi, Ibaraki-ken, Japan	<b>Site Area</b>	17,521m <sup>2</sup>
	<b>Commencement of Operations</b>	June 2013	<b>Total Floor Space</b>	15,197m <sup>2</sup>

**Registration of Specified Facilities**

Specified facilities related to the Water Pollution Prevention Act and Sewerage Act: 1 draft chamber, 4 sinks, 1 washing machine

Specified facilities related to the Noise Regulation Act: 4 ventilators, 3 hydraulic presses, 2 shearing machines

Specific facilities related to the Vibration Regulation Act: 3 hydraulic presses, 2 shearing machines

Facilities that generate smoke: Emergency generator

**Major Environmental Protection Activities**

- ISO 14001: Certification updated in December 2017
- Reduction of waste generation and promotion of recycling
- Designing environmentally friendly products to respond to the RoHS Directive and other environmental regulations
- Reduction of CO<sub>2</sub> emissions through energy conservation



#### Environmental Data

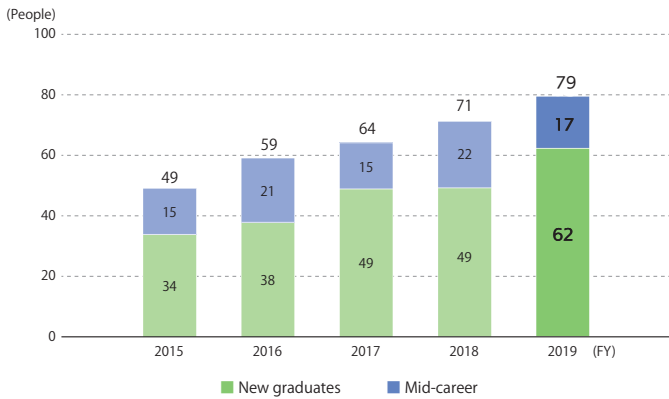
	Unit	FY2015	FY2016	FY2017	FY2018	FY2019	YoY (%)
Electricity consumption	MWh	2,343	2,444	2,353	2,289	2,331	102
Water consumption	m <sup>3</sup>	7,258	9,117	9,883	9,958	9,788	98
Clean water	m <sup>3</sup>	7,258	9,117	9,883	9,958	9,788	98
Groundwater	m <sup>3</sup>	0	0	0	0	0	—
Water drainage	m <sup>3</sup>	7,258	9,117	9,883	9,958	9,788	98
Annual biochemical oxygen demand (BOD) emissions	kg	230	205	195	153	146	96
Total waste generation	t	201	210	193	185	201	109
Final disposal (landfill)	t	2.1	2.0	1.6	1.9	1.7	89
Waste recycling rate	%	99.0	97.2	99.0	98.9	99.2	100

\*Wastewater from RISO R&D Center is drained into the public sewage systems.

\*Opened in June 2013. We continue to consider the environment.

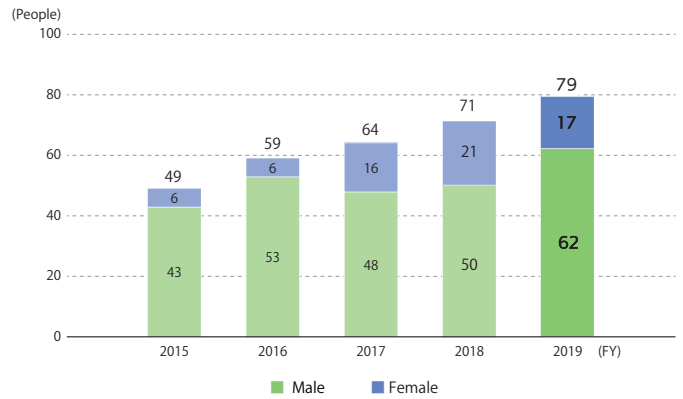
## Social Data

**Figure 25** Employment (Japan)  
(New Graduates/Mid-career)



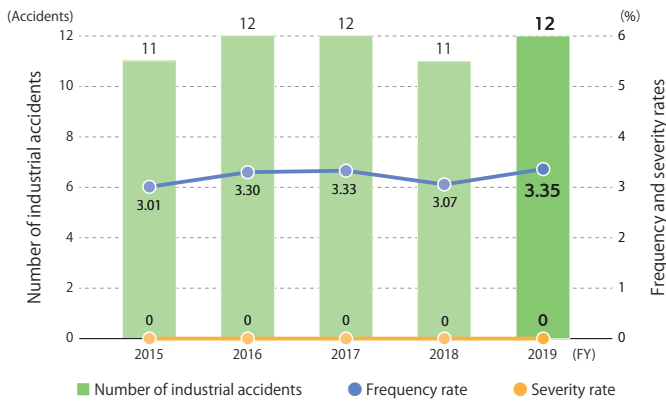
Scope of calculation: Non-consolidated basis (Japan)

**Figure 26** Employment (Japan)  
(Male/Female)



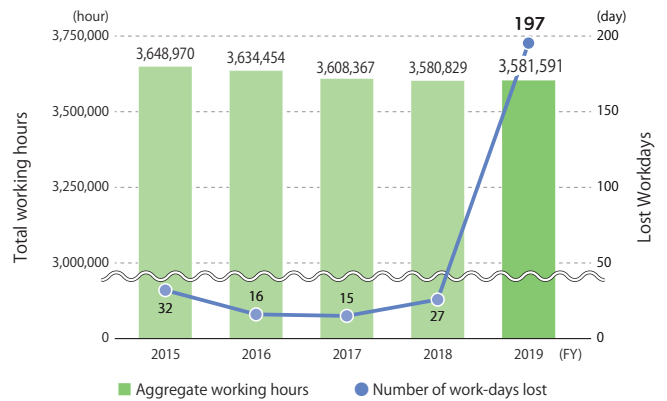
Scope of calculation: Non-consolidated basis (Japan)

**Figure 27** Industrial Accidents:  
Frequency and Severity Rate



Scope of calculation: Non-consolidated basis (Japan)

**Figure 28** Total Working Hours and Lost Workdays



Scope of calculation: Non-consolidated basis (Japan)

### KEY POINT

#### Occupational health and safety

Each production site has established the Occupational Health and Safety Committee to improve the work environment, identify and correct unsafe areas, and undertake voluntary safety activities in an effort to prevent accidents and disasters.

In addition, we have an Occupational Health and Safety page on the company intranet to raise awareness and educate employees about safety.

The number of industrial accidents in Japan in fiscal 2019 was 12, an increase of 1 from fiscal 2018. The number of work-days lost due to industrial accidents increased by 170 days.

#### Promoting employee health

We are attentive towards the health of employees through the implementation of health checkups and concern towards mental health.

We conduct general health checkups, lifestyle-related disease checkups, and comprehensive medical exams in order to verify the health status of employees and provide guidance on lifestyle and health as seen needed.

In addition, to maintain not only physical health but also mental health, we have established a mental health inquiry and assistance service.

We also hold sports competitions with the goal of deepening friendships among employees and creating a fun outlet.

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