

# Environmental Aspects

## CO<sub>2</sub> emissions\*

(thousand tons-CO<sub>2</sub>/year)

	Fiscal 2005	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010 (forecast)
Japan/manufacturing	1,061	1,106	923	884	967
Japan/nonmanufacturing	28	33	30	29	29
Overseas/manufacturing	348	362	326	298	315
Overseas/nonmanufacturing	27	34	34	31	35
Group total	1,465	1,534	1,312	1,242	1,346

\* Calculation method:  
Japan: Calculation employing the coefficients specified in the Ministerial Ordinances on the Act on the Promotion of Global Warming Countermeasures. Emission coefficient by electric power utility used for purchased power.  
Overseas: Retroactive calculations in compliance with the GHG protocol. Purchased electric power calculated with the coefficient found in *CO<sub>2</sub> Emissions from Fuel Combustion (2009 Edition)* published by OECD.

## Breakdown of CO<sub>2</sub> emissions by region (Fiscal 2009)\*

(thousand tons-CO<sub>2</sub>/year)

	CO <sub>2</sub> emissions
Japan	913
Overseas	
Americas (USA, Canada & Brazil)	136
Europe (The Netherlands, Germany, Belgium, UK & France)	83
China	96
Asia (excl. China) & Oceania (Australia, South Korea, Singapore, etc.)	15
Group total	1,242

\* Calculation as in "CO<sub>2</sub> emissions"

## Energy consumption\*1

(GJ)

	Fiscal 2005	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010 (forecast)
Japan/electric power	7,946	8,554	7,131	6,477	7,065
Japan/heavy oil, etc.*2	8,081	6,082	4,365	3,482	3,798
Japan/gas*3	3,928	6,687	7,535	8,606	9,388
Overseas/electric power	5,130	5,377	4,871	3,922	4,278
Overseas/heavy oil, etc.*2	235	234	96	21	23
Overseas/gas*3	2,273	2,008	1,892	1,651	1,801
Group total	27,594	28,942	25,890	24,158	26,351

\*1 Unit calorific value and energy consumption in compliance with the Energy Conservation Act  
\*2 Total of heavy oil A, heavy oil C, kerosene, light oil & gasoline  
\*3 Total of natural gas, liquefied natural gas (LNG), city gas, butane & liquefied petroleum gas (LPG)

## Breakdown of consumption of heavy oil, etc. (Fiscal 2009)\*

(thousand kiloliters)

	Heavy oil	Kerosene	Light oil	Gasoline
Japan	80.6	5.4	0.1	0.0
Overseas	0.0	0.0	0.7	0.1
Group total	80.6	5.4	0.8	0.1

\* Consumption in manufacturing only

## Total CO<sub>2</sub> emissions in domestic logistics\*

	Units	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009
Total CO <sub>2</sub> emissions	tons CO <sub>2</sub> /year	60,499	54,254	49,825	41,031

\* Total CO<sub>2</sub> emissions are calculated as the amount of CO<sub>2</sub> emitted by FUJIFILM Logistics Co., Ltd. in its logistics activities for the Fujifilm Group companies. Since fiscal 2006, we shifted calculation method to the method based on revised Energy Conservation Law (travel distance of empty cars is not included in calculations, etc.).

## Amount of CO<sub>2</sub> reductions and reduction rates through transportation efficiency improvements\* (Domestic distribution)

	Units	Fiscal 2007	Fiscal 2008	Fiscal 2009
Amount of CO <sub>2</sub> reductions	tons CO <sub>2</sub> /year	3,550.1	5,810.1	6,691.0
CO <sub>2</sub> reduction rate (%)	%	6.1	10.4	14.0

$$\text{CO}_2 \text{ reduction rate (\%)} = \frac{\text{Amount of CO}_2 \text{ reductions}}{\text{Total CO}_2 \text{ emissions} + \text{CO}_2 \text{ reductions}}$$

\* In the fiscal year 2009, we enforced our activities for CO<sub>2</sub> reductions in collaboration with a specified consigner. Major reduction initiatives, which proved effective, include improving carrying efficiency by double stacking during transport and enhancing gasoline mileage by eco-driving.

## Domestic transport volume\*

(million tons-kilometers)

	Fiscal 2007	Fiscal 2008	Fiscal 2009
Transport volume	230	182	162

\* Range of transport volume calculation identical to the range of ownership in compliance with reporting under the amended Energy Conservation Act

## Reduction in export packaging material weight\* (Cumulative total)

	Units	Fiscal 2007	Fiscal 2008	Fiscal 2009
Packaging material reduction rate	%	2.6	3.5	5.9

$$\text{Packaging material reduction rate (\%)} = \frac{\text{Weight reduced}}{\text{Total material weight} + \text{weight reduced}}$$

\* Total weight of export packaging materials handled by FUJIFILM Logistics in fiscal 2009 was 3,604.8 tons. Weight was reduced by 214.2 tons, with yearly reduction rate of 5.9%.

## Container & packaging material\* consumption by material type (Non-consolidated for FUJIFILM)

(thousand tons/year)

	Fiscal 2000	Fiscal 2007	Fiscal 2008	Fiscal 2009
Total consumption	35.5	24.6	23.3	19.4

\* Total of corrugated paper boxes, paper materials, paper containers, metal materials, plastic molds & plastic film/sheet glass

## Water consumption, recycling & discharge as wastewater

(million tons/year)

	Fiscal 2000	Fiscal 2007	Fiscal 2008	Fiscal 2009
Consumption volume	Japan	56.1	49.2	48.1
	Overseas	4.2	7.3	7.0
	Group total	60.3	56.5	55.1
Recycled volume*	Japan	18.2	91.7	80.2
	Overseas	0.0	0.0	0.0
	Group total	18.2	91.7	80.2
Wastewater discharge	Japan	48.5	46.1	46.3
	Overseas	4.1	6.3	5.6
	Group total	52.6	52.4	51.9

\* Includes cooling water usage

## Waste generation, recycling & final disposal

(thousand tons/year)

	Fiscal 2000	Fiscal 2007	Fiscal 2008	Fiscal 2009
Waste volume*1	Japan	36.2	40.7	34.3
	Overseas	12.7	29.8	29.7
	Group total	48.9	70.5	64.0
Recycled volume	Japan	28.6	39.7	33.1
	Overseas	1.0	20.6	21.9
	Group total	29.6	60.4	55.0
Final waste disposal*2	Japan	7.6	1.0	1.2
	Overseas	11.7	9.2	7.8
	Group total	19.3	10.1	9.0

\*1 Processed by outside service providers  
\*2 Simple incineration or landfill disposal

## Valuable resources\*

(thousand tons/year)

	Fiscal 2000	Fiscal 2007	Fiscal 2008	Fiscal 2009
Japan	43.0	59.7	55.4	51.9
Overseas	9.2	25.1	27.4	22.1
Group total	52.2	84.7	82.8	74.0

\* Valuable resources are byproducts that have resulted from manufacturing which have been sold with compensation.

## Zero emissions

FUJIFILM achieved its zero emissions targets in fiscal 2003, yet is constantly striving to take waste management to the next level. Our issue for the future is to achieve zero emissions at FUJIFILM's overseas production affiliates and new companies that have joined the Fujifilm Group. Guidance is being provided chiefly to production sites generating large waste outputs. While the definition of 'zero emissions' differs at FUJIFILM and Fuji Xerox due to inherent differences in our respective lines of business, zero emission activities can be defined as "efforts to recycle all waste material from business operations, and to ensure no waste is processed by simple incineration or landfill."

## Main recycling methods for waste products

Waste product	Recycling method
Plastics (sorted)	Pallets, pipes, clothing, heat insulation materials
Plastics (mixed)/Filters	Blast furnace fuel
Magnetic tape	Blast furnace fuel, tatami mat material, heat insulation materials
Aluminum hydroxide	Alumina
Inorganic sludge, polishing agent	Cement, roadway material, construction materials
Organic solvent	Paint thinner
Acids and alkalines	Neutralizer
Mixed flammable waste products	Solid fuels, electricity and hot water production
Fluorescent lamp	Glass wool, mercury
Batteries	Zinc, smelt iron
Left over food, raw garbage, organic sludge	Fertilizer, animal feed
Documents, empty boxes	Recycled paper
Metals such as iron, aluminum and copper	Smelt metal

## Atmospheric emissions of VOCs\*

(Hundred tons/year)

	Fiscal 2000	Fiscal 2007	Fiscal 2008	Fiscal 2009
Domestic consolidated	31.1	12.8	11.2	9.7
Overseas consolidated	1.7	1.9	1.9	1.6
Total	32.8	14.7	13.1	11.3

\* 229 substances applicable in registered 697 substances

## Reductions in VOCs atmospheric emissions\* (FUJIFILM non-consolidated)

(Fiscal 2009)

Category	Name of substance	Reduction (tons)	Reduction rate in comparison to fiscal 2000 (%)
Substances requiring reporting under the PRTR Law	Dichloromethane	254	71
	Methyl alcohol	1,441	82
Substances voluntarily controlled by the company	Ethyl acetate	310	76
	Methyl ethyl ketone	169	82
	Acetone	100	78

\* Reduction in volumes in fiscal 2009 compared with actual levels in fiscal 2000.

## Response to the PRTR Law (FUJIFILM and its domestic affiliates)

In addition to those substances that must be reported under the PRTR Law (Pollutant Release and Transfer Register Law), FUJIFILM controls another 10 items on a voluntary basis, primarily substances specified by the Japan Chemical Industry Association as requiring autonomous monitoring, and has been endeavoring to reduce those emission on consolidated basis. Data (usage volume, atmospheric emissions volume, emission into public water, volume going into sewage water, volume moved outside of facilities, and volume recycled) on substances used in amounts of one ton or more per year by FUJIFILM and its domestic affiliates may be found on the following FUJIFILM website.

<http://www.fujifilm.co.jp/corporate/environment/preservation/chemicalsmanagement/production/prtr.html>  
(in Japanese only)

## Storage and management of devices/equipment containing PCBs\*

Types of equipment containing PCBs	Unit	Storing and managing amount	
		Domestic consolidated	Group total
High voltage transformers	Quantity	1	18
High voltage condensers	Quantity	366	456
PCB oil waste, etc.	kg	201.11	201.11
Sludge, etc.	m <sup>3</sup>	10,400.1	10,400.1
Fluorescent lamp stabilizers	Quantity	15,301	18,301
Low voltage condenser excluding fluorescent lamps	Quantity	117,154	117,154
Low voltage transformer	Quantity	4	31
Rags	kg	919.5	919.5
Other devices	Quantity	14	14

\* Not including items with trace levels of PCBs

# Environmental Aspects

## ► Volume of atmospheric emissions

(tons/year)

		Fiscal 2007	Fiscal 2008	Fiscal 2009
SOx emissions	Domestic	84	66	45
	Overseas	6	3	2
	Group total	90	69	47
NOx emissions	Domestic	786	612	454
	Overseas	111	84	43
	Group total	897	695	497
Soot particle emissions	Domestic	8.8	6.4	3.6
	Overseas	0.2	4.1	2.1
	Group total	9.0	10.5	5.7
Atmospheric emissions of specified CFCs*	CFC-11	1.51	0.76	0.20
	CFC-12	0.01	0.01	0.00

\* Group total

## ► Water contaminant burden & emission\*1

(tons/year)

		Fiscal 2007	Fiscal 2008	Fiscal 2009
Total amount of COD <sup>2</sup>	Domestic	76.2	85.6	76.4
	Overseas	20.3	13.5	13.7
	Group total	96.5	99.1	90.1
Total amount of BOD <sup>3</sup>	Domestic	40.0	45.5	46.7
	Overseas	4.7	3.0	5.6
	Group total	44.7	48.5	52.3
Total amount of nitrogen emissions	Domestic	258.8	290.3	286.5
Total amount of phosphorous emissions	Domestic	4.3	5.0	3.7

\*1 Effluent release into public water bodies

\*2 COD (Chemical Oxygen Demand): An indicator of water pollution. COD indicates the amount of oxygen consumed when water-borne pollutants (primarily organic contaminants) are oxidized upon the introduction of an oxidant.

\*3 BOD (Biochemical Oxygen Demand): BOD is a way to measure the degree of water pollution, and indicates how much oxygen in the water is being used by organisms to decompose contaminants by looking at the reduction in oxygen in the water.

## ► Surveying and remediation soil and underground water pollution conditions

(FUJIFILM and its domestic affiliates/Fuji Xerox and its domestic affiliates)

The Fujifilm Group autonomously conducts environmental surveys on soil and underground water pollution. Regarding substances that are used at manufacturing facilities and that are subject to environmental limits set by regulations, the Group rigorously manages the usage and storage of such substances and monitors the concentrations of such substances in underground water. We are prepared to deal with any unforeseen pollution incidents in a timely fashion.

 <http://www.fujifilm.co.jp/corporate/environment/preservation/site/leakage/>  
(in Japanese only)

 <http://www.fujixerox.co.jp/company/public/sr2009/stakeholder/environment/target.html>  
(in Japanese only)

## ► Legal compliance and reports on complaints in fiscal 2009

In 2009, there were seven violations of environment-related laws and six customer complaints—all of them addressed immediately. Greater effort will be made to implement exhaustive controls and to prevent any recurrence.

	Domestic	Overseas	Total
Number of legal violations (number of cases solved)	1 (1)	6 (6)	7 (7)
Number of complaints (number of cases solved)	6 (5)	0 (0)	6 (5)

## ► Responses to environment-related complaints and legal violations in fiscal 2009\*

### < FUJIFILM Imaging Solutions Osaka Office >

(Violation: Effluent release)

**Issues:** Exceeded the limit (32 mg/liter) of Sakai City's emission control standards (38 mg/liter).

**Response:** Circulation volume in the active sludge tank was reduced to half, with inflow of chromogenic development solution into the active sludge wastewater pipe stopped. Action was taken under instructions from the administrative authorities. No written instructions have been received; no punitive action has been taken.

### < FUJIFILM Hunt Chemicals Singapore Pte. Ltd. >

(Violation: Effluent release)

**Issues:** Effluent release into the commercial drainage conduit that leads to the public sewerage system exceeded the COD standard limit (600 mg/liter) established by regulations on sewage and effluent discharge (840 mg/liter).

**Response:** 1,000 Singapore dollars has been paid as a fine. A pump was installed at the waste solution treatment tank in order to prevent recurrence. Sedimentation that causes growth in the COD value is being removed once a week.

### < FUJIFILM Asaka District >

(Complaint: Noise)

**Issues:** Complaint has been received about the noise of basketball pounding in the basketball court in the early hours on holidays.

**Response:** Rules on hours for the use of employee welfare facilities have been revised (restricting use to 10:00 to 17:00 on holidays). This has been announced within the facility, as well as to residents in the corporate dormitories, and the report has been submitted and accepted by the residents of the condominium building.

### < FUJIFILM Kaisei District >

(Complaint: Noise)

**Issues:** Complaint has been received regarding noise and parking by construction services on the road north to the Advanced Research Laboratories.

**Response:** Instructions have been issued to the service providers once again for compliance.

### < Toyama Chemical Toyama Factory >

(Complaint: Noise)

**Issues:** Complaint has been received on the noise of falling water.

**Response:** Inspection revealed that water noise was coming from water overflowing from fountains, etc., within the factory premises. The fountain and water supply to the fountain was stopped, a wastewater ditch created and a cover installed. Steel plates were installed over the water supply in order to insulate the water noise.

\*Relatively minor violations have been excluded.

\* Organizations covered in the environmental performance data are as a general rule those that are shown in consolidated financial statements, and are significant in terms of environmental burden. However, certain sales and manufacturing (assembly) subsidiaries are excluded. Those not shown specifically are included in the tabulation figures above. And figures in Group total may not correspond with sum of each subtotal.