

3.3 Recycling of Resource

3.3.1 Basic Approach

Since our establishment, the Fujifilm Group has been actively recycling resources, through reducing water usage, recycling and reusing water, recovering and reusing resources (e.g. silver), and establishing a recycling system for multifunction devices and copiers, etc. We are conducting efforts to use resources effectively and reduce waste through measures which take into account the total lifecycle of a product, by considering the 3Rs (reduce, reuse, recycle) in the product design, reducing loss at the manufacturing stage, collecting, reusing and recycling used products, and recycling or converting into valuables.

3.3.2 Response to Water Risks

In the production of the motion picture and photographic film that had formed the mainstay of its business operations since its foundation, the Fujifilm Group had made extravagant use of clean water. For this reason, the Group has taken early steps in reducing water use and in water recycling. In face of the recent growth in the interest focused on water risks as an important international issue, the Group is implementing further steps for the reduction and efficient use of water resources. Due to the concern over the possible expansion of areas stricken by water shortage issues, the Group created a matrix system for water risk evaluation in 2014 that uses conditions in “water stress regions” and “impact on businesses based on water usage” as its two indicators, and has engaged in continual evaluation of water risks for all business operations under the Group. At the same time, Fujifilm contributes to issues on water treatment in society by providing its product and services, including filtration materials.

Targets and Progresses on Water

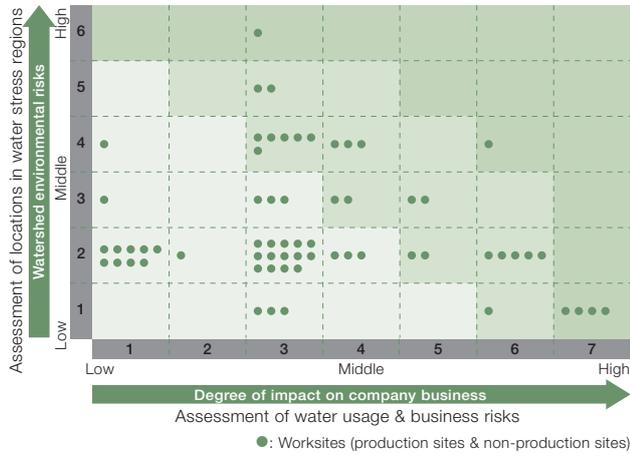
- Long-term target:** Reduce the amount of water the Fujifilm Group uses for production by 30% by FY2030 (compared to the FY2013 level)
Progress: 15% reduction at the end of FY2018 (compared to the FY2013 level)
- Mid-term target:** Reduce the amount of water the Fujifilm Group uses for production by 15% by FY2020 (compared to the FY2013 level)
Progress: 15% reduction at the end of FY2018 (compared to the FY2013 level)
- Short-term Target:** Reduce the amount of water the Fujifilm Group uses for production by 1% by FY2019 (compared to the FY2018 level)

Water Usage

	Unit	FY2014	FY2015	FY2016	FY2017	FY2018
Clean water	million m ³	9.0	8.9	8.3	8.1	8.0
Groundwater	million m ³	40.6	39.6	37.4	35.6	34.5
Rainwater and others	million m ³	0.2	0.2	0.2	0.2	0.3

* Data coverage is for 100% of total sales. The above data has been verified by the third party organization: SGS Japan, Inc.

Assessment Map of the Impact of Water Resources on Company Business

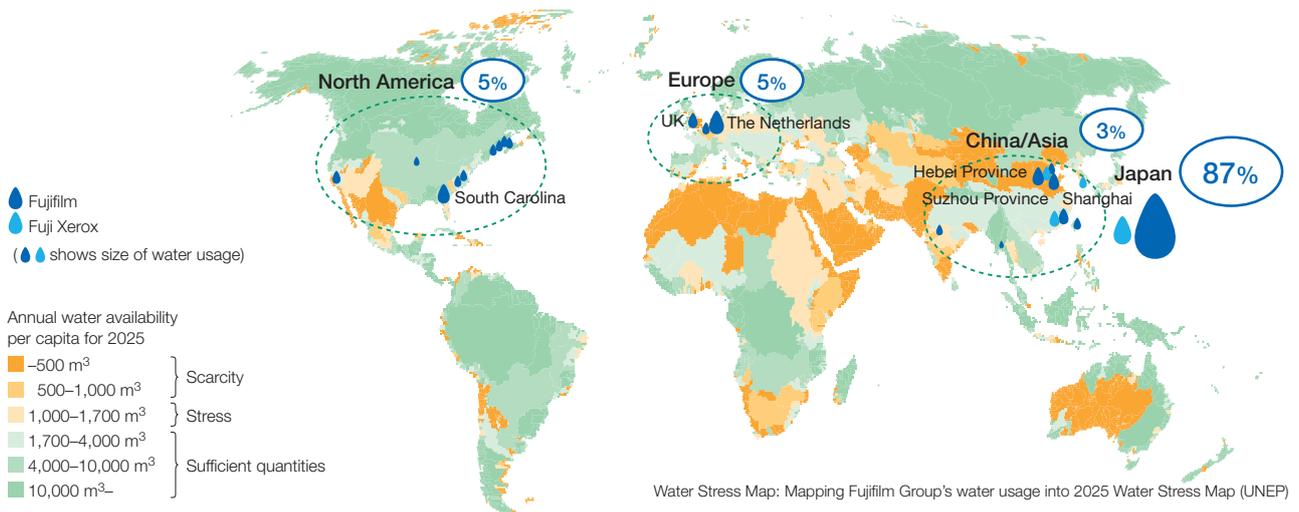


FY2018 Water Usage by Region

Unit: %

	Japan	Americas	Europe	China, Asia/Oceania
Water usage	87	5	5	3
Water discharge	88	5	4	3

2025 Water Stress Map and 2018 Fujifilm Group's Water Usage



Participation in Initiatives

FUJIFILM Europe GmbH has been participated in the international nongovernmental organization, WaterAid since 2012.

3.3.3 Measures to Reduce Waste

The Fujifilm Group is proceeding more effective use for resources and reduction of waste, not only at the manufacturing stage but over the entire product lifecycle as well. In addition to the emphasis on recycling and conservation of resources at the product design stage, reductions in the waste generated at the manufacturing stage are underway in Japan, North America, Europe and China, in ways that suit each region. In Japan, from FY2011 we have been promoting group-wide optimization, including extracting valuables from waste and improving the quality of recycling, not only at our production sites but over our entire business operations including offices and warehouses. In Americas, the regional headquarters promote this effort of group-wide optimization with other sites, too.

Since fiscal 2016, the amount of waste disposed of by incineration or in landfill has been increasing because of the increase in waste liquids resulting from our new business expansion and difficulties in recycling plastics in Asia. We are working for the entire Group to reduce the amount of waste liquids by improving processes and by recycling plastics to achieve our SVP2030 targets.

Targets and Progresses on Waste

Long-term target: Reduce the amount of waste generated by the Fujifilm Group by 30% by FY2030 (compared to the FY2013 level)
Progress: 5% reduction at the end of FY2018 (compared to the FY2013 level)

Waste Generation

Unit: ton

	FY2014	FY2015	FY2016	FY2017	FY2018
A Total waste output volume*1	75,300	72,200	80,100	79,300	81,100
B Total wastes used, recycled or sold	65,600	63,100	65,500	64,500	64,700
Total waste output volume*2 (A – B)	9,700	9,100	14,600	14,800	16,400

* Data coverage is for 100% of total sales.

* The above data has been verified by the third party organization: SGS Japan, Inc.

*1 Processed by external service providers and simple incineration or landfill disposal on sites.

*2 Simple incineration or landfill disposal by external service providers and on sites.

Annual Changes in Valuable Resources*

Unit: thousand tons/year

	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	34.0	34.0	34.1	30.3	26.9
Overseas	27.2	30.1	24.5	42.1	30.6
Group total	61.2	64.1	58.6	72.4	57.4

* Valuable resources sold to the third party.

Main Recycling Methods for Waste Products

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

Annual Changes in Container and Packaging Material* Used

Unit: thousand tons/year

	FY2014	FY2015	FY2016	FY2017	FY2018
Packaging material reduction rate	15.5	15.2	15.6	15.6	16.3

* Total of corrugated paper boxes, paper materials, paper containers, metal materials, plastic molds, plastic film/sheet and glass used.

Annual Changes in Reduction in export Packaging Material Weight* (Cumulative total)

Unit: %

	FY2014	FY2015	FY2016	FY2017	FY2018
Packaging material reduction rate	9.3	10.5	12.7	17.5	17.8

* 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 FY2018 was 1,250.65 tons. Weight was reduced by 270.24 tons, with yearly reduction rate of 17.8%.

3.3.4 Improve the Efficiency of Resource Use

The Fujifilm Group develops and offers a wide range of products such as chemical products, functional materials, optical devices, office equipment, and medical equipment, etc. For this reason, in FY2016, we formulated the Assessment Method of Material Input per Unit (resource material input weight per converted production volume) that utilizes the “Converted Production Volume (production volume of each product converted using the energy used during production)” which is authorized by the Energy Saving Act in Japan. We started to use this method in FY2017. For multifunction devices and copiers, we collect customers’ used products and reuse or recycle them. The program aims to utilize resources as effectively as possible with “Zero Landfill” as our goal. Since FY2016, we are promoting the planning for new products that emphasize the use of reused parts.

Fuji Xerox New Resource Reduction by Using Reuse Parts* (Total for Japan, the Asia-Pacific Region, and China)

Unit: tons

	FY2014	FY2015	FY2016	FY2017	FY2018
New Resource Reduction	2,916	3,273	3,809	3,730	2,967

* The total amount of new resource reduction in the production stage by using reuse parts.