

# Building of a Recycling-oriented Society

## Basic Approach

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The TOPPAN Group has formulated a set of priority policies towards the building of a recycling-oriented society as a critical challenge for management. We process industrial waste and waste materials in line with the following priorities: 1) First priority is given to reductions of the discharge of industrial waste and waste materials generated in association with business activities; 2) Second priority is given to the reuse or recycling of industrial waste and waste materials discharged in spite of the reduction efforts; and 3) Third priority is given to the application of appropriate treatment methods to industrial waste and waste materials not reused or recycled. The order of priority may not be applied when another ordering is deemed to more effectively reduce environmental burden.

We strive, in the course of our business activities, to prevent pollution of the atmosphere and water and soil environments, reduce water consumption, and protect the environment in ways that secure sanitary water supplies for employees, local residents, and other stakeholders.

Please note that while the forms of recycling are generally classified into material, chemical, and thermal (heat recovery), chemical recycling is classified within the “material recycling” category in our list.

## Activities

### Activity results, performance data

In a drive to use limited resources more effectively, we work to reduce the discharge of waste, increase the recycling rate, and

apply appropriate waste treatment methods based on the TOPPAN Group Declaration on the Global Environment.

Waste paper derived from operational sites primarily in the Information & Communication and Living & Industry fields makes up the largest portion (61%) of the total waste discharged at Group sites. The next largest portions are waste plastics derived from plants in the Living & Industry field (20%) and waste acid from the Electronics field. We have striven to increase our material recycling rates by converting waste paper into recycled paper, segregating waste plastics and processing composite plastics into pellets, and applying recycling techniques for other materials. Waste acid, meanwhile, has been treated in-house to lower volumes for disposal. For the hazardous waste regulated under Annex VIII (List A) of the Basel Convention, the total discharge has been confirmed and

intensive efforts have been made to reduce discharge and appropriately manage and treat the waste. The list on page 123 shows the results and targets for the discharge, discharge-reduction, and recycling of plastic industrial waste, including waste from plastics used in products. These are the primary measures we have taken to promote plastic circulation in compliance with the Plastic Resource Circulation Act enforced in Japan in April 2022. For the sustainable use of water, a limited resource, individual Group sites assess water risks, reduce water consumption, and control the quality of effluents discharged into water systems.

TOPPAN will continue to pursue the effective use of limited resources by reducing overall waste discharge and intensifying material recycling.

### Discharge and Treatment of Hazardous and Non-hazardous Waste

Fiscal Year		2021	2022	2023
Total waste discharge (t)		315,512	297,211	288,961
Hazardous waste (t)	Discharge	29,699	25,953	22,295
	Material recycling	25,078	19,954	16,145
	Thermal recovery	3,349	3,370	3,825
	Simple incineration	305	1,106	1,192
	Landfill disposal	917	1,522	1,134
	Other	50	0	0
Non-hazardous waste (t)	Discharge	285,813	271,258	266,666
	Material recycling	235,924	227,834	222,302
	Thermal recovery	42,799	35,782	37,490
	Simple incineration	1,072	1,785	3,057
	Landfill disposal	5,710	5,857	3,816
	Other	309	0	2

\*Data on material recycling, thermal recovery, and landfill disposal of non-hazardous waste for fiscal 2022 and earlier are adjusted based on the updated calculation methods.


## Waste Management Programs

In pursuit of a circular economy, TOPPAN controls waste through a cycle of monitoring, target-setting, and continual improvement in resource efficiency within the ISO 14001 framework. We conduct waste management audits across Group sites to identify opportunities for enhancing waste performance by tracking organizational waste generation and evaluating potential impacts of waste on the environment and associated risks to our businesses. We work to minimize waste discharge and maximize material recycling by pinpointing waste sources in production processes, reducing waste through production process reviews, upgrading equipment and facilities to improve production processes, refining product designs, proactively adopting recycling technologies, and ensuring the proper disposal of hazardous waste.

The quantified reduction targets established under the fiscal 2030 goals have prompted us to develop concrete measures to minimize the discharge of waste. Every operational site has set individual targets in line with the Groupwide goals of a 60% reduction (by 5,296 tons) in the final landfill waste disposal from the fiscal 2017 level (8,739 tons) and a 9%pt increase (to 65%) in the waste plastic material recycling rate from the fiscal 2017 level (56%). Our comprehensive recycling programs have been tailored to specific types of waste in order to increase material recycling rates. We are converting waste paper into recycled paper, segregating waste plastics and processing composite plastics into pellets, and applying recycling techniques for other materials. Driven by investments in R&D and technological innovations, our digital and sustainable transformation initiatives have reduced waste discharge from production processes. Employee awareness of waste reduction has also been enhanced through group-style training and Groupwide e-learning programs.

By implementing these organizational waste management

programs (WMPs) in conformance with the ISO 14001 requirements, TOPPAN continues to enhance resource efficiency towards a circular economy. ISO 14001 provides us with a clear framework for achieving continual improvement in the effectiveness of our waste management.


 More details on our WMPs towards a circular economy >

<https://www.holdings.toppan.com/en/sustainability/environment/recycling.html#anc1>

## Water Efficiency Management Programs

TOPPAN manages water efficiency in Groupwide endeavors to prevent pollution and realize a circular economy. We operate water efficiency management programs to achieve optimal water use through a cycle of monitoring, target-setting, and continual improvement in the quality and resource efficiency of water within the ISO 14001 framework. Every Group site evaluates water risks, reduces water consumption, controls effluent quality, and implements water efficiency enhancement measures.

The sites also assess their impacts on the environment as a basis for deciding specific targets for enhancing the quality and resource efficiency of water. Progress towards the targets has been regularly reviewed and managed throughout the Group.

 More details on our water efficiency management programs towards a circular economy >

<https://www.holdings.toppan.com/en/sustainability/environment/recycling.html#anc2>


Plastic Circulation Targets based on Japanese Legislation<sup>\*1</sup>

Reduction/recycling targets  
Fiscal 2023: Increase the material recycling (MR) rate by 2.3%pt year over year  
Fiscal 2024: Increase the material recycling (MR) rate by 1.4%pt year over year


	Company	Fiscal 2023		Result
		Discharge (t)	MR Rate Increase/ Decrease from Fiscal 2022	Evaluation (Unachieved: × , Achieved: ○ )
High-volume waste dischargers	Toppan Packaging Products Co., Ltd.	16,748	- 29.4%pt	×
	Toppan Decor Products Inc.	1,388	21.9%pt	○
	Tamapoly Co., Ltd.	1,208	7.1%pt	○
	TOPPAN Inc.	897	4.8%pt	○
	Toppan Communication Products Co., Ltd.	831	- 0.7%pt	×
	Toppan Plastic Co., Ltd.	560	33.2%pt	○
	Toppan Infomedia Co., Ltd.	537	- 0.2%pt	×
	Toppan TOMOEGAWA Optical Films Co., Ltd.	421	- 1.2%pt	×
Waste dischargers	Toppan Packaging Service Co., Ltd.	245	1.8%pt	×
	Toppan Techno Co., Ltd.	152	0.0%pt	×
	Toppan Electronics Products Co., Ltd.	106	- 21.7%pt	×

\*Listed companies discharging waste of 100 tons or more a year.  
\*1 Targets for the discharge, discharge-reduction, recycling of plastic industrial waste (including plastics used in products), and other plastic circulation measures based on the Plastic Resource Circulation Act of Japan

Values, Results, and Evaluation of Environmental Targets for Fiscal 2023

	Performance Target	Performance Indicator	Fiscal 2023			
			Target Value	Result	Achievement Rate	Evaluation
Contributing to resource circulation	Reduce final landfill waste disposal	Final landfill waste disposal	7,704 t	4,949 t 	135.8%	S
	Circulate resources	Waste plastic material recycling rate	57.3%	49.6%	84.4%	B
Optimal water use	Prevent water pollution	No. of actions taken by authorities in response to exceeded regulatory standards	0	0	100%	A
	Reduce water withdrawal in regions with higher water risk	No. of sites in high-water-risk regions that implement water-saving measures	4 sites	0 sites (risk assessment method to be updated)		

Evaluation criteria: S) Results achieved far surpass the targets (achievement rate [%] ≧ 105); A) Targets achieved (100 ≦ achievement rate [%] < 105); B) Activities fully carried out, but targets unachieved (70 ≦ achievement rate [%] < 100); C) Activities insufficient (achievement rate [%] < 70)  
Achievement rate: 200 – (values actually achieved / target values) x 100 [%]

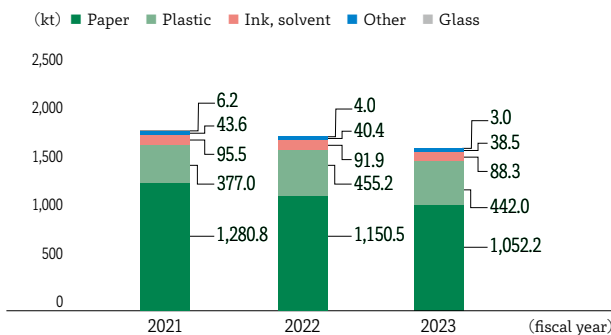
\*Every indicator assured by an independent assurance provider is marked with an assurance stamp .

## Associated Data

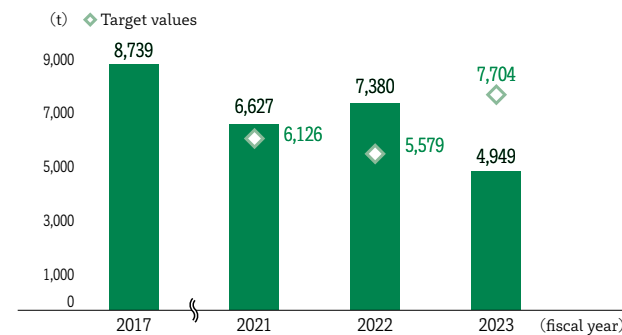
### Activity results, performance data

We evaluate and disclose Groupwide performance data, including that from overseas Group subsidiaries.

#### Material Input

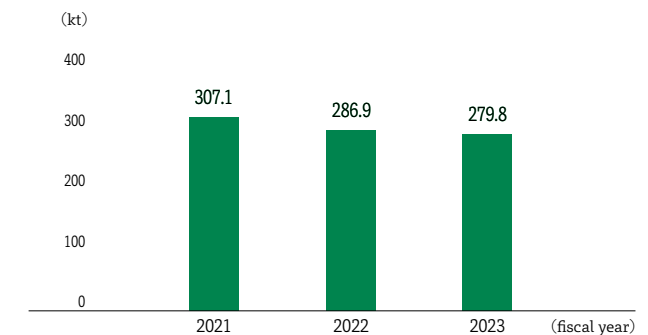


#### Final Landfill Waste Disposal



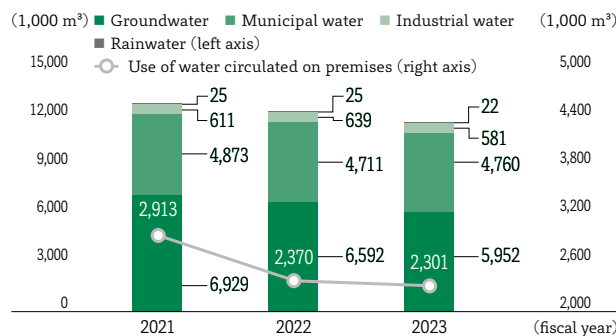
\*The data for fiscal 2022 and earlier are adjusted based on revised calculation methods.

#### Waste Recycling

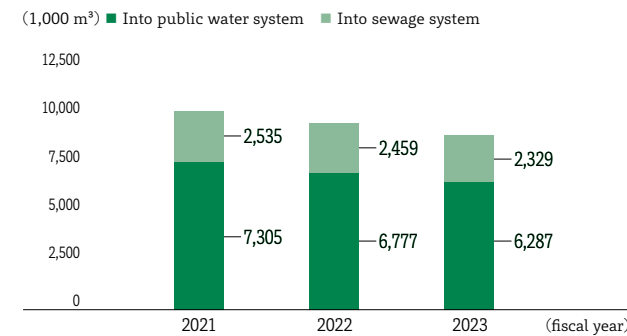


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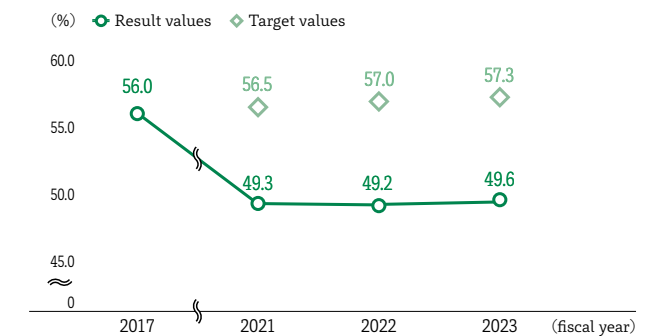
#### Water Withdrawal



#### Effluent Discharge



#### Waste Plastic Material Recycling Rate



\*The data for fiscal 2022 and earlier are adjusted based on revised calculation methods.