

# Environment

(FY) \*1

Greenhouse gas (GHG) emissions from		Scope*	Unit	2019	2020	2021	2022	2023
Scope1、Scope2	Scope1*2	TOYOBO CO., LTD.	Thousand tonnes-CO <sub>2</sub>	708	689	767	752	750
		Group companies in Japan		136	131	77	81	74
		Japan		844	820	844	833	824
		Overseas		60	54	58	67	69
		Global		904	873	902	900	894
	Scope1*2	TOYOBO CO., LTD.		591	588	646	641	638
		Group companies in Japan		99	90	55	59	54
		Japan		690	678	702	700	692
		Overseas		18	21	16	19	20
		Global		709	699	718	720	712
	Scope2*2	TOYOBO CO., LTD.		117	101	120	113	112
		Group companies in Japan		37	40	22	22	20
		Japan		154	141	142	135	132
		Overseas		42	33	41	49	49
		Global		196	174	183	183	182
GHG emissions reduction rate (base: FY2014) <b>KPI</b>		Global	%	26	28	26	26	26
GHG emissions reduction rate (base: FY2021)		Global	%	/	/	—	0.2	0.9
GHG emissions intensity per unit of sales*3		Global	Tonnes-CO <sub>2</sub> /millions of yen	2.69	2.57	2.67	2.40	<input checked="" type="checkbox"/> 2.23
Energy consumption		Global	TJ	12,221	11,942	13,166	13,216	13,048
			GWh	/	/	/	/	2,937

\*1 Year Ended March 31.

\*2 Calculation methods(fiscal2023)

In accordance with the GHG Protocol, we include GHG emissions, calculated by converting the quantity of energy required to produce electricity or steam sold to other companies. GHG emissions with non-energy origins are calculated for Toyobo (non-consolidated) only.

The factors shown below are used in the respective calculations.

■ CO2 emission factors for purchased electricity:

(Domestic) Adjusted emission factor for each electric power service provider listed in "Emission Factors by Electric Utility (for Use in Calculating Greenhouse Gas Emissions of Specific Emitters), FY2022 Results," Ministry of the Environment.

In cases where the emission factor of a given utility was unknown, the "national average factor" was used.)

(Overseas) Factors for 2019 listed by country "Emission Factors 2021" (2021), IEA

■ CO2 emission factors other than for purchased electricity:

"Greenhouse Gas Emissions Calculation and Reporting Manual (v4.8)" (2022),

Ministry of the Environment and Ministry of Economy, Trade and Industry (used for both domestic and overseas subjects)

\*3 (Scope1 Global+Scope2 Global)/Consolidated Net sales

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Scope1		Scope*	Unit	2019	2020	2021	2022	2023
Energy-related GHG emissions	CO <sub>2</sub>	Global	Thousand tonnes-CO <sub>2</sub>	699.7	692.5	710.3	712.5	706.9
Non energy-related GHG emissions	CO <sub>2</sub>	TOYOBO CO., LTD.		7.7	5.8	6.3	6.1	3.2
	N <sub>2</sub> O			1.1	1.0	1.1	1.2	1.2
	HFC			0.4	0.1	0.4	0.7	0.5
	PFC			0.0	0.0	0.0	0.0	0.0
	CH <sub>4</sub>			0.1	0.1	0.2	0.2	0.2
	SF <sub>6</sub>			0.0	0.0	0.0	0.0	0.0
	NF <sub>3</sub>			0.0	0.0	0.0	0.0	0.0

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GHG emissions throughout the value chain		Scope*	Unit	2019	2020	2021	2022	2023
Scope3		Global	Thousand tonnes-CO <sub>2</sub>	—*4		2,714.000	3,415	5,290.080
	1. Purchased goods and services					1,028	1,707	2,055
	2. Capital goods					104	115	55
	3. Fuel- and energy-related activities(not included in Scope 1 or Scope 2)					54	115	113
	4. Upstream transportation and distribution					55	52	50
	5. Waste generated in operations					35	49	53
	6. Business travel					1	2	7
	7. Employee commuting					5	5	6
	8. Upstream leased assets					—	—	—
	9. Downstream transportation and distribution					—	—	—
	10. Processing of sold products					—	—	—
	11. Use of sold products					1,288	1,209	2,745
	12. End-of-life treatment of sold products					143	161	207
	13. Downstream leased assets					—	—	—
	14. Franchises					—	—	—
15. Investments		—	—	—				
Ratio of reduction in CO <sub>2</sub> emissions per unit of transportation in relation to logistics (year on year) <b>KPI</b>		TOYOBO CO., LTD.	%	—	△ 0.6	△ 0.6	△ 0.5	△ 5.3

\*4 Data from fiscal 2018 through fiscal 2020 are not publicly available due to a revision of the calculation method since fiscal 2021.

3 changed the calculation method from FY2021 (see IDEAv2.3 information).

8, 13, 14 are not applicable to the company.

9, the emissions up to the shipping destination are included in 4. Due to the varying processing conditions of the products at the destination, the transportation after the destination is excluded from the calculation as it is not possible to make a reasonable calculation.

10The downstream of the product destination has a large number of potential uses and it is not possible to determine all GHG profiles, so a reasonable calculation is not possible. Therefore, a reasonable calculation is not possible and is not disclosed.

12, the calculation method has been established and the calculation is carried out retrospectively to 2020.

15 is not disclosed due to very low emissions.

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Waste		Scope*	Unit	2019	2020	2021	2022	2023
Amount of waste generation		Japan	Thousand tonnes	108	99	110	109	106
		Overseas		4	6	6	11	16
		Global		113	105	116	120	122
Amount of waste emission		Japan		99	93	104	103	102
		Overseas		4	6	6	11	16
		Global*5		103	99	109	114	118
Amount recycled externally		Japan		93	85	99	98	97
		Overseas		3	5	6	11	16
		Global		96	90	104	109	112
Landfill		Japan	0.6	0.5	0.3	0.2	0.4	
		Overseas	0.0	0.9	0.2	0.2	0.2	
		Global	0.6	1.4	0.5	0.5	0.6	
Landfill rate <b>KPI</b>		Japan	0.6	0.5	0.2	0.2	0.4	
		Overseas	0.0	14.6	3.4	2.2	1.5	
		Global	0.6	1.3	0.4	0.4	0.5	

\*5 Excluding the amount of construction waste from affiliated companies

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Water intake		Scope*	Unit	2019	2020	2021	2022	2023
Total water intake		Japan	Thousand m <sup>3</sup>	86,406	89,139	83,411	84,494	84,714
		Overseas		1,162	1,410	1,061	1,430	1,482
		Global		87,569	90,549	84,472	85,924	86,197
	Tap water	Japan		427	422	439	452	442
		Overseas		—	141	120	170	509
		Global		—	563	559	622	951
	Groundwater	Japan		31,376	32,504	28,783	29,708	28,841
		Overseas		—	669	450	565	684
		Global		—	33,173	29,233	30,273	29,526
	Industrial water	Japan		2,422	2,564	2,551	2,700	2,894
		Overseas		—	546	452	639	289
		Global		—	3,110	3,003	3,339	3,183
	Seawater	Japan		0	0	0	0	0
		Overseas		—	6	0	0	0
		Global		—	6	0	0	0
	River water	Japan		52,181	53,650	51,638	51,634	52,537
		Overseas		—	45	45	0	0
Global		—	53,695	51,683	51,634	52,537		
Other	Japan	0	0	0	0	0		
	Overseas	—	46	38	56	0		
	Global	—	46	38	56	0		
Recycled water	Japan	60,924	66,268	59,182	57,527	53,440		
	Overseas	—	0	0	0	46		
	Global	—	66,268	59,182	57,527	53,486		

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Water discharge		Scope*	Unit	2019	2020	2021	2022	2023
Total water discharge		Japan	Thousand m <sup>3</sup>	82,775	84,858	80,267	82,611	81,885
		Overseas		1,055	892	636	960	1,024
		Global		83,830	85,750	80,904	83,571	82,909
	Sewage system	Japan		355	296	324	377	164
		Overseas		154	67	76	167	580
		Global		509	363	400	544	744
	Freshwater	Japan		36,853	36,452	35,473	35,968	34,132
		Overseas		901	773	519	734	440
		Global		37,754	37,225	35,992	36,702	34,572
	Seawater	Japan		44,269	45,216	44,020	46,064	47,384
		Overseas		0	6	4	3	4
		Global		44,269	45,222	44,024	46,067	47,388
	Groundwater	Japan		—	—	0	0	0
		Overseas		—	—	0	0	0
		Global		—	—	0	0	0
	Other	Japan		1,298	2,894	450	202	205
		Overseas		0	46	38	56	0
Global		1,298	2,940	488	258	205		

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PRTR Substances		Scope*	Unit	2019	2020	2021	2022	2023
Emissions	Emissions to atmosphere Emissions to rivers and other waterways Emissions to soil	Japan	Tonnes	188	151	221	197	108
				176	136	200	166	94
				12	18	21	32	14
				0	0	0	0	0
Transfer volume	Transfer to public sewage system Transfer to waste			1,153	1,179	1,237	2,302	2,668
				0	0	0	0	1
				1,153	1,179	1,237	2,302	2,667

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Air emissions	Scope*	Unit	2019	2020	2021	2022	2023
VOC emissions <b>KPI</b>	Japan	Tonnes	176	136	200	166	94
NOx emissions			883	922	1,251	1,077	1,361
SOx emissions			1,018	959	968	907	1,033

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Effluents	Scope*	Unit	2019	2020	2021	2022	2023
COD, BOD emissions	Japan	Tonnes	972	1,009	860	1,022	1,031
Total nitrogen emissions			188	161	156	200	187
Total phosphorus emissions			25	25	37	35	35

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Visualization of Environmental Contribution	Scope*	Unit	2019	2020	2021	2022	2023
ECO-PARTNER SYSTEM <sup>®</sup> products sales	TOYOBO CO., LTD.	Billion yen	55.2	60.6	59.0	81.8	89.2
ECO-PARTNER SYSTEM <sup>®</sup> products sales ratio <b>KPI</b>		%	27.7	30.4	29.9	33.8	35.2

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Environmental Accounting	Scope*	Unit	2019	2020	2021	2022	2023
Environmental preservation costs (investment)	TOYOBO CO., LTD.	Billion yen	1.1	1.6	0.6	1.5	0.4
Environmental preservation costs (expenditure)			2.3	2.3	2.5	2.9	2.9
Economic benefits of environmental preservation			2.6	2.0	2.0	3.0	1.7

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Compliance with Environmental Laws and Regulations	Scope*	Unit	2019	2020	2021	2022	2023
Environment-related accidents	Global	Cases	0	0	0	0	0
Violations to environmental laws and regulations		Cases	0	0	0	0	0
Total fine		Yen	0	0	0	0	0

\* Scope

TOYOBO CO., LTD.: TOYOBO CO., LTD. only  
Group companies in Japan: domestic consolidated subsidiaries  
Japan: TOYOBO CO., LTD. and Group companies in Japan  
Overseas: Overseas consolidated subsidiaries  
Global: Whole Group in Japan and overseas

Indicators for fiscal 2023 with this icon are externally assured by KPMG AZSA Sustainability Co., Ltd.

—: No data