

Environmental

Scope of collection of environmental data

The organizations specified below are subject to collection of different data.

[Major factories and plants in Japan]

- Toyocolor Co., Ltd. Fuji Factory, Mobara Plant, Okayama Plant
- Toyochem Co., Ltd. Kawagoe Factory, Seishin Plant, Amagasaki Plant, Chitose Plant and Chiba Plant
- Toyo Ink Co., Ltd. Saitama Factory
- Toyo Visual Solutions Co., Ltd. Moriyama Factory

* Data for FY2021 to FY2022 cover the four factories and the six plants mentioned above.

* Data for FY2018 to FY2020 cover four factories and four plants. The Chitose Plant and the Chiba Plant are not included.

[Domestic affiliates]

Toyo-Morton, Ltd., Toyo FPP Co., Ltd., and Matsui Chemicals, Co., Ltd.

* The data for FY2021 to FY2022 cover the three companies mentioned above. They were major production affiliates in Japan.

* The data for FY2018 to FY2020 cover Toyo-Morton, Ltd., Toyo ADL Corp., and Matsui Chemicals, Co., Ltd. They were major production affiliates in Japan.

[All domestic business bases]

All bases in Japan, where the holding company and consolidated subsidiaries (a total of 17 companies) and one equity-method affiliate (Logi Co-Net Corp.) are located

[Principal overseas production affiliates]

Fifteen factories and eight plants certified with the ISO 14001 among the overseas affiliates (i.e. PT. Toyo Ink Indonesia, Toyoink India Pvt. Ltd., Toyo Ink America, LLC*¹, Hanil TOYO Co., Ltd., Toyo Ink Brasil Ltda., Chengdu Toyo Ink Co., Ltd., and Toyo Ink Europe N.V.)

* For the business sites certified with ISO 14001, see the list on the right.

* Toyo Ink America, LLC ceased its production at the end of March 2021.

Environmental Management

Acquisition status of ISO certification (As of December 31, 2022)

Japan	ISO 14001	ISO 9001
[Toyocolor Co., Ltd.]		
● Fuji Factory	○	○
● Mobara Plant	○	○
● Okayama Plant	○	○
● Kawagoe Branch Office	○	○
[Toyochem Co., Ltd.]		
● Kawagoe Factory	○	○
● Seishin Plant	○	○
● Amagasaki Plant	○	○
● Chiba Plant	○	○
[Toyo Ink Co., Ltd.]		
● Saitama Factory	○	○
[Affiliates companies]		
● Toyo FPP Co., Ltd	○	○
● Toyo Visual Solutions Co., Ltd	○	○
● Toyo-Morton, Ltd.	○	○
● Matsui Chemical Co., Ltd.	○	○

Overseas	ISO 14001	ISO 9001
● TIPPS Pte. Ltd. (Singapore)	○	○
● Toyochem Specialty Chemical Sdn. Bhd. (Malaysia)	○	○
● Toyo Ink (Thailand) Co., Ltd. (Thailand)	○	○
● Toyo Ink (Philippines) Co., Inc. (Philippines)	○	○
● PT. Toyo Ink Indonesia (Indonesia)		○
● Toyo Ink Vietnam Co., Ltd. (Vietnam)	○	○
● Toyo Ink Compounds Vietnam Co., Ltd. (Vietnam)	○	○
● Toyo Ink India Pvt. Ltd (India)		○
● Tianjin Toyo Ink Co., Ltd. (China)	○	○
● Shanghai Toyo Ink Mfg. Co., Ltd. (China)	○	○
● Jiangmen Toyo Ink Co., Ltd. (China)	○	○
● Zhuhai Toyocolor Co., Ltd. (China)	○	○
● Chengdu Toyo Ink Co., Ltd. (China)		○
● Toyo Advanced Science Taiwan Co., Ltd (Taiwan)	○	○
● Hanil TOYO Co., Ltd. (South Korea)		○
● Sam Young Ink & Paint Mfg. Co., Ltd. (South Korea)	○	○
● Toyo Ink Europe N.V. (Belgium)		○
● Toyo Ink Europe Specialty Chemicals S.A.S (France)	○	○
● Toyo Matbaa Mürekkepleri Sanayi ve Ticaret A.Ş. (Turkey)	○	○
● Toyo Ink Hungary Kft. (Hungary)		○
● LioChem, Inc. (USA)	○	○
● Toyo Ink Mexico, S.A. de C.V. (Mexico)		○

● : Manufacturing ○ : Certification has been achieved.

* Of 38 manufacturing locations, ISO 14001 certification has been achieved at 28 (74%) locations. In Japan, the certification has been achieved at 93% of manufacturing locations.

* Of 38 manufacturing locations, ISO 9001 certification has been achieved at 34 (89%) locations. In Japan, the certification has been achieved at 86% of manufacturing locations.

Material balance

By grasping the overall picture of material balance and clarifying the effectiveness of our environmental conservation activities, we will further reduce the environmental impact.

INPUT

		FY2020	FY2021	FY2022
Raw materials	Solvents, resins, pigments, etc. (t)	190,041	168,356	161,313
	Chemicals* ¹ amount handled (t)	44,631	51,011	44,468
Supplementary materials	drums, five-gallon drums, etc. (t)	7,983	8,255	7,502
Energy	Electricity (million kWh)	49.40	50.73	48.95
	Heavy fuel oil A (kL)	688.8	508.9	330.2
	LPG (t)	34.5	36.3	26.8
	Municipal gas (thousand m ³)	18,622	20,178	18,844
Water	Water supplied (thousand m ³)	140	160	140
	Industrial-use water (thousand m ³)	7	0	0
	Groundwater (thousand m ³)	2,540	2,820	2,680
	Total (thousand m ³)	2,690	2,990	2,830

OUTPUT

		FY2020	FY2021	FY2022
Volume of products (t)		157,627	165,467	153,953
CO ₂ (t-CO ₂)		67,607	71,533	66,030
Chemicals (t)		68.2	61.7	78.5
Wastewater (thousand m ³)		2,702	2,302	2,229
Environmental pollutant	SO _x (t)	1.0	0.8	0.4
	NO _x (t)	49.9	53.1	62.6
	Particulates (t)	1.9	1.7	1.5
	COD (t)	83.9	68.4	64.6
Waste	Volume of emissions (t)	14,354	15,984	15,408
	Final disposal volume (t)	0.1	0	0

Scope of calculation: Major factories and plants in Japan; For details about the organizations in the scope, see page 72.

* The major factories and plants are responsible for approximately 92.3% of energy consumption of all our production bases in Japan.

*¹ The chemicals described here refer to Class I designated chemical substances listed under the PRTR Act and substances designated by the Japan Chemical Industry Association.

Environmental accounting

The Toyo Ink Group began to calculate its environmental costs based on guidelines from the Environmental Agency (Ministry of the Environment) in FY1999, which it positions as the first year of environmental accounting. Since then, we have been evaluating our environmental activities by continuing to check required costs for these activities and their effects.

Environmental costs

(Unit: million JPY)

Category	Main measures implemented	FY2020		FY2021	
		Investments	Costs	Investments	Costs
Business area costs		681	1,597	175	1,686
Pollution prevention	Pollution prevention related investment and maintenance and management expenses	406	764	80	586
Global environment protection	Global environment protection related investment and maintenance and management expenses	206	299	64	636
Resource recycling	Waste processing and recycling related investment and maintenance and management expenses	69	534	30	463
Upstream and downstream costs	Product recycling and product container recycling expenses	46	176	114	216
Management activity costs	Environmental management expenses, and environmental advertising, environmental education and other activity expenses	0	344	0	397
R&D costs		563	2,957	1,421	4,066
Product development	Environmentally friendly product development related personnel costs, maintenance costs and investment in experimental equipment	483	2,881	1,381	3,086
Technology development	Environmentally friendly technology development related personnel costs, maintenance costs and investment in experimental equipment	81	76	40	980
Social activity costs	Support for global environment activities and donations to environmental organizations	0	1	0	1
Environmental damage response costs	Soil pollution remediation expenses	552	19	699	19
Total		1,842	5,094	2,410	6,385

Period covered by the data: January 1, 2022 – December 31, 2022

Scope of calculation: Major factories and plants in Japan and affiliates in Japan; For details about the organizations in the scope, see page 72.

* The total amount of R&D expenditure during this period (consolidated) : 9,111 million JPY

Direct quantitative effects of environmental preservation (within business area)

Description	Index indicating the effect of environmental protection			
	Category	FY2021	FY2022	Effect*
Effects related to resources used in operations	Total energy used (crude-oil equivalent: thousand kL)	39.8	37.7	-0.4
	Volume of water resources used (thousand m ³)	3,018	2,861	-3.3
	Volume of PRTR- and JCIA-designated chemicals handled (thousand t)	54.7	48.3	3.0
Effects related to environmental burden and waste from business activity emissions	CO ₂ emissions (thousand t-CO ₂)	76.1	70.2	1.1
	Emissions of PRTR- and JCIA-designated substances (t)	62.3	78.8	-20.4
	Volume of wastewater (thousand m ³)	2,319	2,569	-39.6
	Volume of waste emissions (thousand t)	18.1	17.5	-0.6
	Final disposal volume (t)	4.7	3.1	1.3
	SOx emissions (t)	0.8	0.4	0.4
	NOx emissions (t)	53.2	62.7	-12.8
	Particulates emissions (t)	1.68	1.52	0.1
COD emissions (t)	68.4	64.6	-0.5	

Scope of calculation: Major factories and plants in Japan and affiliates in Japan; For details about the organizations in the scope, see page 72.

* Direct quantitative effects of environmental protection activities are calculated by comparing data for the year with data for the previous fiscal year, with adjustments for productions quantity.

* Effect = Environmental burden for previous fiscal period × (Production quantity for current fiscal period / Production quantity for previous fiscal period) – Environmental burden for current fiscal period.

Economic effects

(Unit: million JPY)

Category	Data aggregation definitions and scope, etc. for each item	FY2021	FY2022
1 Sales of valuable resources	Revenue from sale of used containers, etc.	15	25
2 Energy conservation	Monetary value of the effects from energysaving activities at individual business locations	59	86
3 Resource conservation	Effects derived from the reduction in raw materials used due to higher recovery rates, etc.	192	320
4 Recycling of containers, etc.	Effects derived from product container reuse and adoption of reusable tanks	27	51
5 Reduction waste disposal costs	Reduced expenditure due to reduction in the amount of waste generated	6	41
Total		299	523
Environmental business	Total earnings from products registered as "environmentally friendly products"*1	2,590*2	259*2

Scope of calculation: Major factories and plants in Japan and affiliates in Japan; For details about the organizations in the scope, see page 72.

*1 Sales of environmentally friendly products multiplied by the operating margin.

*2 The sale of electricity from in-house solar power generation equipment is included.

Response to Climate Change

CO₂ emissions / CO₂ emissions per unit of sales

		FY2019	FY2020	FY2021	FY2022
CO ₂ emissions (t-CO ₂)	Total in Japan	82,736	76,843	79,380	73,404
	Total of overseas affiliates	121,344	118,786	120,893	109,134
	Asia, China and Eastern Asia	102,193	102,134	101,970	94,850
	Europe and Africa	9,518	8,793	9,753	4,418
	Americas	9,633	7,859	9,169	9,865
	Group total	204,080	195,629	200,273	182,538
CO ₂ emissions per unit of sales (t-CO ₂ /million JPY)		0.73	0.76	0.70	0.58

Scope of calculation: All bases in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* For the electricity emission factor in Japan, we use the emission factor for each electric power company that is announced every year.

* Overseas electricity emissions factors have been calculated using the emissions factors of individual countries from the Inventory Database for Environmental Analysis (IDEA).

* Past figures have been recalculated retrospectively, given that overseas affiliates adopted a new calculation method in FY2020.

Energy consumption / energy use per production unit

		FY2019	FY2020	FY2021	FY2022
Energy consumption (kL)	Total in Japan	40,374	38,388	39,849	37,723
	Major factories and plants in Japan	36,800	35,023	37,056	34,830
	Affiliates in Japan	3,574	3,365	2,793	2,893
	Overseas affiliates	50,124	48,625	49,860	47,498
	Group total	90,498	87,013	89,709	85,221
Energy use per production unit (L/t)	Major factories and plants in Japan	218	222.2	223.9	226.2
	Overseas affiliates	170.9	170.2	164.1	164.1

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

Scope 1 to 3 emissions(Unit: t-CO₂)

	FY2020	FY2021	FY2022
Scope1 (direct emissions)	45,026	48,300	51,027
Heavy fuel oil A	1,866	1,379	994
Municipal gas	42,697	46,272	43,574
LPG	104	109	99
Scope2 (indirect emissions from energy sources)	23,655	23,960	27,934
Scope3 (other indirect emissions)	547,724	595,797	868,211
Category 1: Purchased goods and services	481,145	518,434	766,535
Category 2: Capital goods	15,960	19,075	21,823
Category 3: Fuel and energy related activities not included in Scope 1 or 2	14,055	14,908	16,507
Category 4: Transportation and delivery (upstream)	14,827	23,181	36,454
Category 5: Waste generated in operations	13,580	12,374	16,458
Category 6: Business travel	343	191	552
Category 7: Employee commuting	967	946	1,565
Category 8: Leased assets (upstream)	0	0	160
Category 9: Transportation and delivery (downstream)	6,847	6,688	8,157
Category 10: Processing of sold products	—	—	—
Category 11: Use of sold products	—	—	—
Category 12: End-of-life treatment of sold products	—	—	—
Category 13: Leased assets (downstream)	0	0	0
Category 14: Franchise	0	0	0
Category 15: Investments	0	0	0
Total	616,405	668,057	947,172
Scope1+Scope2	68,681	72,260	78,961

* The scopes of calculation of Scope 1, 2 and 3 emissions used to be major factories, plants and business sites in Japan, including core operating companies. From FY2022 onwards, broader scopes apply in order to understand overall emission figures from the whole Group in Japan. The number of items subject to calculation has also been increased (by adding specific items in Categories 1, 4 and 5 and Category 8). This means that the figures for FY2022 are massively higher than figures for previous fiscal years. Going forward, we will advance efforts to set CO₂ reduction targets at individual items, to formulate an implementation plan, to improve calculation accuracy and to further expand the scope of calculation (for global calculation including overseas emissions).

* For the method and scope of calculation and the items added, see page 77.

Scopes 1, 2 and 3 emissions calculation method

Item		Calculation method	Applicable to more organizations from 2022 onwards	Covering more items from 2022 onwards	Emissions increase (t-CO ₂) due to the expansion of the scope of calculation
Scope1 (direct emissions)		Calculated direct emissions from stationary combustion of fuels (heavy fuel oil A, municipal gas, LPG, etc.) in business activities. The emissions unit value set out in Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain of the Ministry of the Environment were used.	○	-	Approx. 2,700
Scope2 (indirect emissions from energy sources)		Calculated indirect emissions originating from electricity purchased in business activities. The latest emission factors for each electric power company published under the Act on Promotion of Global Warming Countermeasures were used.	○	-	Approx. 3,900
Scope 3 (other indirect emissions)	Category 1: Purchased goods and services	Calculated emissions by multiplying the cost of raw materials purchased, the cost of merchandise purchased, supplies expense, and the cost of auxiliary materials purchased by the emissions intensity for each item. For items related to consumables and services, the applicable emission factor on the value basis was used for calculation. * Emissions intensity used: IDEA3.2, the input-output table, and global environmental impact intensity	○	○	Approx. 240,000
	Category 2: Capital goods	Calculated emissions by multiplying capital expenditure (excluding environmental costs) by an emissions intensity (2.73t-CO ₂ /million JPY).	-	-	Approx. 2,700
	Category 3: Fuel and energy related activities not included in Scope 1 or 2	Calculated emissions by multiplying electricity consumption and heat consumption by the emissions intensity. (Emissions intensity used: The Database of Emissions Unit Values for Calculation of Greenhouse Gas Emissions, etc., by Organizations throughout the Supply Chain (Ver. 3.2))	○	-	Approx. 1,600
	Category 4: Transportation and delivery (upstream)	Calculated emissions using the volumes of raw materials purchased, merchandise purchased, and auxiliary materials and a transportation scenario: a transport of 500 km using a tanker truck or 10-ton truck (a loading ratio of 50%). * Emissions intensity used: IDEA2.3 Calculated CO ₂ emissions associated with the transportation and distribution of our products and merchandise based on regular reports from specified consignors under the Act on Rationalizing Energy Use. Emissions in the scope of specified consignors not subject to reporting were calculated from the value concerning emissions understood by the company's system with the use of the emission intensity and in consideration of the period of storage in external warehouses. Emissions intensity used: Fuel method, improved ton-kilometer method, conventional ton-kilometer method and the input-output table	○	○	Approx. 13,000
	Category 5: Waste generated in operations	Classified industrial waste by type of waste and by stage of the disposal process (transportation, incineration, and landfill) and calculated emissions by multiplying the amount of industrial waste in each classification by the emissions intensity for each stage. Emissions from sewerage were calculated from the value for the volume of use. * Emissions intensity used: IDEA3.2 and the input-output table	○	○	Approx. 1,800
	Category 6: Business travel	Calculated emissions by multiplying the number of employees by the emissions intensity (0.130t-CO ₂ per person per year).	○	-	Approx. 360
	Category 7: Employee commuting	Classified employees by type of workplace and by location of workplace and calculated emissions by multiplying the number of employees in each classification by the number of business days and by the emissions intensity for each classification. * Emissions intensity used: emissions intensities per employee per business day by type of workplace and by location of workplace set out in the Database of Emissions Unit Values for Calculation of Greenhouse Gas Emissions, etc., by Organizations throughout the Supply Chain (Ver. 3.2)	○	-	Approx. 600
	Category 8: Leased assets (upstream)	Emissions are deemed to be zero because emissions are included in emissions at our business sites (Scopes 1 and 2).	○	○	Approx. 160
	Category 9: Transportation and delivery (downstream)	Assumed transportation from a processing company to a retailer and calculated emissions using a transportation scenario: a transport of 100 km using a 4-ton truck (average loading ratio). * Emissions intensity used: IDEA2.3	○	-	Approx. 1,470
	Category 10: Processing of sold products	Do not calculate emissions because there are a wide variety of products and it is difficult to create a scenario about the processing of sold products.	-	-	-
	Category 11: Use of sold products	Do not calculate emissions because there are a wide variety of products and it is difficult to create a scenario about the use of sold products.	-	-	-
	Category 12: End-of-life treatment of sold products	Do not calculate emissions because there are a wide variety of products and it is difficult to create a scenario about the end-of-life treatment of sold products.	-	-	-
	Category 13: Leased assets (downstream)	Emissions are deemed to be zero because we have no applicable leased assets.	-	-	-
	Category 14: Franchise	Emissions are deemed to be zero because we have no franchises.	-	-	-
	Category 15: Investments	Emissions are deemed to be zero because we do not engage in investment business activities directly.	-	-	-

Scope of calculation: Expanded from fifteen sites for FY2020 to FY2021 including major factories, plants, offices and laboratories in Japan to all sites in Japan for Scopes 1 and 2 and for Categories 3, 6 and 7 of Scope 3 for FY2022

Water Resources Management

Water consumption

(Unit: thousand m³)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	2,912	2,728	3,018	2,861
Major factories and plants in Japan	2,869	2,689	2,986	2,831
Affiliates in Japan	43	39	32	30
Overseas affiliates	2,570	2,699	2,577	1,996
Group total	5,482	5,427	5,595	4,857

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

Water withdrawal by source

(Unit: thousand m³)

		FY2019	FY2020	FY2021	FY2022
Japan	Water supplied	186.0	173.8	185.0	172.0
	Industrial-use water	6	7	5	4
	Groundwater	2,720	2,547	2,827	2,685
	Other (rainwater, seawater, river and others)	0	0	0	0
	Total	2,912	2,728	3,017	2,861
Overseas	Water supplied	1,151	1,307	635	1,188
	Industrial-use water	614	810	1,273	116
	Groundwater	732	578	664	692
	Other (rainwater, seawater, river and others)	0	0	0	0
	Total	2,570	2,699	2,577	1,996

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

Amount of wastewater

(Unit: thousand m³)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	2,699	2,727	2,319	2,569
Major factories and plants in Japan	2,660	2,702	2,302	2,542
Affiliates in Japan	39	25	17	26
Overseas affiliates	1,582	1,472	1,704	1,606
Group total	4,281	4,199	4,023	4,175

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

Breakdown of volume of wastewater by destination (FY2022)

(Unit: thousand m³)

	Japan	Overseas
Sewerage networks	1,914	1,605
River	650	1
Sea	5	0
Groundwater	0	0

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

COD emissions

(Unit: t)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	76.8	83.9	68.4	64.6
Major factories and plants in Japan	76.8	83.9	68.4	64.6
Affiliates in Japan	0.0	0.0	0.0	0.0
Overseas affiliates	112.0	75.9	80.3	159.9
Group total	188.8	159.7	148.7	224.5

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

Waste Management

Volume of waste emissions / volume of industrial waste emissions / amount of waste treated off-site / final disposal volume (Unit: t)

		FY2019	FY2020	FY2021	FY2022
Volume of waste emissions	Total in Japan	18,026	16,432	18,053	17,456
	Major factories and plants in Japan	15,805	14,354	15,984	15,541
	Affiliates in Japan	2,221	2,078	2,068	1,914
	Overseas affiliates	14,840	13,817	15,999	14,410
	Group total	32,867	30,249	34,052	31,866
Volume of industrial waste emissions	Total in Japan	7,138	7,572	8,956	7,865
	Major factories and plants in Japan	6,459	6,763	8,337	7,345
	Affiliates in Japan	679	809	619	520
Amount of waste treated off-site	Total in Japan	14,505	12,900	13,949	13,466
	Major factories and plants in Japan	12,333	11,075	12,154	11,774
	Affiliates in Japan	2,173	1,825	1,796	1,692
Final disposal volume	Total in Japan	6.4	6.5	4.7	3.1
	Major factories and plants in Japan	0.4	0.1	0	0
	Affiliates in Japan	6.0	6.4	4.7	3.1

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* The data on affiliates in Japan for FY2022 include figures of the Kansai Branch Office (Neyagawa), the Kansai Branch Office (Toyama), the Chubu Branch Office (Kasugai), Toyo Ink Hokkaido Co., Ltd., Toyo Ink Chushikoku Co., Ltd. (Okayama), Toyo Ink Chushikoku Co., Ltd. (Takamatsu) and Toyo Ink Kyushu Co., Ltd. (Fukuoka).

* Past figures have been recalculated retrospectively, given that overseas affiliates adopted a new calculation method in FY2020.

Volume of hazardous / non-hazardous waste emissions (Unit: t)

	FY2020		FY2021		FY2022	
	Hazardous waste	Non-hazardous waste	Hazardous waste	Non-hazardous waste	Hazardous waste	Non-hazardous waste
Valuables	1,187	2,963	996	3,695	1,118	3,901
Reuse within the Group	3,532	0	3,940	4	3,983	6
Recycling at recyclers	2,714	6,021	2,957	6,457	2,826	5,618
Landfill	0	6	0	3	0	3.1
Total	7,433	8,990	7,892	10,159	7,927	9,528

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* The data on affiliates in Japan for FY2022 include figures of the Kansai Branch Office (Neyagawa), the Kansai Branch Office (Toyama), the Chubu Branch Office (Kasugai), Toyo Ink Hokkaido Co., Ltd., Toyo Ink Chushikoku Co., Ltd. (Okayama), Toyo Ink Chushikoku Co., Ltd. (Takamatsu) and Toyo Ink Kyushu Co., Ltd. (Fukuoka).

* Hazardous waste: specially controlled industrial waste (waste oil, PCB, waste acid, waste alkali)

Pollution Prevention

NOx emissions

(Unit: t)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	46.7	50.8	53.2	62.7
Major factories and plants in Japan	45.6	49.9	53.1	62.6
Affiliates in Japan	1.0	0.9	0.2	0.2
Overseas affiliates	46.5	22.9	21.6	32.2
Group total	93.1	73.7	74.8	94.9

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* Past figures have been recalculated retrospectively, given that overseas affiliates adopted a new calculation method in FY2020.

SOx emissions

(Unit: t)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	1.2	1.0	0.8	0.4
Major factories and plants in Japan	1.2	1.0	0.8	0.4
Affiliates in Japan	0	0	0	0
Overseas affiliates	9.3	3.5	6.5	12.8
Group total	10.5	4.5	7.2	13.2

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* Past figures have been recalculated retrospectively, given that overseas affiliates adopted a new calculation method in FY2020.

Particulate emissions

(Unit: t)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	2.1	2.0	1.7	1.5
Major factories and plants in Japan	2.0	1.9	1.7	1.5
Affiliates in Japan	0.1	0.1	0	0
Overseas affiliates	10.1	22.0	6.6	8.8
Group total	12.2	24.0	8.2	10.3

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* Past figures have been recalculated retrospectively, given that overseas affiliates adopted a new calculation method in FY2020.

VOC emissions

(Unit: t)

	FY2020	FY2021	FY2022
Total in Japan	48,568	44,320	53,279
Major factories and plants in Japan	47,935	43,961	53,186
Affiliates in Japan	633	359	93

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

Chemical Management

Chemical emissions

(Unit: t)

	FY2019	FY2020	FY2021	FY2022
Total in Japan	70.8	69.1	62.3	78.8
Major factories and plants in Japan	69.8	68.2	61.7	78.5
Affiliates in Japan	1.0	0.9	0.6	0.2
Overseas affiliates	183.8	316.7	213.3	107.3
Group total	254.6	385.8	275.6	186.1

Scope of calculation: Major factories and plants in Japan, affiliates in Japan and major overseas affiliates engaging in manufacturing; For details about the organizations in the scope, see page 72.

* Past figures have been recalculated retrospectively, given that overseas affiliates adopted a new calculation method in FY2020.

Emissions and transfers of PRTR-designated chemicals (FY2022)

(Unit: kg)

PRTR substance name	Ordinance designation number	Amount emitted			Amount transferred	
		Atmosphere	Public waters	Soil	Sewerage	Waste materials
ethyl acrylate	3	6	0	0	0	0
acrylic acid and its water-soluble salts	4	2	0	0	0	0
N-butyl acrylate	7	1,631	0	0	0	0
methyl acrylate	8	9	0	0	0	0
acetonitrile	13	0	0	0	0	15
antimony and its compounds	31	0	0	0	0	7
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	34	0	0	0	0	0
ethylbenzene	53	24,042	0	0	0	56,740
ethylene glycol monoethyl ether	57	7	0	0	0	2
1,2-epoxypropane	68	0	0	0	0	3
p-octylphenol	74	0	0	0	0	19,896
ε-caprolactam	76	0	0	0	0	59
xylene	80	24,108	0	0	0	55,248
cobalt and its compounds	132	0	0	0	0	350
vinyl acetate	134	51	0	0	0	0
2-(diethylamino) ethanol	145	1	0	0	0	0
1,3-dioxolane	151	6	0	0	0	27
2,6-di-tert-butyl-4-cresol	207	0	0	0	0	268
N, N-dimethylformamide	232	0	0	0	0	20
organic tin compounds	239	0	0	0	0	16
styrene	240	95	0	0	0	0
Water-soluble copper salts (except for complex salts)	272	0	0	0	0	500
1,2,4-trimethylbenzene	296	8	0	0	0	1,278
1,3,5-trimethylbenzene	297	1	0	0	0	0
tolylene diisocyanate	298	0	0	0	0	75
toluene	300	4,708	0	0	200	28,082
hexamethylene diacrylate	306	0	0	0	0	10
nickel compounds	309	0	0	0	0	556
nitroglycerin	313	0	0	0	0	231
nonylphenol	320	0	0	0	0	1,579
phenol	349	1	0	0	0	0
diallyl phthalate	352	4	0	0	0	2
4-tertiary butylphenol	368	0	0	0	0	16,340
n-hexane	392	81	0	0	0	26
poly (oxyethylene) = alkyl ether (limited to alkyl-group carbon numbers 12 through 15 and composites containing these)	407	0	0	0	0	54
formaldehyde	411	44	0	0	0	0
phthalic anhydride	413	0	0	0	0	83.88
maleic anhydride	414	0	0	0	0	8924
methacrylic acid	415	18	0	0	0	0
n-butyl methacrylate	419	0	0	0	0	0
methyl methacrylate	420	131	0	0	0	40
methylenebis (4,1-phenylene) diisocyanate	448	0	0	0	0	577

Scope of calculation: Major factories and plants in Japan; For details about the organizations in the scope, see page 72.

Social

Human Resource Management

Number of employees

			FY2020	FY2021	FY2022
Number of employees (employees)	Toyo Ink SC Holdings	male	325	306	304
		female	95	96	99
		Total	420	402	403
	Toyo Ink	male	616	579	585
		female	75	73	75
		Total	691	652	660
	Toyochem	male	410	486	493
		female	59	73	73
		Total	469	559	566
	Toyocolor	male	438	445	426
		female	51	56	58
		Total	489	501	484
	Total in Japan	male	848	786	768
		female	184	177	183
		Total	1,032	963	951
	Overseas total	male	—	—	3,754
		female	—	—	1,112
		Total	5,056	4,810	4,866
Group total	male	—	—	6,330	
	female	—	—	1,600	
	Total	8,157	7,887	7,930	

Aggregation scope: Global (consolidated)

Employees by business area

			FY2020	FY2021	FY2022
Number of employees (employees)	Japan	male	2,637	2,602	2,576
		female	464	475	488
		Total	3,101	3,077	3,064
	China	male	—	—	1,220
		female	—	—	344
		Total	2,293	1,579	1,564
	Asia	male	—	—	1,790
		female	—	—	467
		Total	1,785	2,251	2,257
	Americas	male	—	—	303
		female	—	—	161
		Total	418	440	464
	Europe and Africa	male	—	—	441
		female	—	—	140
		Total	560	540	581

Aggregation scope: Global (consolidated)

Number of new hires / Average years of service / Rate of regular employees

			FY2020	FY2021	FY2022
Number of new hires (employees)	Number of new graduate hires	male	44	40	32
		female	20	19	17
		Total	64	59	49
	Number of mid-career hires	male	28	41	49
		female	6	7	10
		Total	34	48	59
	Total	male	72	81	81
		female	26	26	27
		Total	98	107	108
Average years of service (years)	male	19.1	19.2	19.3	
	female	14.5	14.6	14.9	
	Total	18.4	18.4	18.6	
Rate of regular employees (%)			83.6	82.1	81.3

Aggregation scope: Subsidiaries in Japan (consolidated and non-consolidated)

Number of employees by age group, average age

		FY2020	FY2021	FY2022
Number of employees (employees)	Ages 18 to 29	386	395	380
	Ages 30 to 39	738	709	704
	Ages 40 to 49	866	837	796
	Ages 50 to 59	997	994	1,002
	Ages 60 to 64	245	275	309
	Ages 65 and above	6	13	17
Average age (years old)	male	45.0	45.3	45.6
	female	41.4	41.7	41.9
	Total	44.5	44.7	45.0

Aggregation scope: Subsidiaries in Japan (consolidated and non-consolidated)

Annual turnover and reasons for leaving the Group

		FY2020	FY2021	FY2022
Annual turnover* (%)		2.35	2.01	2.84
Reasons for leaving the Group (employees)	Company circumstances	0	0	0
	Personal circumstances	54	45	58
	Mandatory retirement age	6	3	0
	Leave period expired	0	1	6
	Reemployment period expired	21	12	16
	Total	81	61	80

Aggregation scope: Japan (Employees who belong to Toyo Ink SC Holdings Co., Ltd.)

* The annual turnover indicates the percentage of retirees who left the Group due to personal circumstances or who have expired the leave period per the number of all subject employees.

Human resources development

Training costs per employee / in-house recruitment

		FY2020	FY2021	FY2022
Training costs per employee*1	Investment amount (thousand JPY / employee)	20	30	30
In-house recruitment system / Career challenge system (employees)*2	Number of voluntary career development programs adopted	3	8	11
Number of cases eligible for in-house commendation (cases)		4	4	2
Number of applications for Business Idea Competition (cases)*3		—	122	63

*1 Aggregation scope: Toyo Ink SC Holdings Co., Ltd., Toyo Ink Co., Ltd., Toyochem Co., Ltd., Toyocolor Co., Ltd., and Toyo Visual Solutions Co., Ltd.

*2 Aggregation scope: Subsidiaries in Japan (consolidated and non-consolidated)

*3 Scope of calculation: Global (consolidated) In the business idea contest, teams composed of multiple employees deliver presentations on their activities on subjects they have determined.

Promoting Diversity and Inclusion

Employee diversity

		FY2020	FY2021	FY2022
Rate of female managers (%)*1		3.9	4.5	4.5
Rate of hiring female graduates (%)*2		32.1	32.7	32.5
Number of foreign employees (employees)		21	27	28
Employment of people with disabilities	Number of employees (employees)	41	42	42
	Employment rate (%)	2.35	2.56	2.60
	Average years of service (years)	16.1	15.8	15.6

Aggregation scope: Japan (Employees who belong to Toyo Ink SC Holdings Co., Ltd.)

*1 As of the following January of each fiscal year

*2 Rate of hiring female graduates joining the company each year in April.

Wage Gap between Male and Female

	FY2022
Regular employees (%)	76.0
Non-regular employees (%)	65.1
All employees (%)	75.5

Aggregation scope: Subsidiaries in Japan (consolidated and non-consolidated)

* The wage gap between men and women is calculated by dividing the annual average wage for women by the annual average wage for men.

Trainings

		FY2020	FY2021	FY2022
Human rights/ harassment training (employees)	Training for new employees	51	59	49
	Overseas assignment training	16	24	20
	Training for managers	672	86	97
	Compliance training	Meetings in each site: 3,474 Improvement Month: 3,785	Meetings in each site: 3,456 Improvement Month: 3,740	Meetings in each site: 3,663 Improvement Month: 3,896
Number of participants in diversity training (employees)*1		—	—	Total 146
Number of ally supporters (employees)*1		—	—	94

Aggregation scope: Subsidiaries in Japan (consolidated and non-consolidated)

*1 Implemented from FY2022

Promoting a Healthy Work-Life Balance

			FY2020	FY2021	FY2022
Childcare leave	Ratio of employees taking childcare leave, etc. (%)	Male	25.8	25.8	92.7
		female	100	100	100
	Ratio of employees returning to work after childcare leave (%)	Male	100	100	100
		female	100	100	100
		Total	100	100	100
Number of employees working shorter hours for childcare (employees)		39	41	36	
Working hours	Total working hours (hr)		1,728	1,753	1,723
	Average overtime hours (hr/month)		6.2	7.6	7.2
	Ratio of paid leave taken (%)		57.2	57.6	64.0
	Average number of days of annual paid leave taken (days)		11.0	11.1	12.3
	Average number of days of total paid leave taken* ¹		14.2	15.2	16.7
	Ratio of half-day leave taken (%)		68.0	69.0	73.7
	Rate of use of the selectable welfare program (%)		69.3	71.5	85.8

Aggregation scope: Japan (Employees who belong to Toyo Ink SC Holdings Co., Ltd.)

*¹ Total paid leave = annual paid leave + nursing care leave + special leave + accumulated leave

Health and Productivity Management

	FY2020	FY2021	FY2022
Rate of receiving health examinations (%)	100	100	100
Health examinations for dependents (%)*	77.3	81.2	81.9
Rate of conducting stress checks (%)	91.7	92.5	90.9
Influenza vaccinations (%)	78	60	64
Number of COVID-19 vaccinations in workplaces	—	5,600	1,922

Aggregation scope: Japan (Employees who belong to Toyo Ink SC Holdings Co., Ltd.)

* As of the end of December of each year

Occupational Safety and Health, Process Safety and Disaster Prevention

Lost-workday injuries / fatal accidents

			FY2020	FY2021	FY2022
Lost-workday injuries	Number of occurrences (cases)*1	Our Group	2	4	2
		Partner companies	2	2	1
Fatal accidents	Number of occurrences (cases)*1	Our Group	0	0	0
		Partner companies	0	0	0
Lost-workday injuries	Frequency rate*2	Our Group	0.289	0.569	0.286
	Severity rate*3	Our Group	0.006	0.001	0.002
Work-related diseases and poor physical condition	Number of disease outbreaks (cases)	Our Group and partner companies	0	0	0
	Number of deaths (employees)	Our Group and partner companies	0	0	0

Scope of calculation: Japan Our Group: employees working at all of the business establishments of the Group based in Japan (including contract employees, part-time employees and dispatched employees)

Partner companies: employees of those companies engaged in commissioned services in all business sites of the Group in Japan (including those without capital relationships) which provide data for the Group's companies and implement safety management as the Group's companies do

Calculation period: From January to December each year

1 Number of injuries/accidents: Cases where workers suffer diseases, injuries or death arising from their work activities while on duty (wherein diseases or injuries refer to lost-workday for one day or more or non-lost-workday injuries that cause a loss of part of the body or functions, excluding tardive work-related diseases(), food poisoning and infectious diseases). Injuries, illnesses or death arising from commuting accidents are excluded.

* Slow-onset: Illnesses that develop slowly, not acutely due to an accident or disaster

They include pneumoconiosis, lead poisoning, and vibration disorder. (Excerpted from the *Manual for Entering FY2020 Survey Sheet for Survey on Industrial Accidents* by the Ministry of Health, Labour and Welfare)

*2 Lost-workday injury frequency rate: Number of workers suffering or death per million actual working hours in cumulative total, which indicates the frequency of occurrence of lost-workday injuries

*3 Lost-workday injury severity rate: Number of lost-workdays per thousand actual working hours in cumulative total, which indicates severity of lost-workday injuries

Number of violations of labor standards-related laws and regulation

	FY2020	FY2021	FY2022
Number of violations of labor standards-related laws and regulations	0	0	0

Aggregation scope: Subsidiaries in Japan (consolidated and non-consolidated)

Social Contribution Activities

Major activities in FY2022

Education for the next generation	<ul style="list-style-type: none"> • Donation of educational materials (colors and other painting tools) to local elementary schools (Toyocolor Co., Ltd.) • Sponsorship for the Scrum Japan Program, an initiative for spreading and cultivating rugby (Toyo Ink SC Holdings Co., Ltd.) • Donation of an approximate total of 6 million yen in FY2022 according to the CSR program launched in FY2021 for donating to research institutions and offering computers and other learning equipment, bookshelves, chairs and other supplies for use by schoolchildren to local schools (Toyo Ink India Pvt. Ltd.)
Environmental conservation	<ul style="list-style-type: none"> • Continued to participate in environmental beautification activities on July 1 (<i>Lake Biwa Day</i>) (Moriyama Factory of Toyo Visual Solutions Co., Ltd.) • Continued to participate in environmental beautification activities, Nakanoshima West Cleanup Activities (Kansai Branch Office, Toyo Ink Co., Ltd.) • Participation in activities of collecting and recycling used clear folders (Kyobashi Head Office and Toyo Ink Co., Ltd.'s Saitama Factory) • Tree-planting activities on the premises on World Environment Day (June 5) (Toyo Ink India Pvt. Ltd.) • Participation in a tree planting event in a mangrove forest conservation zone in conjunction with the International Day for the Conservation of the Mangrove Ecosystem (July 26) (Toyo Ink (Philippines) Co., Inc.) • Participation in a tree planting event organized by the municipal government and local authorities (where 1,000 young trees of a local species were planted) (Toyo Ink (Philippines) Co., Inc.)
Contribution to local communities	<ul style="list-style-type: none"> • Sales of crops at direct sales places and promotions in collaboration with local tourism associations and communities in agribusiness (Toyo B-Net Co., Ltd.) • Donation of disinfecting alcohol and other items to neighboring kindergartens (Toyo Ink SC Holdings Co., Ltd.) • Donated used stamps and Bell-marks to the local Council of Social Welfare (General Affairs Department, Toyo Ink SC Holdings Co., Ltd.) • Cooperation in employees' blood donation activities on plant premises (Toyo Ink (Philippines) Co., Inc. and Toyo Ink India Pvt. Ltd.)
Others (supporting / donations, etc.)	<ul style="list-style-type: none"> • Continued donation to the <i>Chuo-ku-no-Mori</i> forest conservation project run by the Chuo City Government in Tokyo as a measure against global warming • Continued donation to the Red Feather Community Chest • Donation of research grants to universities and organizations for the purpose of supporting research

Number of employees taking volunteer leave (unit: employees)

	FY2021	FY2022
Number of employees taking volunteer leave*	4	3

* The system implemented from July 2021

Governance

Corporate Governance

Members of major meeting bodies related to corporate governance

			FY2020	FY2021	FY2022	FY2023
Composition of the Board of Directors	Gender	Male (persons)	10	8	9	8
		Female (persons)	1	2	2	3
		Percentage of female directors	9.1	20.0	18.2	27.3
	Total (persons)		11	10	11	11
	By age group (%)	Under 30	0	0	0	0
		Age 30 to 49	0	0	0	0
		Over 50	100	100	100	100
Independent Outside Director (persons)		3	4	5	5	
Composition of the Group Management Committee	Gender (persons)	Male	11	9	11	11
		Female	0	0	0	0
	Total (persons)		11	9	11	11
Composition of Operating Officers	Gender (persons)	Male	25	23	24	23
		Female	1	0	0	0
	Total (persons)		26	23	24	23

* Members after the annual general meeting of shareholders; except for FY2023, for which the figure is as of March 23, 2023

Total amounts of remuneration, etc. by directors and Audit and Supervisory Board members (FY2022)

Position	Total amount of remuneration, etc. (million JPY)	Total amount of remuneration, etc. by type (million JPY)			Number of eligible persons (persons)
		Fixed compensation (Basic compensation)	Variable compensation (Performance-linked compensation)	Transfer-restricted stock-based compensation	
Directors (Excluding Directors who are members of the Audit & Supervisory Committee) (outside directors)	293 (34)	196 (34)	85 (-)	11 (-)	11 (6)
Directors (Audit and Supervisory Committee member) (outside directors)	40 (22)	40 (22)	-	-	4 (3)
Audit and Supervisory Committee members (outside directors)	20 (8)	20 (8)	-	-	5 (3)
Total (outside officers)	353 (64)	256 (64)	85 (-)	11 (-)	Total 20 (Total 12)

* The number of people and the amounts of compensation above include the two directors and the five Audit and Supervisory Board members who resigned at the closing of the Annual General Meeting of Shareholders held on March 23, 2022.

Risk Management

	FY2020	FY2021	FY2022
Serious incidents related to information security (cases)	0	0	0

Compliance

	FY2020	FY2021	FY2022
Serious compliance violations (cases)	0	0	0
Violations related to corruption (cases)	0	0	0