Environmental Data

In FY2024, a total of 88 companies, including Nisshinbo Holdings Inc. and 87 consolidated subsidiaries, were counted.

FY2024 data: On November 28, 2024, the Company included ARGONICS GmbH and ARGONAV GmbH within the scope of consolidation as subsidiaries in the Wireless and Communications business. However, data for these companies is not included in the FY2024 data.

FY2023 data: Nisshinbo Holdings Inc. (the "Company") excluded TMD Group, which was a consolidated subsidiary, from the scope of consolidation, due to its transfer, which took place on November 30, 2023. As a result, data for TMD Group is included in the aggregation up to November 2023.

On December 27, 2023, the Company included KOKUSAI DENKI Electric Group within its scope of consolidation, and data for the group is included from FY2024.

Climate Change Countermeasures

Greenhouse Gas Emissions

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		Boundary	Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Net greenhouse gas emissions* ¹ (Scope1+Scope2)	Nisshinbo Group	Total	Thousand t-CO2e	679.4	564.1	567.4	438.0	368.5	305.0
Gross greenhouse emissions* 2 (Scope1+Scope2)	Nisshinbo Group	Total	Thousand t-CO2e	679.4	564.1	567.4	438.0	368.5	307.9
CO ₂ emissions	Nisshinbo Group	Subtotal	Thousand t-CO2	644.8	505.1	503.1	370.2	322.7	274.3
		Direct emissions	Thousand t-CO2	247.0	187.7	173.7	66.7	63.4	55.7
			Thousand t-CO2	397.7	317.4	329.4	303.4	259.2	218.6
Other greenhouse gas emissions	Nisshinbo Group	Subtotal	Thousand t-CO2e	34.6	59.0	64.2	67.9	45.9	33.6
		SF ₆ (sulfur hexafluoride)	Thousand t-CO2e	1.1	9.0	5.7	6.7	5.2	3.3
		PFCs (perfluorocarbons)	Thousand t-CO2e	25.9	46.8	55.9	56.8	37.2	24.0
		HFCs (hydrofluorocarbons)	Thousand t-CO2e	5.3	3.0	2.5	3.8	2.2	2.7
		N2O (dinitrogen monoxide)	Thousand t-CO2e	1.9	0.0	0.0	0.1	0.7	1.9
		NF3 (nitrogen trifluoride)	Thousand t-CO2e	_	0.0	0.0	0.0	0.0	0.0
		CH4 (methane)	Thousand t-CO2e	0.3	0.0	0.0	0.4	0.5	0.3
		CO ₂ from non-energy related	Thousand t-CO2e	0.1	0.1	0.1	0.1	0.2	1.4
Amount of carbon offsets applied	Nisshinbo Group		Thousand t-CO2e	_	_	_	_	_	2.9 *

^{*1} Net greenhouse gas emissions: Greenhouse gas emissions after carbon offsets (Scope1+Scope2)

^{*2} Gross greenhouse emissions : Greenhouse gas emissions before carbon offsets (Scope1+Scope2)

^{*3} In FY2024, Nisshinbo Automotive Manufacturing Inc. (USA), which operates the Automobile Brakes business, purchased carbon credits and offset 2.9 thousand tons of CO₂.

Greenhouse Gas Emissions by Business Segment

	Во	oundary	Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Net greenhouse gas emissions (Scope1+Scope2)	Nisshinbo Group	Total	Thousand t-CO2e	679.4	564.1	567.4	438.0	368.5	305.0
Gross greenhouse emissions (Scope1+Scope2)	Nisshinbo Group	Total	Thousand t-CO2e	679.4	564.1	567.4	438.0	368.5	307.9
Scope1 by business segment	Nisshinbo Group	Subtotal	Thousand t-CO2e	281.7	246.7	237.9	134.6	109.3	89.3
	Wireless and Communic	ations	Thousand t-CO2e	5.2	5.1	5.4	5.9	5.4	6.3
	Micro Devices		Thousand t-CO2e	34.4	66.1	72.0	74.4	52.1	39.1
	Automobile Brakes		Thousand t-CO2e	26.7	23.8	27.1	25.9	22.3	12.5
	Precision Instruments		Thousand t-CO2e	0.6	1.2	1.1	1.2	1.6	1.1
	Chemicals		Thousand t-CO2e	4.8	1.6	0.8	1.7	0.3	0.5
	Textiles		Thousand t-CO2e	166.1	148.7	131.3	25.4	27.3	29.5
	Paper Products*1		Thousand t-CO2e	43.5	_	-	_	_	_
	Others		Thousand t-CO2e	0.4	0.1	0.2	0.2	0.3	0.3
Scope2 by business segment	Nisshinbo Group	Subtotal	Thousand t-CO2e	397.7	317.4	329.4	303.4	259.2	218.6
	Wireless and Communic	ations	Thousand t-CO2e	19.2	17.9	19.2	19.3	18.6	21.5
	Micro Devices		Thousand t-CO2e	66.1	84.3	86.4	75.8	85.4	75.7
	Automobile Brakes		Thousand t-CO2e	146.9	97.5	102.5	87.0	74.8	46.6
	Precision Instruments		Thousand t-CO2e	32.4	60.0	63.3	62.8	62.7	56.9
	Chemicals		Thousand t-CO2e	5.0	4.7	5.9	5.7	4.7	4.3
	Textiles		Thousand t-CO2e	72.8	47.8	47.8	48.7	9.2	10.4
	Paper Products*1		Thousand t-CO2e	47.6			_	_	_
	Others		Thousand t-CO2e	7.9	5.2	4.4	4.1	3.8	3.3
Amount of carbon offsets applied	Nisshinbo Group		Thousand t-CO2e	_			-	_	2.9

^{*1} The Paper Products business was transferred in April 2017.

Greenhouse Gas Emissions in Japan and Overseas

	Boundar	Boundary		FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Net Greenhouse gas emissions	Nisshinbo Group Total		Thousand t-CO2e	679.4	564.1	567.4	438.0	368.5	305.0
	Nisshinbo Group (Japan)	Emissions	Thousand t-CO2e	284.8	217.5	228.2	217.1	196.4	173.4
		Ratio	%	42%	39%	40%	50%	53%	57%
	Nisshinbo Group (Overseas)	Emissions	Thousand t-CO2e	394.6	346.5	339.2	221.0	172.2	131.6 *
		Ratio	%	58%	61%	60%	50%	47%	43%

^{*} In FY2024, Nisshinbo Automotive Manufacturing Inc. (USA), which operates the Automobile Brakes business, purchased carbon credits and offset 2.9 thousand tons of CO₂.

^{*2} In FY2024, Nisshinbo Automotive Manufacturing Inc. (USA), which operates the Automobile Brakes business, purchased carbon credits and offset 2.9 thousand tons of CO₂.

Greenhouse Gas Emissions (Scope3)

		Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Greenhouse gas emissions (Scope3)	Nisshinbo Group	Total	Thousand t-CO2e	1,611.0	1,692.1	1,604.5	1,914.5	1,304.6
		1. Purchased goods and services	Thousand t-CO2e	975.0	1,110.6	1,031.3	1,368.6	686.2
		2. Capital goods	Thousand t-CO2e	84.3	86.3	91.6	101.8	84.1
		3. Fuel- and energy-related	Thousand t-CO2e	66.4	78.2	65.3	62.1	55.3
		4. Upstream transport and delivery	Thousand t-CO2e	73.7	37.6	41.4	30.9	25.4
		5. Waste generated in operations	Thousand t-CO2e	6.9	6.2	6.9	7.6	5.1
		6. Business travel	Thousand t-CO2e	3.6	3.3	3.4	3.2	3.0
		7. Employee commuting	Thousand t-CO2e	11.3	10.4	11.0	10.4	9.8
		8. Leased assets (upstream)	Thousand t-CO2e	2.4	4.8	2.9	2.7	5.8
		9. Downstream transportation and	Thousand t-CO2e	45.3	41.8	44.5	79.9	4.9
		10.Processing of sold products	Thousand t-CO2e	31.0	27.1	25.0	24.6	26.1
		11.Use of sold products	Thousand t-CO2e	229.2	216.3	205.3	179.7	355.7
		12.End-of-life treatment of sold	Thousand t-CO2e	32.6	34.7	36.7	15.5	15.6
		13.Downstream leased assets	Thousand t-CO2e	16.7	15.6	15.9	14.6	12.1
		14.Franchises	Thousand t-CO2e	0.0	0.0	0.0	0.0	0.0
		15.Investments	Thousand t-CO2e	32.4	19.0	23.4	12.7	15.5

[Calculation Standard]

The Nisshinbo Group has changed its calculation

Until FY2023, calculations were primarily based on the

From FY2024 onward, calculations are primarily based on the GHG Protocol, with reference to the Act on Promotion of Global Warming Countermeasures.

[Calculation Method]

·Scope1:

Energy related Greenhouse Gas Emissions = Σ [Fuel Consumption \times CO₂ Emission Factor*¹]

Non-Energy related Greenhouse Gas Emissions = Non-Energy related CO₂ Emissions + Σ [Greenhouse Gas Emissions other than CO₂ × Global Warming Potential*²]

- *1 Emission factors based on the Act on Promotion of Global Warming Countermeasures are used. Coal, however, uses a factor calculated based on actual calorific values, which is 1.870 t-CO₂/t in FY2024.
- *2 Global warming potential based on the Act on Promotion of Global Warming Countermeasures.
- ·Scope2:

Energy-related Greenhouse Gas Emissions = Σ [Purchased Electricity and Purchased Steam Volume x CO₂ Emission Factor*³]

*3 Purchased electricity uses, in Japan, adjusted emission factors for each electric company based on the Act on Promotion of Global Warming Countermeasures, and in foreign countries, the emission factors for each electric company, and if unavailable, the relevant year country-specific emission data of IEA Emissions Factors. Data for FY2021 and earlier use country-specific emission factors for each year from "IEA Emissions Factors 2021." For purchased steam, the emission factor calculated by the purchasing company (0.0526 t-CO₂/GJ in FY2024) is used.

Scope3 :

Based on the Basic Guidelines Related to Calculating Greenhouse Gas Emissions throughout the Supply Chain (ver. 2.7), Ministry of the Environment. Some information is taken from LCA results.

Energy Conservation

Energy Inputs

		Boundary		Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Total energy consumption	Nisshinbo Group	Total		Million GJ	11.22	9.72	9.96	8.94	8.62	6.41
Renewable energy	Nisshinbo Group	Subtotal		Million GJ	0.01	0.01	0.07	0.74	1.66	0.90
		Electricity	Self-generated amount	Million GJ	0.01	0.01	0.01	0.02	0.03	0.01
			Purchased amount	Million GJ	_	_	_	0.61	1.54	0.84
		Biofuel	Coconut shells, etc.	Million GJ	_	0.00	0.06	0.10	0.08	0.05
Non-renewable energy	Nisshinbo Group	Subtotal		Million GJ	11.21	9.71	9.89	8.20	6.96	5.51
		Electricity	Purchased amount	Million GJ	7.81	7.25	7.58	7.07	5.92	4.64
		Gas	Town gas	Million GJ	1.03	0.67	0.73	0.74	0.59	0.43
			LPG, LNG, etc.	Million GJ	0.24	0.07	0.07	0.07	0.10	0.07
		Fuel oil	Heavy oil, Kerosene, etc.	Million GJ	0.42	0.10	0.10	0.11	0.09	0.09
		Solid fuel	Coal	Million GJ	1.71	1.60	1.41	0.21	0.24	0.27
		Others	Steam	Million GJ	0.00	0.02	0.02	0.02	0.01	0.02

Energy Inputs by Business Segment

	Boundary	Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Total energy consumption	Nisshinbo Group	Million GJ	11.22	9.72	9.96	8.94	8.62	6.41
By business segment	Wireless and Communications	Million GJ	0.46	0.52	0.53	0.54	0.52	0.61
	Micro Devices	Million GJ	1.33	2.07	2.13	2.13	2.09	1.82
	Automobile Brakes	Million GJ	3.63	3.06	3.24	2.99	2.88	1.25
	Precision Instruments	Million GJ	0.59	1.15	1.19	1.18	1.15	1.02
	Chemicals	Million GJ	0.10	0.11	0.13	0.13	0.13	0.11
	Textiles	Million GJ	3.29	2.70	2.64	1.87	1.75	1.53
	Paper Products*	Million GJ	1.67	_	_			_
	Others	Million GJ	0.15	0.12	0.10	0.10	0.09	0.08

^{*} The Paper Products business was transferred in April 2017.

Resource Conservation

		Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Raw material inputs	Nisshinbo Group	Total	Thousand t	229.5	264.2	204.5	251.7	138.6
Raw materials	Nisshinbo Group	Steel	Thousand t	76.8	89.9	43.0	107.5	38.5
		Chemical substances	Thousand t	43.6	45.7	57.2	42.9	40.0
		Brake friction materials	Thousand t	62.2	75.9	57.8	58.1	15.2
		Raw cotton, cotton yarn	Thousand t	23.2	25.4	22.0	19.3	20.4
		Other materials (packing materials,	Thousand t	23.7	27.3	24.5	23.9	24.4

Office Paper Purchased

	Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Office paper purchased	Nisshinbo Group	Thousand sheets	57,100	46,648	47,103	58,270	52,278

Volume of Waste Generated

	Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Volume of waste generated	Nisshinbo Group	Thousand t	53.0	55.7	51.8	52.4	31.1
By business segment	Wireless and Communications	Thousand t	4.0	3.3	2.9	3.0	3.2
	Micro Devices	Thousand t	1.4	1.6	1.5	1.7	1.2
	Automobile Brakes	Thousand t	24.0	27.1	25.6	25.4	5.2
	Precision Instruments	Thousand t	10.1	10.9	11.5	11.9	11.3
	Chemicals	Thousand t	0.3	0.4	0.3	0.3	0.3
	Textiles	Thousand t	13.0	12.3	9.7	10.0	9.8
	Others	Thousand t	0.2	0.2	0.2	0.2	0.1
Breakdown of waste generated	Nisshinbo Group Recycle	Thousand t	44.9	48.9	43.4	46.1	28.6
	Landfill	Thousand t	8.1	6.8	8.4	6.3	2.5

Recycling Rate

	Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Recycling rate	Nisshinbo Group	%	84.7	87.8	83.9	87.9	91.9
By business segment	Wireless and Communications	%	95.3	94.8	95.8	91.3	90.3
	Micro Devices	%	93.5	93.3	94.4	95.8	96.2
	Automobile Brakes	%	78.0	80.2	72.9	79.5	72.4
	Precision Instruments	%	89.7	91.9	93.4	95.8	95.7
	Chemicals	%	97.2	94.4	91.5	91.3	88.3
	Textiles	%	88.7	98.1	96.3	97.4	98.0
	Others	%	93.5	94.3	88.0	95.8	91.1

Water Resources

Water Input

	Boundary		Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Water usage	Nisshinbo Group		Thousand m ³	27,981	8,346	7,042	6,176	6,240	5,753
Water usage by business segment	Wireless and Communications		Thousand m ³	843	479	463	462	370	473
	Micro Devices		Thousand m ³	1,136	1,265	1,252	1,253	1,209	1,169
	Automobile Brakes		Thousand m ³	575	311	335	332	331	218
	Precision Instruments		Thousand m ³	643	831	791	721	686	676
	Chemicals		Thousand m ³	188	109	107	107	93	88
	Textiles		Thousand m ³	11,215	5,327	4,079	3,284	3,535	3,111
	Paper Products*		Thousand m ³	13,366	1	_	_	1	_
	Others		Thousand m ³	17	23	16	17	17	17
Breakdown of water usage	Nisshinbo Group Surface water	Tap water	Thousand m ³	665	800	829	810	841	843
		Industrial water, river water	Thousand m ³	12,804	1,036	898	652	580	574
	Groundwater		Thousand m ³	14,513	6,508	5,314	4,713	4,818	4,335
	Rain water		Thousand m ³	0	2	1	1	0	1
Water usage per unit of sales	Nisshinbo Group		m³/Million yen	53.4	18.3	13.8	12.0	11.8	11.6
Volume of water recycled	Nisshinbo Group		Thousand m ³	3,547	741	796	967	840	848

^{*} The Paper Products business was transferred in April 2017.

Water Effluents Discharged

Trace: 2 maches 2 leanai geu	Boundary	Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Water effluents discharged	Nisshinbo Group	Thousand m ³	27,166	7,942	6,707	5,554	5,511	5,150
Water effluents discharged by business segment	Wireless and Communications	Thousand m ³	714	453	453	462	362	450
	Micro Devices	Thousand m ³	893	997	990	903	920	889
	Automobile Brakes	Thousand m ³	460	310	357	259	197	113
	Precision Instruments	Thousand m ³	587	794	763	692	656	633
	Chemicals	Thousand m ³	169	105	104	105	89	87
	Textiles	Thousand m ³	10,931	5,262	4,023	3,117	3,270	2,960
	Paper Products*	Thousand m ³	12,890	_	_	-	_	_
	Others	Thousand m ³	523	22	15	16	17	18
Breakdown of water effluents discharged	Nisshinbo Group Public water	Thousand m ³	19,956	6,018	4,804	4,064	4,062	3,718
	Sewerage	Thousand m ³	7,210	1,924	1,903	1,489	4 5,511 2 362 3 920 9 197 2 656 5 89 7 3,270 6 6 17 4 4,062	1,432

^{*} The Paper Products business was transferred in April 2017.

Chemical Substance Management

Volume of PRTR Substances Handled

	Boundary	Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Volume of PRTR substances handled	Nisshinbo Group	t	3,228	2,555	2,799	2,625	2,390	1,506
By business segment	Wireless and Communications	t	35.0	122.2	138.4	164.1	107.0	98.8
	Micro Devices	t	48.2	48.4	54.6	51.6	51.1	47.0
	Automobile Brakes	t	1,874.4	1,267.3	1,446.7	1,232.2	1,249.2	204.2
	Precision Instruments	t	18.7	11.9	7.5	11.1	10.8	12.0
	Chemicals	t	641.7	722.3	756.3	726.5	665.3	833.1
	Textiles	t	539.4	382.8	395.5	439.4	305.6	310.1
	Paper Products*	t	69.5	ı	_	_	-	
	Others	t	1.1	0.0	0.0	0.0	1.1	1.1

^{*} The Paper Products business was transferred in April 2017.

Volume of PRTR Substance Emissions*1

	Boundary	Unit	FY2014 (Base year)	FY2020	FY2021	FY2022	FY2023	FY2024
Volume of PRTR substance emissions	Nisshinbo Group	t	37.5	23.9	17.5	21.2	23.6	20.8
By business segment	Wireless and Communications	t	10.5	10.7	6.3	5.8	5.9	2.9
	Micro Devices	t	0.1	0.1	0.1	0.1	0.1	0.1
	Automobile Brakes	t	5.7	4.7	4.4	4.4	3.7	1.1
	Precision Instruments	t	18.7	7.9	6.1	10.1	9.6	12.0
	Chemicals	t	0.8	0.1	0.1	0.1	1.0	1.3
	Textiles	t	1.2	0.5	0.5	0.7	3.4	3.3
Automobile Brakes Precision Instruments Chemicals	t	0.6	_	_	_	_	_	
	Others	t	0.0	0.0	0.0	0.0	0.0	0.0
Volume of PRTR substance emissions per unit of	of sales Nisshinbo Group	kg/Million yen	0.072	0.052	0.034	0.041	0.044	0.042

^{*1} PRTR Substance Emissions are the total amount of PRTR substances released into the environment (air, public waters, and soil).

Breakdown of PRTR Substances Emissions*

		Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
By chemical substance	Nisshinbo Group	Toluene	t	7.5	6.3	7.9	7.8	6.9
		Xylene	t	6.0	4.9	3.9	3.2	2.8
		Antimony	t	1.2	1.3	1.2	1.1	0.2
		Ethylbenzene	t	5.0	1.2	2.3	1.5	2.0
		Phenol	t	1.5	1.2	1.3	1.4	0.4
		1-bromopropane	t	0.0	0.0	1.7	2.4	1.4
		Others	t	2.7	2.6	3.0	6.3	6.9

^{*} PRTR Substance Emissions are the total amount of PRTR substances released into the environment (air, public waters, and soil).

^{*2} The Paper Products business was transferred in April 2017.

Purification of Wastewater

		Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Water quality	Nisshinbo Group	Amount of CODs emissions	t	104.0	94.7	107.1	116.8	125.9
		Amount of CODs emissions per unit of	kg/Million yen	0.27	0.23	0.26	0.28	0.25
	Nisshinbo Group	Amount of SSs emissions	t	68.1	73.3	73.1	84.8	45.1
		Amount of SSs emissions per unit of sales	kg/Million yen	0.18	0.18	0.18	0.20	0.09

Atmospheric Releases

		Boundary	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Atmospheric releases	Nisshinbo Group	SOx (sulfur oxides)	t	222.8	199.6	27.2	29.5	34.7
		Amount of SOx emitterd per unit of	kg/Million yen	0.58	0.48	0.07	0.07	0.07
		NOx (nitrogen oxides)	t	258.2	235.0	38.9	37.6	37.1
		Amount of NOx emitterd per unit of	kg/Million yen	0.68	0.56	0.09	0.09	0.07
		Soot and dust	t	53.2	46.5	10.0	12.9	12.8
		Amount of soot and dust emitterd per	kg/Million yen	0.1	0.1	0.0	0.0	0.0
		VOCs	t	113.0	132.4	64.7	62.0	54.7
		Amount of VOCs emitterd per unit of	kg/Million yen	0.2	0.3	0.1	0.1	0.1

Transport Volume

Transport Volume

	Boundary	Unit	FY2020	FY2021	FY2022	FY2023*	FY2024
Transport volume	Nisshinbo Group	Million ton-km	108.5	149.1	157.7	937.9	165.7
By business segment	Wireless and Communications	Million ton-km	2.2	2.6	2.4	4.5	16.8
	Micro Devices	Million ton-km	0.7	0.8	0.7	3.0	2.8
	Automobile Brakes	Million ton-km	85.8	124.3	132.3	761.4	24.5
	Precision Instruments	Million ton-km	4.8	4.9	5.2	22.8	28.5
	Chemicals	Million ton-km	4.2	4.6	5.1	4.8	4.6
	Textiles	Million ton-km	10.6	11.4	11.5	141.0	88.6
	Others	Million ton-km	0.2	0.5	0.5	0.5	0.0
Transport volume per unit of sales	Nisshinbo Group	ton-km/Million yen	237.3	292.1	305.5	1,766.2	335.0

^{*} Data for FY2023 is based on land, sea, and air transportation volumes. Data until FY2022 are for land transportation volume.