

SUSTAINABILITY DATA 2025

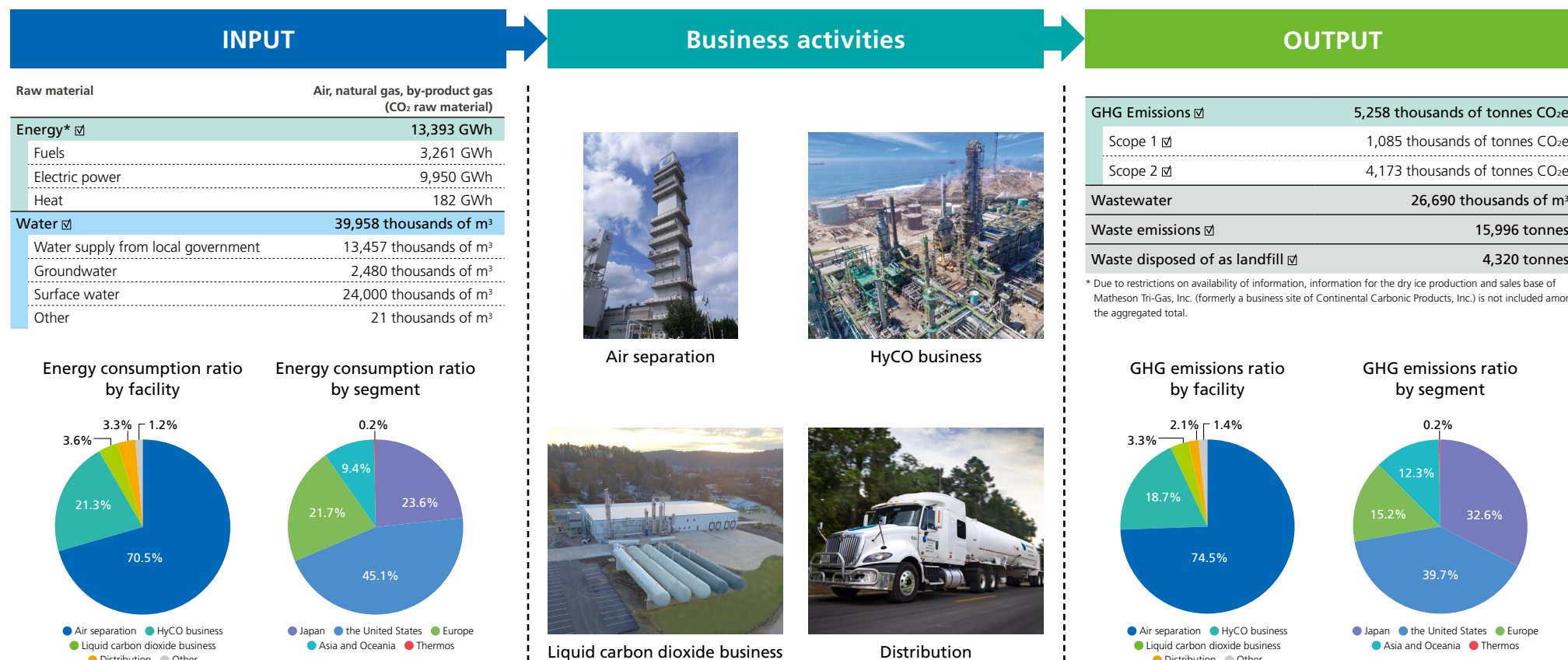
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Sustainability Data

Material Balance and Environmental Contribution of the Nippon Sanso Holdings Group

* Please refer to P2-P3 for the reporting boundary and waste amount calculation method.
Indicators with ☒ mark have been assured by KPMG AZSA Sustainability Co., Ltd. with respect to actual results for FYE2025.

Material Balance



GHG Emission Reduction Contribution

8,104 thousands of tonnes CO ₂ e*1	
Products and services*2	Industrial gases*3, *4
3,934 thousand of tonnes CO ₂ e <input checked="" type="checkbox"/>	4,170 thousand of tonnes CO ₂ e <input checked="" type="checkbox"/>

*1 For details on the reporting boundaries and calculation methods, please refer to P9-P10, "Calculation Methods for GHG Emission Reduction Contribution."

*2 GHG emission reduction contribution for products and services is calculated in accordance with the Guidelines for Quantifying GHG Emission Reductions of Goods or Services through Global Value Chain (Ministry of Economy, Trade and Industry).




*3 GHG emission reduction contribution from the use of industrial gases



*4 GHG emission reduction contribution through industrial gases includes the reduction contribution of consolidated subsidiaries in Japan, Europe, Asia and Oceania, and certain affiliated companies and joint operations.

Sustainability Data

Environment

GHG emissions quantification is subject to uncertainty when measuring activity data, determining emission factors, and considering scientific uncertainty inherent in the Global Warming Potentials.

		Unit	FYE2023	FYE2024	FYE2025
Greenhouse Gas (GHG) Emissions					
GHG Emissions Scope 1 		Thousands of tonnes CO ₂ e	1,103	1,062	1,085
GHG Emissions Scope 2 		Thousands of tonnes CO ₂ e	4,765	4,605	4,173
GHG Emissions Scope 3—Total for the Following Categories 		Thousands of tonnes CO ₂ e	3,341	3,499	3,521
Category 1 Purchased goods and services		Thousands of tonnes CO ₂ e	911	917	904
Category 2 Capital goods		Thousands of tonnes CO ₂ e	67	53	85
Category 3 Fuel- and energy-related activities not included in Scope 1 or Scope 2		Thousands of tonnes CO ₂ e	261	236	219
Category 4 Upstream transportation and distribution (Including transportation services whose cost is borne by the Company)		Thousands of tonnes CO ₂ e	36	37	38
Category 5 Waste generated in operations		Thousands of tonnes CO ₂ e	1	1	1
Category 6 Business travel		Thousands of tonnes CO ₂ e	1	1	1
Category 7 Employee commuting		Thousands of tonnes CO ₂ e	3	3	3
Category 8 Upstream leased assets		Thousands of tonnes CO ₂ e	N/A	N/A	N/A
Category 9 Downstream transportation and distribution		Thousands of tonnes CO ₂ e	N/A	N/A	N/A
Category 10 Processing of sold products		Thousands of tonnes CO ₂ e	N/A	N/A	N/A
Category 11 Use of sold products		Thousands of tonnes CO ₂ e	1,382	1,391	1,199
Category 12 End-of-life treatment of sold products		Thousands of tonnes CO ₂ e	N/A	N/A	N/A
Category 13 Downstream leased assets		Thousands of tonnes CO ₂ e	N/A	46	46
Category 14 Franchises		Thousands of tonnes CO ₂ e	N/A	N/A	N/A
Category 15 Investments		Thousands of tonnes CO ₂ e	679	814	1,026

		Unit	FYE2023	FYE2024	FYE2025
Contributions to Environmental Protection Through Products					
GHG Emission Reduction Contribution	Products and services 	Thousands of tonnes CO ₂ e	3,556	3,775	3,934
	Industrial gases 	Thousands of tonnes CO ₂ e	3,752	3,679	4,170

For information on the reporting boundary and the method of calculation, please refer to P.9–P.10.

Reporting boundary: Scope 1 emissions and Scope 2 emissions represent Nippon Sanso Holdings and its main consolidated subsidiaries. They also include the joint operation of JFE Sanso Center Co., Ltd. For information on Scope 3 emissions aggregation, please refer to P.8.

Scope 1 emissions: Direct emissions occurring from sources owned or controlled by the company

Scope 2 emissions: Indirect emissions from the use of electricity, steam, and heat

Scope 3 emissions: Indirect emissions other than Scope 2 emissions

Calculation methods: GHG emissions in Japan are calculated using emission factors provided in Japan's Act on Promotion of Global Warming Countermeasures (for electricity, the adjusted emission factors for each electricity provider until FYE2024, and the basic emission factor for each electricity provider from FYE2025; for city gas, chilled water, and hot water, substitute values from FYE2024). Scope 1 GHG emissions overseas are calculated using emission factors set forth in Japan's Act on Promotion of Global Warming Countermeasures. However, from FYE2024, Scope 1 emissions in Europe have been calculated using the DEFRA emission factors of the United Kingdom. Overseas Scope 2 emissions are calculated using country-specific emission factors published by the IEA. However, for electricity in Europe, a separate emission factor for each electricity provider is used, and emissions are calculated making reference to the Guarantee of Origin. Furthermore, emissions from electricity use at Top Thermo Manufacturing (Malaysia) Sdn. Bhd. are calculated using emissions coefficients for each electricity provider, while emissions from electricity use in the United States, China, Taiwan, and Singapore are calculated using published grid coefficients for each country. Please refer to P.8 for calculation method for Scope 3 emissions. From FYE2024, Scope 3 Category 13 has been calculated.

Indicators with  mark have been assured by KPMG AZSA Sustainability Co., Ltd. for FYE2025.

Sustainability Data

Environment


	Unit	FYE2023	FYE2024	FYE2025
Energy Usage				
Energy Consumption ㉔	GWh	13,945	13,367	13,393
Electric power	GWh	10,475	10,050	9,950
Fuels	GWh	3,269	3,095	3,261
Heat	GWh	201	222	182

Reporting boundary: Nippon Sanso Holdings and its main consolidated subsidiaries. They also include the joint operation of JFE Sanso Center Co., Ltd.
The energy of the consumed fuels are calculated based on the gross calorific values specified in Japan's Act on the Rational Use of Energy.

Environmental Impact				
Nitrogen oxide (NOx) emissions ㉔	Tonnes	2.6	3.2	1.3
Sulfur oxide (SOx) emissions ㉔	Tonnes	1.1	0.7	0.3
Particulate emissions ㉔	Tonnes	0.1	0.1	0.1
Volatile organic compound (VOC)* emissions ㉔	Tonnes	5	13	10
Releases of substances designated under the Pollutant Release and Transfer Register (PRTR) ㉔	Tonnes	8	13	10

Reporting boundary: Consolidated subsidiaries in Japan, including Taiyo Nippon Sanso

* The substances covered in the calculation are substances that fall under the PRTR Act and certain substances subject to the PRTR survey of the Japan Chemical Industry Association that are classified as VOCs.

Water Usage					
Breakdown of sources of fresh water withdrawn	Water Withdrawal 	Thousands of m³	44,988	40,879	39,958
	Water supply from local government	Thousands of m³	18,161	13,434	13,457
	Municipal water	Thousands of m³	6,332	5,881	5,644
	Industrial water	Thousands of m³	11,829	7,552	7,813
	Groundwater	Thousands of m³	2,366	2,377	2,480
	Surface water	Thousands of m³	24,440	25,047	24,000
	Other	Thousands of m³	21	22	21

Reporting boundary: Gas production plants operated by consolidated subsidiaries of Nippon Sanso Holdings in Japan, business locations with facilities specified under the Water Pollution Prevention Act, and main overseas consolidated subsidiaries

Waste				
Waste generated* ¹ ㉔	Tonnes	15,392* ⁵	15,170* ⁵	15,996*⁵
Waste disposed of as landfill* ² ㉔	Tonnes	5,052* ⁵	3,926* ⁵	4,320*⁵
Hazardous waste generated* ³ ㉔	Tonnes	2,000* ⁵	1,735* ⁵	1,714*⁵
Waste recycled* ⁴	Tonnes	7,975* ⁵	9,481* ⁵	9,484*⁵

Reporting boundary: Nippon Sanso Holdings and its main consolidated subsidiaries

Waste generated by consolidated subsidiaries in Japan is the volume for which the Company issued a manifest.

*¹ Includes valuable materials *² Includes residue after intermediate treatment outside the Group company *³ Includes specially controlled industrial waste *⁴ The amount of waste collected is included in the amount of resources recycled. *⁵ Due to restrictions on availability of information, information for the dry ice production and sales base of Matheson Tri-Gas, Inc. (formerly a business site of Continental Carbonic Products, Inc.) is not included among the aggregated total.

Others				
Number of environmental violations	Incidents	0	0	0
Amount of fines paid for environmental violations	Millions of yen	0	0	0

The figures for chemical oxygen demand (COD) emissions, nitrogen emissions in wastewater, and phosphorus emissions have been omitted from disclosure since the amounts of these emissions have been immaterial. The Nippon Sanso Holdings Group uses water primarily for indirect cooling, and its impacts on water quality are therefore not large. Taiyo Nippon Sanso and its Japanese subsidiaries have five business sites that are subject to restrictions on the concentration of COD, nitrogen, and phosphorous emissions in wastewater. The total amounts of COD, nitrogen, and phosphorous emissions for all five sites amount to less than one tonne each.

	Unit	FYE2023	FYE2024	FYE2025
GHG Emissions				
GHG Scope 1 + Scope 2 ㉔	Thousands of tonnes CO ₂ e	5,868	5,667	5,258
Japan	Thousands of tonnes CO ₂ e	2,054	1,873	1,712
United States	Thousands of tonnes CO ₂ e	2,251	2,165	2,087
Europe	Thousands of tonnes CO ₂ e	916	989	797
Asia and Oceania	Thousands of tonnes CO ₂ e	632	627	648
Thermos	Thousands of tonnes CO ₂ e	15	12	12
Energy Consumption				
Total ㉔	GWh	13,945	13,367	13,393
Japan	GWh	3,757	3,389	3,167
United States	GWh	6,106	5,938	6,038
Europe	GWh	2,889	2,830	2,912
Asia and Oceania	GWh	1,167	1,189	1,254
Thermos	GWh	26	22	22
Electricity Consumption				
Total ㉔	GWh	10,475	10,050	9,950
Japan	GWh	3,552	3,169	2,977
United States	GWh	3,249	3,242	3,263
Europe	GWh	2,585	2,538	2,549
Asia and Oceania	GWh	1,066	1,082	1,141
Thermos	GWh	23	19	19
Water Withdrawal				
Total ㉔	Thousands of m ³	44,988	40,879	39,958
Japan	Thousands of m ³	7,445	3,377	3,569
United States	Thousands of m ³	8,464	8,122	8,043
Europe	Thousands of m ³	25,136	25,690	24,605
Asia and Oceania	Thousands of m ³	3,744	3,523	3,581
Thermos	Thousands of m ³	199	168	162
Waste Generated (Including Valuable Materials)*¹				
Total ㉔	Tonnes	15,392* ²	15,170* ²	15,996*²
Japan	Tonnes	3,909	4,998	3,861
United States	Tonnes	5,415* ²	4,771* ²	5,549*²
Europe	Tonnes	3,068	2,358	2,793
Asia and Oceania	Tonnes	602	1,140	1,806
Thermos	Tonnes	2,398	1,903	1,987

*¹ Waste generated by the consolidated subsidiaries of Nippon Sanso Holdings in Japan is the volume for which the Company issued a manifest.

*² As with the reporting boundary for "Waste" on the left, Matheson Tri-Gas, Inc.'s dry ice production and sales base (formerly a business site of Continental Carbonic Products, Inc.) is not included among the aggregated total.

Sustainability Data

Society

	Unit	FYE2023	FYE2024	FYE2025
Employees and Diversity (Consolidated)*				
Employees	Number of individuals	19,541	19,390	19,754
Japan	Number of individuals	6,391	5,950	6,053
United States	Number of individuals	4,532	4,705	4,597
Europe	Number of individuals	3,013	3,124	3,369
Asia and Oceania	Number of individuals	4,267	4,285	4,360
Thermos	Number of individuals	1,338	1,326	1,375
Employees by gender				
Male	Number of individuals	15,651	15,468	15,644
Female	Number of individuals	3,890	3,922	4,110
Employees by age group (Composition ratio)				
20s and below	%	15.7	15.3	15.1
30s	%	25.0	25.3	26.4
40s	%	27.0	26.2	26.6
50s and above	%	32.4	33.0	32.8
Years of consecutive service				
Overall average	Years	11.6	11.2	11.1
Men	Years	11.8	11.1	11.2
Women	Years	11.4	11.3	11.1
Average age	Years	44.1	44.1	44.3
New hires	Number of individuals	3,161	3,020	2,911
Employee turnover rate	%	6.9	4.2	4.2
Female employees as a percentage of the total number of employees	%	19.9	20.2	20.8
Female managers as a percentage of total managerial positions	%	14.5	15.4	16.7

* Due to differences in accounting periods, some of the compiled data until FYE2024 included figures as of December of each year, but starting in FYE2025, the actual figures are calculated as of the end of March for all Group companies.

Employees and Diversity (Non-Consolidated)				
Employees	Number of individuals	88*	91*	112*
Employees by gender				
Male	Number of individuals	72	72	87
Female	Number of individuals	16	19	25
Female employees as a percentage of the total number of employees	%	18.2	20.9	22.3
Female managers as a percentage of total managerial positions	%	3.6	3.7	6.3

* Includes employees working concurrently for Taiyo Nippon Sanso Corporation (FYE2023: 47 persons; FYE2024: 41 persons; FYE2025: 49 persons)

Indicators with  mark have been assured by KPMG AZSA Sustainability Co., Ltd. for FYE2025.

	Unit	FYE2023	FYE2024	FYE2025
Employees, Diversity, and Work-Life Balance (Registered Employees of Taiyo Nippon Sanso Corporation)				
Employees	Number of individuals	2,086	2,110	2,165
Employees by gender				
Male	Number of individuals	1,780	1,794	1,817
Female	Number of individuals	306	316	348
Employees by age group (Composition ratio)				
20s and below	%	20.2	20.1	20.1
30s	%	20.5	21.3	22.1
40s	%	24.2	22.6	20.6
50s and above	%	35.1	35.9	37.2
Years of consecutive service				
Overall average	Years	18.7	18.4	16.7
Men	Years	19.4	19.3	17.8
Women	Years	14.0	13.7	12.9
Average age	Years	42.7	42.7	42.9
New hires	Number of individuals	88	100	113
Employee turnover rate* ¹	%	3.7	4.5	2.2
Companywide employee training hours* ²				
New employee training hours	Hours	27,360	23,680	26,880
Employee training hours	Hours	42,309* ⁵	61,106* ⁵	70,599
Union members	Number of individuals	1,232	1,275	1,302
Union members as a percentage of the total number of employees	%	59.1	60.4	60.1
Layoffs* ³	Number of individuals	0	0	0
Female employees as a percentage of total number of employees	%	14.7	15.0	16.1
Female managers as a percentage of total managerial positions	%	1.8	2.4	2.5
Employment ratio of persons with disabilities (as of June 1 of each fiscal year)	%	2.5	2.5	2.5
Number of employees reemployed after retirement	Number of individuals	86	99	87
Employees using childcare leave systems	Number of individuals	39	46	58
Men	Number of individuals	21	28	39
Women	Number of individuals	18	18	19
Employees using nursing care leave or long-term nursing care leave	Number of individuals	0	18	16
Usage rate for annual paid leave* ⁴	%	67.0	70.4	70.3
Employees using volunteer leave system	Number of individuals	0	0	0

*1 Employee turnover rate is the number of employees leaving the Company during the fiscal year (including mandatory-age retirees and excluding personnel transferring to other Group companies) divided by the number of employees at the end of the fiscal year *2 Reporting boundary: Training hours of Taiyo Nippon Sanso Corporation employees and Taiyo Nippon Sanso Group employees who took training held by Taiyo Nippon Sanso Corporation *3 Employees leaving the Company for reasons attributable to the Company (dismissals) *4 The number of new days granted in the reporting year is the denominator. The number of days used in the reporting year is the numerator. The denominator does not include the number of days carried over from the previous fiscal year. *5 To improve the accuracy of data aggregation, values presented in past fiscal years have been retroactively amended.

Sustainability Data

Society

	Unit	FYE2023	FYE2024	FYE2025
Others (Consolidated)				
Expenditures on social contribution initiatives	Millions of yen	78.3	103.0	128.6

Occupational Health and Safety				
Lost time injury rate (Number of injuries / fatalities due to occupational accidents per million work hours)				
Nippon Sanso Holdings Group (Including Taiyo Nippon Sanso Group) ㊦	—	1.54* ¹	2.11* ¹	1.85
Taiyo Nippon Sanso Group ㊦	—	0.81	0.77	0.78
Number of fatalities (Consolidated)	Number of individuals	0	1	0
Employees	Number of individuals	0	1	0
Contractors	Number of individuals	0	0	0
Number of participants in hazard simulation training* ² , * ³	Number of individuals	978	1,058	712

Reporting boundary: Main consolidated subsidiaries with production divisions in Japan and overseas

*¹ To improve the accuracy of data aggregation, values presented in past fiscal years have been retroactively amended.

*² Hazard simulation training is experiential training conducted by the Technical Academy of Taiyo Nippon Sanso in accordance with NSHD's Occupational Safety and Health / Industrial Safety and Disaster Prevention Policy. The training is designed to eliminate occupational accidents by raising employees' safety awareness and knowledge, and their sensitivity to hazards. Employees of associates are also included in the scope of data collection.

*³ From FYE2024, values presented in past fiscal years have been retroactively amended.

Supplementary Notes Regarding the Reporting Boundary

Main consolidated subsidiaries

Consolidated subsidiaries in Japan including Taiyo Nippon Sanso Corporation; Matheson Tri-Gas, Inc.; Western International Gas & Cylinders, Inc.; Nippon Gases Euro-Holding S.L.U. and its consolidated subsidiaries (excluding Polaris S.r.l.); Leeden National Oxygen Ltd.; Leeden Gases Sdn. Bhd.; Nippon Sanso Ingasco, Inc.; Nippon Sanso Ingasco Philippines, Inc.; Nippon Sanso Ingasco Clark, Inc.; Nippon Sanso (Thailand) Co., Ltd.; Ayutthaya Industrial Gases Co., Ltd.; Taiyo Gases Co., Ltd.; Nippon Sanso Vietnam Joint Stock Company; Taiyo Nippon Sanso India Pvt. Ltd.; Shanghai Taiyo Nippon Sanso Gas Co., Ltd.; Dalian Changxing Island Taiyo Nippon Sanso Gas Co., Ltd.; Dalian Taiyo Nippon Sanso Gas Co., Ltd.; Yangzhou Taiyo Nippon Sanso Semiconductor Gases Co., Ltd.; Matheson Gas Products Korea, Co., Ltd.; Nippon Sanso Taiwan, Inc.; Taiyo Nippon Sanso Engineering Taiwan, Inc.; Fu Yang Gas Co., Ltd.; Supagas Pty Ltd; Nippon Sanso Myanmar Co., Ltd.; Top Thermo Manufacturing (Malaysia) Sdn. Bhd.; Vacuumtech Philippines Inc.

* From FYE2024, data from the joint operations JFE Sanso Center Co., Ltd. and Sakai Gas Center, Inc. are not included.

Sustainability Data

Governance

	Unit	FYE2023	FYE2024	FYE2025
Activities of Committees				
Management Configuration	Number of individuals	9	9	9
Internal directors	Number of individuals	4	4	4
Independent outside directors	Number of individuals	5	5	5
Directors serving concurrently as executive officers	Number of individuals	1	1	1
Percentage of directors serving concurrently as executive officers	%	11.1	11.1	11.1
Independent outside directors as a percentage of total Board of Directors' members	%	55.6	55.6	55.6
Female directors as a percentage of total Board of Directors' members	%	22.2	22.2	22.2
Term of appointment	Years	1	1	1
Frequency of Board of Directors' meetings	Times	11	12	12
Attendance at Board of Directors' meetings	%	100.0	100.0	100.0
Attendance of independent outside directors at Board of Directors' meetings	%	100.0	100.0	100.0
Number of directors attending less than 75% of Board of Directors' meetings	Number of individuals	0	0	0
Audit & Supervisory Board members	Number of individuals	4	4	4
Internal Audit & Supervisory Board members	Number of individuals	1	1	1
Independent outside Audit & Supervisory Board members	Number of individuals	2	2	2
Independent outside Audit & Supervisory Board members as a percentage of total Audit & Supervisory Board members	%	50.0	50.0	50.0
Female Audit & Supervisory Board members as a percentage of total Audit & Supervisory Board members	%	0.0	0.0	0.0
Frequency of Audit & Supervisory Board meetings	Times	14	15	17
Attendance at Audit & Supervisory Board meetings	%	100.0	100.0	100.0
Attendance of independent outside Audit & Supervisory Board members at Audit & Supervisory Board meetings	%	100.0	100.0	100.0
Number of Audit & Supervisory Board members attending less than 75% of Audit & Supervisory Board meetings	Number of individuals	0	0	0
Average age of directors and Audit & Supervisory Board members	Years	66.1	65.2	64.8
Number of executive officers	Number of individuals	7	6	8
Female executive officers as a percentage of total executive officers	%	0.0	0.0	0.0

	Unit	FYE2023	FYE2024	FYE2025
Activities of Committees				
Advisory Committee on Appointments and Remuneration				
Members	Number of individuals	6	6	6
Internal directors	Number of individuals	1	1	1
Independent outside directors	Number of individuals	5	5	5
Frequency of meetings	Times	12	9	17
Attendance*1	%	100.0	100.0	99.0
Management Committee				
Members	Number of individuals	12	13	15
Frequency of meetings	Times	12	15	14
Attendance*1	%	100.0	99.5	100.0
Global Investment Committee				
Members*2	Number of individuals	15	15	18
Frequency of meetings	Times	2	2	2
Attendance*1	%	93.3	96.5	100.0
Global Strategy Review Committee				
Members	Number of individuals	17	16	18
Frequency of meetings	Times	1	1	1
Attendance	%	100.0	100.0	100.0
Global Risk Management Committee				
Members	Number of individuals	18	18	20
Frequency of meetings	Times	1	1	1
Attendance	%	100.0	94.4	100.0
Global Compliance Committee				
Members*2	Number of individuals	8	7	7*3
Frequency of meetings	Times	1	1	1
Attendance	%	100.0	100.0	100.0

*1 Average attendance rate *2 Excluding additional attendees and Secretariat *3 Including alternate attendees

Sustainability Data

Governance

	Unit	FYE2023	FYE2024	FYE2025
Remuneration for Officers				
Remuneration for directors (excluding outside directors)				
Total	Millions of yen	152	147	154
Basic remuneration	Millions of yen	102	91	91
Corporate political contributions	Millions of yen	47	46	53
Non-financial KPI-linked bonuses	Millions of yen	3	9	9
Remuneration for Audit & Supervisory Board members (excluding independent outside members)				
Total	Millions of yen	28	28	30
Basic remuneration	Millions of yen	28	28	30
Remuneration for independent outside directors				
Total	Millions of yen	129	135	145
Basic remuneration	Millions of yen	129	135	145
Remuneration for independent auditors				
Total	Millions of yen	206	233	246
Remuneration for audit services	Millions of yen	205	229	241
Other remuneration for independent auditors	Millions of yen	1	4	5
Others				
Anti-takeover measures	—	Not adopted	Not adopted	Not adopted
Code of ethics	—	Adopted	Adopted	Adopted
Policy on transparency of tax affairs	—	Adopted (Currently disclosed on the Company website)	Adopted (Currently disclosed on the Company website)	Adopted (Currently disclosed on the Company website)
Corporate political contributions	Millions of yen	0.0	0.0	0.0
Violations of rules for the prevention of corruption	Number of violations	0	0	0
Monetary penalties incurred as a result of violations of guidelines for the prevention of corruption	Millions of yen	0	0	0
Rate of receiving compliance training	%	99.7	99.4*	100.0

* 100% completion rate as of the end of June 2024

Intellectual Property and Research and Development

	Unit	FYE2023	FYE2024	FYE2025
Intellectual Property				
Registered patents				
Total	Patents	1,682	1,761	1,793
Japan	Patents	1,038	1,114	1,131
Overseas	Patents	644	647	662
* Sum of patents at all operating companies, including consolidated subsidiaries				
Research and Development				
Research and Development				
Total	Millions of yen	3,515	4,466	4,946
Japan	Millions of yen	3,054	3,895	4,078
United States	Millions of yen	429	529	729
Europe	Millions of yen	—	—	105
Thermos	Millions of yen	31	41	32

Sustainability Data

Calculation Methods for Scope 3 GHG Emissions

Referenced Guidelines

Our Scope 3 GHG emissions are calculated based on the Corporate Value Chain (Scope 3) Accounting and Reporting Standard issued by the GHG Protocol.

For emission factors, we used the emission factor database Ver. 3.5 provided in the Green Value Chain Platform, led by the Japanese government, and information from the Inventory Database for Environmental Analysis (IDEA v3.5) (IPCC 2021 without LULUCF AR6) developed by the National Institute of Advanced Industrial Science and Technology.

Reporting Boundary

Unless otherwise specified, the data covers Nippon Sanso Holdings and its consolidated subsidiaries in Japan, including Taiyo Nippon Sanso Corporation.

Calculation Method by Category

Category 1 Purchased goods and services	Calculated by multiplying the amounts of products and services in physical or monetary units purchased by Taiyo Nippon Sanso Corporation by the respective emission factor for each type of product or service. However, emissions from transport and shipping services and from oxygen, nitrogen, and argon purchased from Taiyo Nippon Sanso Corporation's consolidated subsidiaries or affiliated companies are included in the reporting boundary of Scope 1 or 2, or Categories 4 and 15 of Scope 3, and are therefore deducted from the procured amounts used for this calculation.	Category 8 Upstream leased assets	Since the amount of applicable lease assets is negligible, emissions in this category are not calculated.
Category 2 Capital goods	Calculated by multiplying the amounts of capital investment during each reporting fiscal year by an emission factor per price of capital goods.	Category 9 Downstream transportation and distribution	The emissions associated with the transportation of sold products whose cost is borne by Taiyo Nippon Sanso Corporation and Nippon Ekitan Corporation fall within Category 4 as the Group basically bears the cost of transporting products.
Category 3 Fuel- and energy-related activities not included in Scope 1 or Scope 2	This category includes emissions associated with the extraction, production, and transportation of purchased fuels and those consumed in the production of electricity and steam that are purchased by the Group. Fuels: Calculated by multiplying the amount purchased during the fiscal year by an emission factor for each fuel type. Electricity and steam: Calculated by multiplying the amount purchased from outside the Group by the upstream emission factor for each purchased energy reflecting electricity transmission loss.	Category 10 Processing of sold products	The Taiyo Nippon Sanso Group's main product group is gas, and since it is difficult to rationally calculate the GHG emissions associated with the processing of these products, the emissions are not calculated.
Category 4 Upstream transportation and distribution (Including distribution services whose cost is borne by the Group)	Calculated by subtracting the CO ₂ emissions from logistics subsidiaries, which are included in Scope 1 emissions, from the CO ₂ emissions reported for Taiyo Nippon Sanso Corporation and Nippon Ekitan Corporation as specified shippers in accordance with the Act on Promotion of Global Warming Countermeasures. CO ₂ emissions related to transportation and distribution of products for which Taiyo Nippon Sanso Corporation and Nippon Ekitan Corporation bear the transportation costs are included in this category.	Category 11 Use of sold products	The amount of CO ₂ emissions generated from the use of propane gas (LP gas), liquid carbon dioxide gas, and dry ice, and from use of electricity for the operation of its air separation units during the service life, which were sold to customers outside of the Taiyo Nippon Sanso Group.
Category 5 Waste generated in operations	Calculated by multiplying industrial waste output by the emission factors for each waste type (including transportation stages).	Category 12 End-of-life treatment of sold products	The Taiyo Nippon Sanso Group's primary products are gases (oxygen, nitrogen, and argon). After use, these gases return to the atmosphere and do not become waste. Furthermore, since the gas containers are loaned, and therefore the amount of waste from sold is negligible, emissions in this category are not calculated.
Category 6 Business travel	Calculated by multiplying the number of employees of consolidated subsidiaries in Japan, including Taiyo Nippon Sanso Corporation, by the emission factor (0.13 tonnes of CO ₂ /person/year).	Category 13 Downstream leased assets	CO ₂ emissions from the use of electricity during operation of air separation units loaned to customers by Taiyo Nippon Sanso Corporation are calculated (electricity consumption is calculated by multiplying the rated electric power consumption by the average operation time).
Category 7 Employee commuting	Taiyo Nippon Sanso Corporation employees: For train commuters, the annual payment for commuter passes is multiplied by an emission factor per transportation expense. For car commuters, the round-trip distance is multiplied by the annual number of commuting days and an emission factor per person-kilometer for passenger car. Employees of Japanese consolidated subsidiaries: The number of employees is multiplied by the annual number of commuting days, and multiplied by the emission factor per commuting day.	Category 14 Franchises	As the Group does not have any businesses in this format, there are no emissions in this category.
		Category 15 Investments	Calculated by multiplying the GHG emissions of each of the nine affiliated companies of Taiyo Nippon Sanso Corporation in Japan that produce gas by the Company's shareholding ratio (as of the fiscal year-end). The nine companies' GHG emissions are based on their actual emissions in the reporting period.

Sustainability Data

Calculation Methods for GHG Emission Reduction Contribution

We include the following products and services sold by consolidated subsidiaries of Nippon Sanso Holdings and certain affiliated companies in the calculation of GHG emission reduction contribution. The calculation method per product or service is as follows. The CO₂ emission factors used for electricity are 0.422 t-CO₂/MWh in Japan, 0.210 t-CO₂/MWh in Europe, and the emission factors published by the IEA for each country in the United States and Asia and Oceania.

Environmental product offerings and applications	Calculation method for GHG emission reduction contribution	Calculation period		
		FYE2023	FYE2024	FYE2025
Products and services	Contribution to GHG emission reduction through products and services using the NSHD Group's proprietary technologies			
Combustion-type exhaust gas abatement system Reporting boundary: Consolidated subsidiaries in Japan	An average processing capacity of 0.6 L/min for nitrogen trifluoride (NF ₃) gas per one combustion-type exhaust gas abatement system was assumed, and this value was multiplied by the number of such systems that were installed from FYE2021 to FYE2025, the number of operating hours per year, and the global warming potential (GWP) of NF ₃ to calculate the GHG emission reduction contribution. The amount of CO ₂ emissions from fuel used in combustion equipment was deducted.	○	○	○
SF₆ recovery service Reporting boundary: Consolidated subsidiaries in Japan	The volume of sulfur hexafluoride (SF ₆) gas recovered in FYE2025 was multiplied by its GWP to calculate GHG emission reduction contribution.	○	○	○
SCOPE-JET® Reporting boundary: Consolidated subsidiaries in Japan	Based on actual observed values at two electric arc furnace manufacturers who had introduced SCOPE-JET®, the electricity-saving effect per volume of jet oxygen (kWh/Nm ³) was calculated. The ratio of the number of plants that have introduced SCOPE-JET® to the total number of electric arc furnace manufacturing plants was multiplied by the volume of crude steel products by electric arc furnaces in Japan in FYE2025, and the resulting number was assumed to be the production volume of crude steel contributed by the electricity saving from SCOPE-JET®. The amount of oxygen consumed by SCOPE-JET® in the production of this crude steel, and the amount of electricity saved per volume of oxygen were multiplied by the CO ₂ emission factor for electricity to calculate the GHG emission reduction contribution. The amount of the CO ₂ emissions generated during the manufacture of the oxygen was deducted.	○	○	○
MG Shield® Reporting boundary: Consolidated subsidiaries in Japan and Asia and Oceania	The amount of SF ₆ gas whose use was avoided through use of MG Shield® sold in FYE2025 was multiplied by the gas' GWP to calculate the GHG emission reduction contribution.	○ (Japan)	○ (Japan and Asia and Oceania)	○ (Japan and Asia and Oceania)
New refrigerants Reporting boundary: Consolidated subsidiaries in Europe	We calculated the amount of reduction contribution by assuming a 7% per year leakage rate of new refrigerants sold from FYE2016 to FYE2025, and multiplying leakage amount by the difference between the GWP of alternative refrigerants and the GWP of new refrigerants. The reduction contribution assumes annual leakage of 7% from equipment sold in the preceding fiscal year, continuing at the same rate in the next fiscal year.	○	○	○
Nitrogen gas supply system for laser processing (PSA) Reporting boundary: Consolidated subsidiaries in Japan	The annual power consumption of Taiyo Nippon Sanso Corporation's conventional air compressor was compared with that of the energy-saving type nitrogen gas supply system to calculate the annual electricity saving from using the energy-saving type system. The annual electricity saved was multiplied by the CO ₂ emission factor for electricity and the cumulative number of units sold from FYE2016 to FYE2025 to calculate the GHG emission reduction contribution.	○	○	○
Shuttle Chef® Reporting boundary: Consolidated subsidiaries in Japan	The amount of electric power usage saved per year from using Shuttle Chef® when cooking was multiplied by the CO ₂ emission factor for electricity and the total number of units sold over the three years from FYE2023 to FYE2025 to calculate the GHG emission reduction contribution.	○	○	○
Hydrogen station Reporting boundary: Consolidated subsidiaries in Japan	The annual CO ₂ emissions, which include emissions during the manufacture of the hydrogen, emitted by fuel cell vehicles (FCVs) filled with hydrogen at hydrogen stations sold or operated by Taiyo Nippon Sanso Corporation and operated during FYE2025 was compared with the annual CO ₂ emissions of gasoline cars to calculate the GHG emission reduction contribution.	○	○	○

Sustainability Data

Calculation Methods for GHG Emission Reduction Contribution

Environmental product offerings and applications	Calculation method for GHG emission reduction contribution	Calculation period		
		FYE2023	FYE2024	FYE2025
Industrial gases	Contribution to GHG emission reduction through industrial gases produced and supplied by the NSHD Group			
Oxygen-enriched combustion in blast furnaces Reporting boundary: Consolidated subsidiaries in Japan and Europe, affiliated companies in Japan, and joint operations	We calculated the GHG emission reduction contribution as the difference between the amount of CO ₂ emissions in the production of crude steel using 100% coke and the production of crude steel via pulverized coal combustion based on crude steel production by the eight steel companies to whom the NSHD Group supplied oxygen in FYE2025. This calculation method is described in “The Impact of Oxygen on Reducing CO ₂ Emissions in Blast Furnace Ironmaking” (July 2011) by Dr. Michael F. Riley. We deducted the amount of CO ₂ emitted during the production of oxygen and the pumping of gas into the blast furnace.	○	○	○
Oxygen-enriched combustion in electric arc furnaces Reporting boundary: Consolidated subsidiaries in the United States, Europe, and Asia and Oceania	Based on actual observed values at two electric arc furnace manufacturers who had introduced oxygen burners, the electricity-saving effect per volume of jet oxygen (kWh/Nm ³) was calculated. The amount of the reduction was calculated by multiplying the amount of oxygen transmitted to the customer by the electricity reduction per volume of oxygen for the oxygen burner, but the CO ₂ emissions coefficient for electricity. The amount of CO ₂ emissions generated in manufacturing the oxygen has been deducted.	○ (The United States, Europe, and Asia and Oceania)	○ (The United States, Europe, and Asia and Oceania)	○ (The United States, Europe, and Asia and Oceania)
Argon (Ar) welding Reporting boundary: Consolidated subsidiaries in Europe the United States, Europe, and Asia and Oceania	We calculated the contribution to the reduction of overall CO ₂ emissions from using Ar-CO ₂ mixed gas as a welding gas, based on actual values when performing CO ₂ welding and Ar-CO ₂ mixed gas welding using welding equipment. The calculation was based on the differences in welding speed and CO ₂ emissions to the atmosphere. Specifically, we calculated the contribution as the difference in CO ₂ emissions released directly when conducting CO ₂ welding and Ar-CO ₂ mixed gas welding with regard to the CO ₂ generated in both methods, adding the reduction effect of lower electric power consumption due to increased welding speed with mixed gas welding. The impact of reduced electricity consumption was calculated by multiplying the amount of electricity consumption saved due to mixed gas welding by the CO ₂ emissions coefficient. The amount of CO ₂ emissions generated in the manufacture of Ar is deducted from the contribution to reduced CO ₂ emissions.	○ (The United States, Europe, and Asia and Oceania)	○ (The United States, Europe, and Asia and Oceania)	○ (The United States, Europe, and Asia and Oceania)
Biogenic CO₂ Reporting boundary: Consolidated subsidiaries in Europe and Asia and Oceania	We calculated the amount of contribution to CO ₂ reduction as the sales volume of CO ₂ generated from biofuels.	—	—	○ (Europe and Asia and Oceania)

Sustainability Data

Independent Practitioner's Limited Assurance Report

Independent Practitioner's Limited Assurance Report

To the Representative Director, President CEO of Nippon Sanso Holdings Corporation

Conclusion

We have performed a limited assurance engagement on whether selected environmental and social performance indicators (the "subject matter information" or the "SMI") presented in Nippon Sanso Holdings Corporation's (the "Company") Sustainability Data 2025 (English version)(the "Report") as of and for the year ended March 31, 2025 have been prepared in accordance with the criteria (the "Criteria"), which are established by the Company and are explained in the Report. The SMI subject to the assurance engagement is indicated in the Report with the symbol "☑".

Based on the procedures performed and evidence obtained, nothing has come to our attention to cause us to believe that the Company's SMI as of and for the year ended March 31, 2025 is not prepared, in all material respects, in accordance with the Criteria.

Basis for Conclusion

We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised), *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information*, and International Standard on Assurance Engagements (ISAE) 3410, *Assurance Engagements on Greenhouse Gas Statements*, issued by the International Auditing and Assurance Standards Board (IAASB). Our responsibilities under those standards are further described in the "Our responsibilities" section of our report.

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA).

Our firm applies International Standard on Quality Management (ISQM) 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*, issued by the IAASB. This standard requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Other information

Our conclusion on the SMI does not extend to any other information that accompanies or contains the SMI (hereafter referred to as "other information"). We have read the other information but have not performed any procedures with respect to the other information.

Responsibilities for the SMI

Management of the Company are responsible for:

- designing, implementing and maintaining internal controls relevant to the preparation of the SMI that is free from material misstatement, whether due to fraud or error;
- selecting or developing suitable criteria for preparing the SMI and appropriately referring to or describing the criteria used; and
- preparing the SMI in accordance with the Criteria.

Inherent limitations in preparing the SMI

As described in the "Sustainability Data Environment section" of the Report, GHG emissions quantification is subject to uncertainty when measuring activity data, determining emission factors, and considering scientific uncertainty inherent in the Global Warming Potentials. Hence, the selection by management of a different but acceptable measurement method, activity data, emission factors, and relevant assumptions or parameters could have resulted in materially different amounts being reported.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the SMI is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the Management of the Company.

Summary of the work we performed as the basis for our conclusion

We exercised professional judgment and maintained professional skepticism throughout the engagement. We designed and performed our procedures to obtain evidence about the SMI that is sufficient and appropriate to provide a basis for our conclusion. Our procedures selected depended on our understanding of the SMI and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise. In carrying out our engagement, the procedures we performed primarily consisted of:

- assessing the suitability of the criteria applied to prepare the SMI;
- conducting interviews with the relevant personnel of the Company to obtain an understanding of the key processes, relevant systems and controls in place over the preparation of the SMI;
- performing analytical procedures including trend analysis;
- identifying and assessing the risks of material misstatements;
- evaluating whether the Company's process for developing estimates as well as its use of data, selection of the methods and assumptions were appropriate;
- performing a site visit at one of the Company's sites which was determined through our risk assessment procedures;
- performing, on a sample basis, recalculation of amounts presented as part of the SMI;
- performing other evidence gathering procedures for selected samples; and
- evaluating whether the SMI was presented in accordance with the Criteria.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

/s/ Junichi Shiraishi
Junichi Shiraishi, Engagement Partner
KPMG AZSA Sustainability Co., Ltd.
Tokyo Office, Japan
September 19, 2025

Notes to the Reader of Assurance Report: This is a copy of the Assurance Report and the original copies are kept separately by the Company and KPMG AZSA Sustainability Co., Ltd.



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