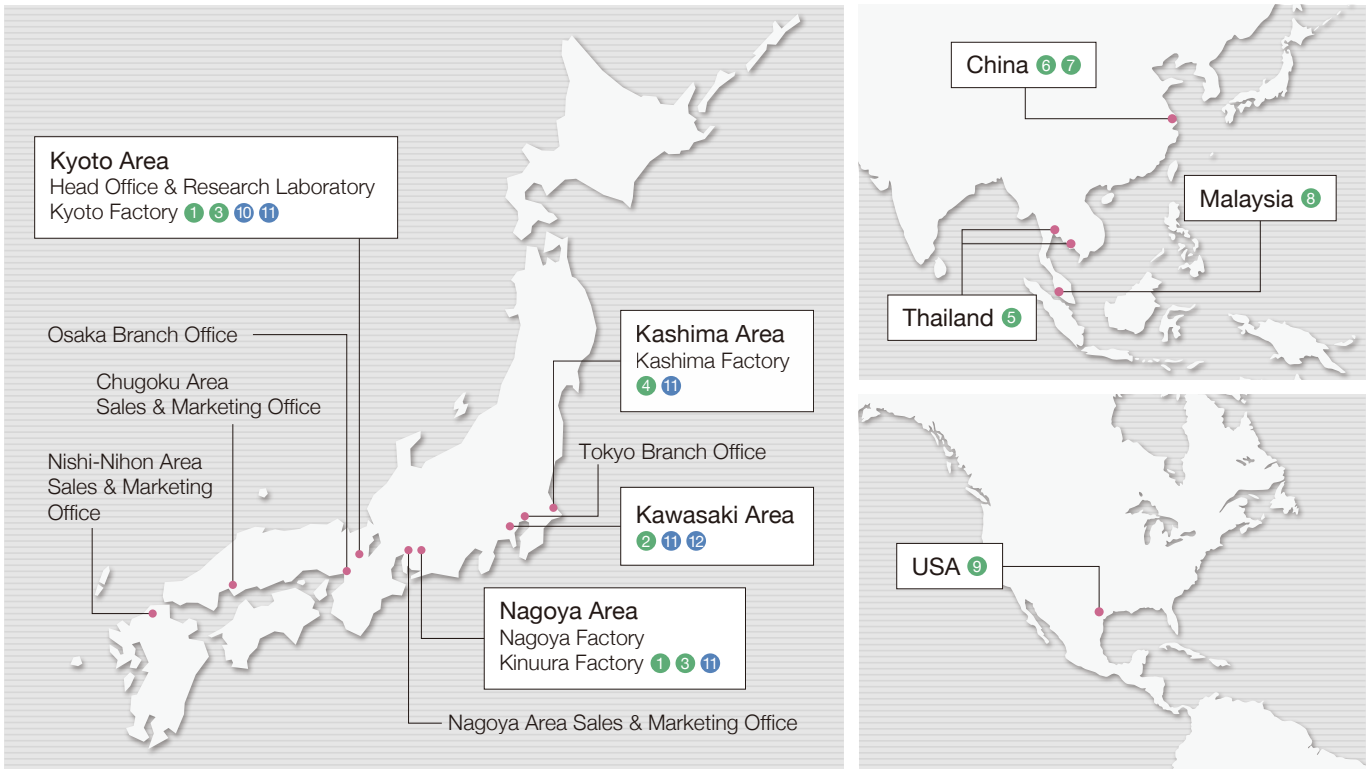
ISO certification



	Location	Facility	Abbr.	Established	ISO14001		ISO9001	
					Acquired	Certification authority	Acquired	Certification authority
Production Base	–	Sanyo Chemical Kashima Factory	Kas	FY 1977	Acquired in FY2000, Discontinued in FY2020		FY 1997	JCQA
	–	Sanyo Chemical Kyoto Factory	Kyo	FY 1949	Acquired in FY2000, Discontinued in FY2020		FY 1999	JCQA
	–	Sanyo Chemical Nagoya Factory	Mei	FY 1969	Acquired in FY2001, Discontinued in FY2020		FY 1998	JCQA
	–	Sanyo Chemical Kinuura Factory	Kinu	FY 2010	–		FY 2010	JCQA
	1	SDP Global Co., Ltd.	SDP	FY 2001	Acquired in FY2001, Discontinued in FY2020		FY 2000	JCQA
	2	San Chemical Co., Ltd.	SCC	FY 1982	Acquired in FY1999, Discontinued in FY2020		FY 2000	JCQA
	3	SAN NOPCO LIMITED	SNL	FY 1966	Acquired in FY2001, Discontinued in FY2020		FY 2000	JCQA
	4	San-Petrochemicals Co., Ltd.	SPCC	FY 1977	Acquired in FY2000, Discontinued in FY2021		Acquired in FY1999, Discontinued in FY2020	
	5	Sanyo Kasei (Thailand) Ltd.	SKT	FY 1997	FY 2009	TICA/J-VAC	FY 2004	TICA/J-VAC
	6	Sanyo Kasei (Nantong) Co., Ltd.	SKN	FY 2003	FY 2012	TUV NORD	FY 2006	TUV NORD
	7	San-Dia Polymers (Nantong) Co., Ltd.	SDN	FY 2003	FY 2013	CQM	FY 2007	DET NORSKE VERITAS
	8	SDP GLOBAL (MALAYSIA) SDN. BHD.	SDPM	FY 2015	–		–	
	9	Sanyo Chemical Texas Industries, LLC	SCTI	FY 2005	–		–	
Non-production Base	10	San-Apro Ltd.	SA	FY 1966	–		FY 2003	JCQA
	11	Sanyo Chemical Logistics Co.,Ltd.	SLogi	FY 2020	–		–	
	12	Shiohama Chemicals Warehouse Co., Ltd.	ShioC	FY 1983	–		–	

On the following pages, the above-listed terms are to indicate the scope of data aggregation. SCI indicates Sanyo Chemical Industries proper, "Domestic" indicates SCI plus domestic affiliates/subsidiaries. "Overseas" indicates overseas affiliates/subsidiaries that have production bases. In case of no specific note, the scope is "domestic" plus "overseas."

Environmental investment and environmental effects

Environmental accounting results: Based on Ministry of the Environment (Japan) Guidelines

[Scope] Sanyo Chemical, seven domestic subsidiaries/affiliates, and five overseas subsidiaries/affiliates with production bases

Environmental protection cost

Investment/Expenses (Unit: million yen)

Classification		2017	2018	2019	2020	2021
Facility Area Costs	1. Pollution prevention costs	136/799	122/864	172/872	260/843	216/842
	2. Global environmental protection costs	481/634	39/622	83/676	81/650	64/671
	3. Resource recycling costs	60/1,734	28/1,771	64/1,932	41/1,850	1/1,794
Upstream/downstream costs		0/38	0/28	0/30	0/34	2/40
Administrative costs		1/457	6/397	3/417	1/459	55/475
R&D costs		0/732	0/688	0/506	0/464	0/663
Social activities costs		0/132	0/129	0/138	0/124	0/132
Environmental remediation costs		0/6	0/4	0/3	20/5	0/3
Total		678/4,531	195/4,504	322/4,573	404/4,428	338/4,620

*1 Investment amount is based on acceptances during concerning period. *2 The expense amount includes depreciation.

Environmental conservation measures by category

Investment/Expenses (Unit: million yen)

Measure category	2017	2018	2019	2020	2021
1) Global warming	467/626	27/615	65/675	40/633	19/646
2) Ozone layer protection	0/1	0/1	1/1	0/1	1/5
3) Atmosphere conservation	70/379	71/419	65/395	185/394	232/391
4) Noise and vibration	6/67	3/70	3/73	5/75	1/64
5) Aquatic and Geologic conservation	58/374	45/399	98/426	136/414	73/432
6) Waste and recycling	73/1,740	35/1,778	69/1,940	34/1,857	1/1,803
7) Reduction of chemical substance risk and emissions	0/317	0/225	0/234	0/282	0/277
8) Natural environmental conservation	0/12	0/13	10/19	0/16	3/17
9) Other cost	4/283	16/295	11/304	3/292	9/322
Total	678/3,799	195/3,816	322/4,068	404/3,963	338/3,957

Note: R&D cost is not classified.

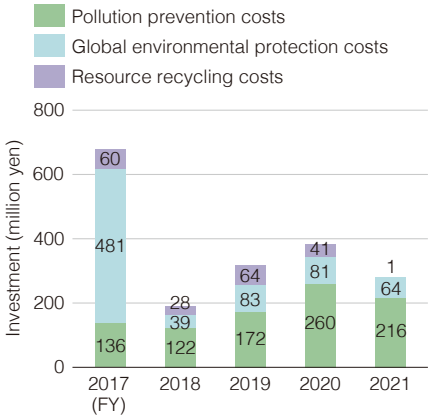
Economic impact

(Unit: million yen)

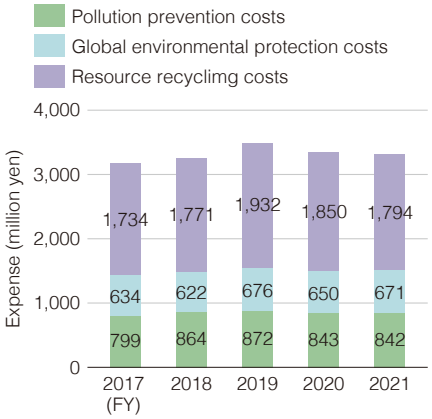
Results		2017	2018	2019	2020	2021
Energy saving		125	72	81	6	41
Resource saving	Waste reduction	75	141	97	48	77
	Raw material use reduction (yield improvement)	116	227	178	174	152
	Revenue from recycling	111	26	80	52	55
Total		427	466	436	279	325

Note: Includes effects from non-investment measures (e.g., improved production procedures)

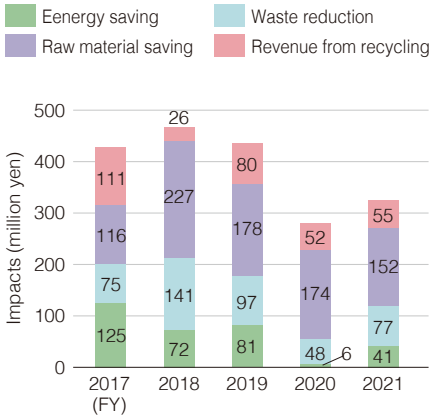
Investment in facility area



Expense in facility area

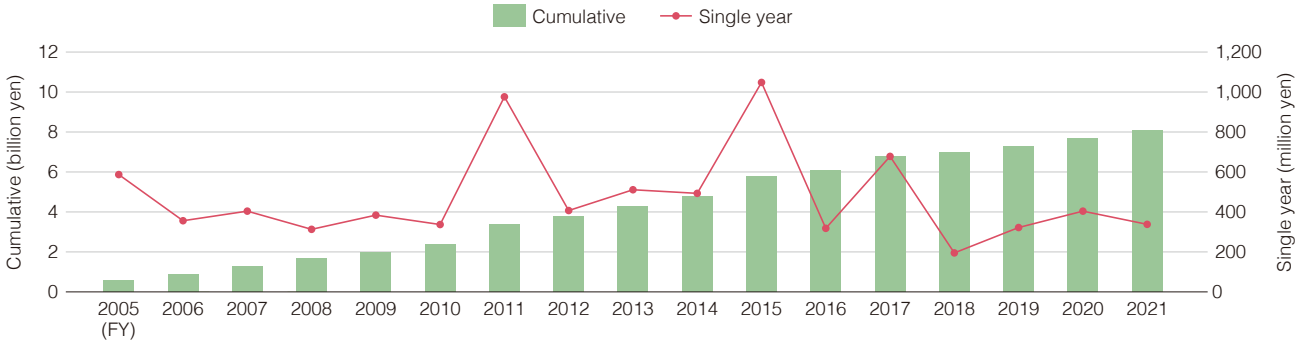


Economic impacts

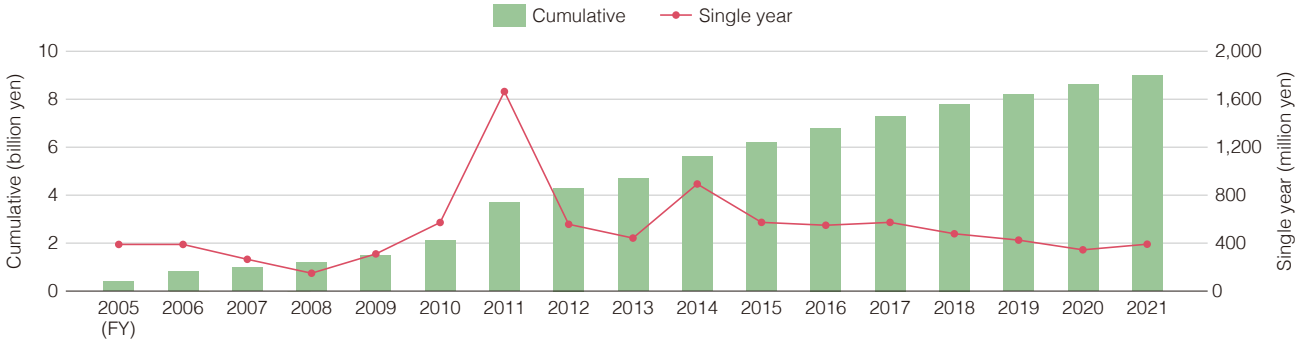


Environment/safety/accident prevention investments

Cumulative environmental investments (since FY2005)



Cumulative safety/accident prevention investments (since FY2005)



(Unit: million yen)

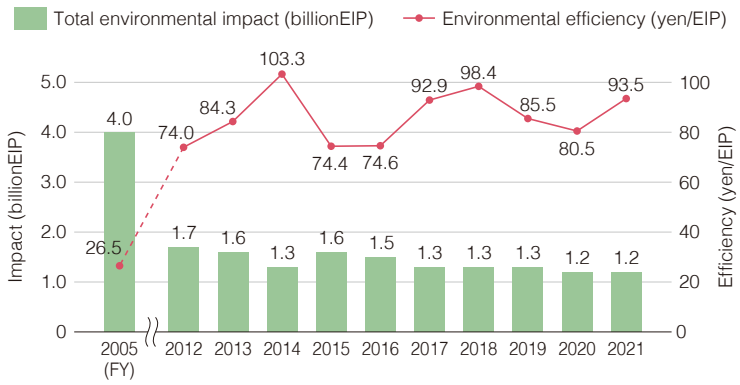
	FY2017	FY2018	FY2019	FY2020	FY2021
Environment	678	195	322	404	338
Safety/accident prevention	573	478	425	344	391
Total	1,251	673	747	747	729

Environmental efficiency (JEPIX: Japan Environment Policy Index)

The total environmental point (EIP) is multiplied by the weighted coefficient of each type of environmental impact such as greenhouse gases and hazardous air pollutants. Environmental efficiency is calculated by driving EIP by adjusted gross sales (JPY). The smaller the EPI, the better the environmental efficiency.

*JEPIX (http://www.jepix.org) Calculated using PEPIX Calculation Sheet Ver. 2.0

Environmental efficiency (JEPIX) (Domestic)



Domestic and overseas environmental impact

	Unit	Scope	FY2017	FY2018	FY2019	FY2020	FY2021
Production volume	tons	Domestic	441,148	407,180	370,681	332,320	343,716
		Overseas	206,058	175,204	201,817	238,468	179,998
		Total	647,206	582,384	572,498	570,788	523,714
Raw materials	tons	Domestic	519,753	478,147	435,736	312,943	400,002
		Overseas	275,686	228,727	267,626	319,739	236,875
		Total	795,439	706,874	703,363	632,682	638,877
GHG emissions*1	CO_2 tons	Domestic	199,185	192,372	176,494	157,435	152,579
		Overseas	141,201	120,842	134,731	150,568	123,562
		Total	340,386	313,214	311,225	308,003	276,140
Energy consumption	kL in crude oil equivalent	Domestic	100,188	95,875	90,037	81,073	81,013
		Overseas	56,796	49,205	57,322	64,981	51,205
		Total	156,984	145,080	147,359	146,054	132,218
Waste generated	tons	Domestic	52,600	53,959	50,907	44,705	38,324
		Overseas	8,801	6,919	8,302	8,803	7,891
		Total	61,400	60,878	59,209	53,508	46,215
Waste emissions	tons	Domestic	20,808	20,454	18,453	16,665	14,590
		Overseas	8,316	6,741	8,236	9,004	7,424
		Total	29,124	27,195	26,689	25,669	22,013
Recycled waste*2	tons	Domestic	21,385	21,526	19,910	16,194	12,113
		Overseas	1,244	1,073	2,986	3,891	3,315
		Total	22,628	22,600	22,896	20,085	15,428
Landfill	tons	Domestic	2.4	2.5	15.7	2.0	1.0
		Overseas	43.0	14.0	7.6	3.0	5.1
		Total	45.4	16.5	23.3	5.0	6.1
NOx	tons	Domestic	86	62	66	87	39
		Overseas	23	25	105	36	20
		Total	109	87	171	123	60
SOx	tons	Domestic	2.1	1.0	0.8	1.1	1.6
		Overseas	15.8	22.8	70.1	10.0	5.0
		Total	17.9	23.7	70.9	11.1	6.6
Soot and dust	tons	Domestic	9.1	4.3	4.3	3.1	2.0
		Overseas	16.5	21.1	23.1	3.9	2.2
		Total	25.6	25.4	27.4	7.0	4.2
Drinking water	thousand m^3	Domestic	187	154	143	132	137
		Overseas	26	111	244	263	284
		Total	213	265	387	395	421
Ground water	thousand m^3	Domestic	0	0	0	0	0
		Overseas	0	0	0	0	0
		Total	0	0	0	0	0
Industrial water	thousand m^3	Domestic	3,528	3,621	3,531	3,367	3,558
		Overseas	570	440	436	507	315
		Total	4,097	4,060	3,967	3,873	3,874
Total water usage	thousand m^3	Domestic and Overseas	4,310	4,325	4,354	4,269	4,295
Water discharge	thousand m^3	Domestic	4,445	3,730	2,894	2,738	3,039
		Overseas	1 34	124	114	149	132
		Total	4,579	3,854	3,008	2,887	3,171
Water discharge COD	tons	Domestic	145	150	161	117	156
		Overseas	29	40	29	23	17
		Total	174	189	190	140	173

	Unit	Scope	FY2017	FY2018	FY2019	FY2020	FY2021
Water discharge phosphorus	tons	Domestic	0.8	0.7	0.6	0.8	0.8
		Overseas	0.0	0.0	0.0	0.0	0.0
		Total	0.8	0.7	0.6	0.8	0.8
Water discharge nitrogen	tons	Domestic	4.8	6.3	4.6	5.0	4.2
		Overseas	1.0	1.1	0.8	0.6	0.8
		Total	5.9	7.3	5.3	5.6	5.0
VOC emissions*3	tons	Domestic	74	75	89	70	73
		Overseas	6	7	22	23	17
		Total	80	82	112	93	90
Substances subject to the PRTR Act ; Release to air	tons	Domestic	43	44	48	44	47
Substances subject to the PRTR Act ; Release to water	tons	Domestic	0.7	0.5	0.6	0.4	0.4
Substances subject to the PRTR Act ; Transfer to waste	tons	Domestic	522	584	518	365	577
Fluorocarbons leakage	kg	Domestic	259	147	184	106	252
CO_2 equivalent	CO_2 tons		864	318	403	280	827
Ozone-depleting substance*4	kg CFC-11		2	2	0	3	1
Pollution complaints	Cases	Domestic	0	0	1	0	0
		Overseas	0	0	0	0	0
		Total	0	0	1	0	0

*1 Calculated in conformity with the Act on Promotion of Global Warming Countermeasures. However, the CO_2 conversion factors for electricity in overseas facilities is according to the U.S. Energy Information Administration (EIA) figures in the case of the U.S.A. and the Institute for Global Environmental Strategies (IGES) figures in the case of China, Thailand, and Malaysia.
*2 The total value of the recycle amounts both internally and outside the company.
*3 Total emission of substances subject to the revised and former PRTR law, and the substances specified by the Japan Chemical Industry Association.
*4 The HCFCs leakage from refrigeration and air conditioning equipment according to the Fluorocarbons Recovery and Destruction Law was converted to CFC-11 volume equivalent.

Environmental impact concerning transportation

Fleet (domestic and overseas)

	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Passenger cars	cars	67	63	55	57	63
ratio of eco-car*	%	28.4	42.9	43.6	43.9	33.3
In-house conveyance vehicles	cars	215	204	194	184	235
ratio of eco-car*	%	37.7	42.2	39.2	40.8	41.7
Transportation vehicles	cars	43	23	15	15	13

* eco-car: passenger car: fuel efficient vehicle and hybrid vehicle, in-house conveyance vehicle: electric forklift and LPG forklift

Environmental impact as a consignor

	Scope	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Transportation volume	Domestic*1	million tkm*2	138.4	130.9	127.1	113.1	110.2
Energy consumption		thousand GJ	180.5	175.2	170.6	152.9	152.4
Unit energy consumption		MJ/tkm	1.30	1.34	1.34	1.35	1.38
CO_2 emissions		tons	12,282	11,931	11,596	10,398	10,368

*1 Total domestic transportation of SCI, SDP, and SNL
*2 tkm: ton-kilometers

Transportation Measures*1

	Scope	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Railway and ship transportation ratio	Domestic*3	%	11.9	11.2	13.2	11.6	13.3
Bulk transportation ratio*2			46.7	47.2	47.3	44.9	35.0

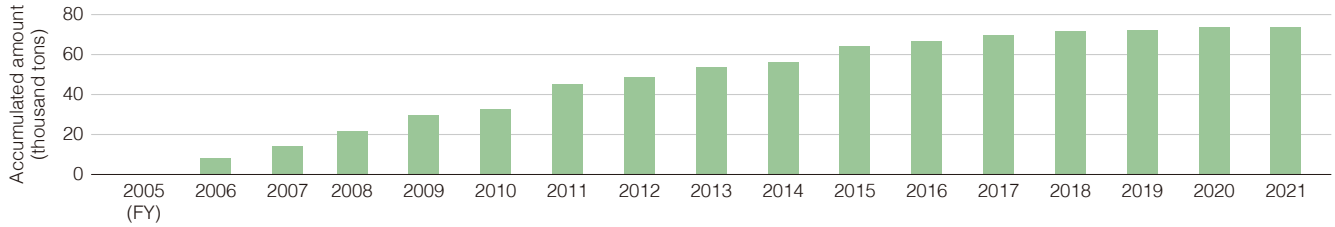
*1 Percentages based on ton-kilometers (tkm.)
*2 Bulk transportation ratio is the ratio of tank trucks, ISO containers, and JR railroad freight cars/container transportation.
*3 The total value of domestic transportation in SCI, SDP, and SNL.

Indicator concerning energy saving and GHG emission reductions

			FY2017	FY2018	FY2019	FY2020	FY2021
Energy generated on-site (cogeneration)	kL in crude oil equivalent	Domestic	17,951	17,837	15,894	15,975	13,165
		Overseas	0	847	2,177	2,824	2,782
		Total	17,951	18,684	18,071	18,799	15,946
Natural energy use (solar power generation)	kL in crude oil equivalent	Domestic	13	13	13	12	13
		Overseas	0	50	26	30	32
		Total	13	63	39	42	45
CO_2 Reduction: cogeneration and solar power	tons CO^2		17,011	16,495	14,529	13,391	9,631
Increase in forest CO_2 absorption*1	tons CO^2		12	–	–	13	39
CO_2 reduction by using our products*2	thousand tons CO_2		378	258	416	477	494
CO_2 reduction results of the global warming WG Accumulated amount of CO_2 reduction	tons CO^2		3,194	1,733	658	1,337	355
Energy composition: purchased electric power	Domestic and overseas	%	18.3	17.8	15.2	13.0	17.1
Energy composition: purchased steam			31.4	32.0	32.3	30.4	33.0
Energy composition: fuel oil			1.3	1.6	2.2	2.0	0.8
Energy composition: natural gas			29.3	32.4	33.8	35.6	37.6
Energy composition : LPG			19.7	16.2	16.5	19.1	11.6

*1 The increase in absorbed CO_2 thanks to forest tree thinning projects.
*2 CO_2 reduction volume associated with the use of our products compared to conventional products is multiplied by sales volume in a fiscal year.

Accumulated amount of the completed CO_2 reduction themes by the Global Warming Countermeasures Work Group (Since 2005)



GHG emissions in Scope1, 2, 3

Cat.: category (Unit: CO_2 tons)

			FY2017	FY2018	FY2019	FY2020	FY2021
Scope 1	Direct Emissions		176,418	164,994	172,349	181,509	145,753
Scope 2	Indirect Emissions from the use of electricity, heat, or steam supplied by others		163,968	148,220	138,876	126,495	130,387
Scope 3	Supply Chane Emissions	Sum of categories	2,803,954	2,764,319	2,540,086	2,286,749	2,358,329
Cat.1	Purchased Goods and Services		1,526,095	1,438,389	1,317,142	1,178,559	1,216,830
Cat.2	Capital Goods		40,494	27,909	18,974	18,367	20,922
Cat.3	Fuel and energy-related activities (not included in Scope 1 or Scope 2)		29,935	28,396	25,969	24,564	24,219
Cat.4	Upstream transportation and distribution		31,945	30,836	29,240	21,789	26,482
Cat.5	Waste generated in operations		13,587	12,525	12,404	409	812
Cat.6	Business travel		184	188	185	189	184
Cat.7	Employee commuting		476	475	475	476	472
Cat.8*1	Upstream leased assets		–	–	–	–	–
Cat.9*2	Downstream transportation and delivery		–	–	–	–	–
Cat.10*2	Processing of sold products		–	–	–	–	–
Cat.11*2	Use of sold products		–	–	–	–	–
Cat.12	End-of-life treatment of sold products		1,105,156	1,172,839	1,083,152	991,752	1,021,016
Cat.13*1	Downstream leased assets		–	–	–	–	–
Cat.14*3	Franchises		–	–	–	–	–
Cat.15	Investments		56,081	52,763	52,545	50,643	47,391

Scope 3 was calculated based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain issued by the Ministry of the Environment. (https://www.env.go.jp/earth/ondanka/supply_chain/gvc/en/files/GuideLine.pdf) and by reference to the Ministry of the Environment's Policy on Emissions Unit Values for Accounting of Greenhouse Gas Emissions, etc., by Organizations Throughout the Supply Chain.
*1 Only the leases within the group and calculated in Scopes 1 and 2 *2 Collection of data necessary for calculation was difficult and no calculations was made.
*3 Out of scope as there were no relevant activities

Scope 1, Scope 2: Sanyo Chemical, domestic affirate/subsidiary, overseas affiliate/subsidiary with production bases
Scope 3 Cat. 1-7: Sanyo Chemical, SDP, SCC Cat. 12: Sanyo Chemical, SDP, SCC, a part of sales products of overseas subsidiaries/affiliates Cat. 15: Sanyo Chemical

Emission/transfer of substances subject to PRTR Law (domestic)

Substances of which more than 0.01 tons of annual emissions were released to the air or water, or transferred to waste are listed below.

(Unit: tons)

Base	Cabinet order number	Cabinet order name	Release to air	Release to water	Transfer to waste
Nagoya Factory	001	Zinc water-soluble compounds	0	0.05	0
	004	Acrylic acid and its water-soluble salts	1.15	0.00	0
	009	Acrylonitrile	0.05	0	0
	037	4,4'-Isopropylidenediphenol (synonym: Bisphenol A)	0	0.02	0
	053	Ethylbenzene	0.14	0.00	0
	056	Ethylene oxide	0.09	0	0
	058	Ethylene glycol monomethyl ether	0.06	0	0
	066	1,2-Epoxybutane	0.39	0	0
	068	1,2-Epoxypropane (synonym: Propylene oxide)	2.07	0	0
	080	Xylene	0.08	0.00	0
	134	Vinyl acetate	0.04	0	0
	178	1,2-Dichloropropane	1.00	0.01	0.1
	213	N,N-Dimethylacetamide	0.01	0	0
	232	N,N-Dimethylformamide	0.14	0.09	78.7
	300	Toluene	7.88	0.02	0
	398	Benzyl chloride	0.03	0	0
	405	Boron compounds	0	0.10	0
	448	Methylenebis (4,1-phenylene) diisocyanate	0	0	0.2
		96 Substances handled Total amount of release or transfer	13.15	0.29	79.0
Kashima Factory	003	Ethyl acrylate	0.02	0	0
	004	Acrylic acid and its water-soluble salts	0.02	0	0
	007	n-Butyl acrylate	0.09	0	0
	008	Methyl acrylate	0.02	0	0
	053	Ethylbenzene	1.03	0.02	101.6
	065	Epichlorohydrin	1.36	0.03	5.3
	076	Epsilon-Caprolactam	0.03	0	0
	080	Xylene	0.60	0.02	67.7
	123	3-Chloropropene (synonym: Allyl chloride)	0.60	0	0
	128	Chloromethane (synonym: Methyl chloride)	17.21	0	0
	131	3-Chloro-2-methyl-1-propene	0.05	0	0
	134	Vinyl acetate	0.32	0	0
	157	1,2-Dichloroethane	0.44	0.00	10.8
	232	N,N-Dimethylformamide	0.04	0	14.2
	239	Organic tin compounds	0	0	16.6
	240	Styrene	0.15	0	2.4
	277	Triethylamine	0	0	9.3
	300	Toluene	0.61	0.03	0
	351	1,3-Butadiene	0.02	0	0
	399	Benzaldehyde	0	0	0.6
	414	Maleic anhydride	0.00	0	1.4
	415	Methacrylic acid	0.34	0	40.5
	418	2-(Dimethylamino)ethyl methacrylate	0.21	0	113.1
	420	Methyl methacrylate	4.76	0	41.4
		59 Substances Handled Total amount of release or transfer	27.94	0.10	425.0
Kyoto Factory	053	Ethylbenzene	0.00	0	9.2
	080	Xylene	0.00	0	6.1
	232	N,N-Dimethylformamide	0.02	0	25.0
	300	Toluene	0.00	0	8.1
	420	Methyl methacrylate	0.03	0	1.9
		69 Substances Handled Total amount of release or transfer	0.07	0	50.4
Kinuura Factory	056	Ethylene oxide	0.09	0	0
	058	1,2-Epoxypropane (synonym: Propylene oxide)	0.33	0	0
		7 Substances Handled Total amount of release or transfer	0.49	0	0

(Unit: tons)

Base	Cabinet order number	Cabinet order name	Release to air	Release to water	Transfer to waste
SCC	056	Ethylene oxide	0.10	0	0
	058	1,2-Epoxypropane (synonym: Propylene oxide)	0.98	0	0
		27 Substances Handled Total amount of release or transfer	1.08	0.00	0.09
SDP	004	Acrylic acid and its water-soluble salts	3.85	0	0.1
		2 Substances Handled Total amount of release or transfer	3.85	0	0.1
SNL	003	Ethyl acrylate	0.01	0	0
	004	Acrylic acid and its water-soluble salts	0.02	0	0.0
	053	Ethylbenzene	0	0	0.6
	080	Xylene	0	0	0.4
	232	N,N-Dimethylformamide	0	0	8.3
	300	Toluene	0.09	0	4.2
	407	Poly (oxyethylene) alkyl ether (limited to those the alkyl group is C=12-15 and mixture thereof)	0	0	0.3
	409	Sodium poly (oxyethylene) dodecyl ether sulfate	0	0	0.2
	410	Poly(oxyethylene) nonylphenyl ether	0	0	0.1
	415	Methacrylic acid	0.01	0	0
		39 Substances Handled Total amount of release or transfer	0.15	0	14.4
SPCC	190	Dicyclopentadiene	0.06	0	1.1
	337	4-Vinyl-1-cyclohexene	0.09	0	4.1
	351	1,3-Butadiene	0.08	0	0
	400	Benzene	0.08	0	0.1
		6 Substances handled Total amount of release or transfer	0.31	0	5.2

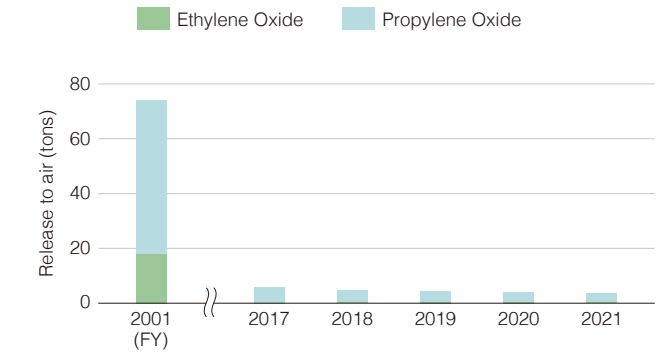
Dioxins

(Unit: mgTEQ)

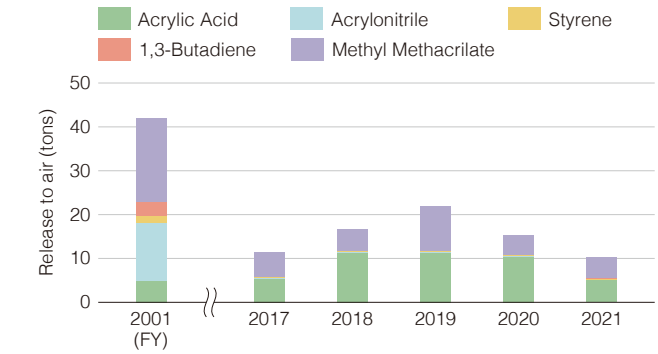
Base	Cabinet order number	Cabinet order name	Release to air	Release to water	Transfer to waste
Nagoya Factory	400	Dioxins	9.80	4.59	6.23
Kyoto Factory	400	Dioxins	0.67	0.13	1.73

Change in emission/transfer of substances subject to PRTR Law (domestic)

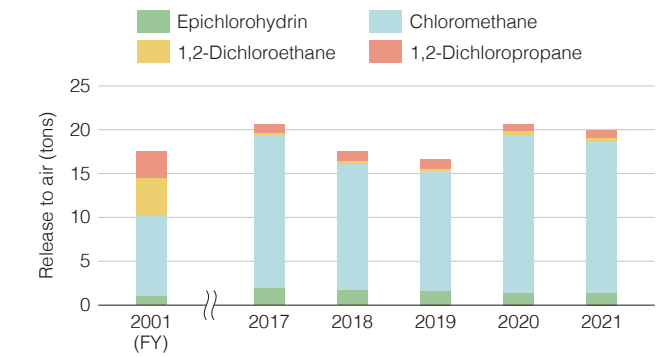
Ethylene oxide and propylene oxide



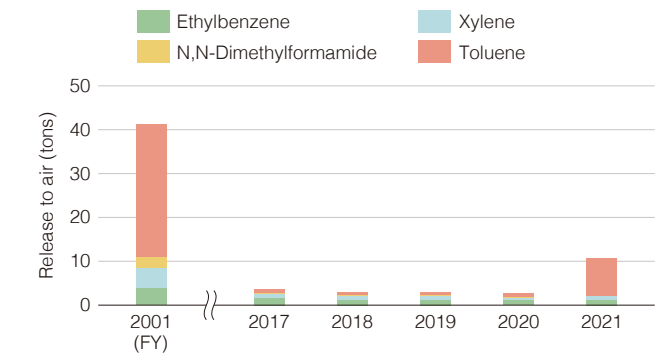
Vinyl monomers



Chlorine compounds



Organic solvents



Note: Reviews of actual emissions in FY2021, show the toluene emissions increased.

VOC reduction measures and their results

Implementation (FY)	Facility	Measures	Result (reduction volume per year)
2001	Mei	Improvement of propylene oxide acceptance system	-50 tons of propylene oxide emissions to the air
2001-2005	SPCC	Production procedure improvement	-1.4 tons of butadiene emissions to the air
2001-2005	Mei, Kas	Reduction of chlorinated solvents (production procedure change, replacement, abolition, etc.)	-7 tons of mainly 1,2-dichloroethane emissions to the air
2002-2004	Kyo	Production procedure improvement and emissions cooling devices installation	-9 tons of methyl methacrylate emissions to the air
2002	Mei	Replacement with other substance and/or abolition	-0.6 tons of water soluble hydrogen fluoride emissions to water
2003	Mei	VOC processing devices installation	-25 tons of mainly acrylonitrile emissions to the air
2004	SCC	Propylene oxide emissions combustion devices installation	-6 tons of propylene oxide emissions to the air
2005	Kas	Production procedure improvement	-3 tons of methyl methacrylate emissions to the air
2005	Mei	VOC processing devices installation	-17 tons of mainly toluene emissions to the air
2005	Mei	Ethylene oxide emissions processing devices installation	-20 tons of ethylene oxide emissions to the air
2005	SDP	Cyclohexane absorption/collection devices Installation	-300 tons of cyclohexane emissions to the air
2006	Kas	Enhancement of the cooling systems	-4 tons of methyl methacrylate emissions to the air
2007	Mei	VOC absorption/collection devices installation	-5 tons of mainly 1,2-dichloropropane emissions to the air
2007	Kyo	VOC absorption/collection devices installation	-12 tons of ethyl acetate emissions to the air
2008	Mei	Enhancement of the cooling systems	-12 tons of hexane and methylethyl ketone emissions to the air
2009	Mei	VOC absorption/collection devices installation	-45 tons of hexane and methylethyl ketone emissions to the air
2010	Kyo	VOC processing devices installation	-4 tons of methyl methacrylate emissions to the air
2012	Kinu	Propylene oxide emissions combustion devices installation	-8 tons of propylene oxide emissions to the air
2012	SCC	Propylene oxide emission combustion devices installation	-1.5 tons of propylene oxide emissions to the air
2015	Kas	VOC processing devices installation	-150 tons of ethyl acetate and methyl methacrylate emissions to the air
2018	SDP	Factory closure	-14 tons of cyclohexane emissions to the air
2020	Mei	Production procedure improvement	-0.7 tons of propylene oxide emissions to the air
2020	SKN	VOC combustion/absorption/collection devices installation	-5 tons of mainly 1,2-dichloropropane and ethyl acetate emissions to the air

Employee-related data

Employment (domestic)

		Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Employees	Male	people	1,260	1,272	1,267	1,278	1,281
	Female		269	276	283	300	319
New employees	Male	people	46	41	34	25	30
	Female		12	11	10	8	15
Percentage of females		%	18	18	18	19	20
Female managers		people	5	6	9	13	15
	per all managers	%	1.7	2.0	3.0	4.0	4.6
Annual holidays		days	125	127	129	129	126
Annual workdays		days	240	238	236	237	239
Annual regular working hours		hours	1,860	1,845	1,829	1,837	1,852
Monthly average overtime work		hours	6.2	6.7	4.8	4.4	4.8
Paid leave usage ratio		%	53.4	58.1	55.7	58.5	50.6
Turnover up to three years after joining the company		people	5	3	5	5	5
		%	8.8	5.9	8.6	9.6	6.8
Employees with disabilities		people	23	27	26	26	26
Ratio of employees with disabilities		%	2.03	2.30	2.20	2.20	2.20
Re-employment of mandatory retirees		people	12	24	27	15	14
Non-Japanese employees		people	16	18	17	12	13
Employees on maternity leave		people	11	13	18	14	12
Employees on childcare leave	Male	people	14	27	37	40	47
	Female		17	14	13	17	11
Employees return rate from childcare leave		%	100	100	100	100	100
Employees on short working hours for childcare	Male	people	0	1	0	0	0
	Female		44	50	16	12	4
Employees on family care leave		people	0	0	1	1	1
Employees on short working hours for family care		people	1	1	1	0	0

Education and training

			Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Study abroad			people	1	2	1	0	0
Overseas training			people	1	1	4	0	0
Expatriate development program			people	4	3	5	2	1
Personal research challenge			people	5	1	0	0	0
Challenge contract			people	7	5	0	0	0
Safety, Technology, and Education Center	Participants	Employees (including transfers)	people	307	239	210	93	168
		Subcontract employees	people	15	33	71	12	35
	Visitors/guests		people	211	313	394	19	55

Labor accidents

	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Lost-work injuries (Sanyo Chemical Group)	cases	3	2	0	0	6
Lost-work injuries frequency (Sanyo Chemical Group)		0.86	0.56	0	0	1.61
Lost-work injuries (subcontractors)	cases	1	0	2	2	2
Lost-work injuries frequency (subcontractors)		1.41	0	2.28	1.94	1.69

* This value indicates the frequency of accident (Group company employees) per 1 million hours
Frequency rate = (number of employees with work loss accident with lost time) ÷ (total working hours) × 1,000,000

Health productivity management related data (domestic)

Initiative	Behavioral objective	FY2019	FY2020	FY2021
Exercise	Have an exercise habit for at least one day per week	29%	31%	50%
Sleeping	Take an adequate rest with sleeping	54%	57%	66%
Meal	Have a well-balanced meal	–	–	76%
Drinking	Have at least two liver rest days per week	74%	75%	75%
Smoking	Do not smoke cigarettes	23%	23%	18%

This survey is based on a questionnaire concerning lifestyle diseases at regular medical checkups.

Communication

IR information

	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Financial results announcement	times	2	2	2	2	2
	people	22	20	19	39	35
Financial results briefing for institutional investors	times	2	2	2	2	2
	people	90	84	93	96	91
Financial results briefing for private investors	times	2	2	2	0	0
	people	152	81	135	0	0

Website information

(unit: times)

	FY2017	FY2018	FY2019	FY2020	FY2021
IR information	21	24	25	23	23
Press release	16	25	28	35	36
News	31	28	41	66	49

* Number does not include personal changes

Exhibitions

(unit: times)

	FY2017	FY2018	FY2019	FY2020	FY2021
Domestic	2	1	2	3	4
Overseas	7	4	5	1	2

April, 2021	CHINAPLAS 2021
May, 2021	CITE JAPAN 2021
October, 2021	Chemical Material Japan 2021 -ONLINE-
December, 2021	31th Finetec Japan
December, 2021	Techno-Ocean 2021
March, 2022	CHINA COAT 2021

Social contribution

Donations

		FY2017	FY2018	FY2019	FY2020	FY2021
Social contribution expenditure: Total amount (million JPY)		22	24	40	24	34
Ratio by item (%)	1. Support for academic promotion mainly concerning chemistry	68	60	43	62	81
	2. Support for human resource development	2	3	6	13	1
	3. Support for the preservation activities of art and culture, mainly in Kyoto	5	4	4	5	4
	4. Support for environmental conservation activities	5	5	28	6	5
	5. Support for social contribution activities wherever possible according to local social needs and requirements	21	28	20	14	9

*Sanyo Chemical proper until FY2019, Sanyo Chemical Foundation for Social Contribution after September 2019
(In 2019, sum of Sanyo Chemical and Sanyo Chemical Foundation)

Elementary school chemistry lessons

Area		FY2017	FY2018	FY2019	FY2020	FY2021	Staff
Kyoto	Schools	8	8	7	4	6	R&D, Head Quarter staff
	Students	444	449	390	209	446	
Nagoya	Students	2	2	2	0	1	Nagoya Factory staff
	Students	246	280	235	0	73	
Kashima	Schools	3	3	2	0	1	Kashima Factory staff
	Students	164	224	198	0	50*	

* Estimated

Acceptance of foreign students

	FY2017	FY2018	FY2019	FY2020	FY2021
Acceptance of the students in the departments of science, technology, and agriculture through IAESTE*	1	1	1	0	0
International internship program between TU Dortmund University and Kyoto University	1	1	1	0	0
Other	–	–	–	–	1

* IAESTE: The International Association for the Exchange of Students for Technical Experience, which is an NGO mediating the overseas internship for the students in the departments of science, technology, and agriculture

Forestry activities: Sanyo Chemical's Forest

In agreement with the purpose of the Kyoto Model Forest Movement*, we started our Sanyo Chemical's forestry activities in FY2009. We have been developing diverse activities, such as a place for employees interaction, motivation for taking an interest in nature and the environment, a place to deepen understanding of forestry, and utilization of forestry resources. We have been working with Wazuka Town, Kyoto Prefecture Yamashiro Promotion Administration Office, the Kyoto Model Forest Association, and the Kyoto Forest Instructors Association. We also provide funding for tree thinning projects.

* An initiative promoted by Kyoto Prefecture to protect and grow forests in Kyoto with all Kyoto residents who are blessed to have an abundance of forests

Forestry volunteer activities by employees

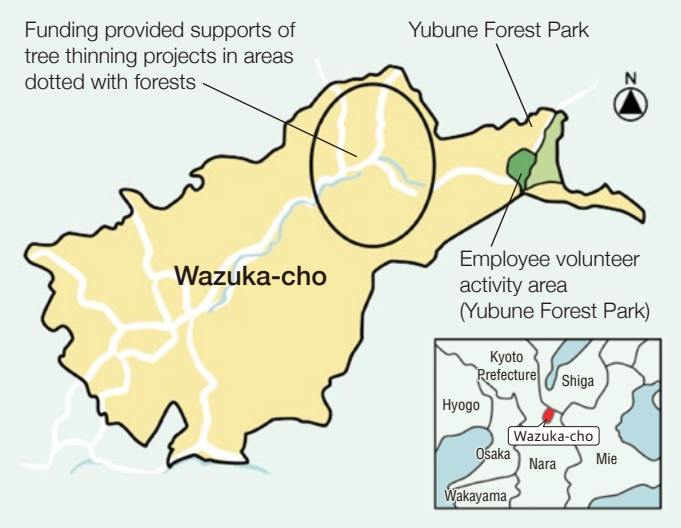
Activity area: The Yubune-mura District, Wazuka-cho, Soraku-gun, Kyoto Prefecture

	Implementation date	Participants	Activity Content
Supporter Association*1 in FY2021		A total of four times outings and a total of 25 participants	Preparations for the forest creation activities, walking trail improvement, etc.
(The 24th forestry activities)	(March 2022)	Canceled due to COVID-19	–
The 23th forestry activities	November 20, 2021	34 participants who were the employees and their families	Improvement of the stairs on the walking trail, and the Mountain Kids Exchange Meeting*2
(New employee training)	(April 2021)	Canceled due to COVID-19	–

*1 Supporter Association: Forest volunteers consisting of employees, their families, and retired employees
*2 Mountain Kids: Activities to foster younger generations who will bear responsibility for forests, so that forests can be reliably passed on to the future. The Junior Green Club and Kyoto Model Forest Association cooperate and implement these activities.

Funding provided for tree thinning project (FY2009–2017 and from FY 2020)

FY	Thinned area (ha)	CO2 absorption volume (CO_2 tons)
2021	3.70	38.5
2020	3.50	12.6
2017	3.08	12.0
2016	5.87	52.0
2015	4.18	20.3
2014	4.89	30.5
2013	4.64	32.7
2012	5.24	24.2
2011	6.46	32.6
2010	9.31	59.7
2009	5.41	37.3
Total	56.28	352.4



Board members

List of Board members

		Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Composition of the Board of Directors *1	Total Number of the Board of Directors	people	9	10	10	10	9
	Outside directors	people	2	3	3	3	3
	Independence directors	people	2	3	3	3	3
	Female directors	people	0	1	1	1	2
Board of Directors Meeting*2	Frequency	times	15	15	17	17	15
	Average Attendance	%	100	100	100	100	99.1
Composition of the Audit & Supervisory Board *1	Total Number of the Audit & Supervisory Board	people	4	4	3	4	4
	Outside A&S Board members	people	3	3	2	3	3
	Independence A&S Board members	people	0	1	1	1	1
	Female A&S Board members	people	0	0	0	0	0
Audit & Supervisory Board Meeting*2	Frequency	times	12	12	12	11	12
	Average attendance	%	95.8	97.9	95.8	100	100

*1 Number of Board Directors and A&S Board members after the General Shareholders' Meeting in June
*2 Fiscal year from April to March

Board members' remuneration

Total Amount of Remuneration (million JPY)

Classification	FY2017	FY2018	FY2019	FY2020	FY2021
Directors (internal)	284	289	304	319	308
Audit & Supervisory Board (internal)	33	32	30	27	33
Outside Directors	21	25	28	29	27
Outside Audit & Supervisory Board	46	47	44	41	49
Total	385	395	408	418	418

Note: There is no individual board member whose total amount of remuneration is 100 million JPY or higher. Including the amounts paid to board members who resigned during the term.

Committee

Nomination and Compensation Committee (Established in 2021)	Chairperson	Selected by resolution of the Board of Directors
	Committee members	Five board members selected by the resolution of the Board of Directors (Majority of them are independent outside directors)
	Frequency (FY2021)	Five meetings
Sustainable Management Committee (Established in 2021)	Chairperson	President
	Committee members	Full-time Directors
	Secretariat	General Manager of the Corporate Planning Division and those appointed by the General Manager of the Corporate Planning Division
	Observer	Full-time Audit & Supervisory Board Member
	Frequency (FY2021)	Two meetings
Compliance Committee	Chairperson	President
	Committee members	Full-time Directors
	Secretariat	General Manager of the Auditing Division and the General Manager of the Legal Affairs Department
	Observer	Full-time Audit & Supervisory Board Member
	Frequency (FY2021)	One meeting
Internal Control Committee	Chairperson	President
	Committee members	Those who are in charge of the sales, research, production, and indirect departments
	Secretariat	General Manager of the Auditing Division
	Observer	Full-time Audit & Supervisory Board Member
	Frequency (FY2021)	Two meetings

Compliance

Whistleblowing, disciplinary actions, and violations

		Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Number of cases of using the whistle-blower hotlines		cases	2	1	4	1	2
Disciplinary actions		cases	3	2	4	1	0
Violations, etc.	Legal violation/Administrative guidance	cases	0	0	0	0	0
	Litigations	cases	0	0	0	0	0
	Complaints on pollution	cases	0	0	1	0	0

Political donations

	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Total amount of donations to political parties	yen	0	0	0	0	0