

ESG Data Collection

Kureha and Kureha Group

● Environment	2
● Social	9
● Governance	13
● Information on external certification	15

Target companies

- Kureha Corporation
- Kureha Group Companies (28 Consolidated Subsidiaries)
 - 17 Group Companies in Japan
 - 11 Overseas Group Companies

August 2022
Kureha Corporation

● Environment

Energy usage, by type (Kureha)							
	Energy usage						
	Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Electricity (purchased)	1,000 GJ	754	614	793	581	605	764
Fuel and heat	1,000 GJ	4,950	4,436	4,173	4,369	4,369	4,990
Total	1,000 GJ	5,704	5,049	4,966	4,950	4,975	5,254
Crude oil equivalent	1,000 kL	147	130	128	128	124	136
vs. Previous year	%	-	100.7	98.4	99.7	97.3	109.4
vs. FY2013	%	100.0	88.6	87.2	86.9	84.5	92.1

Energy sales volume, by type (Kureha)							
	Energy sales volume						
	Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Electricity	1,000 GJ	372	388	366	388	369	374
Industrial steam	1,000 GJ	8.4	7.7	6.5	9.4	8.1	8.6
Total	1,000 GJ	380	396	372	398	378	382
Crude oil equivalent	1,000 kL	9.8	10	9.6	10	9.7	9.9

Energy usage, by intensity: comparison to previous fiscal year, 5 fiscal year average (Kureha)						
	Unit	FY2018	FY2019	FY2020	FY2021	5 fiscal year average intensity
vs. Previous year	%	97.3	101.2	104.2	94.5	99.2

Benchmark index status (Kureha)							
Sector	Benchmark index status						
Name of target business	Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Alkali industry	GJ/t	3.62	3.57	3.65	3.62	3.64	3.67

Energy consumption (Kureha Group)							
	Energy usage						
	Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Kureha	1,000 kL	147	130	128	128	124	136
Group Companies in Japan	1,000 kL	13	6	7	7	8	7
Overseas Group Companies	1,000 kL	10	16	15	14	14	15
Total	1,000 kL	170	152	150	149	146	157
vs. Previous year	%	-	100.0	116.7	100.0	112.6	90.7
vs. FY2013	%	100.0	89.5	88.2	87.4	85.7	92.4

CO₂ generated from business activities (Kureha)							
	CO ₂ emission volume						
	Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Head office, other sites	1,000 t-CO ₂	3.6	2.8	2.5	2.4	1.5	1.0
The plastics processing factory	1,000 t-CO ₂	13	11	10	8.6	7.1	6.6
The Iwaki Factory	1,000 t-CO ₂	427	384	367	375	354	370
Total	1,000 t-CO ₂	444	397	380	386	363	377
vs. Previous year	%	-	102.4	95.6	101.7	93.9	104.0
vs. FY2013	%	100.0	89.5	85.6	87.1	81.8	85.0

CO₂ generated from business activities: From energy and non-energy emissions (Kureha Group)								
		CO ₂ emission volume						
		Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Originated from energy	Kureha	1,000 t-CO ₂	431	389	370	376	363	377
	Group Companies in Japan	1,000 t-CO ₂	21	13	22	23	21	20
	Overseas Group Companies	1,000 t-CO ₂	18	35	30	28	28	30
Subtotal		1,000 t-CO ₂	470	437	423	428	412	427
vs. Previous year		%	-	105.4	96.6	101.2	96.3	103.7
vs. FY2013		%	100.0	93.1	89.9	91.0	87.6	90.9
Originated from non-energy	Kureha	1,000 t-CO ₂	13	7.9	9.4	10	8.8	8.7
	Group Companies in Japan	1,000 t-CO ₂	164	146	146	148	138	145
Subtotal		1,000 t-CO ₂	177	154	155	158	147	154
vs. Previous year		%	-	95.6	100.8	102.2	92.7	104.9
vs. FY2013		%	100.0	86.9	87.6	89.5	82.9	87.0
Total		1,000 t-CO ₂	647	591	578	586	559	581
vs. Previous year		%	-	102.7	97.7	101.5	95.4	104.0
vs. FY2013		%	100.0	91.4	89.3	90.6	86.4	89.8

CO ₂ generated from business activities: Scope 1 and Scope 2 (Kureha Group)								
		CO ₂ emission volume						
		Unit	FY2013	FY2017	FY2018	FY2019	FY2020	FY2021
Scope 1	Kureha	1,000 t-CO ₂	-	352	337	356	340	359
	Group Companies in Japan	1,000 t-CO ₂	-	153	162	166	154	160
	Overseas Group Companies	1,000 t-CO ₂	-	6	5	4	4	4
Subtotal		1,000 t-CO ₂	-	511	504	526	499	523
vs. Previous year		%	-	-	98.6	104.3	94.8	104.8
Scope 2	Kureha	1,000 t-CO ₂	-	45	42	30	31	31
	Group Companies in Japan	1,000 t-CO ₂	-	6	6	6	6	5
	Overseas Group Companies	1,000 t-CO ₂	-	29	25	24	24	26
Subtotal		1,000 t-CO ₂	-	80	74	60	61	62
vs. Previous year		%	-	-	92.0	81.9	101.2	102.3
Total of Scope 1 and Scope 2		1,000 t-CO ₂	-	591	578	586	559	585
vs. Previous year		%	-	-	97.7	101.5	95.5	104.6

GHG Emissions by Scope (Kureha)			
		Unit	FY2021
Scope 1		1,000 t-CO ₂	359
Scope 2		1,000 t-CO ₂	31
Scope 3*	Category 1 - Purchased goods and services	1,000t-CO ₂	202
	Category 2 - Capital goods	1,000t-CO ₂	9
	Category 3 - Fuel- and energy-related activities	1,000t-CO ₂	43
	Category 4 - Upstream transportation and distribution	1,000t-CO ₂	91
	Category 5 - Waste generated in operations	1,000t-CO ₂	0.6
	Category 6 - Business travel	1,000t-CO ₂	0.2
	Category 7 - Employee commuting	1,000t-CO ₂	0.7
	Category 12 - End-of-life treatment of sold products	1,000t-CO ₂	57
Total of Scope 1, Scope 2 and Scope 3		1,000 t-CO ₂	793

*Scope 3; Calculations are fundamentally based on database emissions intensity. The database used as reference is "IDEAv2 (for calculating GHG emissions through supply chain) ver. 2.3" or "Ministry of the Environment database: Emission Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains ver. 3.2".

None of our businesses fall into the following categories: Category 8 – Upstream leased assets, Category 13 – Downstream leased assets, and Category 14 – Franchises. Category 9 – Downstream transportation and distribution, Category 10 – Processing of sold products, and Category 11 – Use of sold products, are not yet calculated because, although they are all subject to calculation, it is difficult to reliably determine the volume of calculation activities due to post-sale processing and the wide variety of final products and final consumers, as most of our products are intermediate products. In addition, Category 15 – Investments are excluded from the calculation because Kureha is neither an investment business nor a business that provides financial services.

Atmospheric (Kureha Group)						
	Unit	FY2017 ¹	FY2018 ¹	FY2019 ²	FY2020 ²	FY2021 ²
SOx emission volume	t	26	34	19	28	28
NOx emission volume	t	518	512	545	536	578
Soot and dust emission volume	t	11	16	17	17	10
1 Fifteen Kureha Group factories in Japan and Overseas 2 Kureha Group						

Atmospheric (Kureha)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
SOx emission volume	t	10	18	4	4	8
NOx emission volume	t	421	395	432	430	455
Soot and dust emission volume	t	5	11	14	14	7

Water consumption and total discharge (Kureha Group)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Water consumption	1,000 m ³	24,628	24,215	24,260	23,897	23,985
City water	1,000 m ³	335	709	349	318	292
Groundwater	1,000 m ³	1,079	1,154	1,153	1,176	1,167
Industrial water	1,000 m ³	22,007	21,424	21,481	21,300	21,337
Seawater	1,000 m ³	0	0	0	0	0
Other	1,000 m ³	1,207	928	1,276	1,103	1,189
Total discharge	1,000 m ³	21,687	21,534	21,832	21,485	21,839

Water consumption and total discharge (Kureha)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Water consumption	1,000 m ³	20,904	20,342	20,392	20,199	20,257
City water	1,000 m ³	85	81	81	79	44
Groundwater	1,000 m ³	863	868	848	841	834
Industrial water	1,000 m ³	19,956	19,393	19,462	19,279	19,379
Seawater	1,000 m ³	0	0	0	0	0
Other	1,000 m ³	0	0	0	0	0
Total discharge	1,000 m ³	18,165	18,084	18,123	18,059	18,240

Discharge-related (Kureha)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
COD emission volume	t	74	69	84	73	95
BOD emission volume	t	10	20	21	32	36
Total nitrogen emission volume	t	35	32	38	31	44
Total phosphorus emission volume	t	10	8	8	9	9

Water consumption and total discharge (Group Companies in Japan)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Water consumption	1,000 m ³	1,739	1,747	1,812	1,730	1,701
City water	1,000 m ³	94	129	128	124	121
Groundwater	1,000 m ³	216	286	305	335	333
Industrial water	1,000 m ³	1,240	1,213	1,314	1,271	1,247
Seawater	1,000 m ³	0	0	0	0	0
Other	1,000 m ³	189	118	65	0	0
Total discharge	1,000 m ³	1,486	1,523	1,692	1,513	1,547

Water consumption and total discharge (Overseas Group Companies)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Water consumption	1,000 m ³	1,985	2,126	2,056	1,968	2,027
City water	1,000 m ³	156	499	139	116	127
Groundwater	1,000 m ³	0	0	0	0	0
Industrial water	1,000 m ³	811	817	706	750	711
Seawater	1,000 m ³	0	0	0	0	0
Other	1,000 m ³	1,018	810	1,211	1,103	1,189
Total discharge	1,000 m ³	2,036	1,927	2,018	1,913	2,053

Waste generation, recycling, and landfill disposal volume (Kureha)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Waste generation volume*	1,000 t	22.3	20.3	22.1	19.6	26.3
Recycling volume	1,000 t	13.8	11.7	13.0	11.5	15.1
Landfill disposal volume	1,000 t	3.6	3.9	4.1	3.2	6.3
Recycling rates*	%	61.8	57.6	58.6	58.7	57.2

* Figures for fiscal 2017 and beyond have been revised due to a review of totals.

Waste generation, recycling, and landfill disposal volume (Group Companies in Japan)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Waste generation volume	1,000 t	37.9	41.1	41.9	48.1	44.3
Recycling volume	1,000 t	13.3	13.8	15.2	20.8	19.8
Landfill disposal volume	1,000 t	24.3	27.0	26.6	27.1	23.8
Recycling rates	%	35.2	33.7	36.3	43.2	44.8

The above includes industrial waste and construction waste disposal.

Waste generation, recycling, and landfill disposal volume (Overseas Group Companies)						
	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Waste generation volume	1,000 t	3.3	2.8	2.8	2.1	2.1
Recycling volume	1,000 t	2.1	1.6	0.4	0.3	0.4
Landfill disposal volume	1,000 t	0.7	0.8	0.8	0.7	0.7
Recycling rates	%	63.5	57.6	14.9	15.1	18.7

● Social

Employees and other workers (Kureha Group)										
		FY2019			FY2020			FY2021		
		Kureha	Group Companies in Japan	Overseas Group Companies	Kureha	Group Companies in Japan	Overseas Group Companies	Kureha	Group Companies in Japan	Overseas Group Companies
Employees	Total	1,695	1,848	728	1,676	1,891	726	1,663	1,898	698
	Male	1,310	1,355	565	1,309	1,369	563	1,295	1,385	539
	Female	385	493	163	367	522	163	368	513	159
Temporary employees*	Total	32	291	2	23	230	7	17	224	20
	Male	17	152	2	12	98	5	12	90	17
	Female	15	139	0	11	132	2	5	134	3

* This refers to part-time workers hired directly by the Company.

Workers who are not employees (Kureha)			
	FY2019	FY2020	FY2021
Temporary workers	95	94	95

Employee age group percentages (Kureha)				
	Unit		FY2020*	FY2021
Under 30 years old	%		14	14
30-50 years old			52	50
Over 50 years old			34	36

* The tally was reviewed.

New regular employees (Kureha)				
		FY2019	FY2020	FY2021
By gender Figures in parentheses indicate the number of career-track employees.	Total	47 (28)	59 (38)	60 (35)
	Male	38 (21)	51 (32)	45 (25)
	Female	9 (7)	8 (6)	15 (10)

Regular employees leaving the Company* (Kureha)				
		FY2019	FY2020	FY2021
By gender	Total	49	70	52
	Male	39	49	43
	Female	10	21	9

* We reviewed the totals for fiscal 2019 and fiscal 2020.

Management position (Kureha)					
		Unit	FY2019	FY2020	FY2021
Management position*	Total		280	277	251
	Male		268	262	237
	Female		12	15	14
	Women	%	4.3	5.4	5.6
	Non-Japanese national		0	0.4	0.4
	Mid-career hires*		5.4	7.2	8.0
* We reviewed the totals for fiscal 2020.					

Paid holidays taken (Kureha)				
	Unit	FY2019	FY2020	FY2021
Percentage of paid holidays taken*	%	81.8	72.5	75.7
* Fiscal 2019 and fiscal 2020 are from March 11 of the first year to March 10 of the following year. Fiscal 2021 is from March 11, 2021 to February 28, 2022.				

Overtime hours (Kureha)				
	Unit	FY2019	FY2020	FY2021
Average monthly overtime hours*	hr/mo	12.9	11.8	12.3
* Fiscal 2019 and fiscal 2020 are from March 11 of the first year to March 10 of the following year. Fiscal 2021 is from March 11, 2021 to March 31, 2022 (excluding September 11 to 30).				

Parental leave, nursing leave (Kureha)					
		Unit	FY2019	FY2020	FY2021
Employees taking parental leave	Total		9	8	13
	Male		0	2	2
	Female		9	6	11
Use of parental leave acquisition rate	Total		14.3	16.3	24.5
	Male	%	0	4.7	4.8
	Female		100	100	100
Return to work rate after parental leave	Total		100	100	100
	Male	%	-	-	100
	Female		100	100	100
Male employees taking childbirth and parental leave*	Male		18	16	24
Use of male childbirth and childcare leave*	Male	%	34.0	37.2	57.1
Employees using shortened working hours for childcare	Total		26	19	16
	Male		0	0	0
	Female		26	19	16
Employees using nursing leave	Total		7	5	5
	Male		2	1	2
	Female		5	4	3
* Excludes seconded employees.					

Spousal overseas transfer leave (Kureha)				
	Unit	FY2019	FY2020	FY2021
Employees taking leave for spouse's overseas transfer*		0	2	1
* The total is for the fiscal year during which the acquisition began.				

Adult nursing leave (Kureha)				
	Unit	FY2019	FY2020	FY2021
Employees who received adult nursing ¹ leave		0	0	0
Employees who used adult nursing ² leave		6	7	5
Employees using shortened working hours for care-giving		0	0	0
1 Three times up to two years cumulative				
2 Ten days for one person, 20 days for two or more people annually				

Employment of people with disabilities (Kureha*)				
	Unit	FY2019	FY2020	FY2021
Employment rate	%	2.24	2.38	2.22
Statutory employment rate	%	2.20	2.30	2.30
* Includes Sunshine Kureha Co., Ltd., a special subsidiary.				

Mandatory retirees and reinstated employees (Kureha)		
	FY2020	FY2021
Mandatory retirees	30	29
Reinstated employees	27	28
Percentage of reinstated employees	90.0	96.5

The number of fatalities as a result of work-related ill health (Kureha)		
	FY2020	FY2021
All employees	0	0
All workers who are not employees but whose work and/or workplace is controlled by the organization	0	0

Ratio of basic salary and remuneration of women to men (Kureha)					
		Unit	FY2019	FY2020	FY2021
Basic salary	Employees	Male : Female	56 : 44	55 : 45	55 : 45
	Temporary employees	Male : Female	54 : 46	59 : 41	58 : 42
Total remuneration	Employees	Male : Female	58 : 42	57 : 43	57 : 43
	Temporary employees	Male : Female	53 : 47	58 : 42	57 : 43

● Governance

Composition of the Board of Directors (Kureha)				
	FY2021*			
	Inside Directors	Outside Directors	Total	Percentage of Outside Directors (%)
Total	4	4	8	50.0
Directors	3	2	5	40.0
Audit & Supervisory Board Members	1	2	3	66.7

* As of March 31, 2022

Compensation of Directors (Kureha)					
Classification	FY2021				
	Aggregate amount of remuneration (Millions of yen)	Amount of remuneration by type (Millions of yen)			Number of Directors
		Base salary	Performance-linked remuneration, etc.	Non-monetary rewards, etc.	
Directors (Excluding Outside Directors)	225	132	73	20	3
Audit & Supervisory Board Member (Excluding Outside Auditors)	18	18	-	-	1
Outside Directors	30	30	-	-	2
Outside Audit & Supervisory Board Members	30	30	-	-	2

Annual total compensation ratio (Kureha)		
	Unit	FY2021
Ratio of individual annual total compensation of the President & CEO to the median annual total compensation of all employees	%	1958
Ratio of the percentage increase in annual total compensation for the organization's highest paid individual to the median increase in annual total compensation for all employees	%	94

Whistleblowing system (Group Companies in Japan)			
	FY2019	FY2020	FY2021
The number of reports	2	10	6

Violations of the law (Kureha)			
	FY2019	FY2020	FY2021
Antitrust Law	0	0	0
Violations of laws concerning security export control	0	0	0
Environmental laws and regulations	0	0	0

Marketing and labeling (Kureha)			
	FY2019	FY2020	FY2021
Premiums and Representations Act violations	0	0	0

● Information on external certification

Company name		Status of international standard certification		
		Environmental Management System	Occupational Safety and Health Management System	Quality Management System
In Japan	Kureha Corporation Iwaki Factory	ISO 14001	ISO 45001	ISO 9001
	Kureha Corporation Plastics Processing Factory	ISO 14001	ISO 45001	ISO 9001
	Kureha Gohsen Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha Extron Co., Ltd.	ISO 14001	-	ISO 9001
	Kureha Unyu Co., Ltd.	-	-	ISO 9001
	Kureha Construction Co., Ltd.	ISO 14001	COHSMS	ISO 9001
	Kureha Engineering Co., Ltd.	-	-	-
	Kureha Ecology Management Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha Special Laboratory Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Resinous Kasei Co., Ltd.	ISO 14001	-	ISO 9001
Overseas	Kureha PGA LLC	-	-	-
	KREHALON B.V.	ISO 14001	-	ISO 9001
	Kureha (Shanghai) Carbon Fiber Materials Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha (Changshu) Fluoropolymers Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha Vietnam Co., Ltd.	-	-	ISO 9001