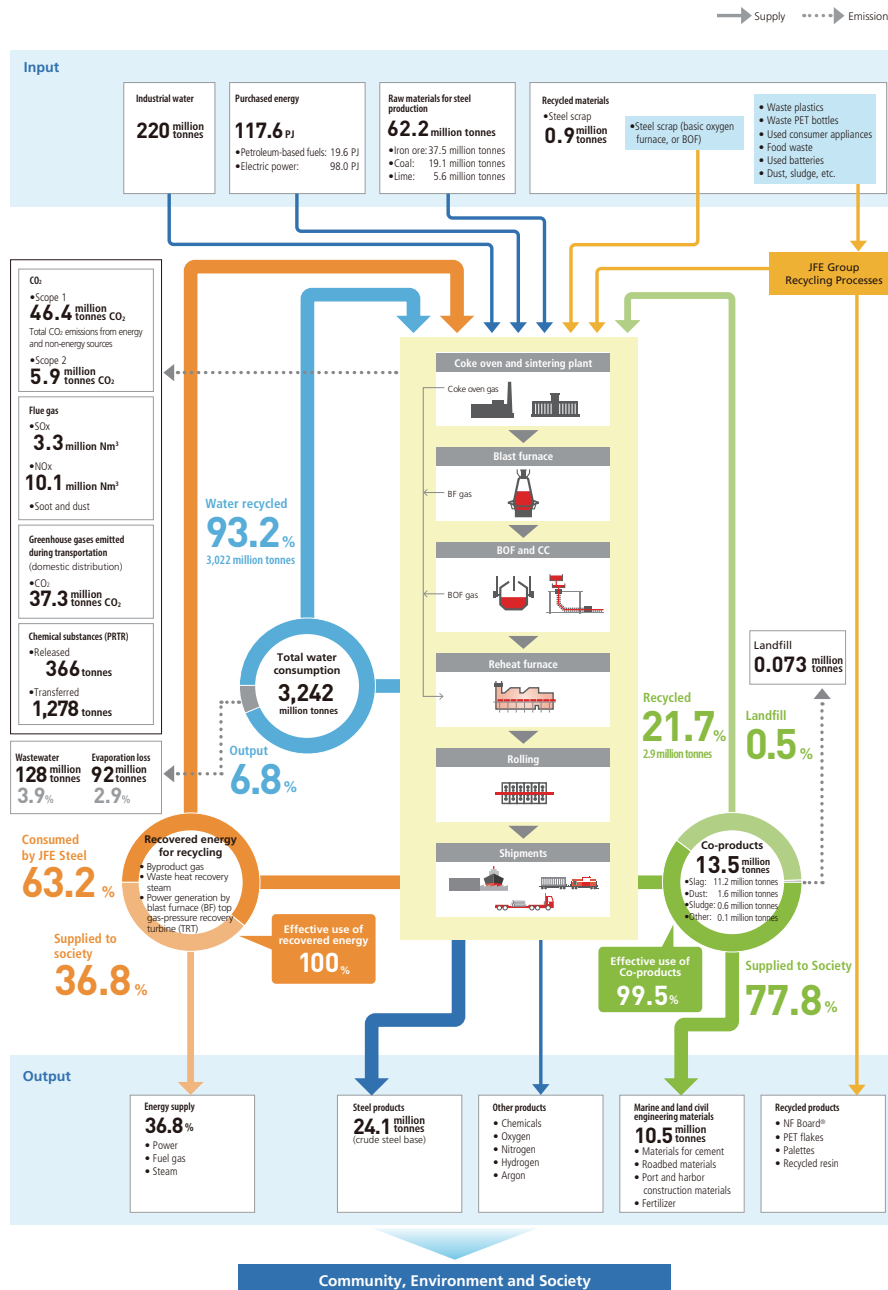


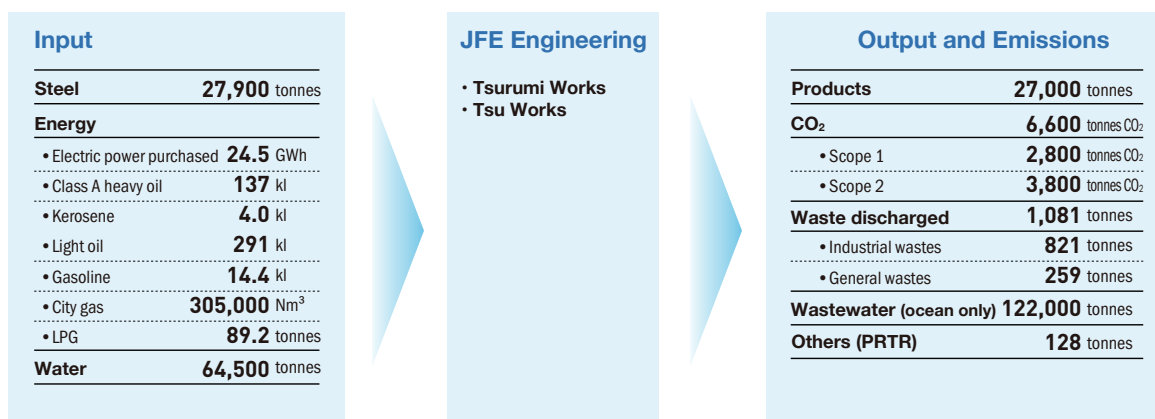
Environmental Data

Material Flow

JFE Steel works to reduce the environmental impact of its iron and steelmaking processes, including through the effective use of resources. The company recycles 93.2% of the water it uses for production and uses 99.5% of its co-products, such as iron and steelmaking slag. In addition, 100% of co-product gas generated during production is reused as fuel for reheating slabs, generating power for internal use and supplying power to the public.



JFE Engineering (Head Office and Works)



Abbreviations indicated under "scope" represent the following group or company:
 JFE Group [All]; JFE Steel Group [ST Gr]; JFE Steel [ST]; JFE Engineering Group [EN Gr];
 JFE Engineering [EN]; JFE Shoji Group [SH Gr]; JFE Shoji [SH]

Environmental Management

■ Data Regarding Environmental Management

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
% covered by ISO 14001 certification	Base	All	%	54	58	58	54	52
		ST Gr	%	20	21	21	18	44
		EN Gr	%	5	9	9	8	44
		SH Gr	%	29	28	28	27	64
	Employee	All	%	72	74	70	68	67
		ST Gr	%	72	75	74	72	70
		EN Gr	%	60	60	51	50	50
		SH Gr	%	88	92	89	83	81
Environmental audit (number of sites)	ST Gr	sites	31	32	24	29	28	
	EN Gr	sites	50	48	28	52	50	
Environmental education conducted (total participants)	EN Gr	people	1,059	1,063	731	1,131	889	

■ Environmental Accounting Data (1)

Breakdown of environmental protection cost		FY2021		FY2022	
		Investment (billion yen)	Cost (billion yen)	Investment (billion yen)	Cost (billion yen)
Management	Impact monitoring and measurement, and EMS expenses and education	14	25	14	27
Global warming countermeasures	Saving and efficiently using energy	189	270	55	359
	Recycling industrial water	66	174	32	216
Conservation of natural resources	Recycling and waste management of internally generated materials, etc.	12.0	59	14	62
Environmental protection	Air pollution countermeasures	124	314	159	312
	Water pollution countermeasures	72	96	43	107
	Prevention of soil contamination, noise, vibration, and subsidence	0	5	0	5
Other	Charges, etc.	—	14	—	14
R&D	Technologies for protecting the environment, saving energy, and preventing global warming	8	93	10	105
Societal activities	Support for nature preservation and forestation, information disclosure, exhibitions, and public relations	—	6	—	7
Total		485	1,056	327	1,215

Note: Data cover all investment activities of JFE Steel Corporation and R&D activities of JFE Engineering Corporation.

■ Environmental Accounting Data (2)

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Energy-saving investment (accumulated)	All	billion yen	505.4	532.1	546.5	565.4	570.8
Environmental protection investment (accumulated)	All	billion yen	708.5	727.6	742.1	770.9	797.1

Climate Change

■ CO₂ Emissions by Scope

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Scopes 1 and 2 total*1*2	All	million t-CO ₂	59.9	60.4	53.1	59.0	56.1
	ST Gr	million t-CO ₂	59.7	60.0	52.6	58.6	55.7
	ST	million t-CO ₂	55.4	56.0	49.1	54.7	52.3
	ST subsidiaries	million t-CO ₂	4.3	3.9	3.5	3.9	3.4
	EN Gr	million t-CO ₂	0.212	0.403	0.484	0.387	0.422
	EN	million t-CO ₂	0.0175	0.0168	0.0141	0.0103	0.0081
	EN subsidiaries	million t-CO ₂	0.195	0.386	0.470	0.377	0.414
	SH Gr	million t-CO ₂	0.0362	0.0353	0.0296	0.0319	0.0316
	SH	million t-CO ₂	0.0005	0.0005	0.0004	0.0004	0.0004
	SH subsidiaries	million t-CO ₂	0.0358	0.0348	0.0292	0.0315	0.0311
Scope1*3*4	All	million t-CO ₂	52.3	52.9	46.6	51.9	49.0
	ST Gr	million t-CO ₂	52.1	52.5	46.2	51.5	48.6
	ST	million t-CO ₂	49.2	49.8	43.8	48.8	46.4
	ST subsidiaries	million t-CO ₂	3.0	2.7	2.4	2.7	2.2
	EN Gr	million t-CO ₂	0.171	0.361	0.442	0.345	0.395
	EN	million t-CO ₂	0.0078	0.0038	0.0024	0.0024	0.0029
	EN subsidiaries	million t-CO ₂	0.163	0.357	0.439	0.343	0.393

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Scope2*5	All	million t-CO ₂	7.6	7.6	6.4	7.1	7.1
	ST Gr	million t-CO ₂	7.5	7.5	6.4	7.0	7.0
	ST	million t-CO ₂	6.2	6.3	5.3	5.8	5.9
	ST subsidiaries	million t-CO ₂	1.3	1.2	1.1	1.2	1.1
	EN Gr	million t-CO ₂	0.0416	0.0422	0.0424	0.0418	0.0263
	EN	million t-CO ₂	0.0097	0.0129	0.0116	0.0079	0.0052
	EN subsidiaries	million t-CO ₂	0.0319	0.0293	0.0308	0.0339	0.0211
	SH Gr	million t-CO ₂	0.0362	0.0353	0.0296	0.0319	0.0316
	SH	million t-CO ₂	0.0005	0.0005	0.0004	0.0004	0.0004
	SH subsidiaries	million t-CO ₂	0.0358	0.0348	0.0292	0.0315	0.0311
Unit CO ₂ emissions (numerator: Scopes 1 and 2 total; denominator: sales)	All	t-CO ₂ /billion yen	1,546	1,619	1,644	1,352	1,057
Scope3*6*7	All	thousand t-CO _{2e}	16,751	16,382	14,369	20,778	23,184
Category 1 Purchased goods and services	All	thousand t-CO _{2e}	13,371	12,557	11,026	17,244	19,750
Category 2 Capital goods	All	thousand t-CO _{2e}	1,180	1,401	1,226	1,221	1,166
Category 3 Fuel and energy related activities not included in Scopes 1 or 2	All	thousand t-CO _{2e}	370	728	671	717	736
Category 4 Upstream transportation and delivery	All	thousand t-CO _{2e}	491	489	419	454	450
Category 5 Waste generated in operations	All	thousand t-CO _{2e}	100	57	45	58	62
Category 6 Business travel	All	thousand t-CO _{2e}	4	4	4	5	4
Category 7 Employee commuting	All	thousand t-CO _{2e}	49	49	51	59	49
Category 15 Investments	All	thousand t-CO _{2e}	1,186	1,097	927	1,022	967

*1 Data cover 76 companies

- JFE Steel and 26 major domestic and overseas subsidiaries
- JFE Engineering and 12 major domestic and overseas subsidiaries
- JFE Shoji and 35 major domestic and overseas subsidiaries.

*2 Starting with FY2021, figure includes data for an expanded list of JFE Steel, JFE Engineering, and JFE Shoji subsidiaries.

*3 Data for JFE Steel include CO₂ emissions from non-energy sources.

*4 Data for 1 JFE Steel major domestic subsidiary and a JFE Engineering major domestic subsidiary include CO₂ emissions from non-energy sources.

*5 CO₂ Emission Factor for Purchased Electricity in FY2022:

- JFE Steel uses the emission factor of the Commitment to a Low Carbon Society of the Japan Iron and Steel Federation for energy purchased in FY2021.
- JFE Steel's domestic consolidated subsidiaries, the JFE Engineering Group, and the JFE Shoji Group apply the adjusted emission factors of each electric power company for each fiscal year.
- Over seas: the latest IEA emission factors

*6 Coverage:

- (Categories 1, 2, 3, 4, 5) JFE Steel, 21 JFE Steel major domestic subsidiaries, JFE Engineering, 1 JFE Engineering major domestic subsidiary, and JFE Shoji
- (Category 6, 7) JFE Steel, 21 JFE Steel major domestic subsidiaries, JFE Engineering, 15 JFE Engineering major domestic and overseas subsidiaries, and JFE Shoji
- (Category 15) Japan Marine United, and 10 JFE Steel equity-method affiliates (7 domestic and 3 overseas)

*7 Sources: Green Value Chain Platform (Ministry of the Environment) and others

Other Greenhouse Gas

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
CO ₂ emissions from energy sources	CO ₂ emissions (Scopes 1 and 2 total)	ST Gr	million t-CO ₂	57.0	57.4	50.2	55.8	53.1
		ST	million t-CO ₂	53.5	54.2	47.3	52.6	50.4
		ST subsidiaries	million t-CO ₂	3.5	3.2	2.9	3.2	2.7
		EN Gr*1*2	thousand t-CO ₂	66.7	67.5	62.5	61.4	45.2
	Scope1	ST	million t-CO ₂	47.3	47.9	41.9	46.8	44.5
	Unit: CO ₂ emissions (denominator: crude steel production)	ST	t-CO ₂ /t-steel	2.03	2.03	2.08	2.03	2.09
CO ₂ emissions from non-energy sources	ST Gr*3	million t-CO ₂	2.61	2.65	2.40	2.74	2.59	
	ST	million t-CO ₂	1.87	1.89	1.82	2.05	1.93	
	ST subsidiaries	million t-CO ₂	0.74	0.76	0.58	0.69	0.66	
	EN subsidiaries*4	million t-CO ₂	0.15	0.34	0.42	0.33	0.38	

Items	Scope	Unit	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	
GHG emissions other than CO ₂	All	thousand t-CO ₂ e	88.7	103.3	96.1	103.0	55.2	
	Methane (CH ₄)	ST Gr	thousand t-CO ₂ e	72.2	72.9	68.3	74.6	35.4
		ST	thousand t-CO ₂ e	72.2	72.9	68.3	74.6	35.4
		ST subsidiaries	thousand t-CO ₂ e	—	—	—	0.005	0.005
	N ₂ O	All	thousand t-CO ₂ e	16.5	30.4	27.9	28.5	19.8
		ST Gr	thousand t-CO ₂ e	16.5	20.0	15.5	17.7	7.8
		ST	thousand t-CO ₂ e	16.5	20.0	15.5	17.7	7.8
		ST subsidiaries	thousand t-CO ₂ e	—	—	—	0.004	0.004
		EN subsidiaries* ⁴	thousand t-CO ₂ e	—	10.4	12.4	10.8	12.0
	GHG emitted during transportation* ⁵	ST Gr	million t-CO ₂	66	65	57	63	61
ST		million t-CO ₂	40	40	34	38	37	
ST subsidiaries		million t-CO ₂	26	25	23	25	24	
Contribution to CO ₂ emission reductions* ⁶	EN Gr	million t-CO ₂ /year	412	413	965	1,057	1,114	
	Biomass power generation	million t-CO ₂ /year	212	212	274	286	294	
	Waste power generation	million t-CO ₂ /year	153	153	337	340	372	
	Others* ⁷	million t-CO ₂ /year	47	48	354	357	359	
	Recycling (Includes fluorocarbon recovery and energy creation)	million t-CO ₂ /year	—	—	—	74	89	

*1 Data cover JFE Engineering and 12 major domestic and overseas subsidiaries.

*2 Starting with FY2021, expanded coverage of major subsidiaries for JFE Engineering.

*3 Data cover JFE Steel and a major domestic subsidiary.

*4 J&T Recycling Co. is a domestic subsidiary of JFE Engineering.

*5 Data cover JFE Steel and 9 major domestic subsidiaries, which are specified consigners designated under the Japanese Energy Saving Act.

*6 Coverage:

- Up to FY2019, only JFE Engineering's domestic business is covered

- FY2020 data cover JFE Engineering's domestic and overseas businesses and its German subsidiary Standardkessel Baumgarte GmbH (SBG)

- From FY2021, JFE Engineering's domestic and overseas businesses, J&T Recycling Corporation, JFE Urban Recycle Corporation, and German subsidiary Standardkessel Baumgarte GmbH (SBG) are covered

*7 Others (digestion gas, geothermal, solar power, wind, waste heat recovery, fuel conversion, sludge incineration, PPA, energy services)

■ Energy

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Energy consumption and unit energy consumption	Energy consumption	All	PJ	—	670	592	654	627
		ST Gr	PJ	—	669	591	652	625
		ST	PJ	613	620	545	602	581
		ST subsidiaries	PJ	—	48.8	45.2	49.6	43.9
		EN Gr	PJ	—	1.3	1.2	1.3	1.2
		SH Gr	PJ	—	0.6	0.6	0.7	0.7
	Unit energy consumption (crude steel production)	ST	GJ/t-steel	23.3	23.2	24.0	23.3	24.1
Energy consumption (Crude petroleum equivalent)	EN	kl	10,886	8,788	8,000	7,636	7,772	
YOY ratio of unit energy consumption	EN	%	95.4	80.7	91.0	95.5	107.9	
Recovered energy for recycling	Supplied to society	ST	%	39	39	38	38	37
	Consumed internally	ST	%	61	61	62	62	63

■ Modal Shift Rate

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
All transportation	Ship and rail	ST	%	60.2	59.6	58.4	58.3	59.0
	Truck	ST	%	39.8	40.4	41.6	41.7	41.0
Transportation of a distance of 500 km or more	Ship and rail	ST	%	91.6	90.9	91.6	90.0	92.1
	Truck	ST	%	8.4	9.1	8.4	10.0	7.9

Scope of calculation: All products and half-finished products transported in Japan

Climate Change (Supplementary Data)

■ CO₂ Emissions and Energy Consumption of JFE Steel Group Subsidiaries (FY2022)

Company name	CO ₂ emissions (unit: thousand t-CO ₂)	Energy consumption (unit: PJ)
JFE Mineral & Alloy Company, Ltd.*	1,389.6	10.71
JFE Bars & Shapes Corporation	504.2	10.19
JFE Chemical Corp.	214.1	4.42
JFE LOGISTICS CORPORATION	161.1	2.32
JFE Galvanizing & Coating Co., Ltd.	56.0	1.20
JFE Plastic Resource Corporation	20.9	0.40
MIZUSHIMA RIVERMENT CORP.	9.2	0.14
JFE Container Co., Ltd.	10.2	0.21
J-Logitec Co., Ltd.	7.5	0.11
Galvatex Corporation	3.9	0.08
JFE Metal Products & Engineering Inc.	7.4	0.18
JFE Welded Pipe Manufacturing Co., Ltd.	9.4	0.16
JFE Techno-wire Corporation	4.4	0.09
JFE PRECISION CORPORATION	3.8	0.07
K-PLASHEET CORPORATION	4.5	0.08
JFE LIFE CORPORATION	3.9	0.11
CHIBA RIVERMENT AND CEMENT CORP.	6.7	0.13
JFE Steel Pipe Co., Ltd.	2.9	0.06
GECOSS CORPORATION	3.7	0.06
JFE Kozai Corporation	3.8	0.07
JFE Ferrite Corporation	3.6	0.07
5 overseas companies	933.9	13.06
Total	3,364.8	43.92

* Data for Mineral & Alloy Company, Ltd. since FY2021 has included CO₂ emissions from Mizushima Ferroalloy Co., Ltd. and JFE Material Co., Ltd., which merged into JFE Mineral & Alloy Company in April 2022.

■ CO₂ Emissions from Energy Sources and Energy Consumption of JFE Engineering Group Subsidiaries (FY2022)

Company name	CO ₂ emissions (unit: thousand t-CO ₂)	Energy consumption (unit: PJ)
J&T Recycling Corporation	29.2	0.8
J Farm Corporation	2.1	0.040
Fujikako, Inc.	1.3	0.034
NORTHERN JAPAN MACHINERY Corporation	1.1	0.018
TOHOKU DOCK TEKKO CO., LTD.	0.9	0.017
JFE Environmental Service Corporation	0.6	0.011
Asuka Soken Co., Ltd.	0.8	0.013
JFE Pipeline Engineering Corporation	0.4	0.006
JFE Technos Corporation	0.1	0.003
JFE Aqua Machine and Service Corporation	0.0	0.001
JFE Project One Co., Ltd.	0.1	0.001
J&M Steel Solutions Company Limited	0.5	0.011
Total	37.2	0.921

Prevention of Pollution

■ Air Emissions

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
SOx emissions* ¹	ST Gr	million Nm ³	4.1	4.3	3.3	3.5	3.3
	ST	million Nm ³	4.1	4.3	3.3	3.5	3.3
	ST subsidiaries	million Nm ³	0.04	0.04	0.03	0.03	0.04
NOx emissions* ²	ST Gr	million Nm ³	10.7	11.3	10.4	11.4	10.2
	ST	million Nm ³	10.5	11.1	10.3	11.2	10.1
	ST subsidiaries	million Nm ³	0.19	0.17	0.14	0.18	0.15

*1 10 JFE Steel consolidated subsidiaries in Japan.

*2 11 JFE Steel consolidated subsidiaries in Japan.

■ Release to Waterways

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
COD (chemical oxygen demand)	All* ¹	t/day	3.5	3.4	3.1	3.1	3.1
	ST	t/day	3.3	3.2	2.9	2.9	2.8
	ST subsidiaries	t/day	0.17	0.15	0.17	0.23	0.25
	EN* ²	kg/day	6.8	8.4	8.7	8.4	6.6

*1 Coverage:

- JFE Steel and 10 consolidated subsidiaries in Japan.

- JFE Engineering

*2 This report uses the maximum value of each year.

■ Chemical Substances Management

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022	
PRTR-registered substances* ¹ * ²	Amount released	All* ³	t	1,019	918	754	827	750
		ST Gr	t	814	766	596	672	609
		ST	t	545	481	341	380	366
		ST subsidiaries	t	269	285	255	292	243
		EN Gr	t	205	152	158	155	141
		EN	t	147	107	121	116	103
		EN subsidiaries	t	58.4	45.4	36.7	39.3	37.8
	Amount transferred	All* ³	t	9,210	7,866	5,949	9,845	12,809
		ST Gr	t	9,176	7,832	5,910	9,811	12,779
		ST	t	2,533	1,865	1,694	1,378	1,278
		ST subsidiaries	t	6,643	5,967	4,216	8,433	11,501
		EN Gr	t	34	34	39	34	30
		EN	t	28	29	26	30	26
		EN subsidiaries	t	5.7	5.4	12.5	4.4	4.4

*1 Coverage:

- JFE Steel and 15 consolidated subsidiaries in Japan.

- JFE Engineering and 4 consolidated subsidiaries in Japan.

*2 Excluding dioxins

*3 JFE Shoji is not included in the scope of the report as the company is not subject to PRTR registration.

Prevention of Pollution (Supplementary Data)

■ SOx and NOx Emissions of JFE Steel Group Subsidiaries (FY2022)

Company name	SOx emissions(unit: Nm ³)	NOx emissions(unit: Nm ³)
JFE Mineral & Alloy Company, Ltd.	17,206	75,518
CHIBA RIVERMENT AND CEMENT CORP.	56	741
MIZUSHIMA RIVERMENT CORP.	0	879
JFE PRECISION CORPORATION	1,751	547
JFE Plastic Resource Corporation	125	62
JFE Bars & Shapes Corporation	4,129	10,056
JFE Metal Products & Engineering Inc.	32	1,442
JFE KENZAI FENCE CO., LTD.	0	0
JFE Galvanizing & Coating Co., Ltd.	1,425	13,226
JFE Container Co., Ltd.	88	0
JFE Welded Pipe Manufacturing Co., Ltd.	0	0
JFE Steel Pipe Co., Ltd.	0	0
Galvatex Corporation	0	877
JFE Techno-wire Corporation	0	0
JFE Kozai Corporation	0	0
GECOSS CORPORATION	0	0
JFE LOGISTICS CORPORATION	0	0
J-Logitec Co., Ltd.	0	0
JFE Chemical Corp.	10,051	41,900
K-PLASHEET CORPORATION	149	0
JFE LIFE CORPORATION	0	0
Total	35,012	145,248

Efficient Use of Natural Resources

■ Natural Resources

	Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Input	Raw materials for steel production	ST	million t	66.0	67.0	58.7	59.3	62.2
	Iron ore	ST	million t	40.1	41.4	35.4	40.2*	37.5
	Coal	ST	million t	20.6	20.3	18.1	19.9	19.1
	Lime	ST	million t	5.3	5.3	5.2	5.9	5.6
	Recycled materials (steel scrap)	ST	million t	1.3	1.1	0.8	1.2	0.9
	Raw materials	EN	thousand t	47.3	39.4	36.9	38.6	27.9
Products supplied	Steel products	ST	million t	26.3	26.7	22.8	25.9	24.1
	Engineering products	EN	thousand t	44.5	36.6	34.7	37.4	27.0

* Revised the prior year data to increase accuracy.

■ Co-products and Wastes

	Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Co-products	Amount generated* ¹	ST Gr	million t	16.1	15.6	13.9	14.4	14.1
		ST* ²	million t	15.3	15.1	13.4	13.9	13.5
		ST subsidiaries	million t	0.8	0.5	0.5	0.5	0.6
	Amount recycled internally	ST	million t	6.0	5.0	3.3	3.3	2.9
	Internal recycle rate	ST	%	39.3	32.9	24.9	24.0	21.7
	Emissions* ¹	ST Gr	million t	9.4	10.3	10.2	10.8	10.8
		ST	million t	9.3	10.2	10.1	10.6	10.6
		ST subsidiaries	million t	0.1	0.1	0.1	0.2	0.2
	Used by local communities	ST	million t	9.2	10.1	10.0	10.5	10.5
	Rate of local communities use	ST	%	60.4	66.8	74.8	75.7	77.8
	Landfill amount* ¹	ST Gr	million t	0.081	0.074	0.060	0.094	0.167
		ST	million t	0.052	0.043	0.037	0.042	0.073
		ST subsidiaries	million t	0.029	0.031	0.023	0.052	0.094
Recycling rate	ST	%	99.7	99.7	99.7	99.7	99.5	

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Wastes	Emissions*3*4	EN Gr	thousand t	131.7	211.0	159.1	249.2	223.7
	Offices	EN	t	386.4	367.1	329.2	235.3	259.4
		Yokohama HO	t	299.9	299.0	256.9	156.7	195.0
		Tsu works	t	86.5	68.2	72.3	78.6	64.4
	Productions	EN	t	1,039.3	1,340.5	1,072.3	803.0	821.4
		Tsurumi works	t	506.6	653.8	519.8	364.7	461.6
		Tsu works	t	532.7	686.7	552.5	438.3	359.8
	Constructions	EN	t	109,045.2	145,397.7	97,387.9	190,242.3	162,747.2
	Subsidiaries	EN subsidiaries	t	22,634.4	63,876.7	60,296.7	57,960.3	59,841.4
	Recycling rate (offices)	EN	%	96.7	97.3	96.8	96.1	96.4
		Yokohama HO	%	98.5	98.8	99.1	98.5	98.4
		Tsuworks	%	85.2	85.2	87.2	88.4	85.7
	Recycling rate (production)	EN	%	46.8	68.0	48.8	46.8	54.0
		Tsurumi works	%	68.7	79.4	72.0	68.3	75.9
		Tsuworks	%	32.1	60.9	33.8	28.0	25.0
	Recycling rate (construction)	EN	%	98.4	97.1	98.3	98.6	99.3
	Landfill	EN	t	2,125.1	4,489.3	2,011.6	3,035.6	1,456.7
	Offices	EN	t	10.7	8.5	9.1	7.4	7.7
		Yokohama HO	t	4.1	3.3	2.1	2.2	2.9
		Tsuworks	t	6.6	5.2	7.0	5.2	4.8
Productions	EN	t	353.3	312.6	351.2	322.6	287.7	
	Tsurumi works	t	83.2	77.3	75.2	89.4	85.9	
	Tsuworks	t	270.1	235.3	276.0	233.2	201.8	
Constructions	EN	t	1,761.1	4,168.2	1,651.3	2,705.6	1,161.3	
Recycling rate	EN	%	97.0	95.8	95.9	96.5	97.4	

*1 Data cover JFE Steel and 22 consolidated subsidiaries in Japan.

*2 Byproducts generated by JFE Steel are mostly reused as offshore, land, or construction materials.

*3 Data cover JFE Engineering and 10 consolidated subsidiaries in Japan.

*4 Data from FY2019 includes wastes generated at offices and productions of JFE Engineering.

■ Wastes at JFE Engineering Construction Sites

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Rubble	Amount generated	EN	t	78,410	113,637	78,100	159,309	141,888
	Recycle rate	EN	%	99.6	98.6	99.4	99.4	99.9
	Landfill amount	EN	t	297	1,533	484	940	173
Sludge	Amount generated	EN	t	16,142	17,225	12,399	24,350	14,806
	Recycle rate	EN	%	98.8	98.8	98.9	96.9	99.0
	Landfill amount	EN	t	199	205	135	683	130
Industrial waste excluding rubble and sludge	Amount generated	EN	t	14,494	13,788	6,678	6,583	6,054
	Recycle rate	EN	%	91.0	85.0	85.4	81.6	84.4
	Landfill amount	EN	t	1,265	1,923	868	1,083	858

■ Paper Consumption at JFE Shoji

Items		Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Consumption of copier papers	SH*		boxes	4,832	4,675	3,021	3,033	2,860
	Tokyo		boxes	2,661	2,516	1,333	1,471	1,376
	Osaka		boxes	372	399	310	337	351
	Nagoya*		boxes	217	293	157	154	177
	Branch*		boxes	1,582	1,467	1,221	1,071	956

* Revised the prior year data to increase accuracy.

Water Security

Water

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Amount of water accepted* ¹	All	million t	240	242	237	246	240
	ST Gr	million t	238	241	236	245	239
	ST	million t	218	221	215	226	220
	ST subsidiaries	million t	20.5	19.8	20.9	18.7	18.2
	EN Gr	million t	0.918	1.410	1.296	1.141	1.35
	EN	million t	0.102	0.106	0.072	0.063	0.064
	EN subsidiaries	million t	0.816	1.304	1.223	1.078	1.28
	SH Gr	million t	0.165	0.149	0.160	0.154	0.154
	SH	million t	—	—	—	—	—
	SH subsidiaries	million t	0.165	0.149	0.160	0.154	0.154
Amount of water released* ²	ST Gr	million t	144	143	141	144	143
	ST	million t	126	126	123	128	128
	ST subsidiaries	million t	18.0	17.0	18.3	15.6	15.4
	EN	million t	0.146	0.126	0.157	0.132	0.122
Amount of water consumption* ²	ST Gr	million t	3,665	3,616	3,331	3,442	3,475
	ST	million t	3,376	3,323	3,066	3,207	3,242
	ST subsidiaries	million t	289	293	265	235	233
Amount evaporated	ST	million t	92	95	92	98	92
Ratio of amount released and evaporated	ST	%	6.5	6.6	7.0	7.0	6.8
Amount recycled* ²	ST Gr	million t	3,427	3,375	3,096	3,197* ⁴	3,237
	ST	million t	3,158	3,102	2,851	2,981* ⁴	3,242
	ST subsidiaries	million t	269	273	245	216	215
Recycling rate* ^{2*3}	ST	%	93.5	93.4	93.0	93.0	93.2
	ST subsidiaries	%	93	93	92	92	92

*1 Coverage:

- JFE Steel and 22 consolidated subsidiaries in Japan.
- JFE Engineering and 7 consolidated subsidiaries in Japan.
- 33 JFE Shoji domestic and overseas consolidated subsidiaries.

*2 Data cover JFE Steel and 22 JFE Steel consolidated subsidiaries in Japan.

*3 Industrial water circulated (%) = (Total amount – industrial water accepted)/total amount used × 100

*4 Revised the prior year data to increase accuracy.

Water Related Data by Water Intake Source and Discharge Source

Items	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Total amount accepted	All*	million t	218.4	221.0	214.8	226.1	220.4
River/lake		million t	0	0	0	0	0
Groundwater		million t	0	0	0	0	0
Industrial water/ waterworks		million t	218.4	221.0	214.8	226.1	220.4
Ocean		million t	0	0	0	0	0
Rainwater		million t	0	0	0	0	0
Other intake source		million t	0	0	0	0	0
Total amount released		All*	million t	126.1	126.8	123.6	128.8
Ocean	million t		125.7	126.3	123.1	128.3	128.1
Surface water	million t		0	0	0	0	0
Underground/well	million t		0	0	0	0	0
Off-site water processing	million t		0.4431	0.4502	0.4796	0.4709	0.4300
Beneficial use/other use	million t		0	0	0	0	0
Other discharge source	million t		0	0	0	0	0

* Data cover JFE Steel and JFE Engineering.

Water Security (Supplementary Data)

Amount of Water Accepted and Released at JFE Steel Group Subsidiaries (FY2022)

Company name	Amount accepted (unit: thousand tonnes)	Amount released (unit: thousand tonnes)
JFE Mineral & Alloy Company, Ltd.	6,353	5,946
CHIBA RIVERMENT AND CEMENT CORP.	10	10
MIZUSHIMA RIVERMENT CORP.	14	14
JFE PRECISION CORPORATION	148	148
JFE Plastic Resource Corporation	18	18
JFE Bars & Shapes Corporation	4,796	2,707
JFE Metal Products & Engineering Inc.	120	138
JFE KENZAI FENCE CO., LTD.	51	51
JFE Galvanizing & Coating Co., Ltd.	548	605
JFE Container Co., Ltd.	251	251
JFE Welded Pipe Manufacturing Co., Ltd.	29	29
JFE Steel Pipe Co., Ltd.	2	2
Galvatex Corporation	651	651
JFE Techno-wire Corporation	93	93

Company name	Amount accepted (unit: thousand tonnes)	Amount released (unit: thousand tonnes)
JFE Kozai Corporation	14	14
GECOSS CORPORATION	67	68
JFE LOGISTICS CORPORATION	104	104
J-Logitec Co., Ltd.	3	3
JFE Chemical Corp.	4,369	4,002
K-PLASHEET CORPORATION	30	26
JFE LIFE CORPORATION	504	493
Total	18,176	15,373

■ Amount of Water Accepted at JFE Engineering Group Subsidiaries (FY2022)

Company name	Amount accepted (unit: thousand tonnes)
J&T Recycling Corporation	1,231
JFE Environmental Service Corporation	30.5
NORTHERN JAPAN MACHINERY Corporation	0.002
TOHOKU DOCK TEKKO CO., LTD.	0.03
JFE Aqua Machine and Service Corporation	0.002
Fujikako, Inc.	0.02
J Farm Corporation	22.2
Total	1,283