

Environment

Environmental Management

■ Environmental policy promotion system

Toward achievement of YKK Sustainability Vision 2050, we established the YKK Sustainability Committee under the Management Strategy Council. With the company president as its chair, the Committee is addressing environmental issues, such as climate change. The Committee is doing so by determining policies and strategies as well as by building a global sustainability promotion structure.

■ Environmental management system

YKK builds an environmental management system in each company that follows the ISO 14001 international standard and promotes continuous environmental activities. Furthermore, YKK has formulated the YKK Global Criteria of Compliance (YGCC), which is based on internal rules related to working conditions, health and safety, the environment, and fair business practices. Self-checks are carried out once a year in addition to periodic external audits.

■ Environmental objectives and targets

YKK has established a Mid-term Environmental Management Policy and measures are analyzed every four years to fit the Mid-term Management Policy. In the 6th Mid-term Environmental Management Policy, starting from FY2021, we are carrying out activities to achieve a sustainable society focusing on the concept of "Technology Oriented Value Creation," and with the aim of becoming a company for the social good that is in harmony with the environment. Activities are being carried out after formulating environmental objectives each year toward achievement of the environmental management policy.

6th Mid-term YKK Environmental Policy (FY2021 to FY2024)

Under the 6th Mid-term Management Vision, "Technology Oriented Value Creation," YKK will promote sustainability through its business activities and products, harmonize with the environment, continue to be a company for the social good, and contribute to society.

Guidelines for Action

- In accordance with the YKK Sustainability Vision, we will strengthen our environmental management system and carry out continuous improvement to ensure environmental compliance and reduce our environmental impact.
- In order to achieve climate neutrality by 2050, we will reduce CO₂ and other GHG emissions over the long-term.
- We will reduce products' environmental impacts throughout their life cycle and promote the transition to sustainable energy and materials.
- We will reduce our environmental impact, as well as the burden we place on the environment, by reducing the use of water and chemical substances for the preservation of ecosystems and enrichment of life.

April 1, 2021

Hiroaki Otani

President, YKK Corporation

FY2024 YKK Environmental Objectives

Contribute to society, in harmony with the environment

1 Respond to climate change

- Scope 1+2 CO₂ emissions 25.2% reduction from FY2018 baseline (reduction of 50% by FY2030)
- Scope 3 CO₂ emissions 15.0% reduction from FY2018 baseline (reduction of 30% by FY2030)

2 Reduce environmental impact

- Waste
 - Waste recycling rate of at least 92%
 - Waste intensity reduction 4% year-on-year reduction (FY2030 waste emissions = FY2018 waste emissions)
- Water (intake) intensity reduction 2% year-on-year reduction (FY2030 water intake = FY2018 water intake)
- Implement water risk reduction measures based on the results of the evaluation of water risks that take the regional environment into account
- Promote zero environmental accidents and the reduction of environmental impact on the atmosphere, wastewater, soil, etc.

3 Provide and propose environmentally friendly products

- Ensure the implementation of environmentally friendly themes in the development of products and equipment

4 Ensure environmental compliance

- Foster environmental human assets by enhancing environmental education
- Strengthen environmental management system via YGCC

Climate Change

Fundamental Approach

In March 2020, YKK signed the Fashion Industry Charter for Climate Action aimed at achieving the objectives of the Paris Agreement, to enable the company to achieve climate neutrality by 2050. In March 2021, we also set a CO₂ reduction target of limiting the average worldwide temperature increase to 1.5°C (objective approved by the SBT), and we are working to implement energy conservation and renewable energy in an effort to reduce CO₂ emissions at each of our business sites around the world.

FY2023 Initiatives

YKK Group achieved the GHG emissions target of a 21.0% reduction for FY2023 compared to FY2018, an SBTi-approved target. (Reduction of 56.2% from FY2018 baseline*)

The entire Group is moving forward with renewable energy procurement, and 37 of our plants around the world have achieved procurement of 100% of their used power as renewable energy.

In addition, we are also creating renewable energy, including the operation of solar power generation systems, at 26 locations (total generation capacity: 12,600 kW).

* Actual value prior to third-party verification

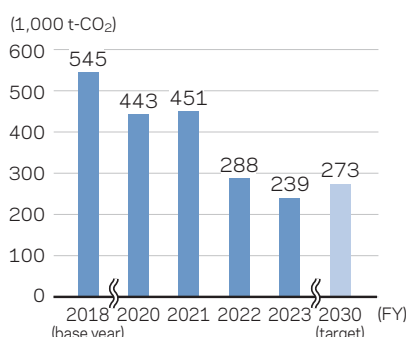
Changes in CO₂ emissions

In March 2021, YKK obtained certification under the SBT initiative's 1.5°C target.

We will aim for a 50% reduction (compared to FY2018) of GHGs in Scope 1+2, and a 30% reduction (compared to FY2018) in Scope 3 by 2030.

Scope 1+2

* Calculated using the YKK Group GHG calculation rules (CO₂ conversion factor fluctuation of electricity)



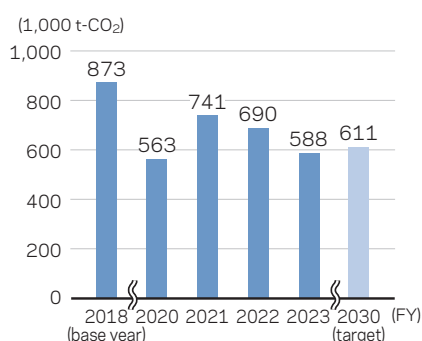
CO₂ emissions in FY2023 were reduced by 56.2% compared to FY2018

Unit: 1,000 t-CO₂

	2018	2020	2021	2022	2023
Japan	77	57	66	37	37
Americas	41	33	34	30	26
Europe	27	25	21	19	16
ISAMEA	45	34	47	26	14
ASEAN	225	178	171	159	130
China	129	116	113	16	16

Scope 3

* Calculated using the Scope 3 calculation method noted on page 13.



CO₂ emissions in FY2023 were reduced by 32.7% compared to FY2018

Unit: 1,000 t-CO₂

	2018	2020	2021	2022	2023
Japan	232	116	153	163	152
Americas	107	63	88	81	56
Europe	41	32	42	40	39
ISAMEA	57	43	47	49	48
ASEAN	239	157	213	191	159
China	198	152	198	167	134

* GHG emissions in FY2021 and FY2022 (Scope 1+2 emissions, as well as Scope 3 emissions in categories 1, 2, and 3) were certified by a third party

Breakdown of CO₂ emissions across all supply chains* (FY2023 results in six regions)Unit: 1,000 t-CO₂

		Region Total	Japan	Americas	Europe	ISAMEA	ASEAN	China
Scope 1	Direct emissions from fuels burned on-site, etc.	77	11	9	14	8	21	13
Scope 2	Indirect emissions from purchased power and the use of heat	162	26	17	2	6	108	3
Scope 3	Category 1 Purchased Goods and Services	327	91	24	10	17	92	92
	Category 2 Capital Goods	126	44	10	16	12	31	13
	Category 3 Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	26	6	4	2	1	12	1
	Category 4 Upstream Transportation and Distribution	33	2	12	4	6	4	6
	Category 5 Waste Generated in Operations	1	0	0	0	0	0	0
	Category 6 Business Travel	2	1	0	1	0	0	0
	Category 7 Employee Commuting	10	6	1	1	0	2	1
	Category 8 Upstream Leased Assets	-	-	-	-	-	-	-
	Category 9 Downstream Transportation and Distribution	-	-	-	-	-	-	-
	Category 10 Processing of Sold Products	0	0	0	0	0	0	0
	Category 11 Use of Sold Products	-	-	-	-	-	-	-
	Category 12 End-of-Life Treatment of Sold Products	62	3	6	4	11	17	21
	Category 13 Downstream Leased Assets	-	-	-	-	-	-	-
	Category 14 Franchises	-	-	-	-	-	-	-
	Category 15 Investments	-	-	-	-	-	-	-
	Other	-	-	-	-	-	-	-
Scope 3 Total		588	152	56	39	48	159	134
Scope 1, 2, and 3 Total		827	189	82	54	62	288	150

* Calculated using the YKK Group GHG calculation rules (CO₂ conversion factor fluctuation of electricity) and the Scope 3 calculation method noted later

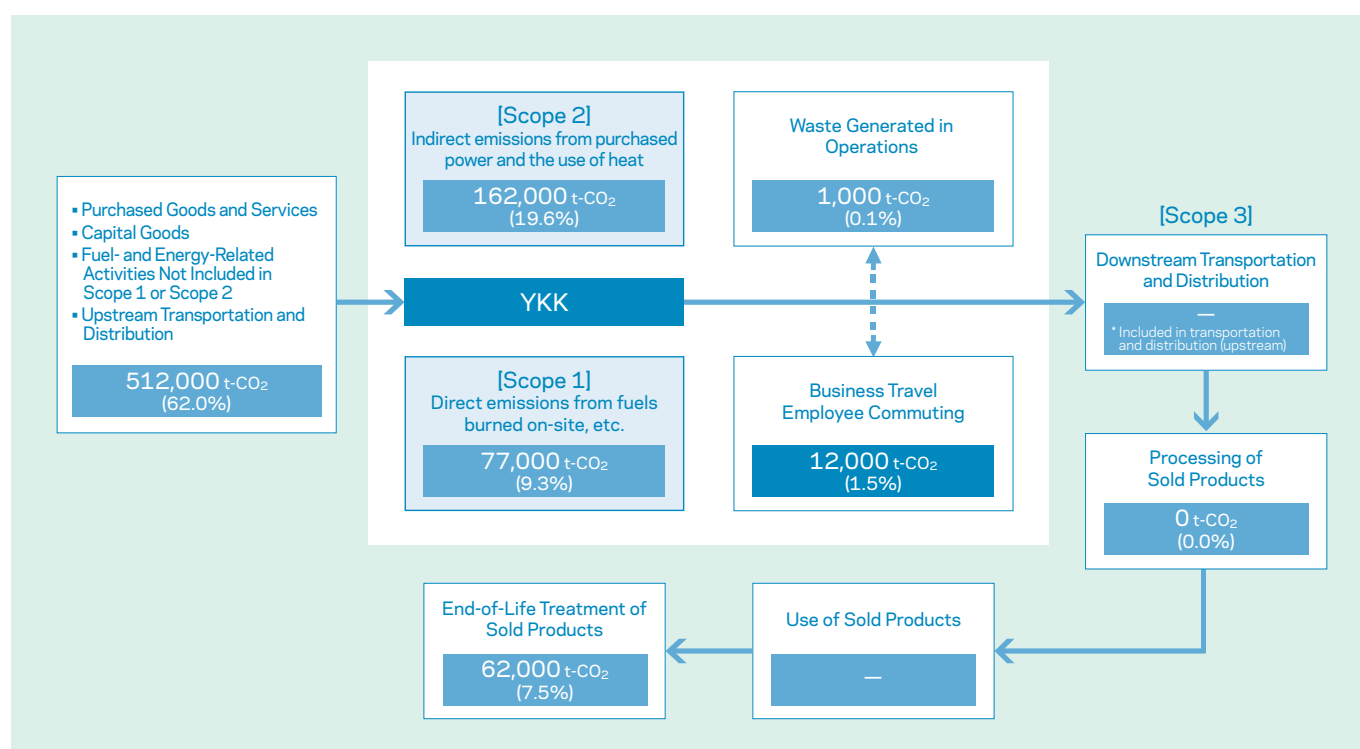
Scope 3 calculation method (amount of activity x emission intensity)

Categories		Calculation method	
		Amount of activity	Emission intensity
Category 1	Purchased Goods and Services	Weight of purchased raw materials	Intensity database (*1, *3)
Category 2	Capital Goods	Equipment investment value of capital goods	Intensity database (*1)
Category 3	Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	Amount of energy (electricity and fuel) consumption	Intensity database (*1, *2)
Category 4	Upstream Transportation and Distribution	Cargo owner's procurement ton-kilometers	Intensity database (*1, *2)
Category 5	Waste Generated in Operations	Amount of processed waste materials per type	Intensity database (*1, *2)
Category 6	Business Travel	Transportation allowance per transportation means	Intensity database (*1)
Category 7	Employee Commuting	Transportation allowance per transportation means	Intensity database (*1, *2)
Category 8	Upstream Leased Assets	We excluded emissions associated with the operation of the leased assets because they were included in Scope 1+2.	
Category 9	Downstream Transportation and Distribution	We excluded it because we included it in category 4 as the product is shipped directly to the customer.	
Category 10	Processing of Sold Products	Amount of production (duration and number of pieces)	Intensity per amount of production in YKK processing process
Category 11	Use of Sold Products	We excluded this because there are no use-stage emissions from the products we sold.	
Category 12	End-of-Life Treatment of Sold Products	Amount of production (weight)	Intensity database (*1, *3)
Category 13	Downstream Leased Assets	We excluded this because we do not lease to others.	
Category 14	Franchises	We excluded this because we do not preside over franchises.	
Category 15	Investments	We excluded this because we are neither an investment business, nor a financial services provider.	
	Other	We excluded this because it is optional.	

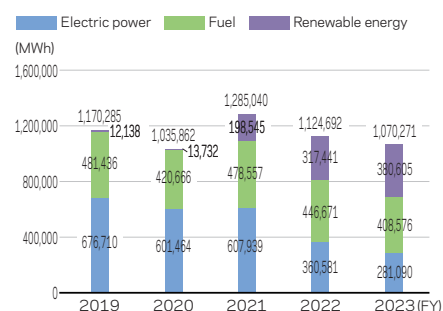
*1 "Emission Intensity Database for Calculating Greenhouse Gas Emissions for Organizations through Supply Chains (Ver. 3.1)"

*2 "LCI Database IDEAv2 (for Calculating Greenhouse Gas Emissions for Supply Chains)"

*3 "GaBi Database"

CO₂ emissions in supply chains (FY2023 results)

Changes in energy consumption



Unit: MWh

		2019	2020	2021	2022	2023
Electric power	Japan	110,850	90,237	110,204	56,495	53,843
	Americas	77,059	59,665	61,838	61,257	49,250
	Europe	27,551	24,698	22,305	7,855	4,904
	ISAMEA	52,932	45,634	62,408	30,857	12,035
	ASEAN	252,400	235,036	214,545	201,355	160,586
	China	155,918	146,194	136,640	2,761	472
Fuel	Japan	50,677	40,471	45,280	45,659	44,903
	Americas	62,365	45,111	59,957	54,854	50,596
	Europe	90,082	83,513	90,722	91,715	76,802
	ISAMEA	56,973	32,765	47,799	45,041	39,044
	ASEAN	135,732	123,922	130,187	125,067	111,903
	China	85,608	94,883	104,611	84,334	85,329
Renewable energy	Japan	327	244	7,878	49,894	47,934
	Americas	6,441	7,835	13,075	9,334	9,214
	Europe	4,786	5,169	22,358	22,254	22,095
	ISAMEA	278	183	53,948	33,036	68,008
	ASEAN	202	183	51,856	61,205	80,640
	China	104	119	49,431	141,718	152,713

* The graphs and tables have been created based on the combination of electricity, fuel, and renewable energy. Fuel is the sum of A heavy fuel, kerosene, LPG, LNG, town gas, natural gas, diesel oil, gasoline, coal, and steam. 3.6MJ/kWh was used as the coefficient for thermal conversion.

COLUMN

YKK Selected for CDP Climate Change Highest “A List” Rating for First Time



In FY2023, YKK was selected for the first time as an “A List” company, the highest rating, in a study on climate change conducted by the international environmental non-profit organization CDP*. To fulfill the YKK Sustainability Vision 2050, our sustainability goals for achieving climate neutrality by 2050, we have promoted various measures related to energy conservation and the introduction of renewable energy, and have increased the transparency of information disclosure by disclosing data on GHG emissions that have been verified by third parties. We are also making company-wide efforts to strengthen engagement with our customers and suppliers to reduce GHG emissions. We believe that YKK was selected because these efforts and our transparent information disclosure were highly rated. We will continue to work actively to reduce GHG emissions and our environmental impact throughout value chains, so that we can continue to earn high ratings in the future.

* An international non-profit organization with a system to disclose environmental information by companies and local governments. CDP is leading the way in corporate environmental information disclosure and environmental protection activities.

Accelerating the Introduction of Solar Power Generation Systems Around the World



YKK Vietnam Co., Ltd. Ha Nam Plant



YKK MEDITERRANEO S.P.A.

YKK is actively adopting solar power generation systems worldwide, toward the goal of achieving climate neutrality by 2050. The systems have generated 16,483 kW of solar power through operations up to this point, marking more than a tenfold increase in comparison to FY2018. Furthermore, in FY2023, we launched new solar power generation systems at ten locations around the world.

- YKK Vietnam Co., Ltd. Ha Nam Plant
4,080 kW (projected annual power generated: 3,884MWh CO₂ emissions: 3,110 metric tons)
 - YKK (SHENZHEN) TRADING CO., LTD.
2,063 kW (projected annual power generated: 2,063MWh CO₂ emissions: 1,355 metric tons)
 - YKK MEDITERRANEO S.P.A.
1,199 kW (projected annual power generated: 1,578MWh CO₂ emissions: 780 metric tons)
- and others

YKK Adopts Low-Carbon Aluminum for Use in Zippers

YKK is working to boost the adoption of reusable and plant-based textile materials for use in zippers, and to reduce GHG emissions through measures such as switching to eco-friendly products. Starting in FY2024, YKK started an initiative that aims to make a staged transition from conventional aluminum alloy zippers to eco-friendly zippers which use low-carbon aluminum*.

YKK is striving to reduce its Scope 3 GHG emissions across supply chains by 30% (compared to FY2018). YKK, together with aluminum material manufacturers Sumitomo Electric Industries, Ltd. and Sumitomo Electric Toyama Co., Ltd., agreed to a contract pertaining to the use of low-carbon aluminum. Beginning in FY2024, YKK will begin purchasing low-carbon aluminum alloy wires for use as materials in aluminum alloy zippers, and gradually expand their application as part of efforts to achieve our reduction targets for Scope 3 emissions.

* Low-carbon aluminum: The emissions of the low-carbon aluminum to be used for this initiative will be less than 4 metric tons of CO₂ per ton of aluminum ingots produced, owing to their reliance on renewable energy as the power source. This significantly reduces CO₂ emissions in comparison to materials which use fossil fuel-based electricity sources, such as thermal power generation.

* Refer to the press release for details (https://www.ykk.com/newsroom/g_news/2024/20240327.html).

[Reference] Information Disclosure Based on TCFD Recommendations

Since the adoption of the Paris Agreement in December 2015, there has been more and more momentum to evaluate the impact climate change has on business activities worldwide. Within this business climate, the TCFD announced its recommendations in June 2017, which YKK signed onto as a supporter in September 2019.

YKK evaluates and strives to incorporate the impact climate change may have on its business activities into its business strategies according to the TCFD recommendations.

Governance

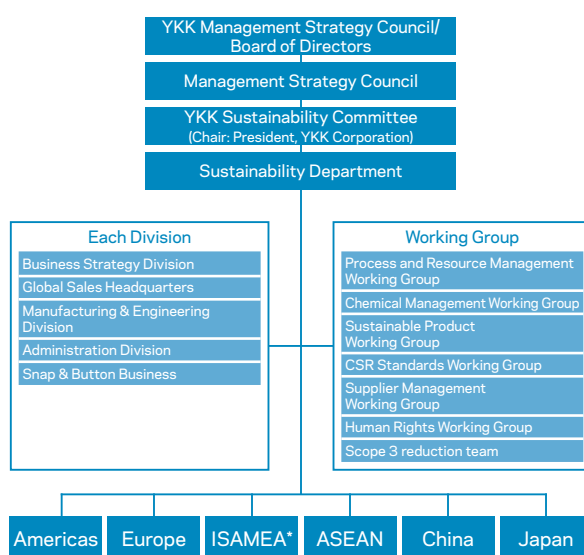
The YKK corporate governance system essentially consists of the Board of Directors, which carries out decision-making and supervisory functions related to management policies and other important matters, and the Audit & Supervisory Board, which carries out auditing functions. We have also introduced an officer system to promote business execution. In addition to regular meetings held once a month, the Board of Directors holds extraordinary meetings as necessary to discuss and make decisions on business plans, organizations, and risk management, as well as other important management matters. It receives reports and supervises the progress of the business execution of each Group company, as well.

The Sustainability Committee, launched as an advisory body for the Board of Directors, discusses and promotes management policies and strategies related to sustainability, such as climate change. The president serves as chair of the Committee.

At the Sustainability Committee, the president serving as chair formulates sustainability policies and strategies and works to build global sustainability promotion systems. Through these policies, strategies, and global sustainability promotion systems, the Sustainability Committee makes final decisions about how to respond to climate change and other sustainability issues. We have established seven expert subcommittees under the Sustainability Committee to take the lead on formulating and promoting specific action plans for each of these challenges. For example, the Process and Resource Management Expert Subcommittee evaluates and executes the development and adoption of manufacturing equipment that will help reduce GHG emissions. The Sustainable Product Expert Subcommittee deliberates on and approves policies on the development of products using sustainable materials.

To promote these sustainability policies and specific action plans globally, YKK has set up sustainability committees in each of the six regions where it does business around the world. The regional sustainability committees disseminate the Sustainability Committee's policies to each region, then report the results of the action plans in each region back to the Sustainability Committee in Japan. The president who serves as chair of the Sustainability Committee in Japan monitors and deliberates on the progress of action plans from these regional reports. In addition, the President supervises and provides guidance for strategy revisions and improvement measures with the aim of achieving sustainability targets.

Sustainability Promotion Structure



* India/South Asia/Middle East/Africa

Strategy

YKK identifies and evaluates major risks and opportunities for these businesses related to climate change according to the TCFD recommendations.

Type		Financial impact on business	Response
Transition risk	Current regulation	The YKK Headquarters is already complying with the carbon tax in Japan. Although the carbon tax in Japan is low and has a relatively small impact, there are risks of higher operation costs of YKK plants and the YKK buildings if the carbon tax rises in the future.	In FY2021, we introduced an internal carbon pricing system and have been actively working to invest in facilities and equipment which will lead to reduced GHG emissions, such as solar power generation systems and energy-saving manufacturing facilities and infrastructure.
	New regulation	The EU Plastics Strategy may raise production costs due to its new rules that require the use of recycled plastics. We may also see cost go up in order to support the shift to renewable energy happening in each nation around the world, such as the purchase of equipment and green power. These are some risks that may reduce revenue.	Therefore, we will strive to broaden sales of products using recycled plastics to improve profitability as well as develop technologies to reduce manufacturing costs. In addition, YKK Headquarters and subsidiary companies research and collect information on regulatory reinforcements in advance and implement measures to deal with them.
	Technology	A delay in our response to advanced technologies to combat climate change could make YKK businesses less competitive, while inaccurate forecasts of demand could make capital investments fail. These are some risks that could impact revenue.	Therefore, we will respond through action that includes verifying the progress of main development themes on a monthly basis and clarifying rules in writing about processes such as methods to calculate the effectiveness of capital investment plans as well as discretionary and approval processes.
	Market	There is also the risk of losing sales opportunities if YKK products and manufacturing processes cannot satisfy the environmental requirements of customers or the environmental regulations of each government. Specifically, the garment industry is said to be just behind the oil industry in CO ₂ emissions, which could impact sales if YKK products do not comply with customer requirements and environmental regulations.	YKK will develop and manufacture products based on the climate-related action of each nation and organization as well as the product preferences of consumers. We will also develop products by anticipating the medium to long-term outlook of environmental action while further supporting evaluations of our impact on the environment and compliance with the regulations in each country.
		A rise in the average temperature has the potential to decrease demand for winter clothing, which in turn would impact the sales of YKK fastening products.	We will respond through market analyses, accurate prior supplementation of consumer demand, and various other measures.
	Reputation	A delay in climate change-related initiatives comes with the risk of harming the reputation of YKK with its main sustainability-oriented customers worldwide. In addition, setting forth goals and visions without actual substance could be perceived as “greenwashing.”	We formulated and announced the YKK Sustainability Vision 2050 and have laid out and are engaging in specific initiatives to reduce GHG emissions and increase the use of renewable energy. Each year, we disclose their progress on our website.
Physical risk	Acute	There is also the risk of harmful effects on health and the environment around our factories in the event hazardous chemical substances leak from YKK manufacturing bases damaged by more frequent and severe flooding due to the rising global temperature.	We see flood damage as one major risk that would have a severe impact on corporate management. Guidelines were formulated in FY2020 to clarify policies to minimize this damage. These guidelines primarily pertain to Japan. With reference to local hazard maps, the policies define flooding, evacuation, and other soft measures to carry out in order to reduce and prevent damage to any facilities in flood zones.
	Chronic	There are also risks of declining profits due to higher air conditioning costs at YKK plants and skyrocketing raw material prices driven by the rising average temperature worldwide.	Therefore, YKK is developing technology to reduce manufacturing costs as well as running costs through the introduction of energy-saving air-conditioning systems. We will also strive to build systems that can always secure raw materials and resources at the right price in the right amount while keeping an eye on trends in the global economy.
Opportunity	Products and services	By expanding sales of products that use recycled materials and help contribute to the reduction of GHG emissions in other ways, we will contribute to solutions to the climate-related issues of our customers and can expect higher sales.	In the YKK Sustainability Vision 2050, we have set the goal of switching to 100% sustainable materials (recycled materials, naturally derived materials, etc.) for textile materials used in fastening products by 2030, and are expanding product design and development using recycled polyester materials made from PET bottles and textile waste. We are also promoting step-by-step sales expansion for a wide range of applications, including garments, bags, and automotive parts. We also engage in various dialogues to solve various issues by disclosing information to customers using CDP and industry standards in addition to sharing our activities. Trials for switching products to recycled materials as well as efforts to establish a system for product LCA disclosure are underway.
	Energy source	YKK can expand product sales by proactively adopting renewable energy and meeting customer demands.	We have set the goal of switching over to electricity that is 100% based on renewable energy sources by FY2030. To achieve that goal, we are working to expand the rate of renewable energy use by actively pushing forward with the installation of solar power panels at company locations and signing contracts for renewable energy offerings and PPA contracts with electricity companies, as well as purchasing renewable energy electricity certificates from them.

■ Risk Management

At YKK, risks are identified by each organization. After worst-case scenarios and the status of their responses are taken into account, we assess risks according to the scale of loss and damage and the frequency of occurrence. We evaluate the scale of damage by taking into account the financial impact, impact on human life and health, impact on credit and reputation, and impact on social order. We identify those risks with large potential impact as key risks that should be managed at the corporate management level.

We also incorporate climate-related risks into the Group-wide risk assessment and management process to anticipate not only the short and medium-term but also the long-term impact (up to about 2030). The impact of torrential rains due to physical risks and the rising temperature in particular could flood YKK plant facilities and stop supplier operations. We have formulated a Business Continuity Plan (BCP) in an effort to reduce and prevent these risks.

* See page 45 for the Risk Assessment Process and the Flow of Identifying Key Risks (conceptual diagram).

■ Metrics and Targets

At YKK, we aim to become climate neutral (net zero emissions) by FY2050. Therefore, we have set targets to reduce CO₂ and other GHG emissions from our company and our supply chains. In addition, these targets have been certified by the Science Based Targets initiative (SBTi). We have disclosed our progress in the Integrated Report.

Metric		Target
Scope 1+2	Reduction of direct CO ₂ emissions	50% reduction by FY2030 (compared to FY2018)
Scope 3	Reduction of indirect CO ₂ emissions from supply chains	30% reduction by FY2030 (compared to FY2018)

* See page 12 for the actual Scope 1, 2, and 3 CO₂ emissions.

Material Resources

Fundamental Approach

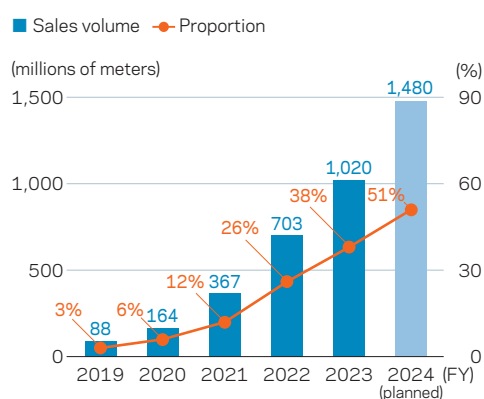
Resources are crucial for *monozukuri* (manufacturing) companies, but the amount available is limited. In order to conduct sustainable business management, YKK is promoting efforts to achieve a circular economy. For example, we proactively research the use of recycled materials and plant-based materials and adopt and provide them in an aim to reduce waste throughout the lifecycle of our products. Meanwhile, we strive to recycle any generated waste materials as much as possible and to reduce the amount of waste that ends up in landfills.

FY2023 Initiatives

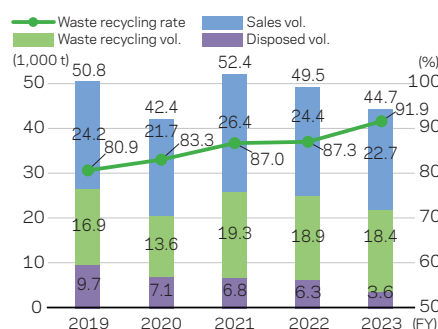
In the YKK Sustainability Vision 2050, YKK has set the target of increasing the recycling rate to 90% by 2030. In FY2023, we conducted activities aimed at achieving a waste recycling rate of 88% or more. Thoroughly separating waste materials and strengthening reuse at each of our operating companies and improved waste processing technology in the Asia Region, and other factors, combined to result in a recycling rate of 91.9%, greatly exceeding the target. The amount of waste was also reduced 86.6% compared to FY2018. In response, we have updated our target to “maintaining a waste recycling rate of 90% or more” from FY2024. As the world shows increasing interest in a circular economy, YKK is moving forward with efforts to recycle and reuse resources and reduce waste.

* According to the definition of “recycling” under Japanese Law. Includes material recycling and thermal recovery.

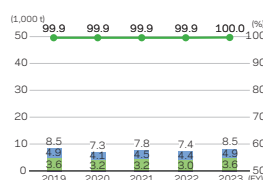
Volume and Proportion of Sustainable Materials Sales



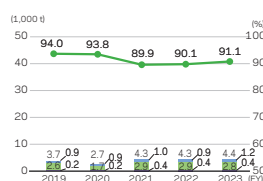
Changes in Waste Emissions/Waste Recycling Rates



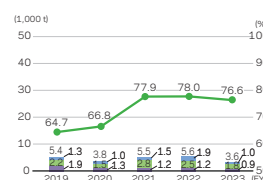
Japan



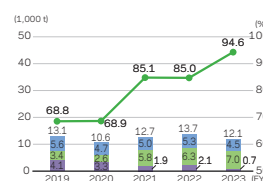
ISAMEA



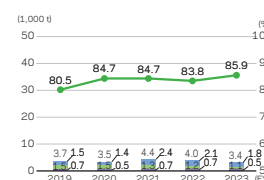
Americas



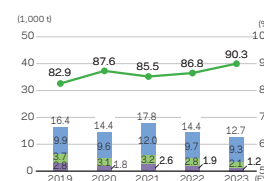
ASEAN



Europe



China



COLUMN

Switching to Sustainable Packaging Materials



For the “material resources” theme laid out in the YKK Sustainability Vision 2050, YKK has set a target of transitioning to a sustainable model by 2030 by replacing all vinyl/plastic packaging materials with sustainable packaging, including recyclable/reusable forms. We are moving forward with the switch to eco-friendly materials for packaging cardboard as well. In FY2023, we changed the main outer packaging cardboard for fastening products at the YKK JAPAN Company (Kurobe Manufacturing Center) to packaging which uses paper certified by the Forest Stewardship Council® (FSC®).

* The Forest Stewardship Council® (FSC®) is a global, not-for-profit organization dedicated to the promotion of responsible forest management worldwide.

License number: FSC®-C192280

Water Resources

Fundamental Approach

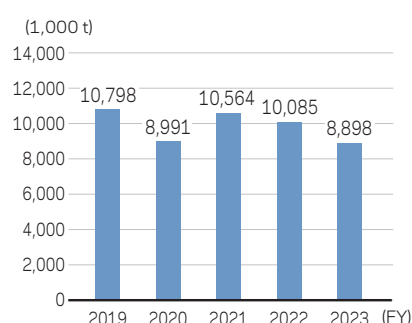
We believe that water resources are indispensable for all living things, including human beings, and are an important shared property of the community. As members that are active in the community, each YKK location is protecting water resources by reducing the amount they use, minimizing environmental impact through management that uses stricter wastewater standards than the legally mandated standards, and striving for sustainable water use in the community.

FY2023 Initiatives

Our work to achieve our environmental targets in FY2023 reduced the water intake 2% compared to the previous year. Our global water intake for FY2023 was 8,898,000 metric tons. This was a reduction of 13.1% (compared to the previous year), greatly surpassing our target. We also reviewed the water risk checklist we created in FY2019, based on recent requirements, and conducted water risk surveys at each of our manufacturing sites.

In addition, to strengthen wastewater management and to enhance staff awareness of environmental compliance, we provided wastewater treatment technical support by specialists at 12 overseas locations. We have also decided to move forward with wastewater management in accordance with the standards of the ZDHC Wastewater Guidelines, which serve as wastewater guidelines for the garment industry.

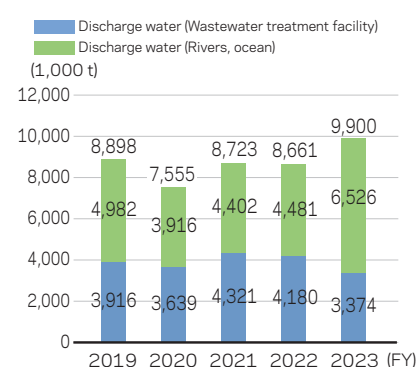
Changes in Intake Water (Total Amount)



Unit: 1,000 t

	2019	2020	2021	2022	2023
Japan	3,260	2,565	3,096	3,402	2,786
Americas	768	574	732	679	615
Europe	763	655	779	728	575
ISAMEA	856	638	927	1,058	1,043
ASEAN	3,325	2,957	3,126	2,693	2,322
China	1,826	1,602	1,904	1,525	1,557

Changes in Discharge Water (Total Amount)



Discharge water (Wastewater treatment facility)

Unit: 1,000 t

	2019	2020	2021	2022	2023
Japan	27	20	25	38	38
Americas	645	490	580	499	476
Europe	381	366	446	446	373
ISAMEA	317	222	492	343	116
ASEAN	997	1,112	1,197	1,276	1,117
China	1,549	1,429	1,581	1,243	1,254

Discharge water (Rivers, ocean)

Unit: 1,000 t

	2019	2020	2021	2022	2023
Japan	3,223	2,944	2,901	3,377	5,303
Americas	115	47	90	92	71
Europe	191	139	150	130	93
ISAMEA	59	47	205	409	328
ASEAN	1,394	739	1,056	808	731
China	0	0	0	0	0

* Revised data between 2019 to 2021, including that aggregated for office locations

COLUMN

Dealing with Regional Water Risks



Water collection using the plant rooftop
(YKK Southern Africa (Pty) Ltd.)

The amount of usable water and quality of water varies by region. In addition, recent climate change has caused heavy rainfall, floods, and droughts, and population growth and economic development in emerging countries have brought water problems (water risks)—such as access to safe drinking water and water shortages due to increased demand for food—to the surface.

In order to use water carefully, which is an important asset for the community, YKK has been conducting water risk assessments at each of its locations once a year since 2019. We conduct water risk assessments using the results of the Aqueduct (provided by the World Resources Institute) and Water Risk Filter (provided by the World Wide Fund for Nature) water risk assessment tools, as well as our own checklists composed of questions to confirm the status of our locations. In our FY2023 assessments, six locations were evaluated as having somewhat high water risks, and we plan to promote water use and carry out contribution activities based on regional targets. Even at locations with low water risks, we are striving for sustainable water use in those regions by reducing water consumption through the introduction of low-water-use manufacturing equipment and water recycling facilities, and by conducting emergency response training at least once a year for wastewater and chemical substance leak incidents.

Chemical Management

■ Fundamental Approach

YKK works to maintain manufacturing and product safety through proper understanding and management of chemical substances related to fastening products and minimize human exposure and environmental impacts by reducing the usage of chemical substances. We comply with laws, regulations, and agreements and also take action to mitigate environmental risks, such as by preserving the local environment including land, ground water, air, and water, and are taking steps to prevent environmental accidents before they occur.

■ FY2023 Initiatives

In FY2023, we switched from per- and polyfluoroalkyl substances (PFAS) to alternative materials wherever possible in cooperation with the manufacturing and development divisions, and conducted a survey of 1,663 suppliers regarding their compliance with the YKK Restricted Substance List (RSL), which takes into account chemical substance regulations, laws, and industry standards related to fastening products. We have revised the YKK RSL to create the 2024 version, based on social and customer needs, and we continue to inform suppliers and conduct compliance surveys.

In order for our workers to be able to carry out their duties with peace of mind, at our manufacturing sites in Japan, we have appointed chemical substance managers who have undergone specialized training, as well as managers who are responsible for the wearing of protective equipment at each manufacturing process unit. We have also strengthened the operational system for chemical management at manufacturing sites. We will continue to develop chemical management education for workers who actually handle chemical substances on a global scale.

COLUMN

ZDHC Roadmap to Zero Program for Eliminating the Use of Hazardous Chemical Substances

YKK believes it is important not only to eliminate the use of hazardous chemical substances that have the potential to be used in the final fastening products but also the hazardous chemical substances with the potential to be used in production activities or emitted into the environment.

We have introduced the Roadmap to Zero Program that advocates Zero Discharge of Hazardous Chemicals (ZDHC) as an industrial federation with participants ranging from brands to participants throughout the fashion industry. YKK is using this program to promote the development of new manufacturing technologies that do not use hazardous chemical substances and the transition to safer chemical substances in production activities.

In FY2023, we expanded the disclosure of our level of compliance with the Manufacturing Restricted Substances List (MRSL) for the chemical substances used in our production processes using the ZDHC Gateway, a chemical usage information platform for the fashion industry which is shared with brands, chemical makers, and suppliers. These activities promote a switch to safer chemical substances and work to engage in manufacturing that minimizes their impact on the natural environment and people.

Biodiversity

Fundamental Approach

Ecosystems of many different organisms support the life of people. YKK believes that our most precious stakeholder is nature and strives to become a company that can coexist and prosper together with nature. We promote planting, cleaning, and other initiatives that work to enrich these ecosystems, in addition to other conservation efforts that include thorough chemical substance management and reducing our environmental impact.

FY2023 Initiatives

In order to expand our activities for bringing about a society that coexists with nature, we revised the YKK Sustainability Vision 2050, which was formulated in 2019, to include the keyword “coexistence with nature.”

As a concrete example of biodiversity conservation activities, we have created the Furusato-no-Mori (Hometown Forest) at the YKK Center Park within the YKK Kurobe Manufacturing Center. YKK MEDITERRANEO S.P.A. protects outdoor gardens where endangered wild orchids grow and conducts activities to raise employee awareness about coexistence with nature. Furthermore, we have continued to conduct tree planting and clean-up activities worldwide. Fourteen locations planted a total of 167 trees, while four locations took part in clean-up activities.

Main Ecosystem Conservation Activities (FY2023)

Activity details	Activity location	Number of implementing locations	Objective
Tree-planting activities	Around the factory	9 (Total 48 trees)	Absorption of GHGs by plants and maintenance of the ecosystem
	Community (parks, etc.)	5 (Total 119 trees)	
Clean-up activities	Around the factory	4	Maintenance of the ecosystem through removal of waste
Biodiversity conservation activities	Inside the factory	2	Protection of living organisms that are subject to national or regional protection
Water resource protection activities	Inside the factory	1	Improving soil's water absorption ability

COLUMN

YKK Center Park's Furusato-no-Mori (Hometown Forest) Designated as a Nature Coexistence Site



Furusato-no-Mori and Furusato-no-Mizube, which were recognized as a Nature Coexistence Site



Kurobe City in Toyama Prefecture—where YKK situates its manufacturing and development locations—is a beautiful city, rich with nature. However, in response to the loss of nature caused by urbanization and other factors, we began forestation efforts in 2006, utilizing a former factory site to recreate the original landscape of Kurobe and to realize the ideal of a “Factory in a Forest” as envisioned by Tadao Yoshida, founder of YKK. In order to conserve the genes of local organisms, we raised seedlings from seeds collected from nearby mountains and fields to plant 20,000 trees from 20 species. Furusato-no-Mori has been open to the public since 2009 as YKK Center Park, integrated with industrial tourism facilities. As the forest has grown, it currently attracts approximately 370 different species (including endangered species). We also use the forest to provide environmental education for children, who will be responsible for the next generation. Based on these activities, in October 2023, Furusato-no-Mori was designated for the first time as a Nature Coexistence Site, a system under which the Japanese Ministry of the Environment certifies areas conserved by the private sector and others that contribute to achieving the international biodiversity goal of “30 by 30.”

Environmental Contribution Activities

Fundamental Approach

Under founder Tadao Yoshida's philosophy of "becoming part of the local community," YKK keeps in mind achieving prosperity together with the community, and places value on the connection with the local community as a member of society. Each business site conducts cleaning activities and other environmental contribution activities based on that thinking. In addition, we believe that teaching the children who are the next generation is crucial to solving environmental issues, so we host environmental learning at many business sites.

FY2023 Initiatives

As an environmental contribution activity aiming to coexist with the community, YKK takes part in a wide range of activities. This includes clean-up activities around our plants at locations around the world, environmental education for the local children, and participation in other local events.

At the YKK Kurobe Manufacturing Center, we held an environmental education program for elementary school students to make tree boards and pick up seeds from the trees in Furusato-no-Mori, with the belief that it is essential to educate the children who will lead the next generation.

COLUMN

"What's This Tree? Let's Make Name Boards for Trees!"



Making name boards for trees



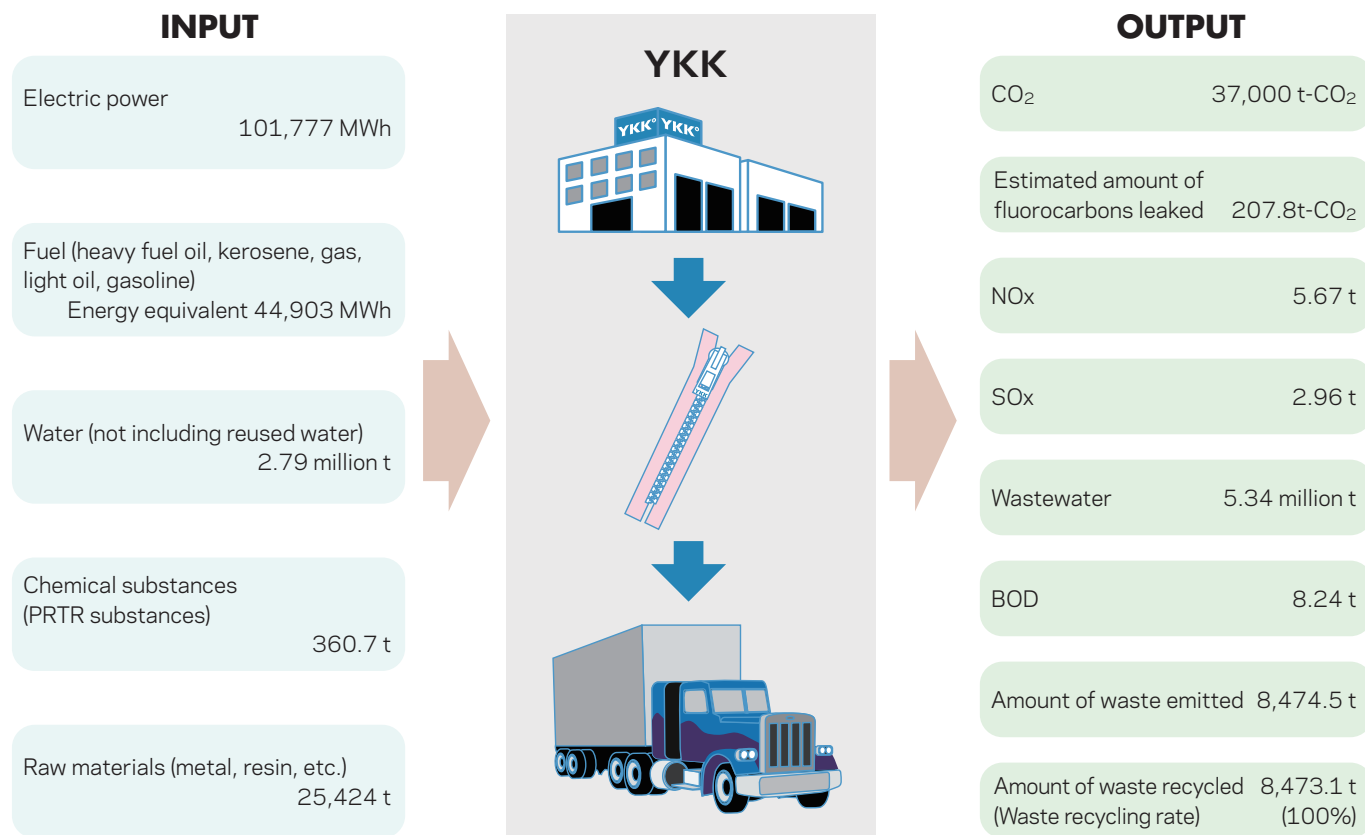
A name board placed on a tree

On November 23, 2023, we held an event at Furusato-no-Mori within the YKK Kurobe Manufacturing Center to make name boards for trees. The event, for elementary schoolers from 1st through 6th grade, was to make participants familiar with nature and experience what makes trees interesting at Furusato-no-Mori.

We hope to promote education for the children of the community in an even better environment, with the aim of having them develop an attachment to Furusato-no-Mori and the newly expanding forest and become fans of the place.

[Reference] Fastening Business and Other Businesses Related to Business Operations (Japan)

Environmental impact mass-balance (FY2023 results)



■ Violations of Environmental Laws and Regulations

We have not had any administrative actions or fines imposed related to environmental laws and regulations in the past five years.

YKK Corporation and YKK Snap Fasteners (YSF) Co., Ltd. status of compliance (results)

Air Pollution Control Act: Exhaust gas (Production sites in Japan, FY2023 results)

Equipment	Plant	Soot and dust (g/Nm ³)					Nitrogen oxide (ppm)				
		National emissions standard	Municipal agreed value	Highest value measured in FY2023	Assessment	(Reference) Voluntary emissions standard	National emissions standard	Municipal agreed value	Highest value measured in FY2023	Assessment	(Reference) Voluntary emissions standard
Boilers	YKK Corporation	-	-	0.02	Acceptable	-	180	-	90	Acceptable	90
	YSF	-	-	-	-	-	-	-	-	-	-

Water Pollution Prevention Act: Wastewater (Production sites in Japan, FY2023 results)

Unit: mg/l (except pH)

Item	Plant	National emissions standard	Prefectural water emissions standard	Municipal agreed value	Highest value measured in FY2023	Assessment	(Reference) Voluntary management standard
pH	YKK Corporation	5.8 - 8.6* ¹	5.8 - 8.6* ¹	5.8 - 8.6	Min.: 6.6 Max.: 7.4	Acceptable	6.0 - 8.4
	YSF	-* ²	-	5.0 - 9.0* ²	Min.: 6.9 Max.: 7.6	Acceptable	5.2 - 8.8
BOD	YKK Corporation	120* ¹	15	15	2.9	Acceptable	5
	YSF	-	-	600	97.7	Acceptable	200
COD	YKK Corporation	-	-	-	6.4	Acceptable	-
	YSF	-	-	-	-	Acceptable	-
Suspended solids	YKK Corporation	150	90	50	18.0	Acceptable	10
	YSF	-	-	600	22.0	Acceptable	120
Oil	YKK Corporation	5	-	3	Below 0.5	Acceptable	1
	YSF	-	-	35	25.4	Acceptable	18
Cyanide	YKK Corporation	1	-	0.1	0.01	Acceptable	0.02
Hexavalent chromium compound	YKK Corporation	2	-	0.1	Below 0.02	Acceptable	0.03

*1: Standards for discharge into rivers

*2: Discharge into sewers

Water Pollution Prevention Act: Groundwater (Production sites in Japan, FY2023 results)

	Substance	Unit	Environmental standard*	Measurement results for FY2023	Assessment
Volatile organic compounds	Dichloromethane	mg/l	0.02 or less	Below 0.002	Acceptable
	Carbon tetrachloride	mg/l	0.002 or less	Below 0.0002	Acceptable
	1,1-Dichloroethylene	mg/l	0.1 or less	Below 0.002	Acceptable
	Cis-1,2-Dichloroethylene	mg/l	0.04 or less	Below 0.004	Acceptable
	1,1,1-Trichloroethane	mg/l	1 or less	Below 0.001	Acceptable
	Trichloroethylene	mg/l	0.01 or less	Below 0.001	Acceptable
	Tetrachloroethylene	mg/l	0.01 or less	Below 0.001	Acceptable
Heavy metals	Cadmium	mg/l	0.003 or less	Below 0.003	Acceptable
	Cyanide	mg/l	Not detected	Below 0.1	Acceptable
	Lead	mg/l	0.01 or less	Below 0.005	Acceptable
	Hexavalent chromium	mg/l	0.05 or less	Below 0.02	Acceptable
	Selenium	mg/l	0.01 or less	Below 0.001	Acceptable
	Fluorine	mg/l	0.8 or less	0.9	Not acceptable
	Boron	mg/l	1 or less	0.02	Acceptable

* Environmental standard: Keeping the amount below this standard is desirable for protection of human health and preservation of the living environment.

In August 2023, we discovered a leak of wastewater containing fluorine from the drainage channel of manufacturing machinery at the Kurobe Makino Plant in Kurobe City, Toyama Prefecture, and reported the leak to the government.

Since discovering the leak, we have taken measures to prevent leakage and monitored the groundwater to confirm that contamination has not spread outside the site. However, because groundwater standards were exceeded at the property line in March 2024, we reported it to the government and have been taking measures to deal with the matter. Since then, groundwater standards have not been exceeded at the property line or in adjacent wells. We will continue to monitor groundwater in the future.

Noise Regulation Act: Noise (Production sites in Japan, FY2023 results)

Unit: db

Plant	Category	Prefectural standard	Municipal agreement on pollution control	Highest value measured in FY2023	Assessment	(Reference) Voluntary standards
YKK Corporation	Daytime (8:00 A.M. to 7:00 P.M.)	70	60	58	Acceptable	60
YKK Corporation	Morning (6:00 A.M. to 8:00 A.M.) Evening (7:00 P.M. to 10:00 P.M.)	65	65	52	Acceptable	65
YKK Corporation	Late night (10:00 P.M. to 6:00 A.M.)	63	63	55	Acceptable	63
YSF	Daytime (8:00 A.M. to 7:00 P.M.)	70	70	64.4	Acceptable	70
YSF	Morning (6:00 A.M. to 8:00 A.M.) Evening (7:00 P.M. to 10:00 P.M.)	65	65	64.4	Acceptable	65
YSF	Late night (10:00 P.M. to 6:00 A.M.)	60	60	-	Acceptable	60

PRTR method: PRTR calculations (Production sites in Japan, FY2023 results)

Unit: t

Substance number	Substance	Volume handled	Emissions				Transformed amount	Transfer amount		Consumption
			Atmospheric emissions	Public water emissions	Soil emissions	Landfill volume		Waste materials	Sewage	
1	Zinc compounds (water-soluble)	1.33	Below 0.01	Below 0.01	-	-	Below 0.01	Below 0.01	-	1.33
53	Ethylbenzene	2.36	2.28	0.00	-	-	0.00	Below 0.02	-	Below 0.01
80	Xylene	28.78	5.28	0.00	-	-	2.19	0.35	-	1.60
144	Inorganic cyanide compounds	15.99	0.03	Below 0.02	-	-	3.39	13.49	-	0.19
232	N,N-Dimethylformamide	124.32	124.32	0.00	-	-	0.00	0.00	-	Below 0.01
300	Toluene	44.72	40.26	0.00	-	-	0.14	1.83	-	Below 0.01
308	Nickel	49.55	0.14	Below 0.01	-	-	0.00	4.41	-	44.09
412	Manganese and manganese compounds	59.55	0.00	0.00	-	-	0.00	0.00	-	54.79
438	Methylnaphthalene	22.86	22.86	0.00	-	-	0.00	0.00	-	0.00
594	Ethylene glycol monobutyl ether	2.82	2.60	0.00	-	-	0.21	0.00	-	0.00
691	Trimethylbenzene	6.00	3.02	0.00	-	-	2.98	Below 0.01	-	0.00
737	Methyl isobutyl ketone	2.42	2.42	0.00	-	-	0.00	0.00	-	0.00

* Aggregated substances of which we handle 1 t or more (0.5 t or more per year for Class 1 Designated Chemical Substances) per year at our domestic production locations

* Consumed: The amount consumed as raw materials, the amount contained in products, or the amount recycled by being sold

* Transformed amount: The amount that has been transformed into other substances by incineration, reactive processing, etc.

Changes in Emissions of PRTR Substances (Production sites in Japan)

