## Environmental Report

# 2025



# MKURABO



## Top Message



Based on our management philosophy, "We, the Kurabo Group, contribute to the creation of a better future society through the creation of new value." we strive to practice "sustainable management" that contributes to solving social issues through each of our businesses.

Various environmental issues, including climate change, resource circulation, and biodiversity, are being discussed worldwide. By confronting each issue one by one and contributing to solving them, we hope to strengthen our business competitiveness and create corporate value.

This report clearly explains the measures and results that our group has taken to address environmental issues, as well as our outlook for the future.

As social conditions, technologies, and values change dramatically, the entire Group will continue to work together to solve problems and address environmental issues so as to leave a rich natural environment for future generations. We appreciate your continued support.

Kurabo Industries Ltd. President Shinji Nishigaki

## **Editorial Policy**

This report describes the environmental conservation activities of our company and its group companies in Japan and overseas (hereinafter referred to as our Group). In creating this report, we have referred to the Ministry of the Environment's "Environmental Reporting Guidelines 2018 Edition." For more detailed information on products, business, etc., please visit our website. Note that  $CO_2$  emissions are calculated for Scope 1, Scope 2, and Scope 3 upstream processes.

[Report period] April 1,2024 to March 31, 2025 (For overseas affiliated companies, January 1 to December 31, 2024)

[Report scope] In addition to Kurabo Industries and its consolidated subsidiaries, Thai Textile Development and Finishing Co., Ltd and Foshan Kurashiki Textile Manufacturing Co., Ltd. are included.

(The section "Reduction of environmental load" and "Chemical substance management" are Kurabo Industries and its domestic consolidated subsidiaries)

## Changes in main performance evaluation indicators

Changes in the Kurabo Group's main performance evaluation indicators are shown in the table below. As indicators for environmental issues, we have set the reduction of  $CO_2$  emissions (Scope1,2) and the waste recycling rate (zero emissions).

Indicators	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Consolidated sales	billion yen	1 2 2	1 3 2	154	1 5 1	1 5 1
CO <sub>2</sub> emissions (Scope1,2)	1,000 t-CO <sub>2</sub>	1 6 5	180	170	162	1 5 3
Recycling rate of waste	%	94.2	94.7	95.2	96.0	96.3

## | Corporate Governance

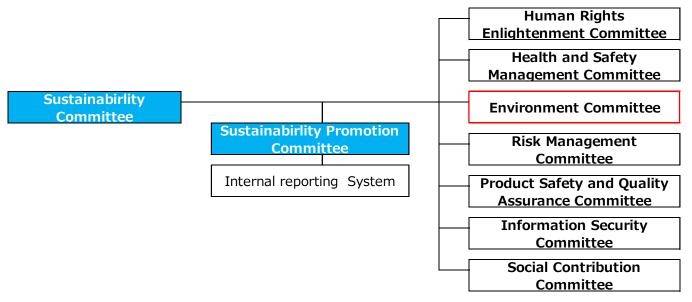
We strive to conduct fair and transparent business activities so that we can be a corporate group whose value is recognized by shareholders, business partners, local communities, and other stakeholders related to our group. We also pursue the best corporate governance and work to continuously improve it, aiming for sustainable growth and increased corporate value over the medium to long term.

Furthermore, with the aim of realizing the best possible corporate governance within our group, we have established the "Kurabo Corporate Governance Guidelines" based on a resolution of the Board of Directors, which sets out the basic principles and framework for corporate governance.

## Strengthening and Promotion of Sustainable Activities

In order to promote sustainable management aimed at realizing a sustainable society and improving corporate value, we have renamed the "Kurabo CSR Committee" to the "Sustainability Committee" on April 1, 2025. With regard to environmental conservation, the Environmental Committee (chaired by a technical executive officer) plays a central role in promoting environmental sustainability activities.

#### Kurabo Industries sustainable activity promotion system diagram



## | Basic Policy on Sustainability

The Kurabo Group believes that in order to contribute to the realization of a sustainable society, companies must aim for sustainable improvement of corporate value, and create high-value-added technologies, products and services. In addition to fostering and expanding highly profitable businesses, we will implement the following practices under the management philosophy of our group, "We, the Kurabo Group, will contribute to the creation of a better future society through the creation of new value."

- ① Contribution to solving social issues through business
- 2 Promotion of business activities with an awareness of the conservation of the global environment
- 3 Respect for human rights and create a comfortable and rewarding work environment
- 4 Promotion of building a trusted company

## Strengthening Relationships with Stakeholders

We strive to build good relationships with shareholders, customers, business partners, and local communities by implementing shareholder return policies centered on stable dividends, providing technologies, products, and services that the market demands, and ensuring continuous employment.

Additionally, we are working to further enhance the disclosure of non-financial information and proactively engage in dialogue with stakeholders, while also focusing on improving corporate recognition through IR briefings and public relations activities.

For employees, we are working on measures to build a "highly engaged organization" in which each employee proactively contributes to the sustainable improvement of corporate value in a comfortable and rewarding work environment.

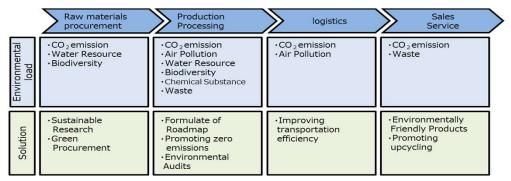
## **Kurabo group's 5 businesses Domains**

Kurabo group	's 5 businesses Domains	
	Description	Business Fields
Chemical Products	Using our unique molding and processing technologies, we have developed a variety of high-performance resin products for semiconductor manufacturing, and in the film business, we have commercialized a super engineering plastic film with high heat resistance using ultra-high temperature molding technology. Furthermore, by strengthening our unique resin compounding and molding technologies, we aim to differentiate ourselves in the fields of automotive interior materials, housing construction materials, and insulation materials. We contribute to the creation of high-value-added products in a wide range of fields.	<ul> <li>High-performance resin products</li> <li>Functional films</li> <li>Industrial materials</li> <li>Flexible urethanes</li> <li>Housing materials</li> <li>Nonwoven fabric, etc.</li> </ul>
Textile	Leveraging our unique technology and know-how in spinning, weaving, dyeing, processing, and sewing, and based on our "human-friendly approach" that we have adopted since 1993, we contribute to solving social issues by promoting sustainable business practices, such as ensuring worker safety and comfort and recycling textiles, and constantly creating new value.  In recent years, we have been expanding our offerings of high-value-added materials that pursue functionality and sensibility to meet the needs of end users globally, aiming to propose new lifestyles through textile products.	<ul> <li>Casual clothing materials and products</li> <li>Uniform materials and products</li> <li>Towels, socks, underwear, etc. Lifestyle materials</li> <li>Resource-recycling sustainable materials</li> <li>Work environment support tools</li> </ul>
Advanced Technology	Our life science and technology business contributes to solving social issues by supporting research and development in drug discovery, diagnosis, and treatment, and improving quality and productivity in production sites and laboratories with technologies and products such as gene and cell-related, robotic, vision sensors, and factory automation equipment. Our electronics business achieves high-precision quality control with inspection, measurement, and color matching systems centered on color sensing technology. Our engineering business is expanding into the biomass power generation field, building on environmental plant technologies such as wastewater and exhaust gas treatment technology. Our environmental mechatronics business supports safety, security, and comfort in many areas, including manufacturing, research activities, transportation infrastructure, and environmental energy.	<ul> <li>Genes and cells</li> <li>Robot, Vision Sensor</li> <li>FA/Lab Automation</li> <li>Stirring and defoaming</li> <li>Inspection, measurement and color matching system</li> <li>Environmental Plant</li> <li>Biomass Energy Facilities</li> </ul>
Food and Services	In the food sector, Japan Jiffy Foods offers safe and reliable freeze-dried products. In the service sector, Kurabo's very first factory in Kurashiki has been refurbished-yet retains its classic shape and charm-to house a commercial/cultural complex called Kurashiki Ivy Square. Meanwhile, the Kurabo Driving School contributes to the safety of the local community.	<ul><li>Freeze-dried food</li><li>Hotel and cultural facilities</li><li>Driving school</li></ul>
Real Estate	Kurabo owns numerous plants and related facilities across Japan. The company's real estate business makes effective use of idle land on such Kurabo-owned property, thereby contributing to local communities while managing assets effectively. Through such real estate projects, Kurabo is contributing to people's lives and wider community.	<ul> <li>Real estate development</li> <li>Real estate leasing</li> <li>Real estate management</li> </ul>
■ Net sales by business (	FY ended March 2025)(million yen)	d and services 10,458—
n		

Advanced technology 21,943

## **Building a Value Chain**

In order to achieve environmental conservation and reduce the environmental impact throughout all stages of a product's life cycle, from product development to raw material procurement, production, distribution, sales, use, and disposal, the Group not only tackles its own environmental issues, but also works with many stakeholders from upstream to downstream in the value chain. Upstream in the value chain, we are promoting procurement from suppliers that are proactively addressing environmental issues and procuring products and services that have a low environmental impact. Additionally, downstream in the value chain, we are promoting the supply of eco-friendly products that reduce the environmental impact at the usage stage and the expansion of upcycling, which returns used products to raw materials for reuse.



Mapping of environmental issues in our value chain (image)

## | Supply Chain Sustainable Survey

When purchasing raw materials, products, and services, the Group not only considers the quality, safety, price, delivery time, etc., but also the status of sustainability activities undertaken by its suppliers in order to promote sustainability activities throughout the entire supply chain. Starting in 2024, we will be conducting a supply chain sustainability survey using the "CSR Procurement Self-Assessment Questionnaire" for our suppliers of raw materials and products. The questionnaire covers sustainability activities in a wide range of areas, including human rights, labor, and the environment, and the responses are evaluated and analyzed by our respective sustainability expert committees by area. Currently, the survey targets suppliers of the Textile Business Division and the Materials Section of the General Affairs Department, but in the future, we will expand the scope of the survey to promote sustainability activities throughout the entire supply chain.

## **Research and Development Activities**

## | Technical Research Laboratory Initiatives

The Technology Research Laboratory has identified six core technology fields - mathematical sciences, information engineering, physical sciences, photoelectric engineering, materials science, and life science - as its research areas, and is working to strengthen the competitiveness of growth and focus businesses and create new technologies to address environmental issues.

Examples of research and development related to environmental issues

- By using modification technology to add functionality while retaining the characteristics of cotton, we have created a single-functional material made of cotton alone that is easy to recycle and does not require sorting.
- -Research into a cheaper, more environmentally friendly method for bleaching used clothing when recycling it
- -Development of cleaning technology using high-performance water that will lead to the reduction of environmental burdens, such as reducing the amount of chemicals used and improving the working environment.





R&D system

# History of Environmental Conservation / Environment Charter

## History of Environmental Conservation

Since the 1970s, our group has been concerned with environmental issues and has been working on measures to address them. Starting with the prevention of pollution, we have promoted energy conservation after the oil crisis and have implemented general environmental management activities to address global environmental issues. As the pillars of our environmental management activities, we implement internal controls through environmental audits, promote carbon neutrality and zero emissions, and disclose the status and results of our activities in the form of environmental activity reports.

#### Organization

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1973	Environmental Management Committee established (Prevention of environmental pollution)
1979	Energy Conservation Committee established (Pursuit of energy conservation)
1994	Environment Committee established (Comprehensive environmental management activities)
2006	Kurabo CSR Committee established (Overall control of CSR activities)
2025	Sustainability Committee established (Overall control of sustainability activities)

**Environmental Management Activities** 

LIIVIIO	Invironmental Management Activities				
1996	Environmental Management Regulations established	2008	Environmental Household Account Book introduced (End of activity)		
1997	Environmental audit started (Started in 2002 for affiliates)	2010	Participated in Challenge 25 campaign (End of activity)		
1998	Environment Charter established	2015	Anjo Mill and Tokushima Plant made ISO 14001 self-declarations		
1999	Tokushima Plant acquired ISO 14001 certification (First in the Kurabo group, thereafter other site and group company)	2020	Anjo Mill and Tokushima Plant require ISO 14001 Certification		
2000	Environmental Report posted on the Internet	2022	Formulation of carbon neutral roadmap		
2002	Environmental accounting introduced (End of activity)	2023	Disclosure of information based on TCFD in securities reports Start responding to CDP		
2005	Joined Team Minus 6% project (End of activity) Began to participate in Eco Pro exhibition (End of activity)	2024	Disclosure of supply chain CO <sub>2</sub> emissions (Scope3)		
2007	Pursuit of zero emissions	2024	Start of supply chain sustainability survey		

#### Environmental Charter

In 1998, the Kurabo Environment Charter was established to define Kurabo's basic policies on environmental issues and behavioral guidelines for employees. Subsequently, as activities for environmental conservation spread throughout the group, the Kurabo Environment Charter evolved into the Kurabo Group Environment Charter in 2006, which the entire group abides by.

In addition, taking the opportunity of formulating a carbon-neutral roadmap in 2022, we clarified that climate change countermeasures will be addressed as an important issue.

#### Kurabo Group Environment Charter

1.Basic Policies

We, Kurabo Industries Group, strive to reduce the environmental load systematically and continuously to always contribute to the conservation of the global environment. Especially we position climate change counter measures as one of the important issues and will work to reduce  $CO_2$  emissions at all stages such as development, production, and sales.

To this end, we will aggressively improve the level of our environmental management in all fields of business activities and introduce products and services that are harmonious with the environment.

2.Behavioral Guidelines

(1)Compliance with applicable laws and regulations

Setting and practice of voluntary management standards

(2) Promotion of environmental sustainability

We will implement the following efforts with the aim of forming a carbon-free society and a resource-recycling society. 1Reduction of  $CO_2$  emissions based on the carbon neutral roadmap

Promotion of efficient use of energy

- Introduction of renewable energy and promotion of energy transformation
- ②Effective utilization of resources and promotion of recycling
- ③Development of technologies, products and services that contribute to reducing the environmental burden
- (3) Operating a business in harmony with the local environment and ensuring safety and health
- (4) Enhancing our internal systems and providing education about environment

## **Long-term Environmental Goals**

## Long-term Environmental Goals

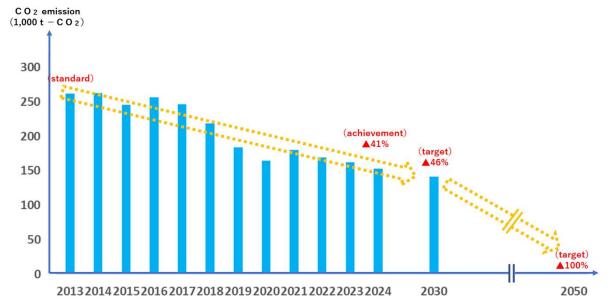
The Kurabo Group's long-term environmental targets are to reduce  $CO_2$  emissions by 46% (compared to 2013) in 2030, which is the government target, in order to achieve carbon neutrality in 2050. We will strengthen the system to promote the reduction of  $CO_2$  emissions and take the following concrete measures.

- · Energy-saving measures by introducing energy-saving equipment and updating equipment
- ·Implementation of CO<sub>2</sub> emission reduction measures at production bases with a high fossil fuel usage ratio
- · Active utilization of Tokushima biomass power plant and renewable energy

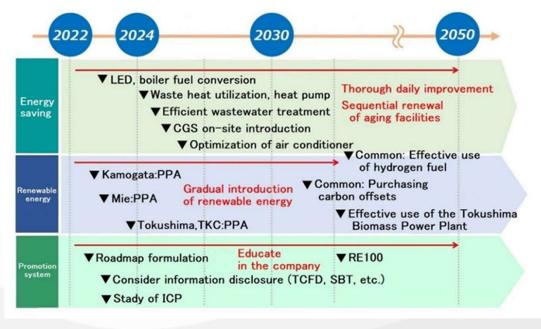
In our new medium-term corporate business plan "Accelerate '27," which began in April 2025, we aim to achieve a 46% reduction by fiscal 2030 (compared to fiscal 2013), and set a target of a 44% reduction by fiscal 2025 (compared to fiscal 2013). We will continue to work on climate change countermeasures in a planned manner.

## | Carbon Neutral Roadmap

To achieve our long-term environmental goals, we have developed a carbon neutral roadmap for 2022. We are currently working to reduce  $CO_2$  emissions in line with this roadmap, with the aim of achieving carbon neutrality across the entire Group by 2050.



As specific measures, we are promoting energy conservation measures such as switching boiler fuels and updating refrigerators, as well as promoting the introduction of renewable energy. The solar panels will be installed at eight locations from 2022 onwards, with plans to continue introducing them in the future. In carrying out the roadmap, we will further strengthen the promotion system throughout the entire group.



## Performance Evaluation and Setting of Environmental Targets

The Kurabo Industries Group has set medium-term targets (numerical targets for three years) to systematically promote environmental conservation and is working to response climate change and make effective use of resources.

 ${\rm CO_2}$  emissions in FY2024 reduced by 41.4% (compared to fiscal 2013) thanks to energy-saving measures such as the introduction of highly efficient equipment and switching to LED lighting, as well as the use of renewable energy (solar power generation), achieving the goal of a 40% reduction (compared to fiscal 2013). In promoting zero emissions, we did not reach our target of a recycling rate of 97%, but the rate improved from 96.0% in fiscal 2023 to 96.3%, demonstrating steady progress in our activities toward realizing a resource-circulating society.

	Target item	Result of FY2023	Target of FY2024	Result of FY2024
Reduction of CO <sub>2</sub> emissions	Absolute reduction (compared to FY2013)	38.0% reduction	40% reduction	41.4% reduction
Efforts toward zero emissions	Improvement in recycling rate of waste	96.0%	97%	96.3%

Our long-term environmental goals are to reduce  $\rm CO_2$  emissions by 46% by 2030 (compared to fiscal 2013 levels) and to be carbon neutral by 2050. In fiscal 2025, the first year of our new mid-term corporate business plan "Accelerate '27," we aim to achieve a 44% reduction (compared to fiscal 2013 levels). In addition, to promote zero emissions, we have set a continuing target of a recycling rate of 97%.

Targe	Target of FY2025	
Reduction of CO <sub>2</sub> emissions	Absolute reduction (compared to FY2013)	44% reduction
Efforts toward zero emissions	Improvements in recycling rate of waste	Recycling rate 97%

Note: Zero emissions applies to our company and domestic consolidated subsidiaries.

## Relationship with SDGs

Our Group believes that environmental conservation efforts are one of the important measures toward achieving the SDGs (Sustainable Development Goals).

We have been proactively working on these issues to date, and will continue to contribute to the achievement of the SDGs by promoting efforts toward carbon neutrality, resource circulation, and biodiversity.

	Rerated SDGs		Related environmental conservation activities
6 安全な水とトイレを世界中に	7 AFFORDABLE AND 9 AN	DUSTRY, INNOVATION NO INFRASTRUCTURE	<ul> <li>Climate change measures         <ul> <li>(mainly reduction of CO<sub>2</sub> emissions)</li> <li>Promotion of energy saving activities</li> <li>Introduction of renewable energy</li> <li>Purchase of CO<sub>2</sub>-free electricity derived from renewable energy sources</li> </ul> </li> </ul>
11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	CLIMATE	Promotion of zero emissions     Waste reduction     Waste recycling     Reduction of environmental load
14 LIFE BELOW WATER	15 LIFE ON LAND	PARTNERSHIPS FOR THE GOALS	Reducing water usage Air, water and soil pollution prevention  Biodiversity initiatives Marine pollution prevention, greening activities

## | Climate Change Measures

#### Current Status of CO<sub>2</sub> Emissions

The table below shows the  $CO_2$  emissions of the Kurabo Industries Group. Since the emission ratio of overseas affiliated companies is high, we will promote efforts to reduce  $CO_2$  emissions throughout the Group, including overseas.

In addition, the breakdown of  $CO_2$  emissions includes the use of fossil fuels as well as electricity. We will promote the reduction of  $CO_2$  emissions by promoting energy conservation and fuel conversion.

CO<sub>2</sub> emission ratio of Kurabo Industries only, domestic affiliate and overseas affiliate (FY2024)

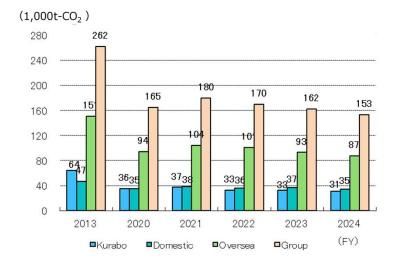
Kurabo	Domestic	Overseas
20%	23%	57%

Total CO<sub>2</sub> emissions 153,221t- CO<sub>2</sub>

#### Reduction of CO<sub>2</sub> Emissions

In addition to promoting energy-saving activities, we are working to reduce  $CO_2$  emissions by using renewable energy and converting fuel (heavy oil to gas), and we are also actively implementing greening activities on the premises of factories and other facilities. In addition, with the complete liberalization of electricity retailing, when selecting an electric power company, we also evaluate the environmental aspect ( $CO_2$  emission factor, etc.). In fiscal 2024, energy-saving measures and the introduction of renewable energy contributed to 5.6% reduction in Group-wide  $CO_2$  emissions compared to the previous fiscal year, and 41.4% reduction compared to fiscal 2013. Over the five years since 2020, we have reduced emissions by an average of 1.8% annually.

#### Changes in CO<sub>2</sub> Emissions



FY	CO <sub>2</sub> emissions (1,000t)	Reduction rate against FY 2013	Reduction rate against the previous year
2013	262	-	-
2020	165	-37.0%	-10.4%
2021	180	-31.3%	9.2%
2022	170	-35.2%	-5.7%
2023	162	-38.0%	-4.3%
2024	153	-41.4%	-5.6%

#### Measures to reduce CO<sub>2</sub> emissions

In order to reduce  $CO_2$  emissions throughout the entire group, including overseas, we are working to promote energy conservation and introduce renewable energy. Below are some examples of initiatives we have implemented in recent years that have been particularly effective.

#### Introduction of solar power generation

From 2022 onwards we installed solar panels on the roofs of factories to generate electricity. In Japan, we installed at Kurabo's Kamogata Factory, Mie Factory, Tokushima Factory, Sheedom Kamigori Factory, Kurashiki Textile Manufacturing Shizuoka Factory, Seiki, Echo Giken in that order. Overseas we introduced at Thai Kurabo. We plan to continue introducing this technology at Kurabo's Neyagawa Factory, Japan Jiffy Foods' Mito Factory and to promote the introduction of renewable energy.

Note: The right photo shows the example of Thai Kurabo.



#### Gasification of boiler fuel

Since 2010, we have been promoting the conversion of boiler fuel from heavy oil to gas. As a recent example, in 2023, the boiler fuel at Japan Jiffy Foods' Mito Factory was switched from heavy oil A to LNG. Fuel conversion at major domestic factories has been almost completed, with some exceptions.



#### Purchase of CO<sub>2</sub>-free electricity

The Kurabo Head Office Building and Annex Building use electricity plans that utilize electricity derived from renewable energy sources such as solar power, achieving virtually zero  $\mathrm{CO}_2$  emissions.



#### Non-fluorocarbon freezers

In order to reduce emissions of fluorocarbons, which are used as refrigerants in our freezers, we are gradually updating them to non-fluorocarbon types. In particular, Japan Jiffy Foods, which carries out freeze-drying processing and owns a large number of freezers, is systematically updating its freezers starting from fiscal 2022.

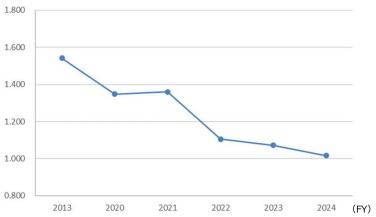
Note: As the majority of greenhouse gas emissions by our Group are CO<sub>2</sub>, this report does not include information on fluorocarbon emissions.



#### Reduction of CO<sub>2</sub> emissions (per unit of sales)

 $\mathrm{CO}_2$  emissions associated with energy use increase or decrease depending on changes in production volume. In order to reduce  $\mathrm{CO}_2$  emissions from a long-term perspective, rather than being affected by temporary fluctuations due to economic fluctuations, the Group evaluates  $\mathrm{CO}_2$  emissions in units of emissions divided by consolidated sales. By evaluating on a per unit basis, we aim to develop a production system with high energy efficiency and build a highly profitable business model.

#### Changes in CO<sub>2</sub> Emissions (per unit of sales)



FY	CO <sub>2</sub> emission (1,000t-CO <sub>2</sub> )	Consolidated sales (billion yen)	Per unit
2013	262	170	1.541
2020	165	122	1.348
2021	180	132	1.360
2022	170	154	1.105
2023	162	151	1.073
2024	153	151	1.017

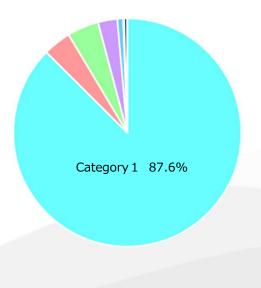
#### Supply chain CO<sub>2</sub> emissions (Scope3)

Regarding  $CO_2$  supply chain emissions (Scope3), we used the Ministry of the Environment's "Emissions Unit Database for Calculating Organizations' Greenhouse Gas Emissions Throughout the Supply Chain" and the inventory database "IDEA" to determine emissions from Categories 1 to 8 based on consolidated accounting data. Going forward, we will proceed with calculations for categories 9 to 15, which are downstream processes, and will also promote reduction efforts focusing on category 1, which has a high emission ratio.

FY2024 Scope3 emissions (upstream only)

Category	Overview	CO <sub>2</sub> emission (1,000t-CO <sub>2</sub> )	ratio
Scope3 Total	Upstream	644.5	_
1	Raw materials	564.8	87.6%
2	Capital Goods	25.2	3.9%
3	Energy relation	28.3	4.4%
4	Transportation and Delivery	17.3	2.7%
5	Wastes	5.3	0.8%
6	Business trip	0.7	0.1%
7	Commute	2.9	0.4%
8	Lease	0.0	0.0%

Ratio of Scope3 emissions (upstream only)

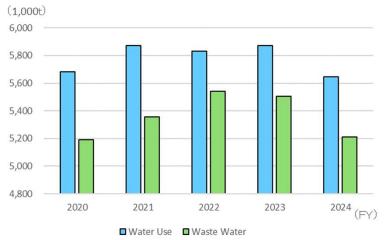


### Water Resource Conservation

#### Reducing water usage

We at the Kurabo Group use a lot of industrial water, mainly for the dyeing process of textile products and as cooling water. We consider the conservation of water resources to be an important environmental theme in continuing our business activities, and we are working to conserve water resources through measures such as the effective use of water resources and water quality management through wastewater treatment. Starting with this year's report, we have revised the calculation method for water usage and wastewater volume, and changed the figures for each fiscal year.

#### Changes in water usage/wastewater volume

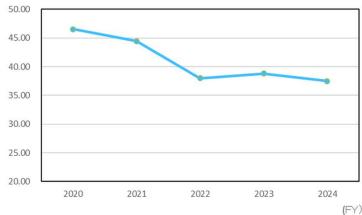


FY	Water usage (1,000t)	Wastewater (1,000t)
2020	5,684	5,189
2021	5,874	5,358
2022	5,830	5,543
2023	5,871	5,507
2024	5,647	5,210

#### Reduction of water usage (per unit of sales)

Water usage is also managed per unit of consolidated sales. By evaluating on a per unit basis in the same way as  $CO_2$  emissions, we aim to establish a production system that uses water efficiently. Starting with this year's report, we have revised the calculation method for water usage and wastewater volume, and changed the figures for each fiscal year.

#### Changes in water usage (per unit of sales)



FY	Water usage (1,000t)	Consolidated sales (billion yen)	Per unit
2020	5,684	122	46.52
2021	5,874	132	44.43
2022	5,830	154	37.98
2023	5,871	151	38.80
2024	5,647	151	38.12

#### Water Recycling

There is a large amount of water on Earth, but most of it is seawater, with freshwater accounting for only about 2.5%. If we limit it to water that is easily usable by humans, such as rivers, lakes and marshes, it is said to be only about 0.01%. Water stress is increasing due to global warming, population growth, natural disasters, and other factors, and even in Japan we are frequently experiencing problems such as water outages, reduced water supply, and industrial water shortages. Under these circumstances, our Group is also promoting the effective use of water resources.

#### Examples of water reuse

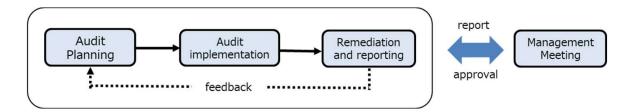
- ·In dyeing factories, wastewater discharged after wastewater treatment is used for washing.
- •Treated wastewater from a nonwoven fabric manufacturing factory is used to water gardens
- ·At food manufacturing plants, cooling water is used for high-pressure cleaning of wastewater treatment equipment
- ·Cooling equipment such as cooling towers and chillers circulate and reuse water.
- •The boiler steam drain is reused after heat recovery.

#### | Environmental Audit

To ensure that appropriate environmental management is being implemented at our Group's business sites both in Japan and overseas, staff from the head office regularly visit and conduct environmental audits. We not only check the status of compliance with environmental laws, but also recommend better management methods in order to improve the level of environmental management.

We also check the status of CO<sub>2</sub> emissions and reduction measures, and audit each business site's efforts and progress toward achieving carbon neutrality.

In fiscal 2024, we conducted audits of 12 domestic business sites and 2 overseas business sites. As a result of the audits, we provided appropriate guidance on areas for improvement, and all improvements were made promptly. We will continue to work across the group to maintain and improve our good environmental management system.



Sites where Environmental Audits have been Conducted in FY2024 FY2023

Company	Site / Location	Business description and main products
	Neyagawa Plant	Plastic product manufacturing industry
	Mie Plant	Plastic product manufacturing industry
Kurabo Industries Ltd.	Advanced Technology Division	Office
	Osaka Head Office	Office
	Technology Research Laboratory	Research and Development
Kurashiki Textile Manufacturing Co., Ltd.	Shizuoka Plant	Non-woven fabric manufacturing industry
Tamai Kasai Ca Ltd	Toyota Plant	Urethane processing industry
Tomei Kasei Co., Ltd.	Handa Plant	Urethane processing industry
Kurabo Chemical Works Co., Ltd.	Kurose Plant	Plastic product manufacturing industry
Taishoboseki Industries Ltd.	Hannan City, Osaka	Spinning
Konsha Tahamatianal Garahal	Murakami Plant	Sewing
Kurabo International Co., Ltd.	Takeda Plant	Sewing
Kurashiki Chemical Products do Brasil Ltda.	Brazil	Plastic product manufacturing industry
Kurashiki do Brasil Textil Ltda.	Brazil	Spinning

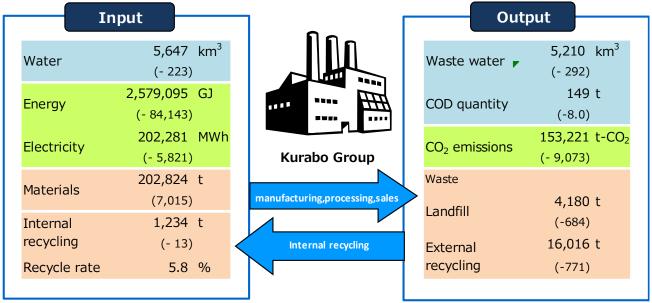
#### Reduction of Environmental Load

The Kurabo Group has always striven to supply high-quality products and services to the market in efforts to contribute to a better future. We also work to accurately understand the impact business activities have on the environment so that we can reduce it.

We will work not only on climate change countermeasures, but also on resource circulation and biodiversity, including with our overseas affiliates. With regard to waste disposal, air pollution, water pollution, etc., we will take into consideration local standards and regulations.

#### Overview

The Kurabo Group's material flow in fiscal 2024 is shown below.

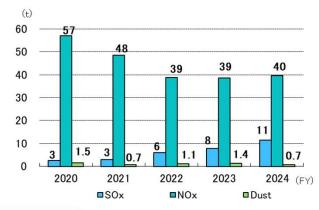


increased or decreased quantities against the previous year ara shown in parentheses

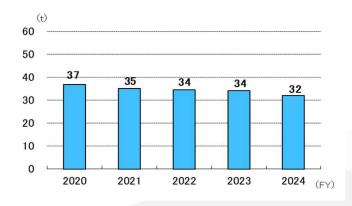
#### Prevention of Air Pollution and Water Pollution

We strive to reduce our environmental burden in order to prevent air pollution and water pollution. Regarding the discharge of air and water pollutants, we set and manage voluntary control standards that are stricter than the law, and the annual discharge amount is also stable.

#### Amount of Air Pollutants



#### COD Emissions (Dye Processing Plants)



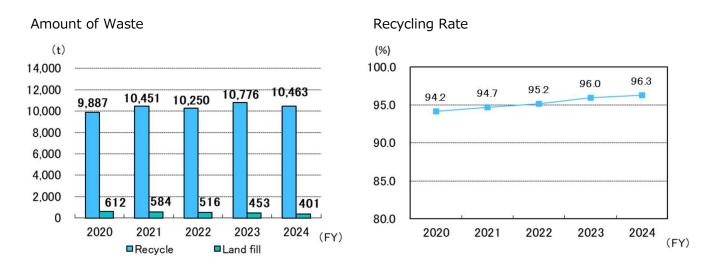
- \*1: SOx, NOx: Generic terms for sulfur oxides and nitrogen oxides. Typical air pollutants generated by combustion of fossil fuel.
- \*2: COD: Chemical oxygen demand. Amount of oxygen required to purify wastewater. An indicator of water contamination.

Note: applies to our company and domestic consolidated subsidiaries.

## **Reduction of Environmental Load**

#### Waste Reduction and Pursuit of Zero Emissions

We have been setting zero emissions as an environmental target and working to recycle waste in efforts to contribute to the realization of a recycling-oriented society. We have achieved significant results thanks to long-term efforts, and the recycling rate for the entire of domestic group in fiscal 2024 was 96.3%.



#### Sites Achieving Zero Emissions

Company	Site / Location	
Kurabo Industries Ltd.	Neyagawa Plant, Susono Plant, Gunma Plant, Kamogata Plant, Mie Plant, Kumamoto Innovation Center, Anjo Mill, Tokushima Plant, engineering department, Osaka Head Office (Including the headquarters of Kurabo International, Kurashiki Textile Manufacturing, Sheedom, and Japan Jiffy Foods) and Tokyo Branch	
Kurashiki Textile Manufacturing Co., Ltd.	Kurashiki Plant, Hayashima Plant, Shizuoka Plant	
Tomei Kasei Co., Ltd.	Nisshin Plant, Gunma Plant, Mie Plant, Toyota Plant, Handa Plant, Saitama Plant	
Kurabo Chemical Works Co., Ltd	Kurose Plant, Kamogata Plant, Neyagawa Plant	
Sheedom Co., Ltd	Kamigori Plant	
Taishoboseki Industries, Ltd.	Hannan City, Osaka	
Kurabo International Co., Ltd.	Murakami Plant, Takeda Plant	
Kurabo Plant System Co., Ltd.	Neyagawa City, Osaka	
Kurabo Techno System Ltd.	Neyagawa City, Osaka	
Japan Jiffy Foods, Inc.	Uji Plant  I. Kurashiki City, Okayama	
Kurashiki Ivy Square, Ltd.		

<sup>\*</sup>Zero emissions: The Kurabo Group defines zero emissions as having 98% or more of the waste generated by our business sites recycled by other companies. In FY2024, 31 of our 40 business sites achieved zero emissions. Note: applies to our company and domestic consolidated subsidiaries.

## **Reduction of Environmental Load**

#### Resource Saving

To reduce raw material waste generated from plants of the Kurabo Industries, we practice resource conservation and develop applications where the waste can be used.

Specific Resource Saving Implementation Status (Case of Kurabo)

Site	Item	Implementation content
Neyagawa and Gunma Plant	molding waste	All of the molding waste generated in the production process of extrusion-molded products for housing materials is reused for molding materials.
Susono and Kamogata Plant	Urethane scraps	The off-cuts of flexible urethane foam are crushed, molded, and reused as tip foam.
Mie Plant	film scraps	The off-cuts from plastic film manufacture are recycled and reused as material when and where possible.
Anjo Mill	fiber waste	Waste cotton or lint generated from the spinning and weaving process are recycled as textile materials. And the Textile Business Division collects off-cuts from the sewing process of other companies and reuses them as raw material, such as in textile products, at the Anjo Mill.
Tokushima Plant	caustic soda ammonia	Most of the caustic soda is recovered, concentrated, and recycled from the discharged washing water. Ammonia used for ammonia mercerization is also recovered and recycled in the same way as caustic soda.

## **Management of Chemical Substances**

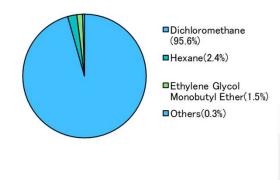
## | Management of Chemical Substances

Chemical substances used at each site are accurately recorded and put under appropriate control in accordance with their properties and relevant laws. In particular domestic group companies, at sites that handle designated chemical substances under the PRTR Law\*, we have established management standards and work standards. And implement operational management that takes into account the health of our employees. Since chemical substances are used as raw materials, emissions tend to increase along with the expansion of business. However, we are working to reduce environmental burden by reviewing formulations and by collecting and reusing chemical substances

Trends in Substances Subject to the PRTR Law



Emission Rate of PRTR-designated Substances



<sup>\*</sup> PRTR Law: Law requiring companies to accurately record the amount of specified chemicals discharged into the environment, and report these amounts to the government. For Kurabo, dichloromethane, which is used as a foaming agent of urethane, accounts for the largest portion of total PRTR substances discharged. The annual usage of PRTR substances is 5,596 tons, and the maximum storage amount is 322 tons. Note: applies to our company and domestic consolidated subsidiaries.

## **Environmental conservation activities**

## Initiatives for biodiversity

Kurabo strives to minimize the impact of its business activities on biodiversity with the aim of preserving biodiversity. As part of these efforts, each business site is engaged in local cleanup activities, especially in the ocean and river coasts, which are rich in biological resources.

The Kurabo Mie Plant faces Ise Bay and the Shitomo River, and located in area with abundant water resources. In commemoration of World Oceans Day on June 8, we conduct cleanup activities at least once a year to collect litter that causes marine pollution, contributing to the conservation of biodiversity in the region. This activity is also being carried out overseas. Thai Textile Development and Finishing Co., Ltd. in Thailand is located near the mouth of the Chao Phraya River, which runs through the country and flows into the Gulf of Thailand. The Indochina Peninsula is an area rich in biodiversity, and we regularly carry out cleanup activities to prevent damage to the coastal ecosystem.



Kurabo Mie Factory



Thai Textile Development and Finishing Co., Ltd.

We also conduct other environmental protection activities tailored to the characteristics of each region. Kurabo Susono Factory supports and participates in the local release of young amago trout. We also plant trees around our factories both in Japan and overseas, promoting greening activities.



Kurabo Susono Factory



Kurashiki Chemical Products do Brasil Ltda.

## **Environmental conservation activities**

#### Social contribution activities

Since 2014, the Kurabo Group has engaged in cleanup activities around its business sites under the name "10-100 (Ten Hundred) Project" as its own social contribution activities, in order to beautify the local environment. In this project, 100 towel handkerchiefs using our antibacterial and antiviral functional fiber processing technology "CLEANSE" are made for every 10 participants in the cleanup activity and donated to kindergartens and facilities for the elderly as Christmas gifts in December.

We are expanding this activity to the local community, and in September 2024 we carried out a large-scale clean-up event in collaboration with J1 League soccer team Fagiano Okayama, and in May 2025 with companies nearby Osaka head office.





## **Topics**

## Osaka Climate Change Measures Award Special Prize

Our company was recognized for its achievements in reducing CO<sub>2</sub> emissions at the Climate Change Countermeasures Awards, which are open to businesses within Osaka Prefecture, and was awarded the 2024 Osaka Climate Change Countermeasures Award Special Award (Gold).



## | Upcycling project launched

We have started an initiative to collect team support towels and uniforms from the professional basketball team "SeaHorses Mikawa" and upcycle them into cheering goods and other items.

# | Exhibiting at the 15<sup>th</sup> Highly Functional Materials WEEK Sustainable Materials Exhibition

The Functional Films Department of the Chemical Products Division exhibited for the first time at the 15th High-Performance Materials Week Sustainable Materials Exhibition held at Makuhari Messe in October 2024, promoting products that focused on environmental friendliness.

The Kurabo Group has set "consideration for the global environment and contribution to a circular economy" as one of its material issues. Recognizing that climate change-related risks and opportunities will have a significant impact on our business strategies, we have positioned "achieving carbon neutrality" as a key issue. We also promote resource circulation and biodiversity initiatives to realize a sustainable society.

#### 1.Governance

Our group changed the name of the Kurabo CSR Committee to the Sustainability Committee since April 2025, reviewed and strengthened our overall CSR promotion system. Regarding environmental issues, we are promoting initiatives centered on the Risk Management Committee and Environmental Committee under the supervision of the Sustainability Committee, which is chaired by the president. About climate change-related risks and opportunities, the Sustainability Committee approves the action policies of the Risk Management Committee and Environment Committee, receives activity results reports, and reports the activity policies and results to the Board of Directors once a year. The Board of Directors deliberates and supervises the goals and plans of these initiatives, as well as the progress of each measure. The Board of Directors also decides on strategies related to sustainability, such as the Basic Policy on Sustainability and the Kurabo Group Environmental Charter.

<Major items to be discussed and approved by the Board of Directors (FY2024)>

- Preparation of environmental reports
- Reporting the results of our CDP response

#### **Sustainability Committee** Board of directors Chairperson: President Deliberation of deliberation items Deliberation and approval of · Determining policies and confirming Progress supervision of initiatives progress Sustainability Promotion Committee Chairperson: General Affairs Department Executive Officer Promotion support for Sustainable initiatives Other committees **Human Rights Enlightenment Risk Management Committee** Committee **Environment Committee** · Promotion of initiatives related to climate change Health and Safety management Committee **Product Safety and** Promotion **QualityAssurance Committee Information Security** Committee Social Contribution Committee Each department Internal reporting system (hotline)

## 2.Strategy

The Kurabo Group has established a CO<sub>2</sub> emissions reduction transition plan (Carbon Neutral Roadmap) in 2022 toward the government's goal of carbon neutrality in 2050, and the entire group is promoting activities to reduce CO<sub>2</sub> emissions. In addition, we have compiled a list of risks and opportunities in order to comprehensively understand the impact of climate change on our business in 2030 and to promote initiatives to address issues caused by climate change. As part of the process of identifying risks and opportunities, we first interviewed each department about climate change-related risks and opportunities and created a comprehensive list. Furthermore, we organized and narrowed down from the perspective of the magnitude of the impact on business, and we identified important climate changerelated risks and opportunities for the Group's business based on the evaluation results of scenario analysis. Risks and opportunities are reviewed every year through this process. Going forward, we will proceed with a detailed examination of contents and strive to reduce risks that have a large impact and to operate our business by accurately seizing opportunities.

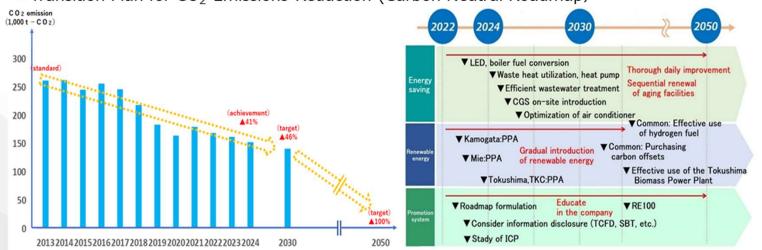
■ Overview of scenario analysis

Scenario analysis is based on "STEPS", "SDS", "NZE 2050" assumed in the International Energy Agency (IEA) "World Energy Outlook", and "SSP1 -1.9", "SSP5-8.5" in the Sixth Report of Intergovernmental Panel on Climate Change (IPCC). And we analyzed transition risks and opportunities in the "1.5°C scenario" and physical risks and opportunities in the "4°C scenario".

For analysis, the definitions of the degree of impact and the time axis are as follows.

[Degree of impact] Large: Significant long-term impact, or expected impact amount of 500 million yen or more Medium: Temporarily significant impact, or expected impact amount of 100 million yen or more [Time axis] Short-term: ~3 years, Medium-term: 3-10 years, Long-term: 10 years ~

■ Transition Plan for CO<sub>2</sub> Emissions Reduction (Carbon Neutral Roadmap)



## **Report based on TCFD recommendations**

#### ■ List of risks

	Pattern	Minor classification	Risk impact	Counter-measure		Time axis
			Increase in energy costs due to the introduction of a carbon tax	Promotion of energy conservation measures such as boiler fuel conversion and heat pump Introduction of renewable energy such as solar power PPA	Large	Medium Long
S	Policy and legislation		Price pass-through occurs due to the introduction of carbon pricing into the supply chain	<ul> <li>Encourage and cooperate with suppliers to develop low-carbon materials, etc.</li> <li>Diversify raw material procurement methods</li> </ul>	Large	Medium Long
		Regulations on existing products and services	Rise in raw material prices due to stricter environmental regulations on products handled	Diversification of suppliers in consideration of environmental impact     Efforts to reduce the amount of raw materials and components used	Medium	Short Medium Long
Transition Risks	Technology/ market	Changes in customer's action	Increase in costs due to promotion of energy conservation and introduction of high-efficiency equipment, etc.	Improve the efficiency of our own production processes     Improve the efficiency of production processes throughout the value chain	Medium	Short Medium Long
Tra		y/ Soaring costs for decarbonization	Increase in costs associated with introduction of renewable energy and purchase of clean energy	Introduction of renewable energy such as solar power PPA Effective use of existing large-scale power sources (mega solar, biomass)	Medium	Medium Long
			Increased costs due to rising energy and fuel prices	<ul> <li>Fuel conversion for boilers, etc.</li> <li>Highly efficient energy use, development and practical application of decarbonized industrial processes</li> </ul>	Medium	Short Medium Long
	Reputation	,	Impact on securing R&D personnel and hiring of new graduates	•Promotion and sophistication of human resource management	Medium	Short Medium Long
S)	Acute risk	Intensification of extreme weather	Equipment damage due to typhoons, floods, etc., decreased production due to suspension of activities, increased recovery costs	Strengthen business continuity plan (BCP)     Confirm hazard maps and assess risks at company sites and major business partners	Large	Short Medium Long
Physical Risks		events such as cyclones or floods	Suspension of production due to damage to suppliers by typhoons, floods, etc., and disruption of transportation routes	Diversification of production and procurement methods, such as diversification of suppliers and reconstruction of supply networks     Deployment of procurement BCP at suppliers, implementation of BCP assessment	Medium	Medium Long
	Chronic risk	Rise of average temperature	Increased air conditioning costs	-Introduction of energy-saving equipment and enhancement of power saving in factories and offices -Introduction of renewable energy such as solar power PPA	Medium	Short Medium Long

The estimated impact of the identified risks on the Group is 8.7 billion yen in total, consisting of 7.1 billion yen for transition risks and 1.6 billion yen for physical risks.

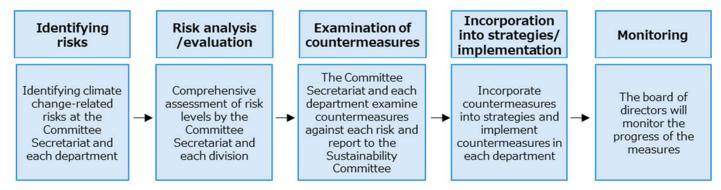
#### ■ List of opportunities

	Pattern	Minor classification	Opportunity impact	Counter-measure	Impact	Time axis
	Resource Use of recycling		Growing demand for materials compatible with the circular economy against the backdrop of the transition to a circular economy	Promote and expand recycling-oriented business by such as "L∞PLUS", recycling clothing cutting waste Expansion of recycled polyester such as "AIR FLAKE" and biodegradable fiber products Expansion of recycled wood powder resin products such as "KURATTICE ECO"	Large	Short Medium Long
Opportunities			Expanding the product lineup using a single material will increase demand for recycled products and reduce manufacturing costs	<ul> <li>Promote and expand recycling-oriented business by such as "L∞PLUS", recycling clothing cutting waste</li> </ul>	Medium	Short Medium Long
	Energy	Use of lower	Reduction of carbon tax burden by reducing GHG emissions through decarbonization measures	Promotion of energy conservation measures such as boiler fuel conversion and heat pump     Introduction of renewable energy such as solar power PPA	Large	Medium Long
	source emission ener	emission energy sources	Reduction of energy costs through energy-saving activities and procurement of low-cost, high-quality renewable energy and hydrogen	Promotion of energy conservation measures such as boiler fuel conversion and heat pump     Introduction of renewable energy such as solar power PPA	Medium	Short Medium Long
	products and expansion of low- services emission products and services	Growing demand and expansion of needs for low-carbon and decarbonized products	Promote decarbonization and strengthen product competitiveness by understanding the carbon footprint Expansion of eco-friendly high-performance material products such as "NaTech" Expansion of eco-friendly functional films such as "Clan Seal Series" Acquisition of tenants by obtaining environmental certification for real estate rental buildings	Medium	Short Medium Long	
		and services	Increasing demand for products that can contribute to reducing CO2 emissions from customer products	- Expansion of high-performance rigid polyurethane foam insulation materials such as the "Cran Zero Series" - Streng thening the EL division's main products to meet the demand for reducing defective products	Large	Short Medium Long
	Market	Access to new markets	Growing demand for parts due to the rapid spread of EVs	Respond to growing demand for semiconductors through high- performance resin processed products Expansion of demand for mainstay products and newly developed products in each segment, including the environmental mechatronics business	Large	Short Medium Long
	Resilience (elasticity)	Continuity of business activities	Strengthen competitiveness backed by a strong ability to respond to disasters due to the geographical dispersion of production bases	Practice sustainable business activities by strengthening the business continuity plan (BCP)	Large	Short Medium Long

## **Report based on TCFD recommendations**

## 3. Risk management

Climate change-related risks are appropriately managed under the leadership of the Risk Management Committee and Environment Committee in accordance with the following assessment and management process. In addition, climate change-related risks are managed by the entire Kurabo Group as one of the risks that have a significant impact on the business of the Kurabo Group.



## 4. Metrics and goals

The Kurabo Group aims to achieve carbon neutrality in 2050 as a long-term goal for reducing  $CO_2$  emissions. Especially for the period up to 2030, we have formulated a roadmap to achieve the government target of a 46% reduction compared to FY2013. The entire Kurabo Group will work to reduce our  $CO_2$  emissions (Scope1, Scope2) on absolute quantity basis. We believe that advancing these initiatives will further enhance the existence value of the corporate group, improve production efficiency, strengthen our foundation as a manufacturing industry, and ultimately improve profitability. Regarding  $CO_2$  supply chain emissions (Scope 3), we currently calculate emissions from upstream processes, but going forward we will also calculate emissions from downstream processes.

#### ■ CO<sub>2</sub> emission reduction target

#### ■CO<sub>2</sub> emissions results

	FY2025	FY2030	FY2050	Category	FY 2024 results
CO <sub>2</sub> emissions reduction target (Scope1,2)	44% reduction (against FY2013)	46% reduction (against FY2013)	Carbon neutral	Scope1	31,877 t-CO <sub>2</sub> /year
				Scope2	121,344 t-CO <sub>2</sub> /year
				Total	153,221 t-CO <sub>2</sub> /year

#### ■ Environmental targets and results

In order to systematically promote environmental conservation, the Kurabo Group has set medium-term targets (three-year numerical targets) for "reduction of  $CO_2$  emissions" and "Improved recycling rate as promotion of zero emissions". We are striving to combat climate change and effectively utilize resources.

For fiscal 2024, we set a target of reducing CO<sub>2</sub> emissions by 40% compared to fiscal 2013 and engaged to reduce energy consumption through energy-saving measures. The result was 41.4% reduction, reach the target. Regarding the promotion of zero emissions, the recycling rate was 96.3%, not reached to our target of 97%.

Ta	arget item	Target of FY2024	Result of FY2024
Reduction of CO <sub>2</sub> emissions	Absolute reduction (against FY2013)	40% reduction	41.4% reduction
Efforts toward zero emissions	Improvement in recycling rate of waste	97%	96.3%

The Kurabo Group has set a long-term environmental goal of reducing  $\mathrm{CO_2}$  emissions by 46% from FY2013 levels in 2030 and aiming to become carbon neutral in 2050. The environmental target of the medium-term corporate business plan "Accelerate 27" (2025-2027) is to reduce  $\mathrm{CO_2}$  emissions by 44% compared to FY2013 by FY2025. In addition, our target of recycling rate remains 97%, in order to further advance zero emissions.

Target item	Target of FY2025		
Reduction of CO <sub>2</sub> emissions	Absolute reduction (against FY2013)	44% reduction	
Efforts toward zero emissions	Improvement in recycling rate of waste	Recycling rate 97%	

#### ■ Towards the conservation of natural capital

Not only to striving to become carbon neutral in response to climate change, we are also promoting initiatives that consider resource circulation and biodiversity, such as recycling products, using recycled raw materials, and carrying out ecosystem conservation activities in the areas where we have business sites.

We are changing to an era in which environmental conservation and reduction of environmental impact are strongly required at the life stages of products including production, distribution, use, disposal, and recycling, from conventional product development with an emphasis on economic efficiency and mass production in mind. Kurabo considers a healthy environment for people and the earth, and aims to reduce environmental impact throughout the life stages of its products.

#### **Chemical Products Business**







#### **Textile Business**







#### Advanced Technology Business

## Railroad material monitoring system

We are working on developing a system that can measure the track materials of the Tokaido Shinkansen while the train is moving, and it can measure at a level equal to or better than visual inspection even at a speed of 300 km/h.















## **Biomass power plant**

We have been operating a biomass power plant that uses thinned wood as fuel, and generate electricity equivalent to the annual power consumption of approximately 11,000 ordinary households.







#### Real Estate Business

## **Tenant Building**

Kurabo Annex Building is a tenant building that aims to "contribute to the local community and revitalize it." It uses electricity derived from renewable energy sources and is environmentally friendly, having been certified with the Comprehensive Assessment System for Built Environment Efficiency (CASBEE) - Real Estate S Rank and the Building Energy Efficiency Performance Labeling System (BELS) 4-star rating.



## Commercial Facilities

Former factory sites are being used as commercial facilities, contributing to the revitalization of the local area. We are attracting businesses that are mindful of the use of renewable energy and biodiversity.







## Mega Solar

We are renting out former factory sites in Ehime and Mie prefectures as sites for large-scale solar power plants (mega solar). The total annual power generation is 19 million kWh, equivalent to the power consumption of 5,300 average households, contributing to reducing  $\rm CO_2$  emissions throughout society.







