



# Environment



## Environmental protection

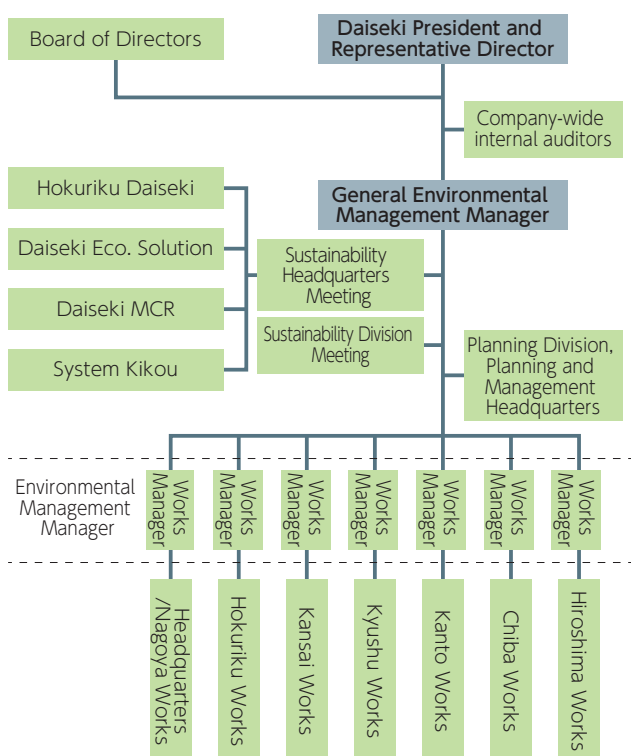
As a venous enterprise running through society feeding into manufacturing and other arterial industries, Daiseki recycles industrial waste to the fullest extent possible, utilizes resources effectively and strives to reduce environmental burdens in the waste treatment process.

## Promoting Environmental Management

### Developing environmentally friendly operations through an environmental management system

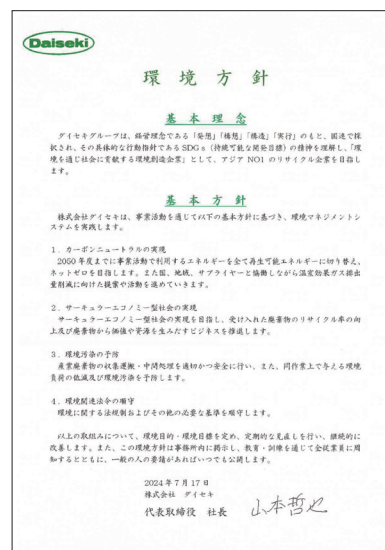
We hold the Sustainability Headquarters Meeting, composed of the President and Executive Officers of Daiseki and the Presidents of Group companies, twice a year to deliberate and decide on important matters, including risk management related to environmental protection climate change and human capital issues. The General Manager of the Planning and Management Headquarters, appointed by the President as the General Environmental Management Manager responsible for the environmental field, including climate change issues, submits specific plans to the Sustainability Headquarters Meeting, where these plans are deliberated and formulated. The content and progress of these plans are reported to the Board of Directors.

### Structure of the Daiseki Group Environmental Management System



### Formulation of an Environmental Policy and its dissemination to employees

The Daiseki Group has established an Environmental Policy that is disseminated to all employees based on the Group's shared core principles and bringing together the core policies guiding environmental initiatives at each of its Group companies. In July 2024, Daiseki revised its Environmental Policy to include content on carbon neutrality and circular economy.



Daiseki's Environmental Policy

### Our system for monitoring compliance with environmental laws and regulations

Out of the Daiseki Group's 49 locations, 21 have obtained ISO 14001 or Eco Action 21 certification. These 21 locations conduct audits related to environmental and legal compliance.

### Implementation of Environmental Management

	FY2022 end	FY2023 end	FY2024 end
Number of work sites	41	42	49
Number of sites certified for ISO 14001 or Eco Action 21	19	21	21
Number of sites that implemented audits related to environment and laws and regulations	19	21	21

## Key environmental achievements in FY2024 (Daiseki Group)

Amount of materials  
received for recycling

**2,102,000** tons  
(1,113,000 tons)

Recycling rate

**85.8%**  
(87.2%)

CO<sub>2</sub> total emission  
(Scope 1 and 2 only)

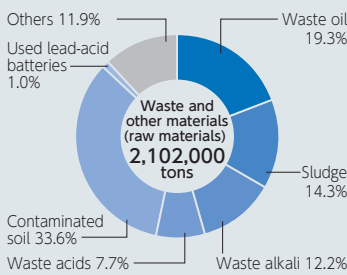
**41,000** tons of CO<sub>2</sub>  
(28,000 tons of CO<sub>2</sub>)

Note: ( ) shows the number with Daiseki only

## Perspective of the environmental load by the Daiseki Group's recycling business

### INPUT

#### Amount of materials received for recycling



#### Supplemental materials

**110,000** tons

#### Water

**921,000** tons

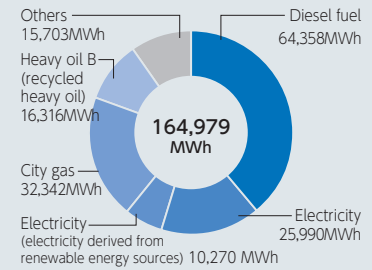
#### Raw material for petroleum products

**1,000** kl

#### Recycled water (rainwater)

**40,000** tons

#### Energy



### Daiseki Group

#### Waste oil treatment



Waste oil



Recycled fuels  
(recycled heavy oil/  
supplemental fuel)

#### Treatment of waste acids and waste alkalis



Waste acid and waste alkali



Raw materials for cement  
(from waste)



Usable metals, etc.



Purification/discharge

#### Sludge treatment



Sludge



Raw materials for cement  
(from waste)



Purification & discharge  
(purification & discharge  
after dehydration)

#### Contaminated soil treatment



Contaminated soil



Raw materials for cement  
(from contaminated soil)

#### Lead recycling



Used lead-acid batteries



Recycled lead

Daiseki Group  
Recycling Rate

**85.8%**

$\frac{\text{Amount of materials received for recycling} - \text{intermediate treatment residue (non-recyclable)}}{\text{Amount of materials received for recycling}} \times 100$

Waste collection

Petroleum product  
manufacturing

### OUTPUT

#### Recycled products shipment

Recycled fuels:	239,000 tons
Raw materials for cement (from waste):	240,000 tons
Useable metals and similar:	10,000 tons
Raw materials for cement (from contaminated soil):	360,000 tons
Recycled lead:	12,000 tons
Other recycled materials:	333,000 tons

#### Drainage to sewer or rivers/other bodies of water

Purification & discharge (sewer discharge)	960,000 tons
Purification & discharge (river discharge)	266,000 tons
Purification & discharge (ocean discharge)	66,000 tons

Note: Discharged after purifying to the value under standard

#### Intermediate treatment residues (non-recyclable)

Incinerated	10,000 tons
Final disposal (landfill)	289,000 tons

Note: Intermediate treatment residue is outsourced

Petroleum products 2,000 kl

#### Emission into the air

CO <sub>2</sub> total emission	41,000 tons of CO <sub>2</sub>
SOx emissions	28.4 tons
NOx emissions	72.4 tons
Soot and dust emissions	0.7 tons

## Climate Change Scenario Analysis

Daiseki holds the Sustainability Headquarters Meeting twice a year to manage risks, including climate change-related risks. Consideration of risk impacts and frequencies is not sufficient to give a full picture of climate change risk, so we are conducting analyses of set scenarios.

### Projected 4.0°C Scenario

- Amount of greenhouse gas emission is large with insufficient countermeasures, and in 2100 the air temperature will rise in 4.0°C compared to the temperature in industrial revolution

In this scenario, there is a lack of clarity around policies aimed at decarbonization, and carbon pricing and other regulations on fossil fuel usage are not strengthened. Although businesses become more aware of decarbonization to some degree, they do not choose low-carbon products at the expense of raising their costs. In this situation, energy costs do not change. With no

reduction in fossil fuel usage and demand for recycled fuels expected to be unchanged, Daiseki expands its recycling operations in this category. In response to predictions of increase in number of weather disasters over the medium- to long-term and the possibility that these could damage our customers' works, Daiseki develops systems to provide reconstruction support.

	Possible Situation	Impact Assessment	Response
4.0°C Scenario (Little to no intervention)	Lack of clarity on greenhouse gas emissions regulations	No change in energy costs	Remains at current level
	Businesses' emissions reduction efforts have increased somewhat	<b>Opportunities</b> Somewhat increased demand for Daiseki's low-emissions industrial waste treatment services	Expanding our industrial waste treatment business operations
		<b>Opportunities</b> Somewhat increased demand for recycled fuels	Expanding our recycling operations in the recycled fuels category
	Increased severity of typhoons, torrential rain, and other natural disasters	<b>Risks</b> Disasters force Daiseki and/or its customers to cease operations	Disaster prevention measures and securing our supply chain
Rising sea levels and other changes in the marine environment	<b>Risks</b> Flooding forces Daiseki and/or its customers to cease operations	Implementing measures during times of increased flood risk	

### Projected 1.5°C Scenario

- Temperature rise in 2100 will be within 1.5°C with strict policy for climate change introduced

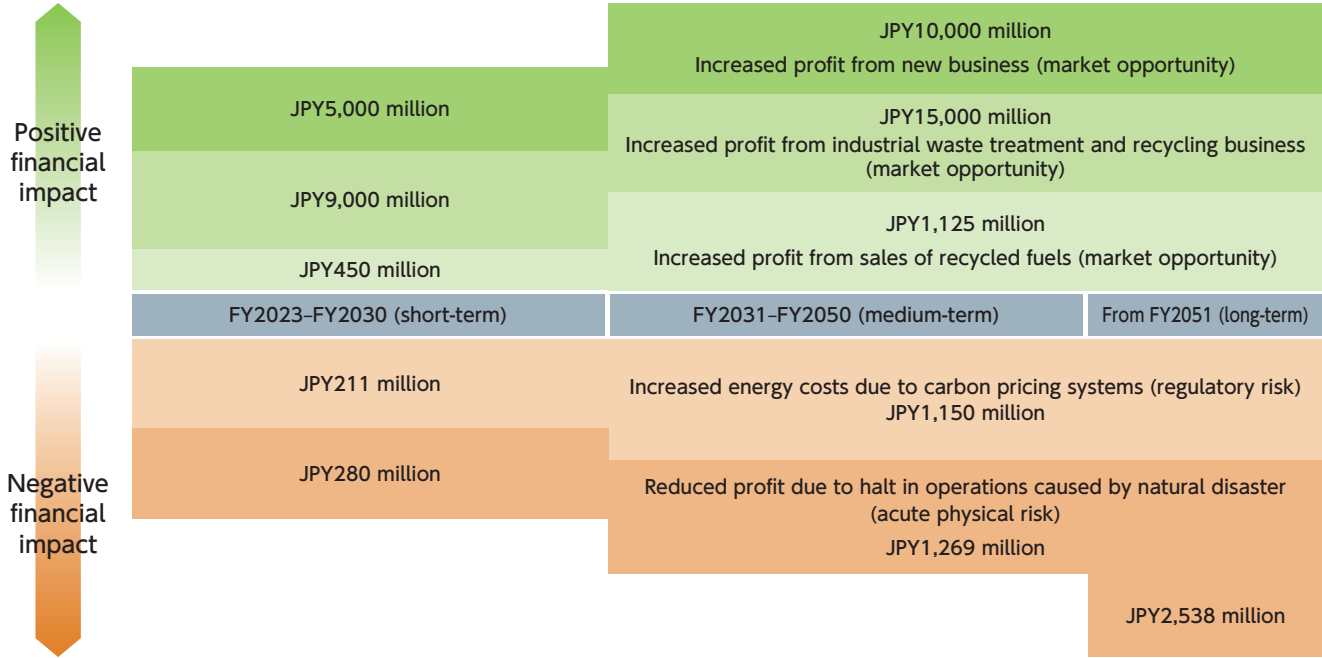
In this scenario, greenhouse gas emissions regulations such as carbon pricing systems and carbon taxation are adopted, resulting in increased energy costs, so we respond by adopting the use of renewable energies and deploying low-emissions vehicles and processing equipment. Fossil fuel usage also decreases, lowering demand for recycled fuels in turn and bringing expectations of decrease in sales. Conversely, demand for our low-emissions industrial waste treatment services

and raw materials increases. In anticipation of this kind of paradigm shift, Daiseki will shift its focus to material recycling. Material recycling is the recycling of waste into products retaining close to their original functionality. This removes the need for the incineration or landfill that would be required for disposal and avoids using natural resources, thereby allowing us to contribute to decarbonization and resource recycling.

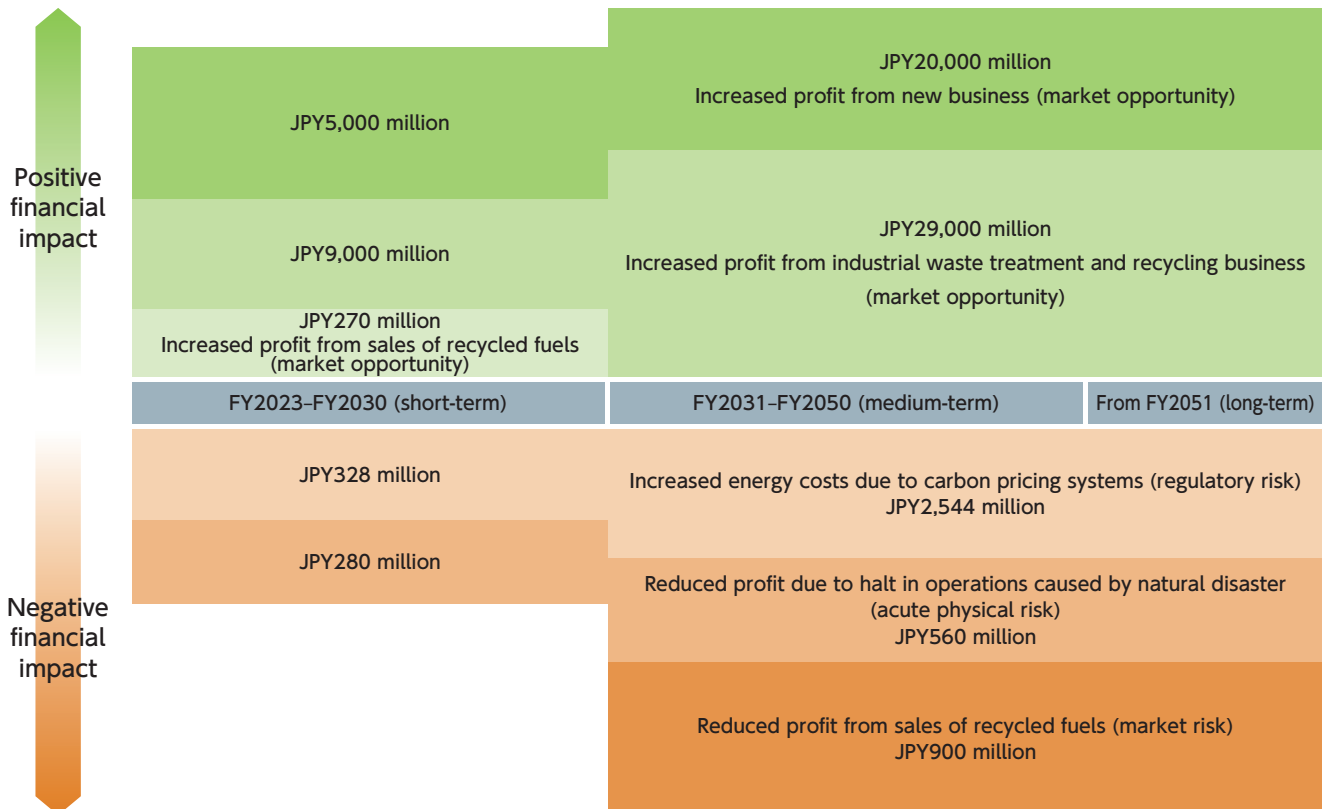
	Possible Situation	Impact Assessment	Response
1.5°C Scenario (controls applied)	Greenhouse gas emissions regulations are strengthened (carbon pricing systems and carbon taxation are adopted)	<b>Risks</b> Increased energy costs	Adopting use of power by renewable energies and low-emissions equipment
	Advances in businesses' emissions reduction efforts	<b>Risks</b> Reduced fossil fuel usage ⇒ Reduced sales of recycled fuels	Shifting operations from recycled fuels to material recycling
		<b>Opportunities</b> Increased demand for Daiseki's low-emissions industrial waste treatment services	Proactively expanding our industrial waste treatment service operations
		<b>Opportunities</b> Increased demand for recycled resources with low emissions	Shifting operations from recycled fuels to material recycling
	No change in likelihood of typhoons, torrential rain, and other natural disasters	No change in risk of disasters forcing Daiseki and/or its customers to cease operations	Remains at current level
No change in the marine environment such as rise in sea levels	No change in risk of flooding forcing Daiseki and/or its customers to cease operations	Remains at current level	

# Analysis of the Financial Impact of These Risks and Opportunities on Our Business Activities

## 4.0°C Scenario

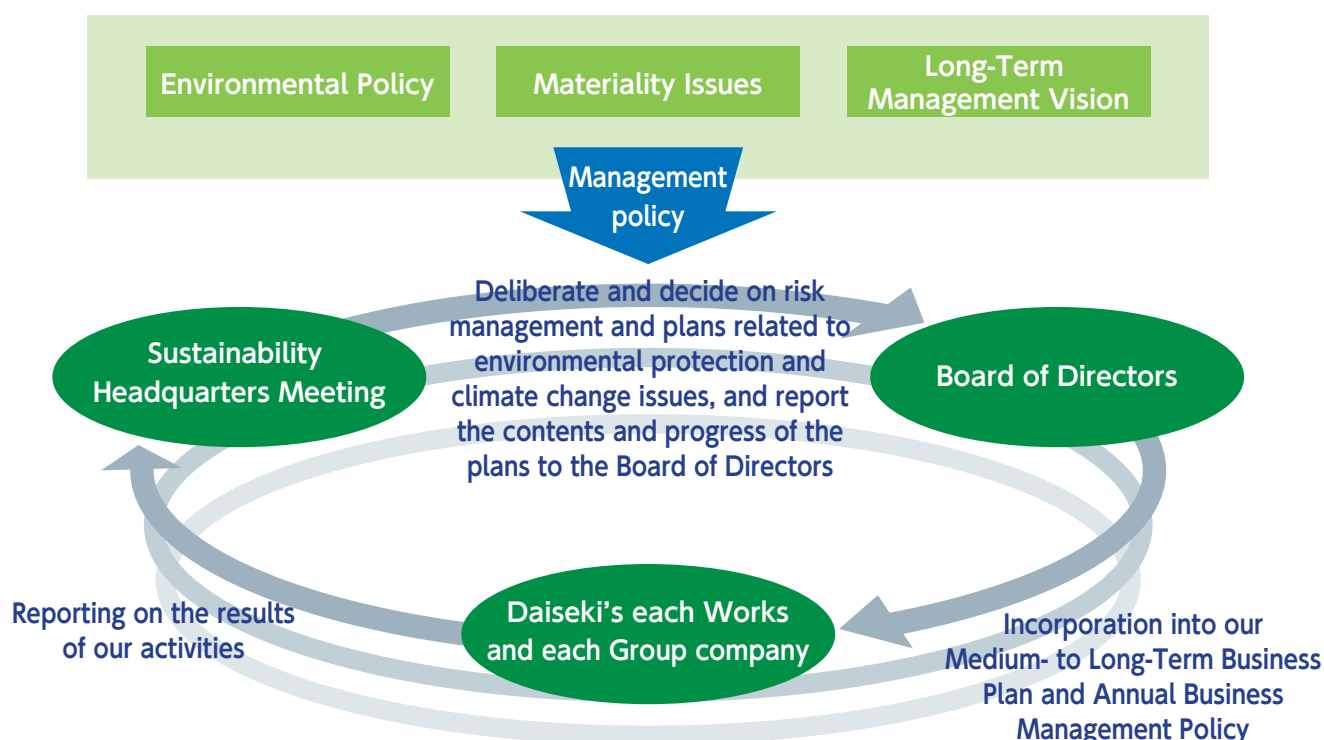


## 1.5°C Scenario



Note: Estimated positive and negative financial impact on operating profit per year based on actual results for FY2023. Refer to "Basis of Calculation of Analysis of the Financial Impact of These Risks and Opportunities on Our Business Activities" for the basis of calculation.

## Management Strategy Based on Our Scenario Analysis



## Linking sustainability management results with compensation

Compensation for internal directors and executive officers follows a basic policy that links their compensation with shareholder profits as an incentive to sustainably increase corporate value and enhance the practice and promotion of sustainable management, and sets appropriate compensation levels for each director and executive officer based on their responsibilities. As an initiative to achieve the SBTs, we establish internal emissions reduction targets for each Works based on ISO 14001. Directors and executive officers who achieve these works targets receive stock-based compensation.

	FY2025-FY2030 (short-term)	FY2031-FY2050 (medium-term)	From FY2051 (long-term)
Risk reduction measures	<ul style="list-style-type: none"> <li>● Deploy emergency generators at all sites in preparation for damage to production facilities due to severe climate change</li> <li>● Introduce renewable energy in preparation for stricter carbon pricing system, request commercial vehicle manufacturers to develop EV commercial vehicles, use fuel with credits</li> <li>● Development of new business (material recycling) in preparation for the risk of reduced demand in the fuel recycling business</li> </ul>	<ul style="list-style-type: none"> <li>● Install watertight walls at business sites at risk of flooding in preparation for damage to production facilities from severe climate change</li> <li>● Introduce renewable energy in preparation for stricter carbon pricing system, use EV commercial vehicles, use fuel with credits</li> <li>● Promote business conversion to new business (material recycling) in preparation for the risk of reduced demand in the fuel recycling business</li> </ul>	<ul style="list-style-type: none"> <li>● Install strong watertight walls at business sites at risk of flooding in preparation for damage to production facilities from further severe climate change</li> <li>● Introduce renewable energy in preparation for stricter carbon pricing system, use EV commercial vehicles, use fuel with credits</li> <li>● Promote business conversion to new business (material recycling) in preparation for the risk of loss in the fuel recycling business</li> </ul>
Measures to capture opportunities	<ul style="list-style-type: none"> <li>● Promote existing industrial waste recycling business to prepare for increased demand for recycling processing services and recycled fuels</li> <li>● Develop new business (material recycling) to prepare for future increase in circular economy demand</li> </ul>	<ul style="list-style-type: none"> <li>● Develop new business (material recycling) to prepare for the increase in circular economy demand</li> </ul>	<ul style="list-style-type: none"> <li>● Establish new business (material recycling) to prepare for the increase in circular economy demand</li> </ul>

## Greenhouse Gas Emissions Reduction Targets and Results

The Daiseiki Group's established greenhouse gas emission reduction targets were certified by the Science Based Targets initiative (SBTi)\*1 in November 2022 as meeting the "Well-below 1.5°C" target based on scientific evidence. The established targets are as follows.

① Scope 1*2 + Scope 2*3	34% reduction by FY2028 (compared to FY2022)
② Scope 3*4	20% reduction by FY2028 (compared to FY2022)
③ Switching to power from renewable energy sources	Switching to 100% power from renewable energy sources by FY2031

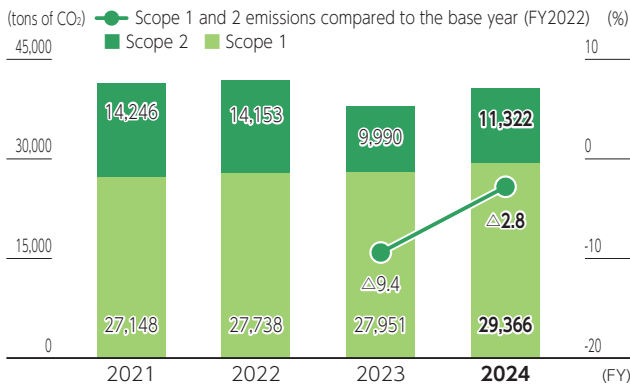
\*1 SBTi: SBTi is a joint international initiative established in 2015 by the CDP, the UN Global Compact, World Resources Institute (WRI), and World Wide Fund for Nature (WWF) to verify and certify that greenhouse gas emissions reduction targets set by companies are science based and in line with the Paris Agreement goal of "limiting global temperature rise to well below 2°C above pre-industrial levels."

\*2 Scope 1: Direct emissions associated with fuel use

\*3 Scope 2: Indirect emissions associated with the use of electricity and heat purchased from other parties

\*4 Scope 3: Indirect emissions other than Scope 1 and 2

### Change in the Daiseiki Group's Scope 1 + Scope 2 emissions



Emissions for FY2024 increased due to the overall increase in Group activities and the M&A with Sugimoto Group

## Promotion of switching to electric power from renewable energy

The Daiseiki Group began switching to electric power from renewable energy (renewable energy electricity) in FY2022. We have a target to introduce the use of renewable energy at all works and in all of our Group companies by FY2028, ahead of the preset goal of reducing our Scope 2 emissions to zero. In FY2024, Daiseiki, Daiseiki Eco. Solution, and Daiseiki MCR, which use relatively large amounts of electricity, continued to introduce renewable energy, and 28.3% of the electricity used by the Daiseiki Group was switched to renewable energy. In FY2025, we plan to increase the amount of renewable energy introduced by these three companies.

## Engagement with customers and our supply chain

Daiseiki is promoting engagement in the following ways with the aim of reducing greenhouse gas emissions.

- **Customers that order waste treatment to Daiseiki**  
Reduce emissions in Scope 3, Category 5 (waste) by using our non-combustible waste disposal method (see page 45 for reduction contribution), and continue to develop and realize new recycling technologies and encourage sorting industrial waste when discharged from customers in FY2024 to increase reductions of Scope 3 emissions
- **Customers that purchase our recycled products**  
Reduce Scope 1 and Scope 3, Category 1 (purchased products and services) by using recycled products that are substitutes for Daiseiki's fossil fuels and natural resources, expand recycled fuel production plant (Kyushu) and open new works (Hiroshima) in FY2024 to increase sales volume of recycled fuel
- **Transportation companies that Daiseiki commissions to transport raw materials and products and treatment companies that Daiseiki commissions to process residues from waste treatment**  
We gather fuel efficiency data from 33 transportation companies to calculate emissions, and develop treatment technologies to reduce residues from waste treatment

### Selected as an A-list company by CDP

Daiseki Co., Ltd. has been selected by CDP, an international environmental rating organization, as an A-list company, the highest ranking in the climate change category for FY2024. Among over 21,000 companies scored worldwide, only 362 companies are climate change A-list companies. Our transparency in disclosing information on climate change and our leadership in performance were recognized and highly regarded. We will continue to improve in response to climate change to remain a climate change A-list company.



CDP climate change A-list company logo

### Awarded the ESG Finance Award Japan

Daiseki and Daiseki Eco. Solution were recognized as Environmental Disclosure Progress Companies in the 5th ESG Finance Award Japan by the Ministry of the Environment. This award was established by the Ministry of the Environment to evaluate and recognize financial institutions and organizations that actively engage in ESG finance and companies that engage in environmentally sustainable management.



ESG Finance Awards Japan "Environmental Disclosure Progress Company" logo

### Member of Japan Climate Leaders Partnership (JCLP)

Daiseki joined the Japan Climate Leaders' Partnership (JCLP) in August 2023. The JCLP is a group of companies that supports the goal of zero greenhouse gas emissions by 2050 and aims to realize a sustainable and decarbonized society.



JCLP logo

### Joined Circular Partners (CPs)

In December 2023, Daiseki joined the Circular Partners, an ambitious and pioneering initiative that brings industry, academia, and government together in a collaborative effort to achieve a circular economy. Circular Partners is a partnership to promote cooperation between industry, academia and government established by the Ministry of Economy, Trade and Industry to achieve a circular economy based on the "Growth-Oriented, Resource-Autonomous Circular Economy Strategy" formulated in March 2023.



Circular Partners logo

# Initiatives to protect the environment and biodiversity

## Initiatives to reduce environmental impact

Daiseiki is striving to reduce the use of water resources used in its business activities and to reduce external emissions of air pollutants, chemical substances (PRTR substances), and hazardous materials.

Water resources are mainly used for washing industrial waste collection and transportation vehicles, and rainwater is reused to reduce water resources.

The main sources of air pollutant emissions are boilers and other soot and smoke generating facilities and collection and transportation vehicles. For the soot and smoke generating facilities, the level of air polluting materials emitted is measured annually in accordance with the Air Pollution Control Act, and levels are maintained at or below the standard level. We are also working to reduce emissions from some of our soot and smoke generating facilities by switching from liquid fuels to gaseous fuels, which generate less air pollutants. For industrial waste collection and transportation vehicles, we are gradually switching to low-pollution vehicles to reduce emissions, and as of February 29, 2024, 97.4% of Daiseiki's 234 collection and transportation vehicles are low-pollution vehicles.

The main sources of emissions of PRTR Act-targeted chemical substances are the fuels used for on-site heavy machinery and soot and smoke generating facilities and the purified water discharged into rivers after biological treatment. To reduce these emissions, we promote fuel-efficient driving of heavy machinery and thoroughly conduct water quality inspections by setting stricter in-house discharge standards than the legal standards for discharged water.

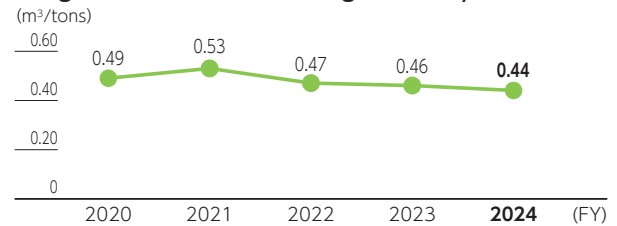
At Daiseiki, we accept special control industrial waste which includes toxic substances such as strong acids, strong alkalis, and heavy metals, and detoxify such toxic substances by appropriately treating them with treatment agents. In FY2024, we accepted 204,000 tons of special control industrial waste, and following treatment we sent 12,000 tons of special control industrial waste in the form of residues, etc., to an external treatment company. Special control industrial waste is defined as highly hazardous under the Waste Management Act, and even small quantities of such waste have an adverse impact on the natural environment. To reduce emissions of these hazardous substances, we are working to reduce the volume of residual materials after treatment and promote in-house processing.

Other environmental impacts include water quality and odor impacts. To reduce the impact on water quality, the wastewater we receive is processed first by neutralizing, coagulating, and dehydrating it; then a biological treatment is applied via the activated sludge method before it is finally discharged into sewers or rivers.

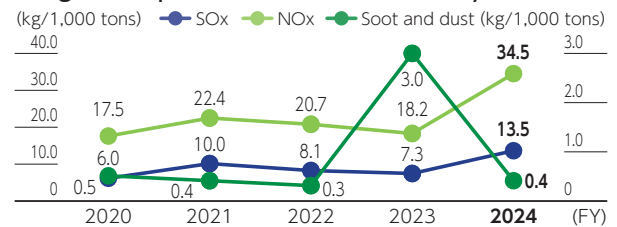
As steps to counter unpleasant odors, we analyze samples of industrial waste before it is delivered to us and,

in cases where it generates significant unpleasant odor, determine in advance whether to accept its delivery and the treatment methods to be used. We also install odor-eliminating devices in each plant to remove odors before release into the atmosphere.

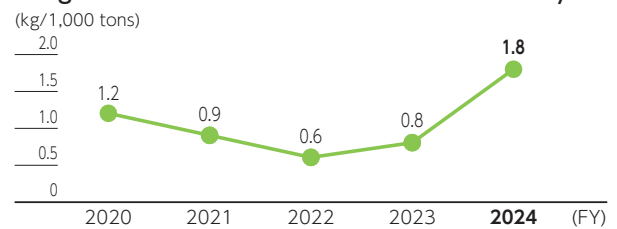
### Change in water resource usage intensity



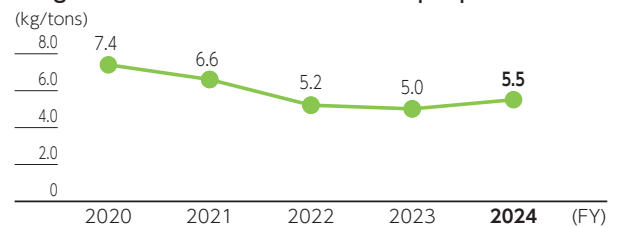
### Change in air pollutant emissions intensity



### Change in chemical substance emissions intensity



### Change in harmful substance emissions per production unit



## Biodiversity initiatives

At Daiseiki, we believe that in order to protect biodiversity, it is necessary to prevent the destruction and pollution of the natural environment, limit the excessive use of natural resources, prevent global warming, and eliminate invasive species. Based on this approach, Daiseiki Hokuriku Works participates in clean-up activities of nearby coastal areas each year, and is working to protect the environment to preserve biodiversity.

For details on Daiseiki's initiatives to protect biodiversity,

refer to the section of our website on biodiversity.



Coastal clean-up  
(Daiseiki Hokuriku Works)