



Noritake Garden (Biotope)

## Harmony with the Environment

In order to "achieve a sustainable society," the Noritake Group has acquired certification under the international standard ISO 14001 at all of our major domestic business sites and promotes environmental activities such as developing environmentally-friendly products and taking countermeasures on global warming. In particular, as a measure against global warming, we believe that the use of renewable energy has a significant effect on the reduction of greenhouse gases, and we have installed solar power generation facilities at our domestic offices, including Noritake Garden.

The report "13. Harmony with the Environment" (P44 to 52) was created using data from the following group companies.

- NORITAKE CO., LIMITED    ●NORITAKE COATED ABRASIVE CO., LTD.
- ZEN NORITAKE CO., LTD.    ●HIROSHIMA KENMA K.K.
- KCM CORPORATION    ●KYORIX MIE CO., LTD.
- NORITAKE ITRON CORPORATION    ●NORITAKE TCF CO., LTD.
- NORITAKE GARDEN CO., LIMITED
- NORITAKE RECYCLE CENTER CO., LIMITED
- NORITAKE SCG PLASTER CO., LTD.
- PT. NORITAKE INDONESIA    ●NORITAKE TAIPEI CO., LTD.
- NORITAKE LANKA PORCELAIN (PVT) LIMITED



NORITAKE GARDEN

## Environmental action policy



### Environmental Policies

The Noritake Group, as a company that manufactures products based on its founding spirit of "Good Quality, Export and Co-prosperity," positions the preservation of the global environment as an important management issue, and is contributing to the achievement of a "sustainable society" through its business activities.

- ① We will strive to develop and provide environmentally-friendly products and services.
- ② We will endeavor to reduce environmental burden in all processes of our business activities. In particular, we will

strive to achieve the goals set for the reduction of CO<sub>2</sub> generation, resource saving, waste reduction, and recycling, and to manage hazardous substances appropriately.

- ③ We will build Environmental Management Systems from a global perspective and strive to reduce environmental burdens continually.
- ④ We will comply with environmental laws, regulations, and other requirements.
- ⑤ We will disclose information about our environmental activities and enhance our communication activities with stakeholders.

### Aim

The Noritake Group as a whole will make efforts to promote voluntary environmental protection activities, actively work to reduce the environmental burdens and risks that occur in our business activities, and aim to contribute to global environmental protection. In addition, we will strive for co-prosperity with our stakeholders by implementing environmental management that balances environmental protection and generating business profits.



Solar power generation equipment

### 11th Three-Year Environmental Action Plan initiatives

In the 11th three-Year Environmental Action Plan starting in fiscal 2019, we aim for environmentally friendly business activities by advancing the integration between our business activities and environmental action. We are linking our countermeasures for global warming and our resource recycling activities with our manufacturing enhancement work in an effort to eliminate "unreasonableness, inconsistency and waste," thereby focusing on reducing energy use, changing raw materials and reducing defective products as we work on reducing our environmental impact such as greenhouse gases and landfill waste. We will also progress with development and expand sales that are friendly to the environment.

Although there was a delay during 2020, the second fiscal year of the three-year plan, in reducing greenhouse gas emissions, other efforts were mainly implemented on schedule according to plan. During fiscal 2021, the final year of the plan, we will continue to move forward with the 11th Three-Year Environmental Action Plan in efforts to build an environmental management framework that unifies our business activities with environmental action.



## 11th Three-Year Environmental Action Plan (Fiscal 2019 to 2021 plan and results of the plan through fiscal 2020)

Activity item		Fiscal 2020		Evaluation
		Plan	Results	
Environmental management system	ESG Initiatives	Achievement of environmental management based on the Group management system	Establishing a foundation for environmental management based on the Group management system	○
	Promote environmental activities at overseas plants	Promoting environmental activities at each overseas office	Activity items defined for each overseas business operation	○
Countermeasures for global warming	[Domestic] Reduce greenhouse gas emissions	Per unit of production: reduce by 1% or more compared to previous fiscal year	Per unit of production: increase by 5% compared to previous fiscal year	×
	[Global] Reduce greenhouse gas emissions	Per unit of production: reduce by 2% or more compared to previous fiscal year	Per unit of production: increase by 1% compared to previous fiscal year	×
Resource recycling measures	[Domestic] Reduce landfill waste generation	Per unit of production: reduce by 4% or more compared to previous fiscal year Recycling rate: 85% or more	Per unit of production: reduce by 20% compared to previous fiscal year Recycling rate: 88%	○
	[Global] Reduce waste	Per unit of production: reduce by 3% or more compared to previous fiscal year	Per unit of production: reduce by 2% compared to previous fiscal year	△
Pollution measures	Respond to use of prohibited substances	Reduce devices that use specified mercury and specified CFCs	Reduce devices that use specified mercury and specified CFCs	○
	Chemical substance management under PRTR regulations Compliance with chemical substance regulations	Reduce use of chemical substances subject to PRTR regulations Continuous monitoring of chemical substance regulation	Reduce use of chemical substances subject to PRTR Continuous monitoring of chemical substance regulation	○
Product measures	Environmentally-friendly products	Net sales ratio: 8.0%	Net sales ratio: 10.9%	○
	Enhance green procurement	Continue operation of Green Procurement Guidelines	Continue operation of Green Procurement Guidelines	○
Environmental communications	Practice of environmental education	Continued expansion of environmental education	Continued expansion of environmental education	○
	Disclose information to stakeholders	Continued issuance of integrated reports	Continued issuance of integrated reports	○

Activity item		Fiscal 2021 Plan
Environmental management system	ESG Initiatives	Achievement of environmental management based on the Group management system
	Promote environmental activities at overseas plants	Promote activities at each overseas office
Countermeasures for global warming	[Domestic] Reduce greenhouse gas emissions	Per unit of production: 1% or more reduction compared to previous fiscal year
	[Global] Reduce greenhouse gas emissions	Per unit of production: 2% or more reduction compared to previous fiscal year
Resource recycling measures	[Domestic] Reduce landfill waste generation	Per unit of production: 4% or more reduction compared to previous fiscal year Recycling rate: 85% or more
	[Global] Reduce waste	Per unit of production: 3% or more reduction compared to previous fiscal year
Pollution measures	Respond to use of prohibited substances	Reduce devices that use specified mercury and specified CFCs
	PRTR chemical substance management Compliance with chemical substance regulations	Reduce use of chemical substances subject to PRTR regulations Continuous monitoring of chemical substance regulation
Product measures	Environmentally-friendly products	Net sales ratio: 11.0%
	Enhance green procurement	Continue operation of Green Procurement Guidelines
Environmental communication	Practice of environmental education	Continued expansion of environmental education
	Disclose information to stakeholders	Continued issuance of integrated reports

## Management system

### ► Environmental Management System organizational structure

We have established an environmental protection promotion system having the president as the Environmental Protection Supervisor.

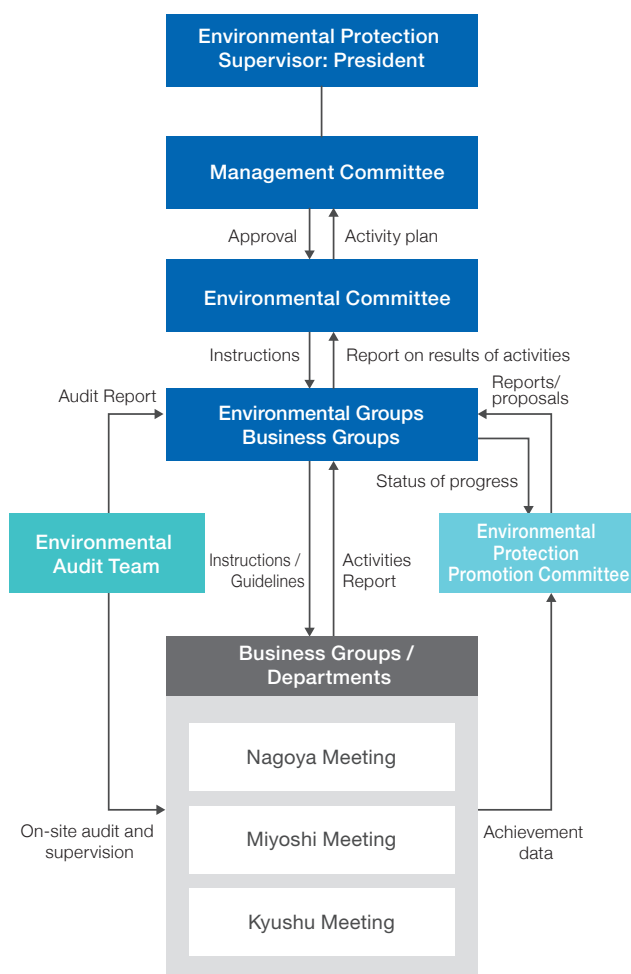
The Environmental Committee, chaired by the company President and with members comprising managers in charge of each business, deliberates the activity plan based on the results of the activities and approves unified guidelines for environmental protection promotion activities at the Management Conference.

For environmental protection activities in each business, Environmental Groups chaired by managers in charge of business are established in each Business Group to plan initiatives and manage progress in line with business activities.

In addition, the Environmental Protection Promotion Committee is held on a regular basis to plan and manage environmental protection activities and evaluate the results of activities.

In addition, in order to operate the Environmental Management System in cooperation with each region, we hold "ISO Meetings" in various locations.

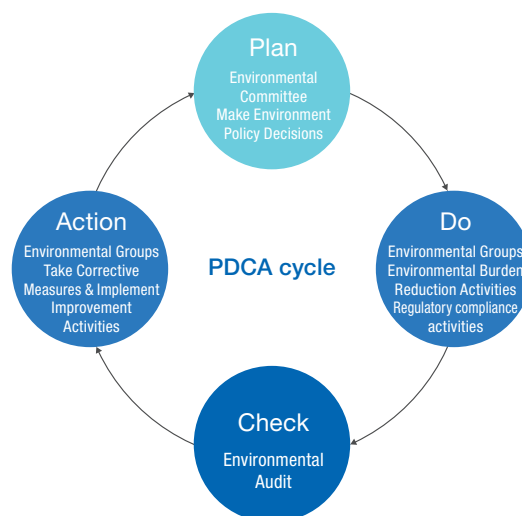
### ■ Environmental management organization and structure



### ► Operation of Environmental Management System

In efforts to appropriately implement environmental management, we have established an Environmental Management System based on the international standard ISO14001 and are continuously promoting environmental protection activities. We have received ISO14001 certification from a third-party organization at all domestic production sites.

### ■ PDCA cycle



### ◀ ISO14001 certified offices (Situation as of March 2021) ▶

#### ■ NORITAKE CO., LIMITED (JQA-E-90071 was obtained in 1997)

- NORITAKE CO., LIMITED  
Head Office, Miyoshi Site, Kamori Plant, Komaki Plant, Minato Plant, Matsusaka Plant, Yasu Plant, Kurume Plant, Imari Plant
- ZEN NORITAKE CO., LTD.
- HIROSHIMA KENMA K.K.
- NORITAKE RECYCLE CENTER CO., LIMITED
- NORITAKE TCF CO., LTD.
- NORITAKE GARDEN CO., LIMITED
- NORITAKE ITRON CORPORATION  
Omiya Office/Ouchiya Office
- NORITAKE COATED ABRASIVE CO., LTD.  
Head Office/Noto Plant

#### ■ KCM (JSAE393 was obtained in 2001)

- KCM CORPORATION  
Head Office/Head Office Plant
- KYORIX MIE CO., LTD.  
Mie Plant

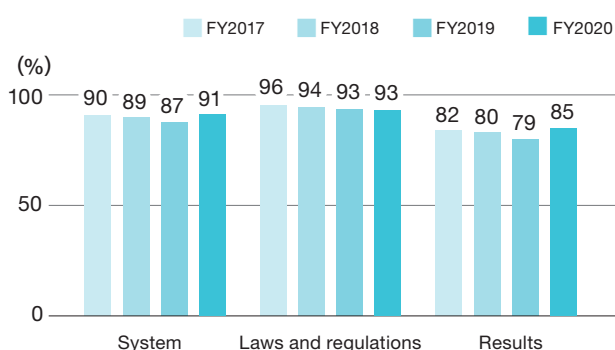
In addition to the above, overseas offices are also establishing Environmental Management Systems to promote environmental protection activities in the same way as in Japan. They are setting up environmental systems considering the regional characteristics of each country, such as laws and regulations.

## ▶ Results of fiscal 2020 group environmental supervision

In order to properly promote environmental protection activities, the Environmental Audit is conducted every year by the Environmental Protection Promotion Committee.

The Audit investigates the status of implementation of environmental activities at all plants and evaluate the results. In particular, in order to preemptively prevent environmental pollution, it focuses on on-site confirmation of production processes and facilities. In addition, by conducting this Audit, we are working to resolve problems and issues related to environmental burden reduction activities, and to help improve the overall system.

### ■ Average score rate for each audit item



(Global warming countermeasures, resource recycling countermeasures, pollution countermeasures)

The Environmental Audit in fiscal 2020 evaluated the results of the environmental burden reduction activities in the Environmental Management System, legal and regulatory management, and the 11th Three-Year Environmental Action Plan.

As a result, we were able to confirm that management of relevant legal regulations and environmental pollution measures are being operated properly based on the procedures of the Environmental Management System. Yet as there is insufficient coordination between initiatives for environmental activities and business plans, fiscal 2021 will focus on policies with a higher level of effectiveness than coordinating with business plans.



Environmental internal audit

## ▶ Environmental communications

In order to promote environmental protection activities throughout the company, it is important for each person, from management to new employees, to correctly recognize environmental issues and to raise awareness of environmental protection. Therefore, in addition to providing environmental education by qualification, we regularly disseminate information on environmental activities through our in-house newsletter to publicize environmental initiatives. We also hold specialized education for personnel who require specialized knowledge such as laws and regulations.

Furthermore, in order for as many people as possible to understand the Noritake Group's approach to the environment, we disseminate information in this report and on our website.



In-house environmental education

## ▶ Regulatory compliance and complaints

### ◀ Regulatory compliance and complaints ▶

In fiscal 2020, there were no deviations or complaints regarding environmental regulations or standard values. In addition, there were no penalty or lawsuits from the supervisory authorities regarding the environment.

### ◀ Devices containing PCB ▶

For equipment containing PCB, we implement strict storage management, and proceed with appropriate processing sequentially based on the processing plan.

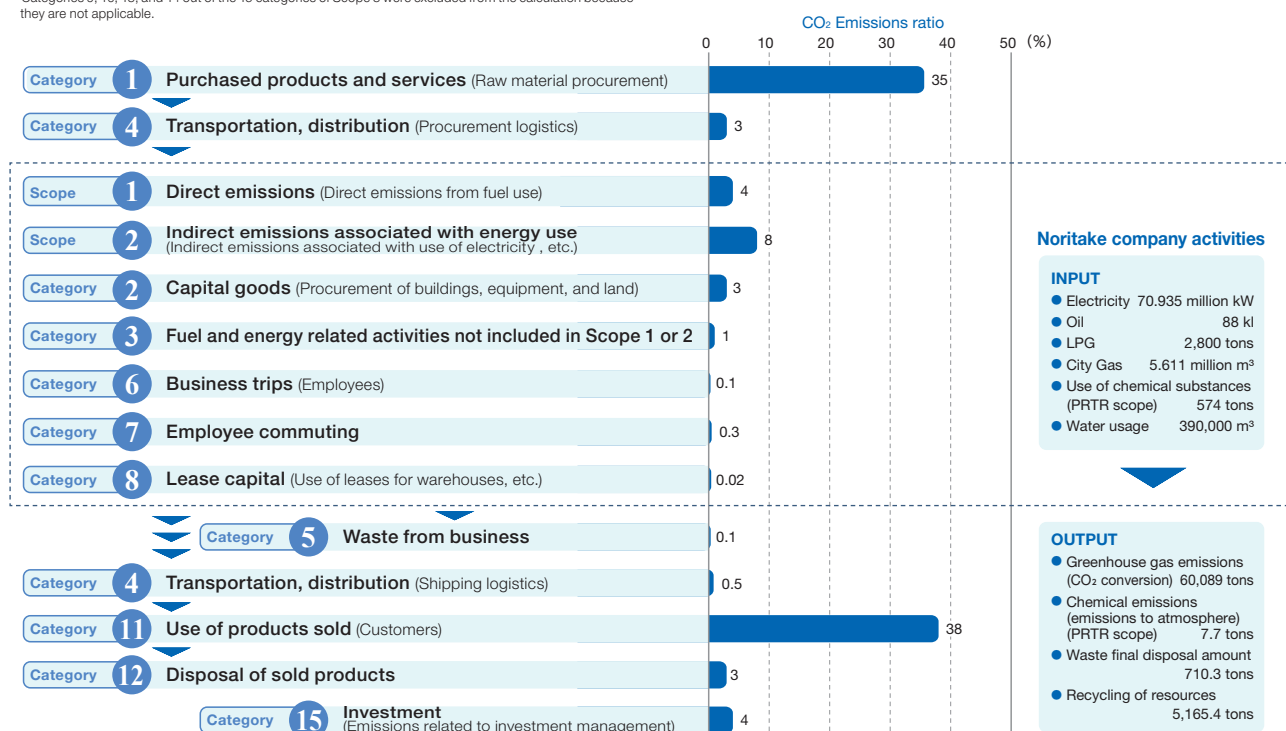
## Reduce environmental burden

### ► Overall picture of environmental burden (Scope 3)

We are working to reduce environmental burden more effectively by monitoring the overall environmental burden of the entire product life cycle from raw material procurement to disposal after product use.

Noritake calculates greenhouse gas emissions based on the international standard Scope 3 and uses them as an activity indicator.

\* Calculation method  
 • Calculated in accordance with the Ministry of the Environment and Ministry of Economy, Trade and Industry's "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain Ver 2.0."  
 • Categories 9, 10, 13, and 14 out of the 15 categories of Scope 3 were excluded from the calculation because they are not applicable.



### ► Pollution measures

#### ◀ Pollution control activities ▶

In order to reduce the risk of environmental pollution caused by chemical substances, it is important to reduce the use of substances that adversely affect the environment as much as possible and to prevent dispersal and leakage through proper storage and handling.

In the 11th Three-Year Environmental Action Plan, we aimed to reduce the impact of harmful chemicals on the environment, strengthened the management of chemical substances, and promoted the reduction of chemical substances used.

#### ◀ Chemical substance management ▶

We conduct chemical substance management that meets environmental-related laws for the entire Noritake Group. Chemical substance management consists of two parts: Screening and approval rules to control new use of harmful chemical substances, and monitoring the amount of chemical substances used and transferred. In this way, we are visualizing the conditions of chemical substances used and working to reduce the use and emission of hazardous substances.

We also issue and operate the "Chemical Contamination Prevention Control Standard" that uniquely defines the structural standards and inspection standards of related facilities for the storage and use of harmful chemical substances, and we are striving to prevent the dispersal and leakage of chemical substances.

## ▶ Countermeasures for global warming

### ◀ Global warming countermeasure activities ▶

The Noritake Group is working to reduce greenhouse gases that cause global warming. In the 11th Three-Year Environmental Action Plan, we are working to reduce greenhouse gas emissions per production volume by 1% or more compared to the previous year. In order to reduce greenhouse gases, we are actively promoting the reduction of energy consumption by means including increased productivity and adoption of energy-saving facilities.

We are also taking measures to counter global warming by expanding the use of renewable energy. We operate solar power generation facilities at six domestic business sites, making effective use of their premises in reducing annual CO<sub>2</sub> emissions by 1,500 tons or more.



Solar power generation facility

### ◀ Global Warming Countermeasures Dedicated Committee initiatives ▶

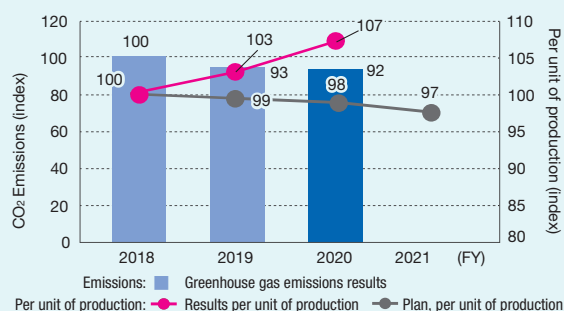
In order to share information necessary for global warming countermeasures and work on activities with a company-wide policy, we have established a Global Warming Countermeasures Dedicated Committee in which "energy management plan promotion staff" and "energy management managers" from the main plants participate. This Global Warming Countermeasures Dedicated Committee confirms the progress of company-wide greenhouse gas reduction activities and considers ways to promote preventing global warming.

In addition, in order to spread our advanced activities and effective means to prevent global warming, we share the information within the Group. We also promote company-wide activities such as taking a local-tour at the sites where the activity is being well performed, and create guidebook on how we corresponded to each environmental cases. The main plants are taking initiatives on working on this matter.

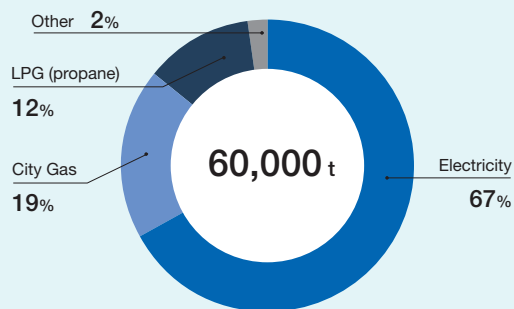
## Greenhouse gas emissions results

During fiscal 2020, the second year of the 11th Three-Year Environmental Action Plan, our continuous efforts to improve quality and increase productivity linked with manufacturing enhancement activities resulted in a reduction in CO<sub>2</sub> emissions by approximately 1%. Yet insufficient reductions in fixed energy use due to production fluctuations meant that we were not able to meet our planned goal of a 1% or greater year-on-year reduction in CO<sub>2</sub> emissions per production volume.

### ■ Domestic greenhouse gas emissions results

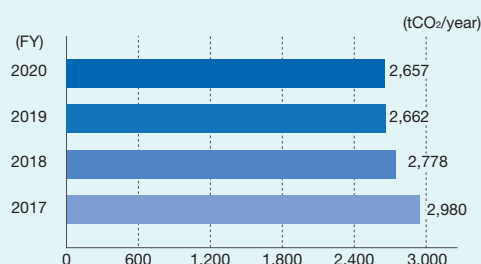


### ■ CO<sub>2</sub> emissions ratio by energy type



In addition, the company continuously monitors the amount of logistics transport in order to achieve efficient logistics. In fiscal 2020, our CO<sub>2</sub> emissions were 26.57 million tons with 14.93 million ton-kilometers.

### ■ CO<sub>2</sub> emissions from logistics and transport





## ▶ Resource recycling measures

### ◀ Resource recycling activities ▶

We understand that doing our utmost to reduce the generation of waste in our business activities is critical to making effective use of limited resources. At the Noritake Group, we undertake to reduce waste in conjunction with our manufacturing enhancement activities and quality improvement.

In our 11th Three-Year Environmental Action Plan, we have been working to reduce the amount of waste sent to landfill per production volume by 2% or more compared to the previous fiscal year in order to promote resource recycling. In addition, as a main initiative, we aim for a recycling rate of over 85% in order to promote the recycling of waste that was previously sent to landfill.

### ◀ Noritake Recycling Center initiatives ▶

Industrial grinding wheels, Noritake's main business, are consumable products, and are disposed of in landfills as industrial waste after use. This has been a major issue in terms of the effective use of resources.

In order to recycle the industrial grinding wheels that we sell, the Noritake Recycling Center collects about 500 tons of used vitrified grindstones annually.

The collected grindstones are crushed, classified, and then reborn as products such as abrasives and heat-resistant materials.

We are also actively developing applications so that used grindstones can be used effectively.

#### ■ Recycling process of used industrial grinding wheels

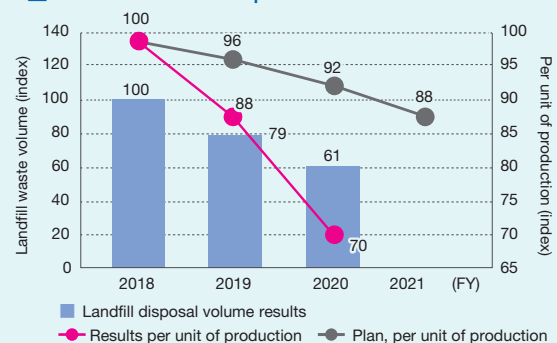


## Waste emission result

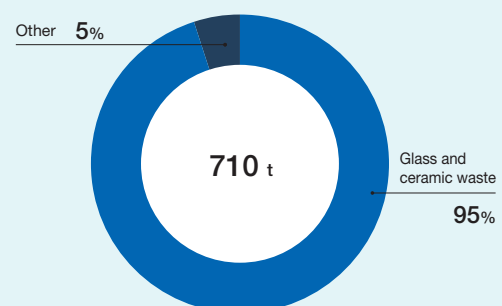
In fiscal 2020, the second year of our 11th Three-Year Environmental Action Plan, we continued to promote the reduction of waste by reducing the defect rate, and the recycling of resources by reviewing disposal methods. We succeeded in reducing the amount of waste sent to landfill per production volume by approximately 24%. We reduced the volume of waste sent to landfill per production volume by 20% compared to the previous year, accomplishing our plan.

By promoting resource recycling, we were also able to recycle 88% of generated waste.

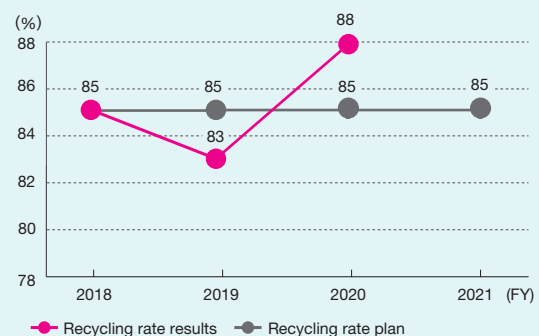
#### ■ Domestic landfill disposal volume results



#### ■ Landfill disposal volume rate by waste type



#### ■ Trend in recycling rate





## Initiative for biodiversity



In order to realize the "sustainable society" that the Noritake Group is aiming for, we are promoting initiative for biodiversity aimed at preserving nature and ecosystems. We are promoting the greening activity of our business sites, and the "Noritake Garden" adjacent to our headquarters provides an environment where wild birds and insects can flourish.



Noritake Garden (Biotope)

## Water resource conservation



In order to conserve important water resources, the Noritake Group strives to prevent pollution of rivers and other areas managing wastewater from its production processes appropriately. In factories that generate a large amount of waste liquid, all wastewater from the process is collected so that they do not spread into rivers and other areas, and some process wastewater such as washing water is recycled.



Wastewater processing equipment



Waste liquid collection and recycling equipment

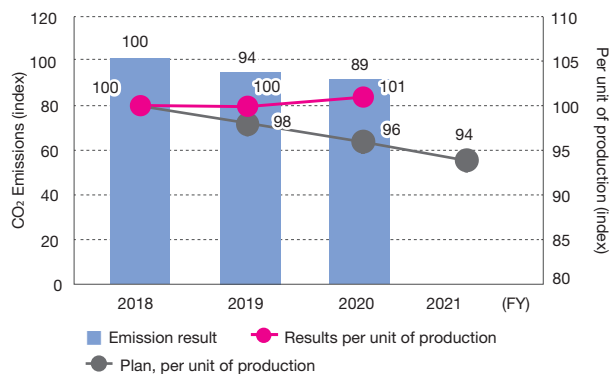
## Initiatives at overseas business sites



The Noritake Group is working to reduce its environmental impact at overseas production sites as we expand our overseas business. In the 11th three-Year Environmental Action Plan, we set global targets for greenhouse gases and waste, and activities have proceeded.



### Transition of greenhouse gas emissions (global)



### Transition of waste disposals (global)

