

**Hitachi Global Life Solutions Environmental Report 2020**



**By applying services and solutions utilizing high added value products and digital technologies that take into consideration environmental conservation, we intend to innovate the lifestyles of people as we continue in our contribution towards fulfilling a sustainable society.**



President and Director

*J. Taniguchi*

The world was plunged into a serious state of confusion with the spread of the novel coronavirus (COVID-19). I would like to take this opportunity to sincerely thank those who work to support society including all healthcare workers.

This raging virus highlighted various social issues and living problems, creating a circumstance for introspection as to how we can contribute to society in our pursuit to fulfill our mission.

On the other hand, there are various environmental issues that need to be addressed including climate change, the depletion of natural resources, sea contamination from waste plastic, water and atmospheric pollution as well as problems with biodiversity. In order to resolve these issues, it has become even more urgent for nations and businesses around the world to cooperate and focus their efforts on improvement.

As a global leader of a socially innovative business aimed at realizing a world that is sustainable, the Hitachi Group aimed at improving economic, social, and environmental values in its Medium-term Management Plan 2021 announced in 2019, which was aimed at contributing to the improvement of the Quality of Life (QoL) and the value for customers. Among the several social issues, we must particularly focus our efforts on resolving environmental issues including climate change in order to become a leading company in environmental value.

As a member of the Hitachi Group, we wish to continue

contributing towards improving QoL and realizing a sustainable society, as we innovate the lifestyles of people through our products like white goods, lighting and housing equipment, refrigeration and air-conditioning equipment, and services and solutions which utilize digital technology.

To fulfill a decarbonized society, we offer products as well as services and solutions that provide high energy-saving performance and high added value functions, by taking into consideration environmental conservation in order to help resolve the environmental problems of our customers. Also, to achieve the Sustainable Development Goals by the deadline of 2030, the Hitachi Group has announced that it will achieve carbon neutrality on a group-wide basis, and our company also focus our efforts on achieving carbon neutrality for our two domestic and three overseas factories. Furthermore, in an aim to establish a resource-circulating society, we are stepping up our resource-saving and product recycling efforts. These are just a single step towards establishing a sustainable future. In our aim to achieve a sustainable society, we are taking a long-term view as we push forward with the evolution of our life solution business.

Through this report, we hope to actively communicate with our various stakeholders and will continue to disclose information regarding our efforts for environmental conservation.

## Contents

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<b>Message from the President</b> .....	<b>1</b>
<b>Hitachi Group's Approach to Sustainability</b> .....	<b>3</b>
<b>Hitachi Global Life Solutions Group's Approach to Sustainability</b> .....	<b>4</b>
<b>Hitachi Global Life Solutions Group's Environmental Activity Report</b> .....	<b>5</b>
• Environmental Management .....	<b>5</b>
• Efforts to Realize a Low-carbon Society .....	<b>7</b>
Improving the environmental performance of products .....	<b>7</b>
[Example] Actions to reduce CO <sub>2</sub> through solutions and services	
Reducing CO <sub>2</sub> emissions in the production process .....	<b>8</b>
[Example] Actions to reduce CO <sub>2</sub> at the Works	
• Efforts to Realize a Resource Efficient Society .....	<b>9</b>
Reducing water consumption in the production process .....	<b>9</b>
[Example] Actions to make effective use of water resources	
Reducing waste in the production process .....	<b>10</b>
Promoting product recycling .....	<b>10</b>
[mini COLUMN] Effective use of resources	
• Efforts to Realize a Society Harmonized with Nature .....	<b>11</b>
Relations between ecosystem conservation and corporations .....	<b>11</b>
[Example] Actions to conserve ecosystems	
Controlling chemicals contained in products .....	<b>12</b>
Reducing chemicals in the production process .....	<b>12</b>
[mini COLUMN] Actions to reduce chemicals	
• Environmental Communication .....	<b>13</b>
<b>Corporate Overview</b> .....	<b>Back cover</b>

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## Hitachi Group's Approach to Sustainability

By proactively responding to social issues, Hitachi contributes to the achievement of all SDGs through its responsible corporate conduct and its Social Innovation Business.



In 2015, the United Nations adopted 17 Sustainable Development Goals (SDGs) to be achieved by 2030, such as eradicating poverty, reducing inequalities, and taking climate

action. The SDGs are not just expectations but a concrete action plan requesting the cooperation of a wide range of governments, communities, and businesses throughout the world, in an attempt to achieve prosperity for humankind and the earth.

The world today expects corporations to establish a framework with a long-term outlook on achieving the SDGs and building an even better world, thereby positively promoting sustainability.

The Hitachi Group covers a wide range of industries and is able to help achieve various aspects of the SDGs. In fiscal 2017, the Group's Sustainability Strategic Conference, chaired by Representative Executive Officer, President and CEO Toshiaki Higashihara, studied the 17 SDGs and the possible risks and opportunities regarding the relevant business, and then identified five SDGs that the Hitachi Group could greatly help to achieve through its business strategy.

The Group also identified six SDGs as the goals that it should help to achieve through all its corporate activities. We consider these six goals as being related to all business and managerial strategies of the Hitachi Group, and which will affect its long-term corporate sustainability.

## Hitachi Group's long-term environmental targets – “Hitachi Environmental Innovation 2050”

The Hitachi Group has formulated its Environmental Vision, and announced its “Hitachi Environmental Innovation 2050” in September 2016, to present concrete goals for realizing that vision.

In Hitachi Environmental Innovation 2050, our goal of reducing CO<sub>2</sub> emissions, designed to create a low-carbon society, was set to fulfill the goals of the Paris Agreement. To achieve this goal through its value chain, the Hitachi Group is committed to reducing emissions in the use stage, which accounts for a large percentage of the emissions. We are also promoting the reduction of emissions in the production stage of Hitachi Group's business activities.

Working towards realizing a resource efficient society, we are promoting the efficient use of water and other natural resources used by the Hitachi Group. To achieve that goal, we will continue to practice the manufacture of durable goods made with resource efficiency, thorough product recycling, and reduced water consumption in production processes.

Toward realizing a society harmonized with nature, we promote actions to minimize our burden on ecosystems in each stage of the value chain. Other than providing products and services for that purpose, we are stepping up our efforts to minimize our environmental loads in factories and offices.

In May 2019, the Hitachi Group set its goals on improving economic, social, and environmental values, and also newly set up a three-year Environmental Action Plan 2021. Also, in May 2020, to accelerate the creation of environmental value throughout the Hitachi Group's business activities, the Group

declared its goal to achieve “carbon neutrality for all production by FY 2030.”



\* CO<sub>2</sub> emission reduction targets in “Hitachi Environmental Innovation 2050” are stated as absolute quantities.

## Identification of SDGs, and contribution to their attainment

Hitachi Global Life Solutions Group was founded in April 2019 through the merger of a home electric appliance manufacturer and a distributor of home electric appliances and air conditioning equipment. In addition to efforts such as these, we have set the reinforcement of our service business as part of our business strategy, and we will be working to create new economic, social, and environmental value by providing innovative solutions and products.

The SDGs aim to realize a sustainable society and improve people's Quality of Life by solving challenges related to society and the environment. In our Group, we are working to achieve Quality of Life improvements by advancing our life innovation business, which solves life challenges.

In order to clearly identify SDGs, we are analyzing how our integrated manufacturing and distribution contributes to and also affects SDGs throughout the overall value chain.

More specifically, we performed the mapping by cross-referencing our business activities against the 17 goals and

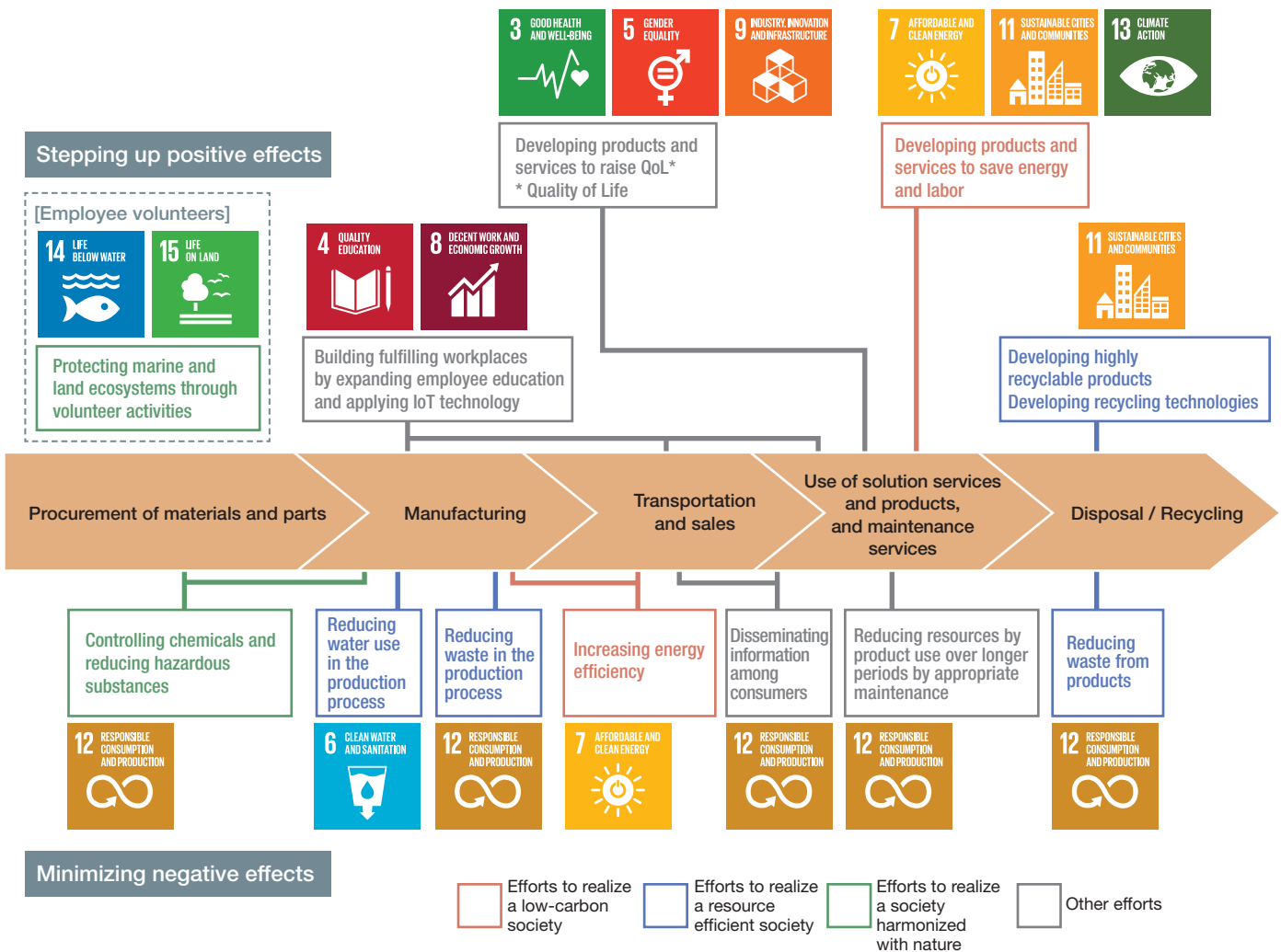
169 targets of the SDGs, and identified the goals in which we can contribute by reinforcing positive impacts and minimizing negative ones in the whole range of our corporate activities.

Most of the re-mapped goals (see "Map of the SDGs in the value chain" below) are also the goals which can help to solve global warming and resource depletion. For this purpose, we will continue working to improve the energy-saving performance of our products and raise the efficiency of our production processes, to cut environmental loads.

In addition to providing products and services to improve people's Quality of Life, we focus on environmental conservation by promoting resource circulation as well as reducing energy consumption and waste materials. In this manner, we are taking into consideration positive and negative effects in our corporate activities in order to further contribute to the realization of a sustainable society.

### Map of the SDGs in the value chain

As of October 2020. We will be continuously evolving our operations according to our business strategy.



Reducing the environmental burden of the entire value chain is the key to achieving the Even within that effort, the Group recognizes making efforts to improve the energy-saving challenges, and those efforts are covered in this report.

## Environmental Management

We acquire certification under ISO 14001 at specific production centers in order to monitor the environmental fulfill our Environmental Vision.

We have also established a global environmental control system to assess our environmental activities

### Environmental Conservation Guidelines


The Group has set its Environmental Conservation Guidelines, to present our policies for environmental conservation efforts concerning industrial activities. The Environmental Conservation Guidelines are based on the Conduct Guidelines of the Hitachi Group as its basic philosophy, and consist of 10 items.

The Group considers that one of its top priorities in management is to realize a sustainable society harmonized with the environment under these guidelines, and accordingly has been tackling various environmental actions.

**Environmental Conservation Guidelines (excerpt)**

**Purpose**  
 In order to realize an environmentally harmonious and sustainable society through products and services, we are promoting global "MONOZUKURI," which is aimed at reducing environmental loads of our products throughout their entire lifecycles, and striving for global environmental conservation, to make our contribution to society.

**Action Guidelines**  
 1. Global environmental conservation is a critical challenge shared by all humans. We have set management to realize an environmentally harmonious and sustainable society as one of our management priorities, for fulfilling our social contribution.

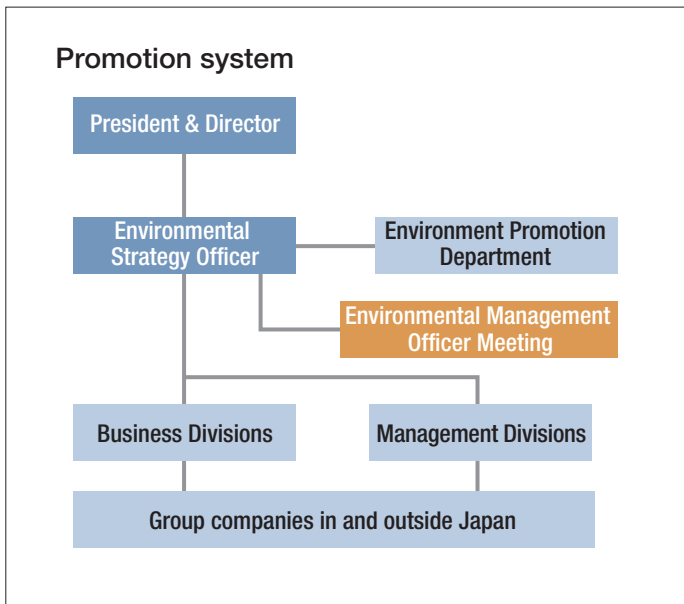
 The full text of the Environmental Conservation Guidelines is presented on our website (Japanese language only). <https://www.hitachi-gls.co.jp/about/environment/management/action-guidelines.html>

### Promotion system for environmental management

Our Environmental Policy and Environmental Action Plan are considered and determined at an Environmental Management Officer Meeting of Environment Promotion Department and Environmental Management Officers from both domestic and overseas manufacturing sites under the supervision of the Environmental Strategy Officer, who supervises the entire group. Based on decisions made at this meeting, the Environment Promotion Department collaborates with both Business Divisions and Management Divisions to promote environmental conservation activities.

We at the Group also improve our operations and environmental efforts, and prevent environmental issues by conducting environmental internal audits of our domestic and overseas production centers (two domestic works and three overseas group member companies) every year.

Note: Ome Works was closed in March 2020.  
 From April 2020, domestic operations are supported by two Works factories.



## SDGs and the goals of “Hitachi Environmental Innovation 2050.” performance of its products and the efficiency of its production processes as important

burden of our industrial activities and steadily implement the PDCA cycle to reduce it, thereby aiming to  
in detail.

### Environmental Action Plan

The Group establishes a concrete Action Plan every three years to achieve its Environmental Vision. In the “Hitachi Global Life Solutions Group’s Environmental Action Plan 2021” (hereinafter “Environmental Action Plan 2021”) which was published in fiscal 2018, we formulated a three-year plan to work through until fiscal 2021, towards attaining the goals of our long-term environmental targets “Hitachi Environmental

Innovation 2050.” We will advance our environmental activities under this plan for the three years until fiscal 2021.

However, the improvement rates for new target values set in fiscal 2018 have been negatively affected due to the worsening situation for the energy consumption rate in some Works factories since 2010.



Details are presented on our website (Japanese language only).  
<https://www.hitachi-gls.co.jp/about/environment/management/action-plan.html>

### Main action items and targets of Environmental Action Plan 2021

	Reduction rate in CO <sub>2</sub> emissions from products and services (from fiscal 2010)	Improvement rate in the CO <sub>2</sub> emissions per unit of the Works (from fiscal 2010)	Improvement rate of water consumption per unit (from fiscal 2010)	Improvement rate of the amount of waste and valuable materials generated per unit (from fiscal 2010)	Improvement rate of chemical substance emissions into the atmosphere per unit (from fiscal 2010)
Fiscal 2019 targets	23.1% reduction rate	9.3% improvement rate	22.2% improvement rate	-19.8% improvement rate	-26.6% improvement rate
Fiscal 2020 targets	23.9% reduction rate	13.0% improvement rate	22.9% improvement rate	-18.3% improvement rate	-18.3% improvement rate
Fiscal 2021 targets	24.6% reduction rate	14.6% improvement rate	23.8% improvement rate	-17.1% improvement rate	-18.1% improvement rate

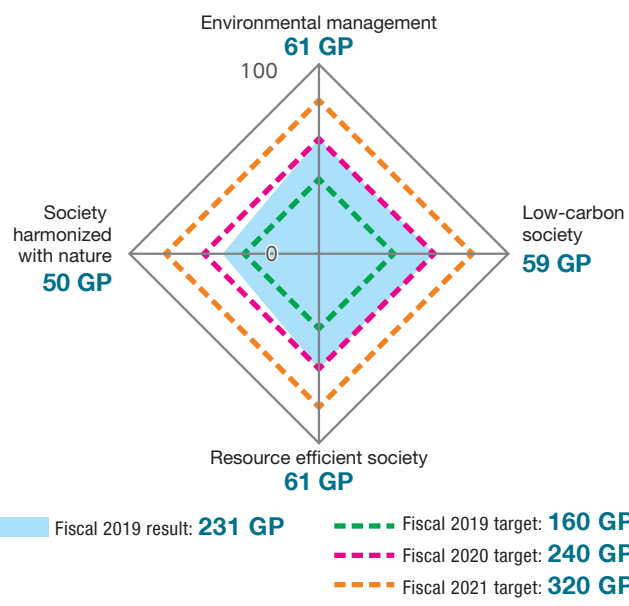
### Improving and reactivating activities by means of the assessment program for environmental activities

The Hitachi Global Life Solutions Group utilizes the Hitachi Group’s unique GREEN21 assessment program as a system for evaluating the achievement situation of the activity targets of its environmental action plan.

GREEN21 assesses the achievements of activity targets for each Works factory or the entire Group by category. Each category has a total of 100 green points (GP), and 40 GP are awarded if the activity targets of Environmental Action Plan for fiscal 2019 are achieved; 60 GP are awarded if targets for fiscal 2020 are achieved; and 80 GP are awarded if targets for fiscal 2021 are achieved. By giving numerical value to achievements, we can reconfirm the strengths and weaknesses of each Works factory, and further improve and revitalize their activities.

For fiscal 2019, the Group achieved an overall rating of 231 GP under GREEN21, exceeding its goal of 160 GP. To reinforce our activities and achieve our goals for fiscal 2021, we are analyzing the factors of low evaluation items such as “CO<sub>2</sub> emissions in the production process” and “improvement rate of energy consumption per unit” as well as the “improvement rate of the amount of waste and valuable materials generated per unit.”

### Fiscal 2019 results in the green point averages



Efforts to Realize a Low-carbon Society

Reduction in energy consumption is vitally important for cutting the greenhouse gases which cause customers with products of higher energy-saving performance. We are also working to reduce energy

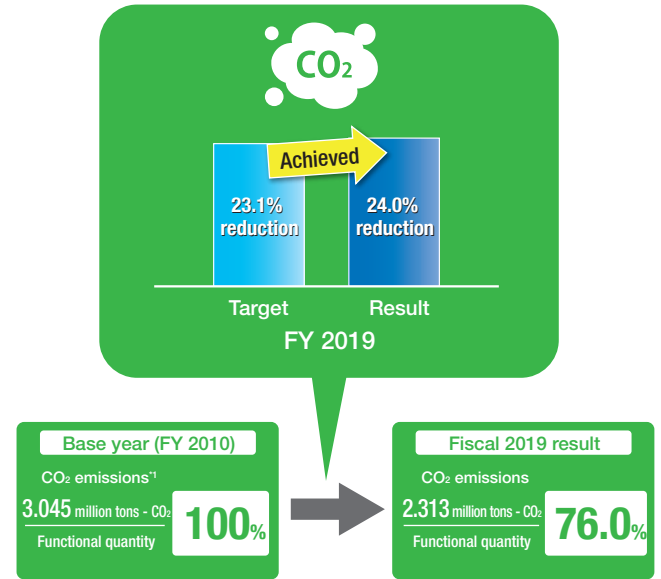
Improving the environmental performance of products

The Group aims to contribute to solving environmental issues by developing and spreading environment-conscious products, as well as solutions and services. One of our actions to that end is to raise the environmental performance of products and promote the widespread application of IoT solutions, such as by enhancing their energy-saving performance.

The assessment subjects are IoT solutions as well as refrigerators, washing machines, and LED lighting, which provide high levels of contribution to the suppression of CO<sub>2</sub> emissions (power consumption) during use.

In developing products, we work to achieve functional improvement and environmental load reduction in tandem, using the functions of equivalent models such as the volume of refrigerators and the wash load of washing machines, etc., as indicators. We are also working to cut CO<sub>2</sub> emissions by expanding sales of products with high energy-saving performance and promoting the widespread application of IoT solutions. In fiscal 2019, we achieved a 24.0% reduction, against a reduction target of 23.1%, compared to fiscal 2010.

CO<sub>2</sub> emission reduction rates (fiscal 2010 comparisons) by product types with high CO<sub>2</sub> emission suppression as well as solutions and services (refrigerators, washing machines, LED lighting, and "exiida" Remote Monitoring/Predictive Diagnosis)



\*1: Sum of the amount of CO<sub>2</sub> emissions before adopting solutions and services and the amount of CO<sub>2</sub> emissions based on the assumption that a required number of units which corresponds to that of products from the assessment fiscal year were used for the whole lifetime

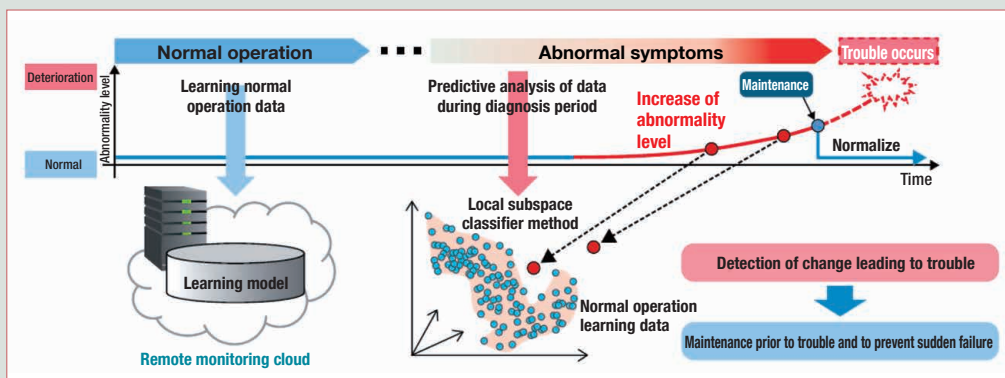
Example of actions to reduce CO<sub>2</sub> through solutions and services

Air-conditioning IoT solution: "exiida" Remote Monitoring/Predictive Diagnosis

Hitachi's "exiida" is an air-conditioning IoT solution that links refrigeration and air-conditioning equipment to the Internet to gather data as well as store, analyze and apply in order to solve various problems. By monitoring the operating state of air-conditioning and cooling equipment, the system compares the current operating data with normal operating data to detect any change that could lead to trouble. Based on the results, the system supports the stable operation of air-conditioning and refrigeration equipment by allowing preventive maintenance prior to the

occurrence of trouble.

Preventive maintenance prior to the occurrence of trouble means that even when a refrigerant leak occurs, the volume of the leak can be reduced, controlling greenhouse gas emission which is also a cause of global warming. Also, predictive diagnosis allows periodic preventive maintenance which can lead to a reduction in the volume of dispatches of on-site service personnel, resulting in the reduction of CO<sub>2</sub> emissions that accompany the mobilization of said personnel.



Conceptual diagram of predictive diagnosis



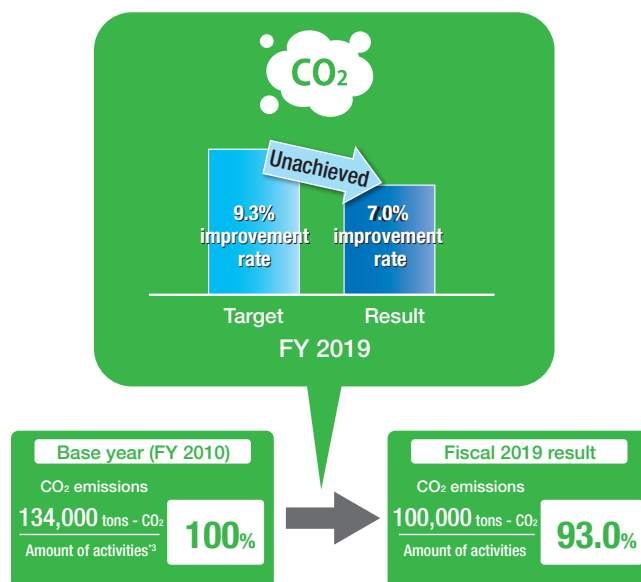
global warming. The Group is working to reduce energy used at the product usage stage, by providing use in production processes.

## Reducing CO<sub>2</sub> emissions in the production process

Energy consumption in corporate activities is one emission source of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases that cause global warming. The Group also uses energy when producing products. It therefore promotes the efficient use of energy consumed in its production activities by means such as the introduction of high-efficiency devices, and the amelioration of the production process. As a specific goal from fiscal 2019, using CO<sub>2</sub> emissions per unit\*<sup>2</sup> as an indicator, we are to achieve a 14.6% improvement in fiscal 2021, compared to fiscal 2010.

For fiscal 2019, the improvement rate for CO<sub>2</sub> emissions per unit stood at 7.0%, short of our 9.3% goal. Reasons for not being able to achieve our goal include a worsening of facilities use efficiency due to a decrease in net sales, failure to reduce fixed electricity to cope with sales changes, and a turn for the worse in the CO<sub>2</sub> emissions per unit of some of our Works factories.

### Improvement rate in the CO<sub>2</sub> emissions per unit (from fiscal 2010)



\*<sup>2</sup>: Quotient of CO<sub>2</sub> emissions divided by the amount of activities

\*<sup>3</sup>: A value linked closely to CO<sub>2</sub> emissions (such as production and quantity produced)

## Example of actions to reduce CO<sub>2</sub> at the Works

### Introduction of high-efficiency devices

To reduce the CO<sub>2</sub> emissions in the production process, each Works factory is systematically introducing high-efficiency devices including LED lighting and inverter air conditioning to improve energy consumption efficiency for lighting and equipment.

At Hitachi Global Solutions' Taga Works, 1,978 fluorescent and

mercury lamps were updated to LED lighting in fiscal 2019. In addition, 12 transformers of the secondary substation were updated to amorphous transformers. The introduction of the high-efficiency devices cut the annual CO<sub>2</sub> emissions by approximately 170 tons.



Exchangeable LED lighting



High-ceiling LED fixtures



Amorphous transformer

## Efforts to Realize a Resource Efficient Society

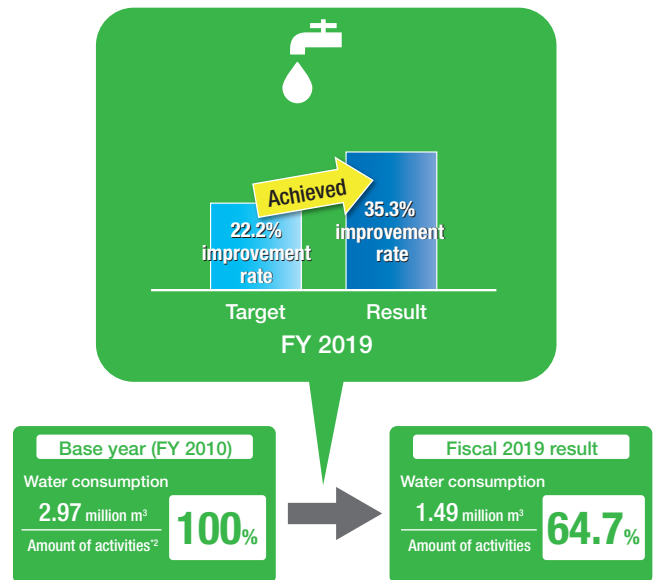
To address environmental issues such as resource depletion, waste problems, and water shortage, the products from production processes, and reduction of water usage in production processes, as it works

### Reducing water consumption in the production process

The Group uses water in its product testing, equipment cooling, painting, and other production processes. Water resources are faced with a shortage of household and agricultural water due to population growth, ground subsidence stemming from the pumping-up of groundwater, and other issues involving various aspects. To help settle these issues, the entire Group has been promoting a reduction in water consumption within the production process. As an activity target, we are working to improve water consumption per unit<sup>\*1</sup>, towards the goal of a 23.9% improvement in fiscal 2021, compared to fiscal 2010.

The improvement in the water consumption per unit in fiscal 2019 reached 35.3%, far exceeding the 22.2% target. The main measures included the visualization to strengthen management of water consumption, and the reuse of waste water. We will continue to further our reduction efforts.

Improvement rate of water consumption per unit (from fiscal 2010)



\*1: Quotient of water consumption divided by amount of activities

\*2: A value linked closely to water consumption (such as production and quantity produced)

### Example of actions to make effective use of water resources

#### Visualization of groundwater flow volume and other water conservation efforts

Our Tochigi Works manufactures household electric refrigerators and heat pump water heaters. At the Works, we utilize groundwater in its bathrooms and its manufacturing process, and have made efforts that focus on various water conservation activities to further effectively utilize water resources.

So far, we have carried out the visualization of buried pipes and the early repair of water leaks in pipes. In addition, we have made improvements including the cooling tower's water conservation inspection tours as well as changing the compressor cooling method from water cooling to air cooling. We are also raising water conservation awareness among employees by posting our monthly water consumption on the intranet. In fiscal 2018, we introduced a power monitoring system to automatically measure groundwater flow to visualize the water consumption at each building in the Works. As a result of these efforts, groundwater consumption for fiscal 2019 was reduced by 235,451 m<sup>3</sup>, down approximately 29% when compared to fiscal 2010.

This volume reduction is equivalent to Japan's average household water consumption for approximately 2,900 persons (235,451 m<sup>3</sup>/year ÷ 365 days ÷ 224 liters/person-day) or (1 m<sup>3</sup> = 1,000 L).



Check for water consumption using power monitoring system



Source: World's Household Water Consumption  
[http://www.jwrc-net.or.jp/map/shiyouyou\\_map.html](http://www.jwrc-net.or.jp/map/shiyouyou_map.html)



Details are presented on our website (Japanese language only).  
<https://www.hitachi-gls.co.jp/about/environment/>

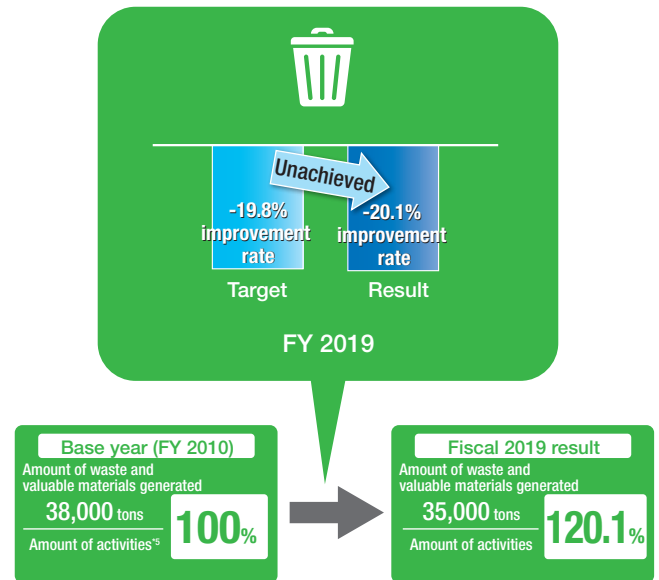
Group is promoting thorough product recycling, resource-saving Monozukuri, reduction of waste to improve the efficiency with which it uses water and resources.

## Reducing waste in the production process

Resource issues due to economic development and population growth are common worldwide, and actions are being demanded to control the mass consumption of resources and the large quantities of waste. Even within the Group, the manufacturing of products generates waste materials, as well as unwanted but salable materials (valuables), so we are working to suppress the production of such materials. From fiscal 2019, based on our long-term environmental targets, we are working to achieve new goals that assumed the standard to be 2010. Specifically, we are working to improve the amount of waste and valuable materials generated per unit<sup>\*3</sup>, towards a goal of a -17.1% improvement<sup>\*4</sup> in fiscal 2021, compared to fiscal 2010.

In fiscal 2019, we achieved a -20.1% improvement rate for the amount of waste and valuable materials generated per unit, falling short of our -19.8% goal. The main causes of the worsening per unit included the deterioration of efficient use of natural resources due to the decline in sales at some Works.

Improvement rate of the amount of waste and valuable materials generated per unit (from fiscal 2010)



\*3: Quotient of the amount of waste and valuable materials divided by the amount of activities  
 \*4: Due to the situation growing worse at some Works factories for the amount of waste and valuable materials generated per unit as of fiscal 2010, a new target was set in fiscal 2018, resulting in a negative improvement rate for the target value.  
 \*5: A value linked closely to the amount of waste and valuable materials (such as production and quantity produced)

## Promoting product recycling

The Home Appliance Recycling Law mandates that manufacturers recycle end-of-life home appliances which they manufactured in four product categories (room air conditioners, TVs, refrigerators and freezers, and washing machines and clothes dryers). The Law also sets recycling rate<sup>\*6</sup> standards for each product and mandates manufacturers to attain recycling rates above the standards. The Group established Kantou Eco Recycle Co. Ltd. in 1999 to comply with the Law. Five suppliers<sup>\*7</sup> including Hitachi Global Life Solutions in the same industry collaborate in developing recycling technology, as well as establishing and running an efficient nationwide recycling

system.

These efforts have raised the recycling rates for Hitachi home electric appliances which were discarded in fiscal 2019 to 80% for refrigerators and freezers, 93% for washing machines and clothes dryers, 74% for CRT TVs, and 87% for LCD and plasma TVs, exceeding the legal standards in all cases.

\*6: Within the discarded home electric appliances collected by manufacturers, this is assessed according to the proportion by weight that is transferred, either free of charge or for payment, as either parts or raw materials. Legal standards for recycling rates: 70% for refrigerators and freezers, 82% for washing machines and clothes dryers, 55% for CRT TVs, and 74% for LCD and plasma TVs.  
 \*7: Sharp Corporation, Sony Corporation, Fujitsu General Limited, Mitsubishi Electric Corporation, Hitachi Global Life Solutions, Inc. (five companies in total)

### mini COLUMN Effective use of resources

When shipping compressors for refrigerators to Japan's Tochigi Works, Hitachi Compressor (Thailand), Ltd. uses steel pallets which can be folded and stored to be used multiple times, instead of packing them in cardboard and wooden pallets which can only be used once.

By folding and shipping back the steel pallets to the manufacturing factory, and repeatedly reusing them for shipment, we are able to control the generation of waste such as cardboard and wood at Tochigi Works following the shipment of compressors.

## Efforts to Realize a Society Harmonized with Nature

The Group affects ecosystems to a considerable extent through its business activities. As part of its which could potentially impact ecosystems.

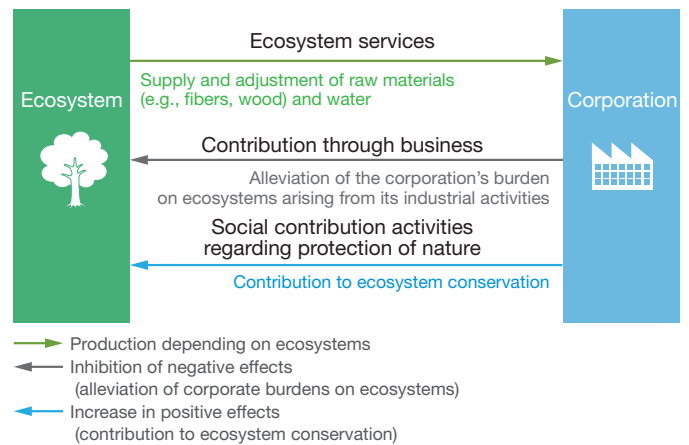
It is also committed to reducing chemical emissions in its production processes.

### Relations between ecosystem conservation and corporations

Our life is based on the various benefits of nature (“ecosystem services”) provided by air, water, soil, animals, plants, and other natural capital. The Group also affects ecosystems to a certain extent in all value chains, including the procurement of raw materials, product manufacturing, and use of energy for transporting materials and products.

Therefore, we at the Group work to maintain and recover ecosystem services by means of contribution through business, and by social contribution activities regarding protection of nature. Of these activities, contribution through business promotes design and production activities that alleviate a corporation’s burden on ecosystems, while providing energy-saving products. We also control chemical substances properly by positioning such control as part of ecosystem conservation activities. Moreover, social contribution activities regarding protection of nature promotes ecosystem conservation, involving Group companies both in and outside Japan.

### Relations between ecosystem conservation and corporations



### Example of actions to conserve ecosystems

#### Releasing marine life and planting trees in Thailand

Through continued release of marine life and tree planting, Hitachi Consumer Products (Thailand) and Hitachi Compressor (Thailand) provide ongoing support to land and marine ecosystem conservation activities.

In July 2019, with the cooperation of the Royal Thai Army and the volunteer participation of company employees, an NGO organized the release of baby blue crabs at Dongtan Beach, located in Thailand's Chonburi Province.

Also, in September of the same year, various trees including yellow bells, mango trees, and plumeria were planted at the Sai Ngam Temple in Ayutthaya Province. In addition, working with the locals and staff members, a substantial amount of plants including willow and pampas grass were planted at Thap Lan National Park in Prachin Buri Province from March to June of 2020.

For our future, each one of us must think and independently act to reduce ecosystem damage due to the causes such as global warming.



ecosystem conservation work, the Group practices proper management of chemical substances

## Controlling chemicals contained in products

As part of its ecosystem conservation activities, the Group manages the chemicals contained in materials and parts, etc. This activity starts from the product development and design stage and extends through the procurement of materials and parts, to all stages of product manufacturing. The management of chemicals is particularly important in procurement, and our management is particularly stringent, in line with the Hitachi Group Green Procurement Guidelines, which is published by the Hitachi Group. We work in cooperation with our

suppliers to investigate the content of chemicals in the parts and materials built into products, and also the oils used in manufacturing processes, and all other purchased materials used in production.

And based on J-Moss<sup>\*1</sup>, the Group discloses information about the inclusion of chemicals in products to outside parties through its website.<sup>\*2</sup>

<sup>\*1</sup>: A common designation for JIS C 0950 (Marking for the presence of specific chemical substances for electrical and electronic equipment)

<sup>\*2</sup>: For refrigerators, washing machines and clothes dryers, microwave ovens, and air conditioners

## Reducing chemicals in the production process

To prevent atmospheric pollution, the Group practices proper management of chemicals, and is working to reduce emissions of Volatile Organic Compounds (VOCs), etc. from its factories. The goal for this activity, using chemical atmospheric emissions per unit<sup>\*3</sup> as an indicator, is to achieve an improvement rate of -18.1% in fiscal 2021, compared to fiscal 2010<sup>\*4</sup>.

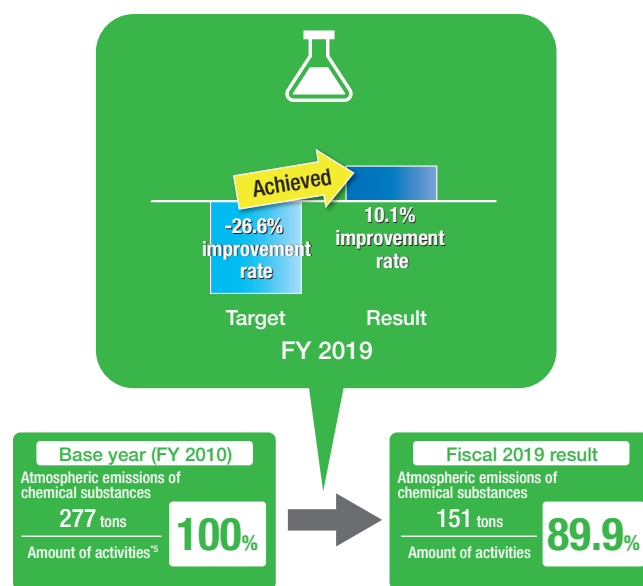
The improvement in the atmospheric emissions of chemical substances per unit in fiscal 2019 reached 10.1%, far exceeding the -26.6% target. The main improvement measure was to reduce the use of coated parts in order to substantially cut the emission of chemicals from paints.

We also keep track of emissions of sulfur oxides (SOx) and nitrogen oxides (NOx), for which measurement is mandated by laws and ordinances at the locations of our manufacturing sites, including overseas manufacturing companies. We practice proper and legally compliant management of such substances.

<sup>\*3</sup>: Quotient of chemical substance emissions into the atmosphere divided by the amount of activities

<sup>\*4</sup>: Due to the situation growing worse at some Works factories for the atmospheric emissions of chemical substances per unit as of fiscal 2010, a new target was set in fiscal 2018, resulting in a negative improvement rate for the target value.

### Improvement rate of chemical substance emissions into the atmosphere per unit (from fiscal 2010)



<sup>\*5</sup>: A value linked closely with the atmospheric emissions of chemical substances (such as the amount of chemical substances handled and their production)

## mini COLUMN Actions to reduce chemicals

Hitachi Consumer Products (Thailand) manufactures home electric appliances including refrigerators, washing machines, vacuum cleaners, and rice cookers.

In an effort to reduce chemical substance emissions and to promote a paint-free environment, the company now uses precoated steel sheets instead of conventionally painting the sides of the cabinets for its washing machines at the factory. Through efforts such as this, Hitachi Consumer Products (Thailand) reduced its fiscal 2019 chemical substance emissions by 31% when compared to the previous year.



Precoated steel sheets



Completed product

## Environmental Communication

The Group recognizes that it is important to interact with its actual and potential consumers, distributors, stakeholders.

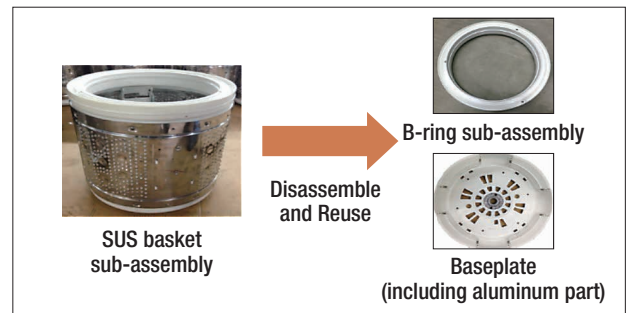
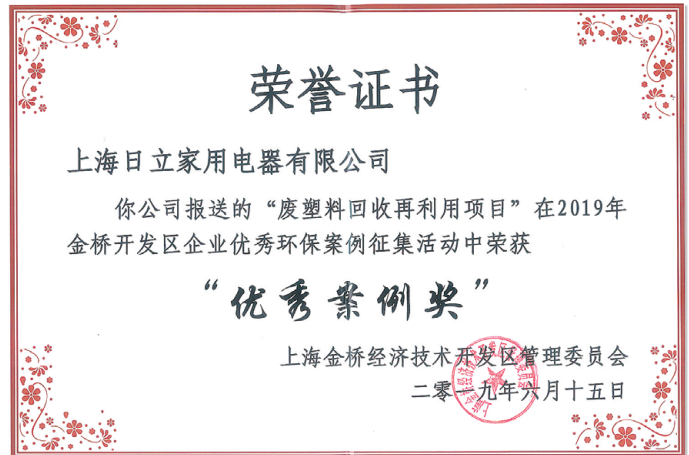
The Group conducts internal training sessions attended by outside knowledgeable people, disseminates of its employees, and is involved in other such activities, that promote communication in various forms.

### Award by an outside organization

Shanghai Hitachi Household Appliances Co., Ltd. manufactures home electric appliances such as washing machines. Up until now, the company has been grinding down, recycling and reusing plastic parts. Since 2018, the company has added the dismantling of parts composed of plastic and metal (SUS basket sub-assembly) to recycle them as a baseplate, B ring sub-assembly, or other part.

Also, in the same year, the company introduced a pulverizer which enabled the crushing of plastic molded parts containing fiberglass which had been firmly welded to reuse the material in other parts. In this manner, the company has made it possible to recycle materials within its own production process, instead of relying on the conventional method of having other companies handle the disposal or reprocessing of defective molded parts.

On June 5, 2019, the company's efforts to increase the use of recycled parts were recognized by China's government agency (Shanghai Jinqiao Economic and Technological Development Zone Administrative Committee) which awarded the company with the "Golden Bridge Development Corporate Environmental Protection Award for Excellence."



### Disseminating information to stakeholders

Disseminating information to stakeholders is vitally important in working towards a sustainable society. The Group discloses environmental information appropriately through environmental reporting. We also disseminate information to suppliers and customers through briefings to trading partners, websites, and other channels.

#### Disseminating information to suppliers

The Group investigates chemical contents of materials and parts, in line with the Hitachi Group Green Procurement Guidelines, which is published by the Hitachi Group, in order to manage those chemical contents. Such investigation requires the understanding and cooperation of its suppliers, so that the Group holds a briefing session for its suppliers when necessary,

thereby seeking their understanding and collaboration. In these sessions, the Group explains the latest trends in the Green Procurement Guidelines and legal regulations on chemicals in different countries, methods of analyzing chemicals included in products, and other issues.

#### Disseminating information to customers

In our catalogs etc., we strive to clearly convey information on the energy-saving performance of products, so that customers can make suitable choices of energy-saving products. Specifically, we clearly state the energy saving standard attainment rates and annual power consumption for products which have high power consumption, such as refrigerators. We also explain where energy-saving technologies are used.

The Group also strives to help its customers save electric energy by presenting the points of effective energy saving that they can follow at home through its websites, where such information is summarized for each product.



Everybody starts from what we can do to save electricity  
<https://kadenfan.hitachi.co.jp/support/about/attention/setsuden.html>



suppliers, members of the community near its works, employees, their families, and many other information among outside parties through websites, engages in volunteering with the participation

### Contribution to local businesses

The Ministry of the Environment is promoting COOL CHOICE, an effort to make the “smart choice” in order to counter the effects of global warming. Tochigi Prefecture has implemented “COOL CHOICE Tochigi” to call on each resident to help make this a prefecture-wide effort.

At our Tochigi Works, we are participating as a “Home/Household Appliances Working Group” to propose effective efforts to lower residential carbon emission. On August 8, 2019, we conducted a lecture where we provided various information on energy-saving home appliances, targeting approximately 30 individuals including the household appliance retailers as well as the promotion leaders of global warming prevention.

For COOL CHOICE, it has targeted a 40% reduction in greenhouse gases at the home by 2030 (compared with fiscal 2013).

Home electric appliances play a major role in accomplishing this goal, and we will continue our various efforts to reduce the volume of greenhouse gas emission.



Lecture



Prefectural Movement “COOL CHOICE Tochigi”  
<http://www.pref.tochigi.lg.jp/d02/gakushu/cct.html>

### Employee training

#### EARTH HOUR

We are conducting various CO<sub>2</sub> reduction activities as well as raising energy saving awareness at each of our bases of operation both at home and abroad.

An example of these efforts is the annual participation of Shanghai Hitachi Household Appliances and Hitachi Consumer Products (Thailand) in EARTH HOUR, an event in which people around the world extinguish their lights on the same day at the same hour as a countermeasure against global warming.

This is when we extinguish our HITACHI signboards and lights at each location. It's at moments like this that the awareness to save energy is heightened among our employees.

Before and after the lights are turned off



#### Efforts for environmental beautification

In addition to greenery maintenance at factory sites, the Group is engaged in environmental beautification efforts that include cleaning activities on the premises as well as in the neighboring areas of the sites.

On July 5, 2019, 97 Taga Works employees participated in cleaning the Kawarago Coastal Beach.

Working together with members of local residents' associations and tourist associations, each piece of waste such as trash and stones as well as seaweed and driftwood was picked off the beach.

Waste removal activities such as this play an important role in protecting the ecosystem of small creatures on the beach.



## Corporate Overview

Company name	Hitachi Global Life Solutions, Inc.
Main business	Providing sales, engineering, and maintenance services for home appliances, air conditioning equipment, and other equipment, and providing products and solutions which apply digital technologies.
President and Director	Jun Taniguchi
Capital stock	20 billion yen (Hitachi, Ltd. 100%)
Established	April 1, 2019 (Registered establishment date: November 26, 1998)
Consolidated revenues	465.3 billion yen (consolidated, as of the end of March 2020)
Consolidated number of employees	Approximately 10,700 (consolidated, as of the end of March 2020)
Manufacturing sites	Tochigi Works and Taga Works
Locations of sales and service sites	Sales: 73 sites, service: 105 sites (as of April 1, 2020)
Website	<a href="https://www.hitachi-gls.co.jp/">https://www.hitachi-gls.co.jp/</a>

## Group Companies

### Domestic

- Hitachi Appliances Techno Service, Ltd.
- Niigata Hitachi Co., Ltd.
- Hitachi Air Conditioning Kyushu Co., Ltd.
- Hitachi Air Conditioning Kanto Co., Ltd.
- Hitachi Air Conditioning Kansai Co., Ltd.
- Kanto Eco Recycle Co., Ltd.

### Overseas

- Shanghai Hitachi Household Appliances Co., Ltd.
- Hitachi Consumer Products (Thailand), Ltd.
- Hitachi Sales Corporation of Taiwan
- Hitachi Sales (Thailand), Ltd.
- Hitachi Home Electronics Asia (S) Pte. Ltd.
- Hitachi Sales Middle East FZE
- Hitachi Compressor (Thailand), Ltd.
- Hitachi Consumer Marketing (China) Ltd.
- Hitachi (Hong Kong) Ltd.
- Hitachi Sales (Malaysia) Sdn. Berhad
- PT. Hitachi Modern Sales Indonesia
- Hitachi Home Electronics Vietnam Co., Ltd.

### Companies under the equity method

- Hitachi-Johnson Controls Air Conditioning, Inc.

## Scope of the report

- **Applicable period** Fiscal 2020 (April 1, 2019 to March 31, 2020)
- **Applicable organization** Hitachi Global Life Solutions, Inc. and its consolidated subsidiaries
- **Targeted offices for environmental load data count** Hitachi Global Life Solutions, Inc.  
Tochigi Works, Taga Works, and Ome Works (closed in March 2020)  
Hitachi Consumer Products (Thailand), Ltd.  
Hitachi Compressor (Thailand), Ltd.  
Shanghai Hitachi Household Appliances Co., Ltd.
- **Method of setting data for the reference year** See JIS Q 14064-1: 2010 (Greenhouse Gases – Part 1: Specifications and Guidelines for Quantifying and Reporting the Emission and Absorption Levels of Greenhouse Gases in Organizations).

## Contact Address

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