

Environmental Management

To create a sustainable society, the entire Glory Group works to protect the environment under the **Glory Environmental Vision**.

Glory Environmental Vision

Environmental Vision

We contribute to securing the future of the Earth's environment by working worldwide to reduce environmental impact and protect the planet's resources.

The Glory Group's environmental vision is captured in the slogan we adopted in 2010: "GLORY GREEN CHALLENGE: Leading the way for a prosperous Earth with dynamics and technology through cooperative efforts." We established the "2020 Medium-Term Environmental Plan" as our three-year plan from April 2018 based on this vision, and we are working to achieve its targets.

Environmental Policy of the Glory Group

We will act in Earth-friendly ways and endeavor to provide environmentally friendly products with services that contribute to a sustainable society.

- 1. Compliance with laws and regulations**
We will comply with environmental laws and regulations, as well as the demands of our stakeholders.
- 2. Mitigation of global warming**
We will strive to reduce our use of energy and our emissions of greenhouse gases.
- 3. Promotion of resource recycling**
We will strive to use resources effectively and will promote the recovery and recycling of our products.
- 4. Prevention of pollution by chemical substances**
We will properly manage chemical substances and will reduce hazardous substances in our products.
- 5. Conservation of biodiversity**
Each of us will strive to conserve ecosystems through activities that contribute to our communities.
- 6. Proper disclosure of environmental information**
We will proactively carry out disclosure of information and will respond to the wishes of our stakeholders.

In order to achieve this policy, we will set and work toward environmental targets and will strive to effect continuous improvements.

Environmental Management Framework

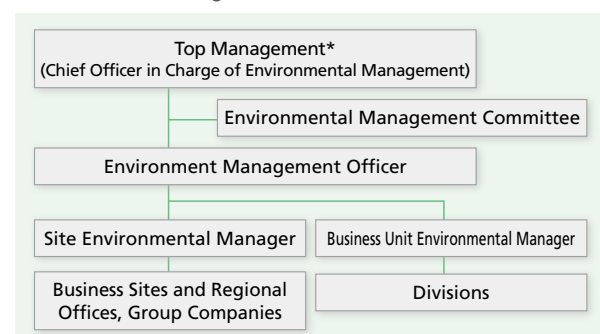
The Glory Group considers environmental conservation to be a key management concern, and therefore we have implemented an ISO 14001-compliant environmental management system to reduce the environmental impact in every aspect of our business. The system covers a broad range of our activities, from energy conservation, resource conservation, waste reduction, and appropriate chemical substance management to environmentally friendly product development.

In March 2002, the head office was the first in the Group to acquire ISO 14001, and certification has currently spread to Glory's main business sites, regional offices, and Group manufacturing companies. We are also working toward acquiring ISO certification and for comprehensive environmental impact reduction efforts to promote environmental conservation at overseas Group companies as well.

Our environmental management framework consists of sites for reducing environmental impacts from business operations and business units for reducing the environmental impact of products.

We develop an annual environmental management action policy in conjunction with the basic management and environmental policies, ensuring reliability and continuous improvement of the management framework and system to be effective in all business operations related to products and services. Also, we strive to expand the action policy into respective sites and business units and confirm implementation status. At the same time, we share and horizontally address issues and counter measures by the Environmental Management Committee and conduct management reviews whereby we utilize PDCA cycles to integrate business activities Groupwide. Moreover, the environmental management department conducts a continuous improvement of the system for the entire Group.

Environmental Management Framework



*The chief officer of the environmental management system, who is entrusted by the president with all authority and responsibility to promote and maintain the environmental management system.



Environmental Audit

Our ISO 14001 certified business sites conduct audits integrated with ISO 9001 performed by internal auditors and external auditors from a certification body.

The internal audits mainly confirm legal compliance such as that with environmental regulatory limits including noise and water quality as well as the status of reports to authorities and conformity with standards for continuously improving the environmental management system. In the internal audits in fiscal year 2018, we examined the conformity and validity of the implementation status of ISO 14001:2015, and non-conformity was not discovered, while external examinations did not discover any either. The results of the audits and examinations are laterally reviewed across the Glory Group and shared with all employees through a bottom-up approach across our activities.

Environmental Risk Management

We conduct environmental impact assessments annually to reduce environmental risk and stipulate response procedures for specific risks. Furthermore, we ensure that internal systems are in place and conduct thorough employee education, particularly by emphasizing proper industrial waste processing and hazardous materials management.

Waste management systems are in place at each site for proper industrial waste processing, and in addition to the thorough training of managers and other responsible employees in charge of waste management, we apply strict standards in selecting waste processing contractors and conduct on-site inspections. For hazardous materials management, we stipulate the response procedures in the event of an emergency involving an oil spill and regularly hold simulation drills.

Compliance with Environmental Laws

Recognizing legal compliance as a key aspect of environmental conservation, Glory is committed to thorough operational management. We closely monitor changes to laws and regulations and confirm our own compliance status twice a year. On-site inspections are based on a dedicated checklist at each site during internal environmental audits. Moreover, CMS (chemical substances management system) audits are periodically conducted at the sites of business partners and overseas subsidiaries.

As a result of verifying legal compliance in fiscal year 2018, we confirmed that no serious non-compliance problems or accidents have impacted the environment.

Environmental Education

We focus on environmental education as we believe that correctly understanding the impact of our business activities on the environment is a key to ongoing efforts to reduce such impact.

In addition to including environmental management system requirements in new employee training, we conduct tailored educational programs based on professional positions such as management training for newly appointed managers and training on environmentally friendly design for product designers. Moreover, we seek to build on the expertise of employees by executing training in areas such as internal environmental auditing and waste management.

We are striving to raise environmental awareness further by informing all employees, including resident business partners, of our environmental activities.

TOPIC

Received the Outstanding Environmental Performers Award

GLORY (PHILIPPINES), INC. is reducing its power and water usage as well as industrial waste towards alleviating the environmental impact in its business activities. The company monitors data monthly and takes corrective actions when targets are not met. Moreover, it promotes activities for preserving biodiversity by participating in events such as river clean-ups and tree-planting as well as cleaning around its premises. In May 2019, it received its second Outstanding Environmental Performers award from PEZA* in recognition of these efforts.

*PEZA: Philippine Economic Zone Authority



Award ceremony

Developing Environmentally Friendly Products

Glory develops environmentally friendly products that minimize the environmental impact throughout the product life cycle, from material procurement and customer use to final disposal.

Developing Environmentally Friendly Products

The Glory Group has set a long-term goal of 30% reduction in CO₂ emissions from the 2005 levels by its products during use and is engaged in developing environmentally friendly products in order to achieve a low-carbon society as it continuously engages in environmental conservation efforts. We conduct life cycle assessments (LCAs) in response to customer requests to evaluate the environmental impact at every stage of the product life cycle, from material procurement and customer use to final disposal.

Our product assessments during new product development cover over 60 categories, from energy efficiency to reuse-recycling, and we compare products under development to those that already exist. Through these assessments, products that meet standards such as electric power use efficiency are at least 15% better than existing products, and chemical substance regulation-compliant, are designated as G-Eco products in accordance with in-house standards.

Approximately 44% of our new products released in fiscal year 2018 were designated as G-Eco products. The coin and banknote recyclers for cashiers for overseas markets (CI-5) use approximately 40% less electricity during operation for banknotes and 25% less for coins compared to their predecessors. They also achieved recyclable rates of approximately 91% for banknotes and 89% for coins.



CI-5 Coin and banknote recyclers for cashier for overseas markets (Left: coins; right: banknotes)

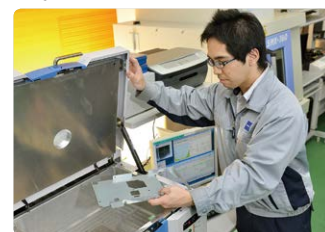
Management of Chemical Substances

Glory designates materials regulated by the RoHS Directive, REACH Regulation, and other laws and regulations in the Glory Specified Chemical Substances List. It also stipulates banned materials in the Green Procurement Standards to facilitate the thorough management of chemical substances contained in our products.

In addition to confirming compliance with regulations concerning chemical substance content during the parts selection process, we use X-ray fluorescence spectrometers to inspect all parts carefully as they are delivered. We also measure chemical content amounts,

which are registered in the Chemical Substance Control System, making it easy to tally amounts for the overall product. Furthermore, all new products are inspected before shipping to comply with relevant regulations.

Supplier cooperation is essential for controlling chemical substances. We request that domestic and overseas suppliers ensure the parts and materials shipped to us fully comply with the Glory Green Procurement Standards. They are also asked to execute a memorandum of understanding on green procurement and provide data concerning chemical substance content.



Inspecting parts for chemical substance content

Developing Environmentally Friendly Maintenance Products

Glory developed the Recycle Jet air duster as an environmentally friendly maintenance product that removes dust and other contaminants from electronics and precision machinery. Instead of typically used chlorofluorocarbon (CFC) alternatives, the Recycle Jet is filled with carbon dioxide (CO₂) injection gas recovered as an industrial by-product yielding a global warming potential of just 1/1,430 of that of existing products, thereby helping to prevent global warming. Since carbon dioxide is non-flammable and therefore has no risk of igniting, the product is extremely safe. In addition, its reusable and detachable cylinder minimizes waste.

We have established our own recycling-oriented scheme that makes use of a nationwide network of more than 100 service locations, towards achieving a recycling-oriented society. Through this scheme, technical staff collect used cylinders during routine maintenance work and then send the cylinders to affiliated carbon dioxide filling facilities to be refilled with injection gas.

The number of filled cylinders in fiscal year 2018 was about 60,000, reducing CO₂ emissions by around 30,000 tons.



Using a Recycle Jet for maintenance



Recycle Jet

Reducing Environmental Impact of Business Activities



Glory continuously strives to preserve the Earth's environment and reduce environmental impact by reducing CO₂ emissions, managing chemical substances, and effectively using resources.

Environment

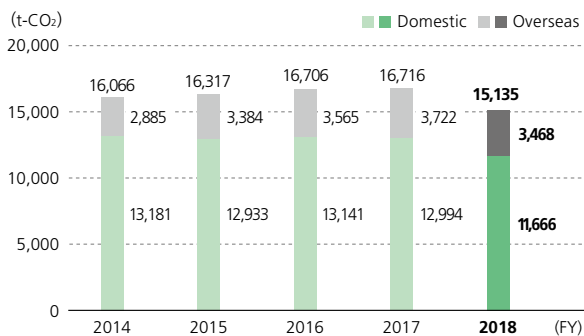
Mitigation of Global Warming

"Mitigation of Global Warming" has been established as a theme of the Glory Environmental Vision, and we are working to cut emissions of CO₂.

Under this part of the vision, we have adopted highly efficient production equipment to cut CO₂ emissions. We have also been installing power monitoring systems (demand monitoring functions), LED lighting, and human detection sensors at our business sites while setting up a solar power system on the roof of the head office for the use of renewable energy sources.

Furthermore, we are promoting a modal shift by switching transport from trucks to railways and ships as a means of improving shipping efficiency with lighter weight packing materials in order to reduce the burden on the environment.

CO₂ Emissions



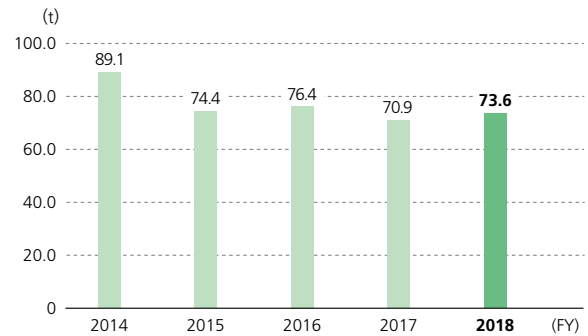
*1 Domestic business sites that have acquired ISO 14001 certification

*2 Following overseas business sites that have acquired ISO 14001 certification
 GLORY Denshi Kogyo (Suzhou) Ltd., GLORY (PHILIPPINES), INC.
 Glory Global Solutions (France) S.A.S.
 Glory Global Solutions (Germany) GmbH
 Glory Global Solutions Inc.

Management and Reduction of Chemical Substances

We thoroughly manage the chemical substances used in production and are making progress in switching to chemical substances with a low impact on human health. The factories manage and issue semi-annual reports about the amount of chemical substances they use. Factory employees who use chemical substances, including those subject to the Law concerning Pollutant Release and Transfer Register (PRTR Law), are trained in chemical substance handling. Safety data sheets (SDS) containing chemical substance safety data are always on hand so employees can, as necessary, confirm precautions when handling these substances as well as response procedures for emergencies.

Volume of PRTR Law-Listed Substances (Domestic)



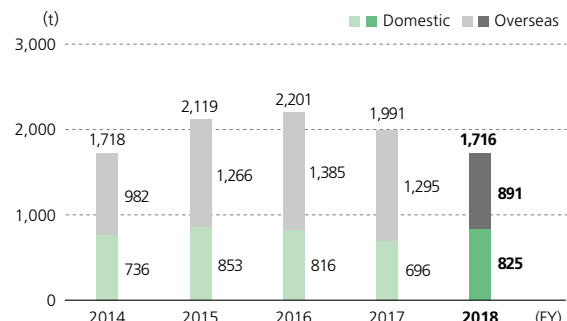
*Domestic business sites that have acquired ISO 14001 certification

Effective Use of Resources

Glory is engaged in 3R (reduce, reuse, recycle) efforts to contribute to creating a recycling-oriented society.

In order to use resources more effectively, we are improving our production processes, raising parts manufacturing yields, and reducing the number of manufacturing trials to cut down on the volume of materials used. In addition, our factories and offices are going paperless, returnable containers are being used for deliveries from suppliers, and efforts are being made to reduce the volume of packing material. Also, we are reusing cushioning materials used for intra-Group parts shipping. Wastes are thoroughly separated when we dispose of them in order to increase recycling rates. Moreover, we have established a recycling rate of 99.5% as our zero emissions target and intend to achieve it at our production sites.

Waste Volume



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 GLORY Denshi Kogyo (Suzhou) Ltd., GLORY (PHILIPPINES), INC.
 Glory Global Solutions (France) S.A.S.
 Glory Global Solutions (Germany) GmbH
 Glory Global Solutions Inc.

Preserving Biodiversity

Glory is engaged in a variety of activities for preserving biodiversity in collaboration with stakeholders such as local communities and incorporated NPOs.

Activities in the Glory Yumesaki Forest

Glory entered into the Forest Cultivation Agreement with the Greenery Association of Himeji City, Hyogo Prefecture in 2011 and has been participating in forest conservation activities in Yumesaki, Himeji, Hyogo. The location of these activities is the Glory Yumesaki Forest, a name selected from among entries submitted by employees based on the aspiration that a forest be a place where dreams (*yume*) bloom (*saki*).

We conduct forest conservation activities from the beginning of spring to early summer every year. We thin out one hectare of undergrowth each year among the hinoki cypress and broadleaf groves in collaboration with the forestry cooperative to encourage plant growth on the forest floor. We also strive to reproduce and maintain the rich natural environment by forming favorable environments for village forests through activities such as planting conventional trees including mountain cherry and konara oak as ways to ensure the conservation of the species.

In fiscal year 2018, we conducted a forest conservation project in April, and a total of 83 Glory Group employees, business partners, and family members participated.



Planting an apple tree

Botanical Survey

We conduct joint botanical and biological surveys with specialists to look into the types and growth status of plant life in order to scientifically examine the effectiveness of the Glory Yumesaki Forest for preserving biodiversity. During the course of conducting the surveys, it was also confirmed that a rare species of woodpecker and a frog listed in the Hyogo Prefectural version of the Local Red Data Book were living in the area. We will continue to conduct this survey periodically in order to confirm the effectiveness of forest conservation as well as to determine what policies are required for future activities.



Botanical survey underway in a hinoki cypress grove

Efforts to Educate the Next Generation

Each year in autumn we hold the Kids' Nature Workshop. Various programs are designed for parents

and children to stroll through the forest while observing insects and plants and to have fun in nature with the goal of passing on an appreciation of it to the next generation.

In fiscal year 2018, we held the workshop in October with 94 Glory Group employees, business partners, and family members.



Making forest lanthanum

Activities in the Kanto Region

In fiscal year 2013, Glory began expanding its activities into the Kanto region to preserve biodiversity in collaboration with NPOs.

Since fiscal year 2017, we have participated in the Restoring Satoyama project in a designated greenery conservation area in Hachioji, Tokyo as a forest conservation activity. We also conduct a clean-up on the banks of the Arakawa River, Tokyo and offer opportunities to learn about biodiversity with the aim of promoting environmental preservation.

In fiscal year 2018, 82 Glory Group employees, business partners, and family members participated.



Forest conservation activity in Hachioji, Tokyo

Main Activities by Region

Company	Activity
GLORY (PHILIPPINES), INC.	<ul style="list-style-type: none"> Participated in the planting event: Adopt-A-Tree Park Program Participated in an ocean regeneration project in the municipality of Rosario in the province of Cavite, Philippines (donation of reef buds)
Sayo Factory of GLORY Products Ltd.	Developed a biotope for preserving the natural environment and improving biodiversity
GLORY Engineering Ltd.	Participated in an annual tree-planting event in the forests of Takao near Tokyo for the purpose of creating a diverse and rich forest

2020 Medium-Term Environmental Plan



We established the 2020 Medium-Term Environmental Plan and are working toward these targets.

Environment

Targets and Results Based on the 2020 Medium-Term Environmental Plan

Under the Environmental Vision with three areas of focus, specifically products, business, and awareness, the entire Glory Group is taking action on the themes of the prevention of global warming, management and reduction of chemical substances, effective use of resources, and preservation of biodiversity, all based on the 2020 Medium-Term Environmental Plan developed for the three-year period beginning in April 2018.

Activity Areas	Activity Themes	Targets for 2020 Medium-Term Environmental Plan	Targets for Fiscal Year 2018	Results for Fiscal Year 2018
Products	Mitigation of global warming	Reduce CO ₂ emissions from new products	Improve energy efficiency of new products by at least 15% compared to previous models	Reduced by average of 16.1% (target achieved for 14 of 32 models, designated as G-Eco products)
	Management and reduction of chemical substances	Make all new products RoHS-compliant	Comply with all relevant laws	32 models were RoHS-compliant (achieved compliance rate of 100%)
Business	Mitigation of global warming	Increase environmentally friendly product account ratio out of sales	At least 60% of sales for all products	Accounted for 73.0% of sales
		Reduce annual per-employee energy consumption	Reduce annual average by 1% (base year: fiscal year 2010)	Reduced annual average by 2.2% (base year: fiscal year 2010)
	Management and reduction of chemical substances	Balance control of chemical substances	Balance control of chemical substances Reduce PRTR Law-listed substances	Counted record of volume of in-process chemical products in May Reduced volume of PRTR Law-listed substances slightly (Type 1) (1%)
	Effective use of resources	Reduce volume of waste generated	Reduce annual volume of waste generated by 1% (base year: fiscal year 2010)	Reduced annual volume of waste generated by average of 1.5% (base year: fiscal year 2010)
Awareness	Preservation of biodiversity	Increase contribution to biodiversity preservation (improve management criteria)	<ul style="list-style-type: none"> Plant 20 trees Thin 1 hectare of forest 	<ul style="list-style-type: none"> Himeji: Held forest conservation activity in April (symbolic trees planted, 20 apple trees planted, 1 hectare of forest thinned) Held nature appreciation event for employees' families in October Kanto area: Held forest conservation activity in Hachioji, Tokyo in May Held clean-up on banks of Arakawa River, Tokyo in October
		Cooperate with stakeholders to preserve biodiversity	<ul style="list-style-type: none"> Formulate plan Carry out 100% of activities planned 	<ul style="list-style-type: none"> 100% achievement ratio for yearly plans Himeji: Glory Yumesaki Forest 83 people participated in forest conservation activity (16 people representing 3 Glory suppliers also participated) 94 people participated in nature appreciation event (9 people representing 1 Glory supplier also participated) Kanto area: Kamikawa in Hachioji, Tokyo (designated greenery conservation area) 54 people participated in forest conservation activity (3 people representing 1 Glory supplier also participated) 28 people participated in clean-up on banks of Arakawa River, Tokyo
	Communication	Disclose environmental information on CSR Report and website	Run articles	<ul style="list-style-type: none"> CSR Report 2018 posted on our website (data on reducing environmental impact from business activities, etc.) CDP, provided answers on a questionnaire from the Nikkei Environmental Management Study