E Environment

ENVIRONMENT

The JAMCO Group is working on environmental protection, including energy and resource conservation, contributing to a sustainable society both environmentally and economically, including research and development toward providing products and services with low environmental impact.

Basic Environmental Philosophy and Environmental Policies

Basic Policy

JAMCO proactively engages in conservation activities to preserve the global environment through business activities. Accordingly, we have established the Basic Environmental Philosophy and Environmental Policies based on our management philosophy and basic policies on sustainability.

Basic Environmental Philosophy

Global environmental conservation for the survival of human beings is a common desire throughout the entire world.

As a company operating globally, the JAMCO Group positions global environmental issues as one of the most important management issues, and we will contribute widely to society conducting corporate activities as a company that is friendly to the global environment and is capable of coexisting with richness.

Environmental Policies

On the basis of the Basic Environmental Philosophy, JAMCO undertakes to protect the global environment in accordance with the following Environmental Policies.

1. We will accurately comprehend environmental impacts arising from all business activities, plan for sustained improvement in activities with consideration for global environmental protection, and work to prevent environmental pollution.
2. We will comply with laws, ordinances, regulations, and other requirements relating to environmental protection.
3. We will assess the environmental impact of our business activities, and set and periodically review environmental targets for activities for which we make improvements in significant environmental terms, thereby promoting environmental protection.
4. We will proactively undertake energy conservation as a global warming preventative policy in our business activities, thereby working to reduce our environmental footprint.
5. We will inform all officers, employees, and concerned parties of our Environmental Policies and educate them about the environment, thereby effecting greater awareness of environmental protection activities.

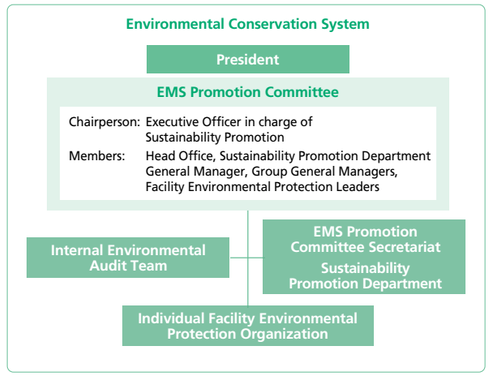
Environmental Management System

Environmental Conservation Activities Promotion System

We are building an environmental protection activities promotion system to realize our Basic Environmental Philosophy and Environmental Policies. Our environmental protection initiatives are conducted primarily on the basis of internal regulations in compliance with ISO14001, the Environmental Management System (EMS), and we have secured ISO14001 certification for our head office and our Aircraft Components Manufacturing Group.

Our President defines our Basic Environmental Philosophy, and the Executive Officer in charge of Sustainability Promotion supervises companywide environmental protection initiatives and conducts management reviews in accordance with said Philosophy as Chairman of the EMS Promotion Committee. We have established specific facilities within each district to perform environmental conservation activities as an integrated unit, with the facilities' Environmental Committees promoting these activities in an organized manner. Each facility sets individual environmental targets for every fiscal year as objectives to achieve during the financial year. The facilities work on continuous improvements related to the targets by systematically promoting environmental conservation activities and checking their progress through internal environmental audits. Facilities that have received ISO14001 certification undergo conformity assessments through periodic reviews by a certification body.

Environmental Conservation System



Environmental Audit System

In order to improve environmental conservation activities, internal and external audits are carried out periodically to confirm whether the activities are being performed appropriately in conformance with associated requirements, and if they are being maintained in an effective manner.

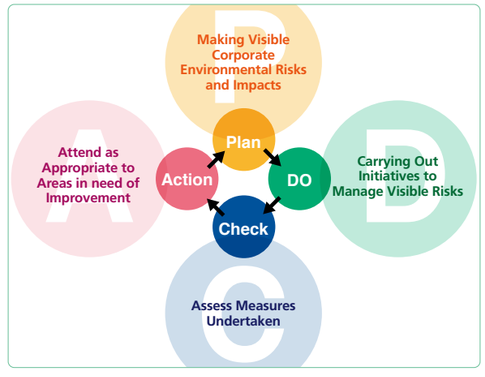
The internal environmental auditing team is made up of internal auditors who fulfill qualification requirements that are determined by internal regulations. Internal environmental audits follow an audit plan and check sheet. We focus on onsite audits that verify the consistency between administrative procedures and how activities are being results of each audit into individual reports and requesting that corrective action be taken for non-compliant items. Every financial year we summarize the results of the internal audits and reflect them in the management review.

ISO14001 certified facilities maintain the certifications through annual examinations by external auditors for compliance with the standard's requirements.

Environmental Action Plans

Carrying Out Environmental Protection Activities Continuity Plans

Environmental conservation activities throughout the year are summarized by management review, and issues are reviewed for improvement. For the important action items decided through the review, each facility continuously performs the PDCA cycle: Planning of environmental targets/ implementation plans/measures (Plan), implementation of measures (Do), confirmation and implementation result reports on the achievement of environmental targets (Check), and management review (Action). Through such continuous efforts, in response to various movements and changes in the environment, we are encouraging environmental awareness among officers and employees throughout the company.



Management of Environmental Impact Assessment and Regulatory Compliance

We extract the aspects of our business activities that affect the environment, and in particular those items requiring improvements or special control under environmental laws and regulations are deemed to be significant environmental aspects. Areas which require adherence to laws and regulations, such as "emergency situations" and "wastewater," independent standards are established and periodic checks are made to strengthen control measures.

Climate Action

Climate Action as Management Strategy

The JAMCO Group's basic principles of management mandates that we contribute to society through businesses operated according to our management philosophy of "striving for coexistence with nature and contributing to a prosperous and progressive society." Responding to climate change is crucial in terms of creating a sustainable society and protecting the global environment, and we are promoting initiatives based on analyses and assessments of the risks and opportunities that climate change affords our businesses.

Announcement of Acceptance and Disclosures Regarding TCFD Recommendations

In November 2022, we proclaimed our agreement with recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board (FSB). We are endeavoring for full disclosure of information relating to climate-associated concerns pursuant to the TCFD Framework.

Refer to the URL at right for further information about our responses to climate change. (Japanese text only.)

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

WEB Climate Action (disclosures based on TCFD Recommendations)
https://www.jamco.co.jp/ja/csr/tcfd.html

Governance

Our Board of Directors is involved, through key decision-making and direction of management, including management policies and plans, in decision-making on such matters as key policies and responses to concerns, as well as resource allocation including human resources plans and infrastructure investments relating to sustainability, including such climate-associated concerns as responses to climate change risks and opportunities.

We have also established a Sustainability Promotion Board (SPB), which promotes overall sustainability efforts including climate change problems and reports as appropriate to the Board of Directors chiefly on the progress of such efforts.

▶ See page 12 for SPB organizational structure and initiatives.

Risk Management

We are aware that the quality of our risk management capabilities and risk response, enabling prompt and accurate handling in line with management environment changes, is directly linked to corporate survival and corporate value assessment. Turning to risk, the Sustainability Promotion Department ascertains various environment-related data including climate change initiatives and stakeholder demands in countries the world over in identifying and evaluating climate-associated risks. Working Groups and concerned divisions collaborate in undertaking to turn opportunities into new businesses and enterprises oriented toward creating new value.

▶ See page 50 for our risk management structure.

Strategy

Risks and Opportunities based on Scenario Analysis

We identified risks to our company and its businesses from climate change on the basis of 1.5°C and 4°C scenario analyses. To investigate strategies for preparing for long-term risks among these, we conducted impact analyses with reference to such materials as global warming scenarios from the United Nations' Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) World Energy Outlook.

We also examined the impact of these scenarios on the aviation industry, creating societal concepts and analyzing risks and opportunities envisioning the 1.5°C and 4°C scenarios.

Scenario Analysis Results

The aviation industry is accelerating moves to become carbon neutral industrywide by 2050. On the basis of the 1.5°C and 4°C scenarios, the JAMCO Group, as part of this industry, is aware of the necessity to further promote CO_2 emissions reduction efforts throughout its supply chain and to proceed with new initiatives as well.

There are demands for contributions to operating fuel efficiency improvements chiefly through weight reductions in the aircraft furnishings that are our primary products, etc., and the possibility of so responding is both a risk and an opportunity affecting future orders and transactions.

Going forward, we believe that proceeding with development of low-carbon, high-strength lightweight products that we manufacture and sell will enable us to make offerings that take advantage of our corporate strengths in narrow-body planes that are forecast to expand in market scale as well as the widebody planes that are our main targets, representing an opportunity for increased net sales.

Indices and Targets Based on Scenario Analysis

We are specifying materialities (important issues) to undertake to resolve environmental and societal concerns through business activities on the basis of JAMCO Vision 2030 and JAMCO Transformation 2022 (JX2022), which is the action plan for JAMCO Vision 2030, and conducting progress management through executing measures and operation of non-financial KPIs.

Turning to JX2022, we are carrying out such initiatives with the New Energy and Industrial Technology Development Organization (NEDO) project as promoting research and development into CFRP manufacturing technologies and next-generation lightweight carbon honeycomb panels, promoting product recycling, and proactively utilizing recycled materials, thereby proceeding with research and development capable of contributing to product decarbonization through these efforts, with a target of contributing to becoming carbon neutral.

Greenhouse Gas (GHG) Emissions Results and Reductions Targets

Results

($t\text{-}CO_2$)

	March 2020 Period	March 2021 Period	March 2022 Period	March 2023 Period
Scope1	2,031.48	1,718.53	1,515.20	1,947.55
Scope2 (Market Standard)	11,056.90	8,612.83	7,916.33	8,337.04
Total	13,088.38	10,331.36	9,431.53	10,284.59

- **GHG Types to Be Aggregated**
  GHG Types aggregated in this report are CO_2, methane, N_2O, HFCs, PFCs, SF_6, and NF_3.
- **Scope 1 Emissions**
  GHG emissions in Japan, including those not resulting from energy, are computed using calorie conversion coefficients and carbon emission coefficients defined by the Act on Promotion of Global Warming Countermeasures.
- **Scope 2 Emissions**
  GHGs associated with use of power purchased in Japan are computed using emissions coefficients of each electric company as defined by the Act on Promotion of Global Warming Countermeasures.
- **Scope 3 Emissions**
  We are expanding initiatives oriented toward emissions computations to Scope 3.

Emissions Targets

As targets conforming to being carbon neutral by 2050, the Japanese government has expressed that it will strive for a 46% reduction in GHGs from FY2013 levels by FY2030, and that it will continue to endeavor to increase this reduction to 50%. In response, we have set targets of being carbon neutral by 2050, and reducing total Scope 1 and Scope 2 to at least 50% of FY2019 levels by 2030.

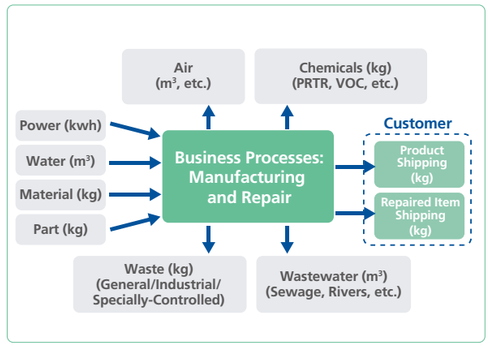
Initiatives to Reduce Environmental Impact

Initiatives to Reduce Environmental Impact in Business Activities

JAMCO specializes in the aircraft sector and is engaged in the manufacture and repair of aircraft interior products and components, and the maintenance and modification of aircraft and aircraft equipment. The figure at right shows the overall picture of energy and resource inputs into our business activities and products and environmental impact outputs resulting from these activities as a material balance. In conducting our business, we consume many resources and discharge various substances. We strive to quantitatively grasp our environmental burden in order to reduce it in inputs and outputs alike.

As it becomes increasingly important to address global environmental issues, we are working hard to further reduce our environmental impact.

Material Balance



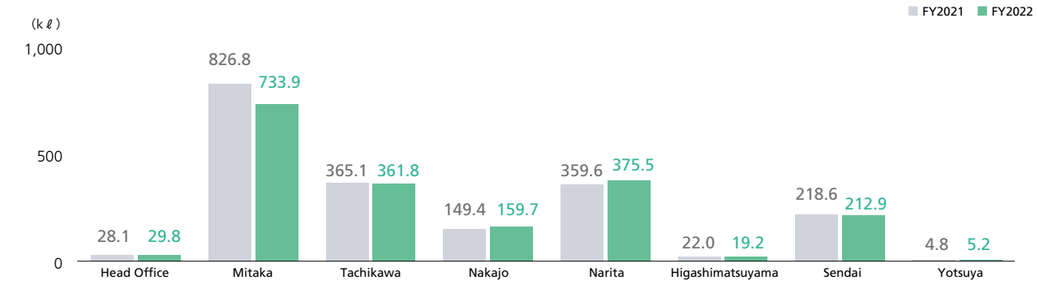
Energy-saving Initiatives

We are working to reduce our energy consumption by driving energy conservation and efficiency in our production processes, and by reducing fuel consumption through such means as using inverters in our production equipment, air conditioning systems, lighting fixtures, and air compressors.

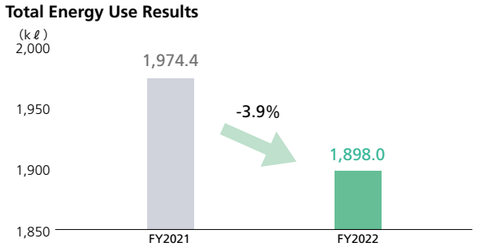
Energy consumption was reduced at each facility in FY2022 by adopting high-efficiency air conditioning equipment and high-efficiency operation thereof. Consumption was further reduced by reviewing which facilities were still using mercury vapor and fluorescent lighting and replacing those with LED lighting fixtures (reductions in energy consumption: 50% or greater by switching from fluorescent to LED).

Objective	Reduce energy consumption
Subjects	“Electricity, city gas, LP gas, type A fuel oil, gasoline, diesel fuel, kerosene”
Target	Reduce energy consumption by 1% or more compared with FY2021

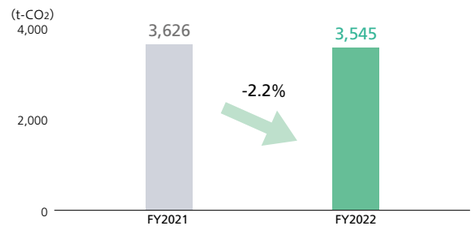
Energy Consumption by Facility



Total Energy Use Results



CO_2 Emissions



In FY2022, 1,510 mercury vapor and fluorescent lighting fixtures were replaced with LEDs, reducing the number of mercury vapor and fluorescent lighting fixtures in use to 1,069 as of the end of March 2023, as per the following chart. Through the aforementioned energy conservation activities, including lighting fixture replacements, energy consumption in FY2022 was reduced to 1,898.0kl, 3.9% lower than the 1,974.4kl in FY2021, thus achieving the target of 1% or greater reduction.

Additionally, carbon dioxide (CO_2) emissions in FY2022 were reduced to 3,545t, 2.2% less than the 3,626t in FY2021.

Replacing Lighting Fixtures with LED Lighting (FY2022 Plans and Results)

Subject Facilities	Plans	Results
	Fluorescent Lighting → LED	Fluorescent Lighting → LED
	Number of units	Number of units
Tachikawa	1,348	1,406
Nakajo	63	84
Narita	20	20
Total	1,428	1,510

* 80W/unit fluorescent lighting replaced with 37W/unit LED lighting fixtures, etc.
* Excludes Yotsuya and Higashimatsuyama facilities, which operate as tenants
* Head Office and Sendai facility have been fully switched over to LED lighting fixtures.

Mercury Vapor and Fluorescent Lighting Usage as of March 31, 2023

Subject Facilities	Mercury Vapor	Fluorescent
	Number of units	Number of units
Mitaka	3	1,065
Nakajo	0	1
Total	3	1,066
	1,069	

Energy Reduction Measure Implementation Status

● : Measure taken ○ : Maintenance item ▭ : Not applicable

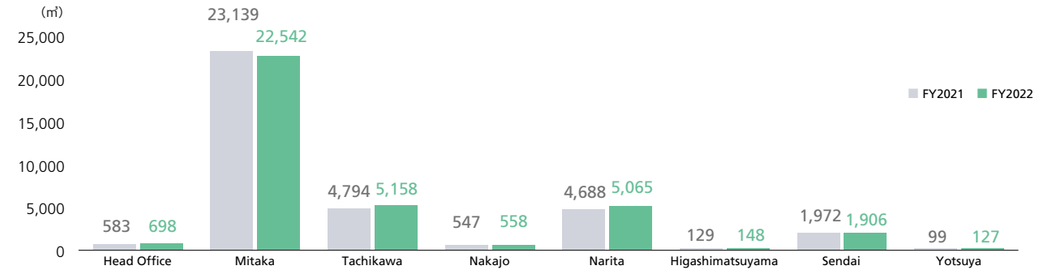
Measures Taken (Including operations)		Head Office	Mitaka	Tachikawa	Nakajo	Narita	Higashi matsuyama	Sendai	Yotsuya
Transformers	Consolidation		○						
	Introduction of high-efficiency equipment		○	●					
Air compressors	Stopped night operations by installing an evaporator			○		○			
	Reduction of discharge pressure		○						
	Introduction of energy-saving equipment (Inverter type)		○			○			
Air conditioning system	Strict observance of indoor temperature settings: Guidelines calling for 28°C in summer and 20°C in winter	●	●	●	●	●	●	●	●
	Regular filter cleaning	●	●	●	●	●	●	●	●
	Introduction of energy-saving equipment (inverter type, heat pump type)	○	●	●	○	●	●	○	
Lighting	Frequent turn out (Such as during breaks)	●	●	●	●	●	●	●	●
	Cleaning of lighting equipment	●	●	●	●	●	●	●	●
	Introduction of high-efficiency lighting equipment	○	●	●	●	●		●	
Production equipment	Application of heat insulating paint to heating furnace		○						
Lifting equipment	Number of elevator cars changed			○					
Other	Turning off OA equipment when not in use	●	●	●	●	●	●	●	●
	Demand meter settings		○			○			
	Introduction of fuel-efficient automobiles	○	○	○	○			○	
	Reduction of the number of vending machines		○						
	Man-hour reduction	●	●	●	●	●	●	●	●

Water Resources Initiatives

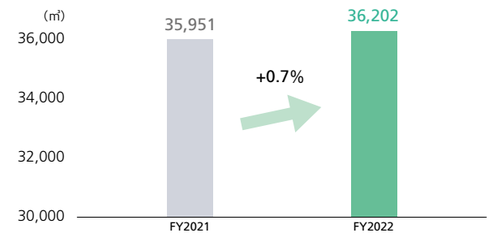
Water conservation efforts have been implemented throughout the company with the goal of reduce the water usage in business activities.

FY2022
Objective Reduce water usage
Target The actual results for FY2021 or less

Water Usage by Facility



Total Water Usage Record



Water usage increased in FY2022 0.7% over FY2021 due to recovering workload, which declined while telecommuting increased in FY2021 due to the COVID-19 pandemic.

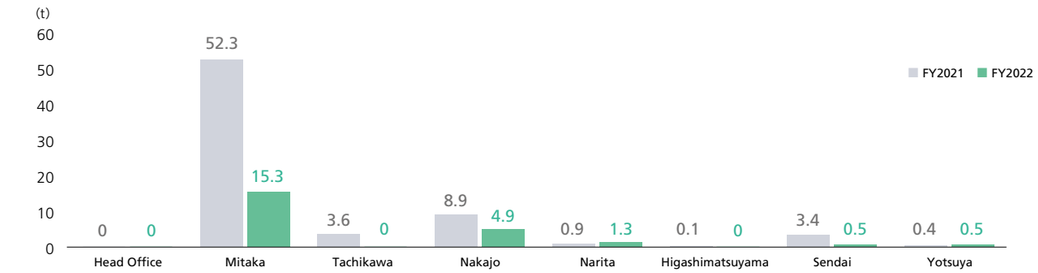
Waste Reduction Initiatives

We are undertaking to reduce and recycle waste, as well as contain and optimally manage chemical discharges. In FY2022 we proceeded with resource recycling initiatives, including increasing our recycling rate by 11%.

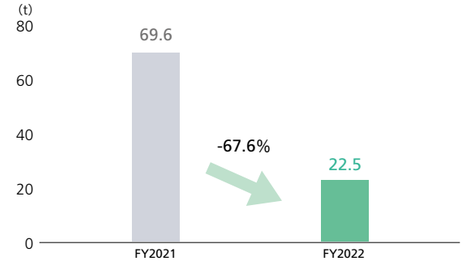
FY2022
Objective Reduce waste emissions
Target The actual results for FY2021 or less

Based on the concept of the 3Rs of Reduce, Reuse, Recycle, wastes generated from business activities are classified into waste (general and industrial waste disposed of into landfills), recyclable materials (general and industrial recyclable waste), and valuable resources. The discharge status of waste and recyclable materials is as follows.

Waste Volume by Facility

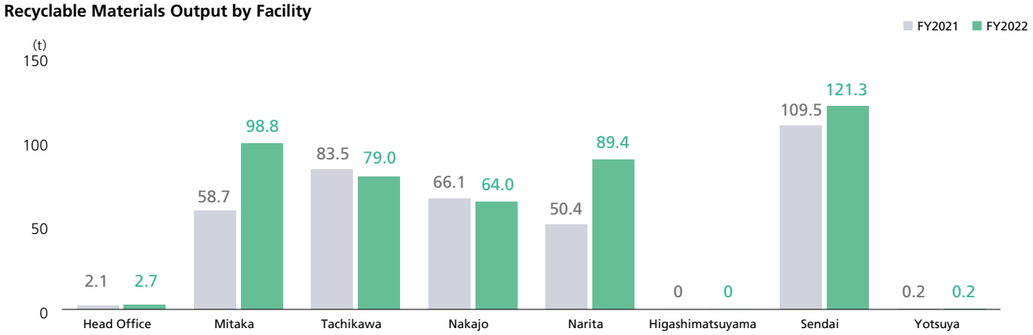


Total Waste Volume

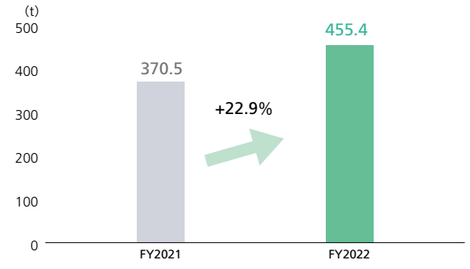


The JAMCO Group strives to reduce waste by thorough sorting so that recyclable and valuable materials are not mixed therein. Total waste discharge in FY2022 was 67.6% lower than in FY2021.

Recyclable Materials Output by Facility

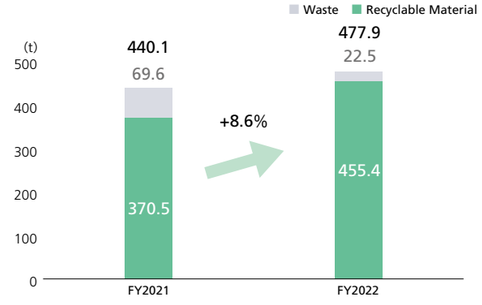


Total Recyclable Materials



JAMCO outsources recycling of materials to processing companies with specialized facilities. Total recyclable materials output grew 22.9% over FY2021 levels. As work returned to more normal levels in FY2022 following the COVID-19 pandemic in FY2021, waste discharges have increased, as have recyclable materials thereamong.

Emissions from Waste and Recyclable Materials



The JAMCO Group strives to reduce its environmental impact by reducing and thoroughly sorting waste, although there was an increase in recyclable materials output owing to recovering work volumes. As a result, the total discharge of waste and recyclable materials in FY2022 was 8.6% greater than FY2021 levels.

Reduction of Waste and Recycle Rate Improvement

Thorough Separation Control

We thoroughly sort and collect waste by type of material, convert metals and paper (copy paper, cardboard, newspaper, etc.) to valuable resources, thereby working on promoting recycling and reducing waste.

Recycle Rate Improvement

Turning to increasing recycling rates, we are undertaking to increase the types of items which can be recycled, via material and thermal recycling, by investigating and consulting with waste disposal subcontractors.

Proper Waste Management

JAMCO continues to implement initiatives to reduce waste based on the 3R (reduce, reuse, recycle) concept.

Additionally, the company conducts frequent on-site surveys of and collects information from waste disposal subcontractors to confirm that the disposal of waste products is being carried out appropriately. The information includes ascertaining disposal processes, control of manifests and other records, and certification renewal.

Equipment Containing PCBs (polychlorinated biphenyl)

As of December 2016, JAMCO had disposed of all PCB-containing equipment. Further investigations in January 2022 into use of equipment containing PCBs revealed that three such devices were still in use, however. These were disposed of in FY2022, and the safety of said disposal verified in May 2023.

Management of Chemical Substances

Chemical substances used in our business activities are regulated by laws and regulations depending on their properties, risk, hazard, etc. Regarding particularly high-risk substances, we set up management procedures in our internal regulations and control them appropriately, to ensure stability of contents and accurate inventory. In addition, workers actually handling chemical substances possess the necessary qualifications and are working properly in accordance with management procedures.

Promotion of Green Procurement

In order to continuously address environmental concerns in all corporate activities and reduce environmental burdens in the life cycle of products being produced and sold, JAMCO has established “Green Procurement Standards” by which we are committed to procuring materials and products with minimal environmental impact.

Proper CFC Management

CFCs used in air conditioners, refrigerators, freezers, etc., in our buildings contain substances that emit GHGs. We have made a list from the standpoint of preventing global warming and periodically inspect these for malfunctions, etc.

Additionally, we carry out tasks of filling and recovering CFCs on refrigerators, freezers, air conditioners, etc. installed in aircraft, having received Class I Fluorocarbon Filling and Recovery Operator registration.

Column

Biodiversity Initiatives

We are aware that such environmental changes as climate change and global warming have a tremendous impact on humans, animals, and plants too. We are engaging with concerns about environmental protection and biodiversity. We are profoundly interested in the Taskforce on Nature-related Financial Disclosures (TNFD), a framework for disclosures relating to overall environmental protection.

Environmental conservation activities

Since its launch in June 2021, TNFD has proceeded to build a framework for private corporations and financial institutions to appropriately assess and disclose risks and opportunities relating to natural capital and biodiversity. Following on the International Sustainability Standards Board (ISSB), part of the International Financial Reporting Standards (IFRS) Foundation, announcing that it was commencing a new standards setting project relating to biodiversity, ecosystems, and ecosystem services, we too believe that efforts are necessary in disclosures on the basis of the TNFD framework. In FY2023, we are commencing research and proceeding to investigate concrete initiatives.

Tokyo Greenship Action

In biodiversity protection, we are participating in local initiatives, including Tokyo Greenship Action, a Tokyo-led environmental protection group that acts in collaboration with corporations, NPOs, etc. We are cooperating to build an environment in which various plants may survive through such activities as cutting undergrowth and planting trees to preserve village forest environments.