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Canon addresses the four material topics identified in

the environmental domain, including Climate Change,

To help promote material recycling, we have

established recycling centers at five sites worldwide and

net consumption. With chemical substances, we ensure

are promoting efficient use of resources in regions of

composition standards for hazardous substances and

Resource Efficiency, Chemical Substances and Biodiversity, throughout the entire product life cycle.

that Canon products do not breach regulatory

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### Canon's Approach to Environmental Assurance

Acting on the foundation of its Approach to Sustainability (→P05), Canon works to protect and conserve the global environment in line with the Canon Group Environmental Charter and the Canon Group Environmental Vision.

#### Canon Group Environmental Charter

Corporate Philosophy: Kyosei

Achieve corporate growth and development while contributing to the prosperity of the world and the happiness of humankind.

Environmental Assurance Philosophy

In the interest of world prosperity and the happiness of humankind, pursue maximization of resource efficiency, and contribute to the creation of a society that practices sustainable development.

Fundamental Policies for Environmental Assurance

Seek to harmonize environmental and economic interests in all business activities, products, and services (the EOCD concept); offer products with lower environmental burden through innovative improvements in resource efficiency, and eliminate anti-social activities that threaten the health and safety of mankind and the environment

#### EQCD Concept

- E: Environment Companies are not qualified to manufacture goods if they are incapable of environmental assurance. (environmental assurance)
- Companies are not qualified to market goods if they Q: Quality are incapable of producing quality goods
- C: Cost Companies are not qualified to compete if they are D: Delivery incapable of meeting cost and delivery requirements.
- 1. Optimize the organizations for prompting the Canon Group's global environmental efforts, and promote environmental assurance activities for the Group as a whole.
- 2. Assess the environmental impact of entire product lifecycles and explore ways to minimize environmental burden.
- 3. Promote the research and development of technologies and materials essential for environmental assurance and share the achievements with society.
- 4. Comply with all applicable laws in each country/region and other requirements the Canon Group agrees upon with stakeholders, and promote energy and resource conservation and elimination of hazardous substances in all corporate activities.
- 5. In procuring and purchasing necessary resources, give priority to materials, parts, and products with lower environmental burden. 6. Establish an Environmental Management System (EMS) and establish and
- periodically review environmental objectives and targets to prevent environmental pollution and damage, and steadily reduce environmental burden.
- 7. Actively disclose to all stakeholders information on environmental burden and keep them updated on the progress of environmental measures.
- 8. Raise the environmental awareness of employees and educate them to take the initiative in environmental protection
- 9. Maintain close relationships with governments, communities, and other interested parties, and actively support and participate in environmental protection activities.

Date of establishment March 1993 Date of revision December 2024 Chairman & CEO Canon Inc.

Canon Group Environmental Charter

## **Canon Group Environmental Vision**

Through technological innovation and improved management efficiency throughout all of its corporate activities, Canon aims to achieve sustainable corporate growth while also realizing a society that promotes both enriched lifestyles and the environment.

To this end, Canon offers greater value using fewer resources throughout the entire product lifecycle -Produce, Use, Recycleto achieve highly functional products with minimal environmental burden. Canon continues to expand these activities with its customers and business partners.

Canon will contribute to a future that promotes both enrichment and the environment through technological innovation.

Canon Inc. Date of establishment August 2008 Date of revision December 2024

Canon Group Environmental Vision

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that our operational sites do not emit any chemicals beyond regulated emission limits. To preserve biodiversity, we strive to protect and restore biodiversity and water resources while ensuring appropriate water use. Especially in Climate Change, to achieve net zero CO<sub>2</sub> emissions, we are working to improve the energy efficiency of Canon products over their life cycle through a range of environmental activities, including designing smaller, lighter products; making distribution more efficient; saving energy at production sites; utilizing renewable energy sources; and improving the energy efficiency of products during usage and other stages of the life cycle. We will seek to reduce our CO<sub>2</sub> emissions by using fewer virgin resources and more recycled materials while reducing waste emissions. In addition to our own efforts, we will collaborate on initiatives with stakeholders throughout the value chain. Over the long term, we aim to incorporate the products of innovation to reduce CO<sub>2</sub> emissions using various approaches, including the achievement of our SBTi\* targets. Through the power of innovation and technology, Canon will not only reduce CO<sub>2</sub> emissions in our own operations but also help lower CO<sub>2</sub> emissions across society.

\* Science Based Targets initiative: A global body that promotes setting greenhouse gas emission reduction targets in line with climate science

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# **Environmental Management**

Canon works to protect and conserve the environment throughout the product life cycle.

## Global Environmental Promotion System

Led by the Sustainability Headquarters under the supervision of the CFO of Canon Inc., Canon is conducting environmental activities with the aim of achieving Canon's environmental targets and realizing Canon Group environmental vision. We use a global framework comprising the Canon products operations and Canon Group companies in Japan and overseas. Canon Executive for Sustainability Headquarters, a position occupied by an executive officer of Canon Inc., reports each month to the CFO (and to the CEO if necessary) on all environmental activities to gain approval.

Moreover, based on the identification of the related risks and opportunities through the discussions of the Sustainability Committee, the direction and content of any sustainability-related matters requiring the response or engagement of Canon is approved by the CEO.

#### Global Environmental Promotion System



## **Environmental Management System**

Canon has instituted a common environmental management system (EMS) in line with the ISO 14001 standard covering Group operational sites worldwide. The EMS promotes environmental assurance activities (Do), which are linked with activities of each division (products operations, operational sites, and Group companies). In turn, we set annual and medium-term environmental targets (Plan) and establish action plans and important measures to achieve those targets, which are reflected in our business activities. Moreover, we carry out Environmental audits to check the progress of initiatives as well as any issues to be addressed in each division, and Environmental and CSR performance evaluations, to assess our environmental performance (Check). We then work to continually improve and enhance our environmental assurance activities (Act). This PDCA cycle is used to manage the evaluated and identified risks as well. By implementing the PDCA cycle for environmental assurance activities of each division. we achieve continual improvement and reinforcement and advance the environmental assurance activities of the entire Canon Group. The Sustainability Headquarters ensures the smooth management of this system by gathering Canon's Environmental Management System information on environment-related laws and regulations, establishing environmental policies and rules for the entire Group, and planning and managing evaluation methods for environmental assurance activities. Reflecting the need for independent, thirdparty evaluation of EMS effectiveness, all Canon Group operating sites with manufacturing or marketing functions are ISO 14001-certified. In 2024, Canon Inc. as well as Group companies operating in 39 countries

and regions (in total, 117 companies/529 operational sites) had gained ISO 14001 certification. The acquisition of consolidated Group certification has supported stronger corporate governance and more efficient environmental management. The progress of activities is one element of the management review used to monitor this area, which includes relevant reporting to and approval of both the CEO and CFO of Canon Inc.

#### Reference: Certifications Obtained https://global.canon/en/sustainability/data/pdf/canon-list-e.pdf?001

#### Canon's Environmental Management System



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## Product Development System Using LCA Methodology

Message from the CEO

Canon aims to reduce the environmental impact of products over their entire life cycle based on the use of life cycle assessment (LCA) methodology. We have incorporated the LCA approach from the product development stage, using supplier-specific emission factor collected from suppliers on the CO<sub>2</sub> emissions of the materials used to make parts.

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## **Product Environmental Assessments**

Product environmental assessments are used by Canon in the commercialization process to confirm conclusively whether products comply fully with legal and other requirements relating to the product environment by achieving the required levels of environmental performance. We start the assessment by assigning an environmental performance target to the product at the product planning stage. We evaluate if this target has been met before the product can move from the design stage into the development stage and finally into mass production. Utilizing product environmental assessments as hurdles within the product commercialization process in this way leads to better environmental performance while also supporting compliance.

## Confirming the Effectiveness of Environmental Management

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Canon uses an internal environmental audit to confirm the effectiveness of its environmental management system. This audit is made up of a headquarters environmental audit performed by the Sustainability Headquarters, together with an operational site environmental audit and product environmental audit conducted by the audit departments of business divisions, operational sites and sales companies. Mutual cross-site audits are carried out in certain locations. The results from internal environmental audits are collated by the Sustainability Headquarters and reported to the CEO and the CFO of Canon Inc. via management reviews. In 2024, the audits found no major nonconformity or violations. From the perspective of continual improvement and prevention, we are taking steps to rectify even minor findings relating to operations management, including stricter supervision of the chemical content of Canon products, legal compliance at operating sites, and proper management of chemicals.

### Internal Environmental Audit



## Monitoring of Progress toward Environmental Targets

Operational sites report monthly to Sustainability Headquarters on energy consumption, volume of waste generation, chemical substance emission volumes, and water usage. Monthly aggregates are tracked against targets to monitor progress, and are also reported monthly to executives and top executives at major Canon Group companies. Collated results are also included in semiannual and annual environmental/CSR performance assessments, as well as being used for business improvement activities.

## **Environmental/CSR Performance Assessments**

In addition to achievement of environmental targets and the results of environmental activities by operational sites, we also evaluate the various environmental activities (see table) of our business divisions and sales companies as part of assessing the environmental life cycle performance of Canon's business activities during stages such as development, production and sales. This becomes one input into the consolidated performance evaluation system used to assess management of Canon's overall business performance.

### Environmental/CSR Performance Assessment Flowchart

Reflected in consolidated performance evaluation system

Sustainability Headquarters Achievement levels for principal initiatives (numerical evaluation)					
Reports Feedback	Reports Feedback	Reports Feedback			
Business divisions	Operational sites	Sales companies			
Product eco- consciousness, etc.	Environmental impact of production activities, etc.	Environmental communication activities targeting stakeholders, etc.			

## How Product Environmental Assessments Work



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## Green Platform and Minimum Energy 360

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Canon has organized all the eco-conscious systems and technologies it has accumulated to date into a core technology base known as the Green Platform. Utilizing combinations of various in-house technologies, we undertake initiatives to help minimize environmental impact through decarbonization, development of the circular economy or other means for each product life cycle stage, notably Design (energy efficiency, resource conservation, pro-recycling design, etc.), Production (less power/water consumption and waste, etc.) and Recycling (repair, re-use, recycling, etc.).



Canon's Green Platform

Message from the CEO

To help speed up addressing environmental issues such as decarbonization and resource recycling based on a shared mindset among employees, Canon has adopted the motto "Minimum Energy 360." Emphasizing the need to minimize energy usage in every direction (360°), this motto encapsulates our commitment to the ongoing pursuit of various activities to use the minimum amount of energy at every step across the value chain, from the time that Canon carries out

development and production, to the stage of transportation and logistics, to the point at which customers use our products and when they are finally reused.



Minimum Energy 360

# Environmental Awards and Environmental Exhibition

Canon holds an internal environmental awards ceremony and related exhibition to increase staff awareness and promote successful initiatives in the environmental field This approach enables management to identify outstanding examples of good environmental practice and promote their companywide implementation, while also serving as a valuable opportunity to raise environmental awareness among employees. The best examples are exhibited online using Canon's intranet, to which many Canon employees have access. This has helped accelerate the implementation of good practices across the entire organization. In 2024, one project was selected for the Grand Prize, with four entrants getting a Merit Award and another two a selection committee commendation. In addition, staff events and other activities held in Environment Month in June to help raise in-house sustainability awareness included a photography contest on the theme of sustainability and a visit to an external sustainability-related facility. The staff canteen also undertook several steps, including an initiative to cut food waste and offering low-CO<sub>2</sub> emission menus featuring meat alternatives, while outside experts were featured on in-house channel programs.



Online exhibition website

## **Environmental Education**

Canon's environmental education programs provide basic environmental training to all employees, and specialized training for employees engaged in specific types of work. The basic environmental training aims to equip employees with an awareness of the importance of environmental assurance activities and an understanding of related policies and targets, while the aim of the specialized training program is to enable employees involved in environmental assurance activities to acquire knowledge and expertise. The specialized training program consists of product environment, operational site environment and environmental audit sections. Of these, product environment training enables those responsible for product environmental assessments and product surveys to acquire knowledge and expertise. These educational programs are designed to enable employees to receive needed training at a time that suits their schedule, whether by e-learning, group discussion, group work, or other method. We are also focusing efforts on global education initiatives utilizing training materials translated into English and Chinese. In 2024 also, we carried out training for employees involved in risk management related work (total of approximately 10,200 participants).

### List of Environmental Educations

Enviro	Forms			
Basic Environm	ental Education	Basic Environmental Training		
	Operational	Environmental Management Training		
Specialized Environmental Education	Environment	Chemical Substance Management Training	E-learning	
	Product	Product Environmental Assessments Training*		
	Environment	Product Survey Training*		
	Environmental Audit	Internal Environmental Audit Training	Collective training	

\* Trainings subject to risk management

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## **Environmental Communication**

Message from the CEO

Alongside the publication of this report, we use a range of media and platforms to keep stakeholders informed about Canon's environmental activities. These include a dedicated environmental website, guarterly presentations and investor dialogues, and various events. We are striving to undertake more and better activities based on suggestions and opinions received from stakeholders. Canon also promotes environmental education and awareness activities for the benefit of people in regional communities, providing environmental outreach classes for elementary school students and environmental programs run in cooperation with regional organizations. Canon began holding environmental outreach classes on toner cartridges in 2011. Extended to Canon Bretagne in 2022, this program has provided more than 300 classes to over 14,000 participants (including 11 classes conducted online for over 350 participants).

Initiatives at Canon Eco Technology Park The Canon Eco Technology Park (opened in February 2018 and operated by Canon Ecology Industry Inc.) is not only a cutting-edge reuse/recycling plant, but also serves as a focal point of the environmental activities of the Canon. In addition to the plant, which is equipped with automated toner and ink cartridge recycling systems and other functions, the facility has a showroom highlighting Canon's wide range of environmental activities. It hosts environmental programs aimed at teaching elementary school students about the importance of resource recirculation using recycling-related science experiments. This program has attracted numerous plaudits for helping to educate many elementary school students while also enabling interactions with enterprises and

organizations which are engaged in environmental education. In 2024, we began the process of renewing the showroom spaces to provide people a wider range of information on our initiatives with respect to product life cycles.



Canon Eco Technology Park

Details: Canon Eco Technology Park https://global.canon/ja/environment/ecotechnopark/ (Japanese website only) (For inquiries on educational visits and related matters, please contact us through the website shown above.)



#### **Canon Eco Technology Park Visitor Comment**

Our tour and experiences onsite were part of a social studies excursion for Year 5 students. Having learnt about the SDGs in Year 4, they were now studying industrial production for this subject. Canon Eco Technology Park helped us feel the connections between what we learnt (from industrial production to caring for the environment). It was especially great to experience using such a wealth of materials in environmental lessons – materials that would have been difficult to prepare at school. The children could handle the materials and learn about sorting through trial and error. Since the school is a collection point for used ink and toner cartridges from students' homes, it was most rewarding for the children to discover what happens to these cartridges after they are collected.



Shigeyuki Tamura (teacher) Shinjuku City Toyama Elementary School (Tokyo)

## **Environmental Regulatory Compliance and Response to Complaints**

As a result of implementing an environmental management system coordinated across Canon, Canon came through 2024 without a single legal violation or accident that seriously impacted the environment, including incidents relating to water guality or guantity permits. Although there were some complaints about noise at our operational sites, all issues were resolved satisfactorily via appropriate measures.

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# **Climate Change**

Canon is working to reduce CO<sub>2</sub> emissions at all stages of the product life cycle.

#### For 2050

We aim to achieve net-zero CO<sub>2</sub> emissions for entire product life cycle (Scope 1-3) by 2050.

#### 2030 Targets

- Reduce Scope 1 & 2 GHG emissions by 42% compared to 2022, reduce Scope 3 (category 1 and 11) GHG emissions by 25% compared to 2022.
- Work toward a 3% average annual improvement in the index of life cycle CO<sub>2</sub> emissions (per product unit), realizing a cumulative improvement of 50% compared to 2008 by continually achieving this target.

#### GHG Emissions Reduction (Diagram)

Scope 1&2 (1,000 t-CO2e)



### Scope 3 (Categories 1, 11) (1,000 t-CO<sub>2</sub>e)



## Canon's GHG Emissions-reduction Initiatives

Canon is working to reduce greenhouse gas emissions by assessing the impact of climate change on the entire product life cycle, from the manufacturing of materials and parts at suppliers, transportation to retailers, use by customers, and disposal and recycling.

Canon aims to achieve net zero by 2050, and to reduce its scope 1 and 2 GHG emissions by 42% compared to 2022 and scope 3 (category 1 and 11) GHG emissions by 25% compared to 2022 by 2030. These targets for 2030 have been verified by SBTi, an international initiative that recommends setting scientifically based GHG emissions reduction targets. To this end, we are promoting various initiatives, including the development of products using recycled materials, product downsizing and weight reduction, energy-saving activities at production sites, energy saving during product use, product recycling, and efficient logistics.

## **Acceptance of TCFD Recommendations**

Canon accepts the recommendations of the final report of the Task Force on Climate-related Financial Disclosures (TCFD). Our disclosures of climate-related information are in accordance with the TCFD framework.

Scope 1: Direct emissions (city gas, LPG, diesel oil, kerosene, non-energy greenhouse gases, etc.) Scope 2: Indirect emissions (electricity, steam, etc.)

Scope 3: Emissions in the supply chain (category 1: Purchased goods and services, category 11: Use of products sold)

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## Governance

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The impact of climate change on Canon, response plans and targets were discussed at the Climate Change Working Group (WG) under the Sustainability Committee. The Climate Change Working Group is comprised of senior managers from each business and corporate division. The content of discussions is reported to the Sustainability Committee, and after approval, it is reported to the CEO ( $\rightarrow$ P13).

To achieve these targets, the Sustainability Headquarters plays a central role in promoting activities throughout Canon. The progress of targets is reported to the management every month, and the annual review is reported to the CEO.

## Strategy

Canon conducts scenario analysis based on the TCFD framework, which is recommended in non-financial disclosures, and recognizes the importance of both "mitigation" and "adaptation" to physical risks for Canon. We are working to achieve our GHG emissions reduction targets and build a sustainable business model resilient to climate-related impacts.

**Scenarios Referenced for Analysis** In the scenario analysis, Canon selected the "current scenario." in which economic activities are conducted in line with current policies, and the "1.5°C scenario," in which the world will control greenhouse gas emissions and policies and technological development related to climate change will progress faster than the current speed toward achieving net zero by 2050, on the premise that the targets of the Paris Agreement will be achieved. The scenarios referred to are as follows.

## Current Scenario: (Transition risk) IEA APS, NGFS **Current Policies** (Physical risk) IPCC RCP8.5

1.5°C Scenario: (Transition risk) IEA NZE, NGFS Net Zero 2050 (Physical risk) IPCC RCP2.6

Factors such as climate-related policies, laws and regulations, technological developments, changes in customer behavior, and market conditions in the major regions where Canon operates are also taken into account.

**Definition of Time Frame and Degree of Impact** As shown in the following table, the time frame is examined in a manner consistent with the Canon's medium to long-term management plan. The degree of impact is examined in three stages of extremely important, important and minor.

#### **Time Frame**

Category	Period
Short term	То 2025
Medium term	То 2030
Long term	After 2030

#### Degree of Impact

Category	Impact on sales			
Extremely important	May cause fluctuations in net sales by $\pm 10\%$ or more			
Important	May cause fluctuations in net sales by $\pm5\%$ to $10\%$			
Minor	Impact of less than $\pm$ 5% on sales			

\* The impact criteria for each group is judged based on the sales of Canon

## **Business Environment Assumptions under the Current/** 1.5°C Scenario

As climate-related risks and opportunities differ among the businesses of Canon's industrial groups (printing, medical, imaging and industrial), Canon reviewed the major climate-related risks and opportunities, their countermeasures and financial impact for the entire Canon and each group.

Under the Current Scenario, the business environment is expected to include the continuation of existing climate-related regulations, the introduction of carbon pricing, the spread of recycled materials and bioplastics, the introduction of a modal shift, the expansion of customer demand for decarbonization and purchasing behavior conscious of climate change response, and the introduction of industrial policies for decarbonization in each country. Under the 1.5°C scenario, the aforementioned environment will become even more severe and develop, and the movement toward carbon neutrality throughout the supply chain will accelerate.

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### **Risk and Opportunity Factors Affecting Canon and Estimated Financial Impact** Risks and opportunities relating to the transition to a

decarbonized economy are outlined below.

#### Transition Risks

#### Policies and laws and regulations

- Increased cost for carbon pricing
- Sales decrease when regulations cannot be metIncrease in capital investment to comply with regulations

#### Market

- Increased costs due to the adoption of recycled materials
  Sales decrease when other companies' products become dominant
- Sales decrease when the price pass-through of costs for responding to climate change is not accepted

#### Technology

• Increased research and development expenses to respond to climate change

#### Reputation

 Sales decrease due to growing concerns of stakeholders when climate-change measures are not sufficient

#### Opportunities

#### **Resource efficiency**

Cost reduction due to energy efficiency improvement
Lower distribution costs due to joint distribution and modal shift

#### Market

Sales increased due to the improvement of evaluation by stakeholders
Diversify fund procurement

#### **Energy source**

• Lower carbon pricing impact due to the use of low-carbon energy

#### Products/Services

- Sales of GX related products and recycling-oriented
   products increased
- Increase sales of low-carbon products
   Sales increase of products for which the Cuidelinese
- Sales increase of products for which the Guidelines are applied

### Details of Transition Risks and Opportunities — Company-wide

The scenario analysis revealed that carbon pricing is a risk factor that could affect the entire company. Based on the emissions forecasts for scopes 1, 2 and 3 of Canon, the impact of the introduction of carbon pricing in 2030 and beyond is estimated to be approximately 8.3 to 44.5 billion yen in 2030 and approximately 4.3 to 40.3 billion yen in 2050, using the current scenario and the 1.5°C scenario. As a risk management measure, we are working to decarbonize through the development of green technology. For example, at each of our sites, we have been working to reduce electricity consumption during production in three steps: visualizing electricity consumption, analyzing potential reduction, and implementing reduction measures. These efforts include breaking down electricity consumption into the operational units of production equipment, such as transportation and processing, to identify hidden waste and highlight targets for improvement. The estimated reduction in electricity costs is estimated to be approximately 4.5 to 5.7 billion yen in 2030 and approximately 9.7 to 12.1 billion yen in 2050, and it was confirmed that it will also have a positive impact. We are also addressing climate change in logistics in consideration of the characteristics of each business, and we see the results of these efforts as an opportunity.

Furthermore, the Company is working on reducing CO<sub>2</sub> emissions (Scope 3 Category 1) in raw material procurement on a company-wide basis, and is considering low-carbon materials in procurement and preparing for future procurement. We have introduced life cycle assessment (LCA) methods in product development, such as incorporating actual data on the CO<sub>2</sub> emissions of raw materials and parts collected from our business partners into LCA, and are aiming to reduce the environmental impact throughout the product life cycle.

If taking sufficient measures to address climate change are not be implemented, the Company recognizes the risk of a deterioration in reputation due to an increase in concerns of stakeholders who place importance on responding to climate change and a decrease in sales due to a loss of sales opportunities. As a countermeasure, the Company will continue to promote effective climate-change initiatives and make timely and appropriate disclosures to stakeholders. Furthermore, the Company recognizes that appropriate disclosure of its response to climate change will improve the understanding and evaluation of stakeholders, including investors and customers, and that it will also provide opportunities to diversify its financing by meeting the investment and financing requirements of financial institutions.

## Details of Transition Risks and Opportunities — by Industry and Group

Analysis by industry group revealed that the printing business is expected to be affected by climate-related regulations in the electrical and electronics industries, changes in consumer preferences, competition with competitors, etc. However, risk reduction measures such as understanding regulatory trends, research and development and capital investment to respond to regulations, and acquisition of procurement requirements have already been incorporated into the plan, and as a result of trial calculations, it was confirmed that there will be no significant impact under either the current scenario or the 1.5°C scenario. We expect the positive impact of increased sales opportunities due to increased demand for low-carbon products and cost reductions due to energy efficiency improvements to be an opportunity.

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In the Medical Business, there are cases where bidding requirements include power saving due to the increasing interest in sustainability mainly among customers in Europe. In the Imaging and Industrial businesses, although regulations and customer demands are relatively low at present, demands may increase in the future. Therefore, we have made trial calculations

assuming the possibility that new research and development and capital investment will be required. The results showed that, although there was a risk of increased costs, the impact was relatively small as we have started to investigate trends in laws and regulations and take initiatives to improve energy efficiency in the regions where it operates. We believe that there are

more opportunities in terms of reducing costs through energy efficiency improvements, and increasing sales opportunities for products that contribute to adaptation to climate change using existing technologies and products that match the industrial promotion measures of each country such as the GX-related policies.

#### Transition Risks (Company-wide and Group by Industry)

Transition risk classification	Risk factors	Corporate/ group	Financial impact	Expression time	Impact degree	Measures
	Carbon pricing	Entire company	Increase in response costs	Mid-term to Long-term	Minor	Company-wide initiatives to reduce GHG emissions
Policy Laws and regulations		Printing	Decrease in sales when we fail to respond	Short-term to Long-term	Minor	<ul> <li>Continue research and development and capital investment in response to various regulations (response to the revision of the International Energy Star Program, an energy conservation system for office equipment, development of recycled machines, etc.)</li> </ul>
	Strengthening the response to climate- related regulations for	Printing	Increase in research and development expenses for responding to regulations and capital investment	Short-term to Long-term	Minor	• Examination of research and development plans, capital investment plans and cost plans in response to regulatory trends
	existing products	Medical	Increase in costs due to responding to regulations	Long-term	Minor	Continue efforts to improve energy saving performance
		Industrial	Decrease in sales when we fail to respond	Long-term	Minor	<ul> <li>Develop products and production technologies in response to regulatory measures (such as Product Front End Cards)</li> </ul>
S Technology c	Strengthening of customer's needs for climate-change response	Medical	Decrease in sales when we fail to respond	Long-term	Minor	<ul> <li>Develop products that meet the energy saving related bidding requirements</li> </ul>
		Industrial	Sales decrease due to restrictions and curtailment of transactions in the event that the Company fails to respond to the above	Long-term	Minor	• Develop low-carbon products and production technologies to meet changing customer needs
Market	Spread of recycled materials	Printing	Increase in raw material costs due to the use of recycled materials	Short-term to Long-term	Minor	<ul> <li>Consider and evaluate the use of various recycled materials</li> <li>Price negotiations through the consolidation of material manufacturers, price guarantees through long-term contracts, and consideration of expanding new adoption</li> <li>Collect information on alternative materials</li> <li>Consider in-house production of substitute materials</li> </ul>
	Comparison with competitors	Printing	Decrease in sales when products show higher life cycle CO2 emissions than that of competitor's products	Short-term to Long-term	Minor	<ul> <li>Continue research and development utilizing product life cycle assessment</li> <li>Try to reduce GHG emissions throughout the product life cycle</li> </ul>
	Changes in customer preferences	Imaging	Decrease in sales when customers do not accept price pass-through for the cost of addressing climate change	Long-term	Minor	<ul> <li>Continue price acceptance surveys in response to climate change in each country and region</li> </ul>

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## Opportunities (Company-wide and Industrial Group)

Opportunities classification	Opportunity factor	Corporate/ group	Financial impact	Expression time	lmpact degree	Measures
<b>D</b>	Improvement of energy efficiency	Entire company	Cost reduction due to reduction of power costs	Short-term to Long-term	Minor	Company-wide initiatives to improve energy efficiency
efficiency	Lower distribution costs	Entire company	Lower distribution and selling, general and administrative expenses through joint distribution and modal shift	Short-term to Long-term	Minor	<ul> <li>Joint transportation within Canon and with other companies/ round transportation</li> <li>Expand to use of modal shift</li> </ul>
Energy source	Switch to low-carbon energy	Entire company	Cost reduction due to reduction of carbon pricing impact	Mid-term to Long-term Minor Of low-carbon measures of low-carbon energy		<ul> <li>Continue to consider various low-carbon measures, including the use of low-carbon energy</li> </ul>
Products/ services Products/ services Increasing demanc products that help to climate change Increasing demanc semiconductor manufacturing equipment due to increase of govern promotional measing for GX	Increasing demand for low-carbon products	Printing	Sales increase due to increase in sales opportunities	Short-term to Long-term	Minor	<ul> <li>Development of low-carbon products (energy-saving products, longer product life, use of recycled materials, etc.)</li> <li>Meet to newly developed of procurement requirements (Environmental evaluation system "EPEAT" registration, environmental label "Blue Angel", etc.)</li> </ul>
	Increase in sales due to changes in customer preferences	Medical	Sales increase due to increase in sales opportunities	Short-term to Long-term	Minor	<ul> <li>Develop products that meet the energy saving related bidding requirements</li> </ul>
	Increasing demand for products that help adapt to climate change	Imaging	Sales increase due to increase in sales opportunities	Mid-term to Long-term	Minor	<ul> <li>Development of products that help adapt to climate change (disaster prevention network cameras, image-based infrastructure inspection services, etc.)</li> </ul>
	Increasing demand for semiconductor manufacturing equipment due to increase of governmental promotional measures for GX	Industrial	Sales increase due to increased demand for semiconductors as a result of the GX Project	Short-term to Long-term	Important	<ul> <li>Expand semiconductor manufacturing equipment for power semiconductors</li> <li>Develop a system to increase production, including the construction of new plants</li> </ul>
	Increase in sales due to changes in customer preferences	Industrial	Sales increase due to increase in sales opportunities	Short-term to Long-term	Minor	<ul> <li>Expand sales of low-power consumption products (nanoimprint lithography and model changes of current products, etc.)</li> <li>Expand sales of products that can recycle plastics (plastic sorting equipment)</li> </ul>

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Physical Risks (Risks Associated With Climate Change) Canon's facilities and offices are located around the world, and natural disasters caused by climate change could affect its businesses. As for physical risks associated with climate change, we have verified the risks of river flooding, storm surge, and storm wind at major bases in Japan and overseas using analysis tools such as the World Resources Institute's Aqueduct, local government hazard maps, and XDI's natural disaster risk analysis service. As a result, we have found that four of our production bases and offices in Japan and overseas have medium or high risks of river flooding and storm surge. However, we have already implemented necessary measures according to the situation of the bases, such as installing water stop boards, remodeling rainwater pipes, and raising the block height of the outer fence. The assets of these four bases account for approximately 3% of the total assets of Canon.

Going forward, the Company will continue to consider various measures to reduce the impact of damage and loss from natural disasters.

Results of Scenario Analysis

In the value chain, especially in research and development, procurement and sales, it was clarified through scenario analysis that there are impacts from research and development due to strengthening regulations, fluctuations in raw material prices, and customers' and business partners' views and demand trends for low-carbon products.

If no measures are taken, financial risks such as missed sales opportunities and cost increases may occur in either scenario. Although these are risks that should be considered, we have already incorporated measures to reduce risks into our plan, such as understanding regulatory trends, research and development and capital investment to respond to regulations, and acquisition of procurement requirements. Through multiple patterns of financial simulations conducted under each scenario, it was confirmed that there were no measures that would have a significant impact on the financial results, including measures currently being implemented and those that are being planned. Therefore, the impact was judged to be limited, and it was reconfirmed that there was no shortage in the measures that had been implemented and that the direction of the initiatives at products and production sites was correct.

In addition, in a world where the transition to decarbonization is progressing, we expect a positive impact from changes in consumer preferences, increased demand for adaptive products, and increased sales of low-carbon products and adaptive products of Canon due to the progress of industrial measures for the promotion of the GX, products contributing to the promotion of the GX, and cost reductions associated with energy efficiency improvements.

Through scenario analysis, we have confirmed that the impact of climate change on the financial performance, including sales and operating income, the financial position and cash flow of the entire Canon and major businesses will be limited in the short, medium and long term, and that there is no need to revise the portfolio and business model.

However, we are aware that the introduction of carbon pricing and climate-related regulations could affect Canon's financial performance and the entire value chain, due to increased response costs, research and development expenses, and capital expenditures. We will continue to monitor the business environment while analyzing the impact on climate-related risks and opportunities.

## **Risk Management**

Our response to climate-related risks and opportunities is reflected in our company-wide environmental targets and priority measures. At Canon, environmental initiatives are part of our management evaluation. The status of achievement of environmental targets and the results of environmental activities of each division are evaluated twice a year in the Environmental and Corporate Social Responsibility Performance Evaluation, which is implemented as an indicator of the Consolidated Performance Evaluation System for evaluating the performance of Canon's overall management. The results of the evaluation are reported to the CEO and other management. Identified climatic risks are managed in accordance with the PDCA cycle of ISO14001 (→P13).

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## **Indicators and Targets**

Message from the CEO

Canon aims to reduce its CO<sub>2</sub> emission throughout the product life cycle to net zero by 2050. To achieve this goal, we have set an overall target to reduce Scope 1 and 2 GHG emissions by 42% in 2030 compared to 2022, and reduce Scope 3 (categories 1 and 11) GHG emissions by 25% compared to 2022. In November 2023, these targets were validated by SBTi.

improvement in life cycle CO<sub>2</sub> emissions per unit of product of 3% per year" (basic unit target) as a comprehensive target of Canon's environmental

## **Environmental Targets and Achievements**

targets. By consistently achieving this target, we expect to achieve a 50% improvement in 2030 compared to 2008. In 2024, the annual average was 3.76%, exceeding the target, and an improvement of 44.6% compared to 2008.

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During the fiscal year ended March 31, 2018, the actual life cycle CO<sub>2</sub> emissions (the total of Scopes 1, 2 and 3) were 8,104,000 t-CO<sub>2</sub>e, with Scope 1 emissions of 198,000 t-CO<sub>2</sub>e, Scope 2 emissions of 733,000 t-CO<sub>2</sub>e and Scope 3 emissions of 7.173 million t-CO<sub>2</sub>e. We will continue to achieve these targets in the next fiscal year and beyond.

2024 Achievements\*

Scope 1 & 2: 12.8% reduction

Scope 3: 17.7% reduction

In 2024, in terms of SBTi, through the promotion of various energy-saving measures, the introduction of renewable energy, the adoption of smaller, lighter, and low-carbon emission components, we achieved a reduction of 12.8% in Scope 1 and 2, and 17.7% in Scope 3 (categories 1 and 11) compared to 2022.

In Canon, the environmental targets are set in line with our three-year management plan and reviewed every year to determine whether changes are necessary. Under the overall target of a 3% average annual improvement in the index of life cycle CO<sub>2</sub> emissions per product unit, our product target is a 3% average annual improvement in the index of CO<sub>2</sub> emissions per product unit associated with raw materials and product utilization. The operational site target includes target figures for reductions per basic unit in energy consumption.

As for the operational site target, we also set goals for total waste emissions, water consumption, and controlled chemical substance emissions, thus making the management of environmental risks and opportunities more comprehensive and conclusive.

\* Results in the base year (2022) have been recalculated in accordance with the SBTi.

\* Calculations are based on the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

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2030 Targets

25% reduction for Scope 3 (category 1 and 11)

42% reduction for Scope 1 & 2

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Since 2008, we have set a target of "an average

## \* For scope of data collection: https://global.canon/en/sustainability/report/pdf/data-2025-e.pdf

## GHG Emissions

(1,000 t-CO2e)

1,200

1,000

800

600

400

200 0

GHG emissions

(compared to 2022)



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**Progress Relative to Overall Target** 

In 2024, we made progress with ongoing improvement in product life cycle emissions via upgraded site-based energy-efficiency measures; greater adoption of renewable energy sources; development of better energy-efficient products; reduced use of air freight; and other measures. As a result, against the target of a 3% average annual improvement in the index of life cycle CO<sub>2</sub> emissions per product unit, we realized an average annual improvement of 3.76% between 2008 to 2024 and total improvement of 44.6% from 2008.

44.6% Life cvcle CO<sub>2</sub> improvement index per product improvement since 2008

We continued with initiatives, including efforts to make products more compact, lightweight, and energy efficient, and achieved an average annual improvement of 2.22% (2008–2024) in raw materials and use CO<sub>2</sub> emissions per product, falling just short of our target of 3%.

**Achievement of Operational Site Targets** 

at Operational Sites

Due to more efficient production and other factors, overall energy consumption per basic unit improved by 4.6% in 2024, exceeding the 2.4% improvement target. We aim to meet this target again in 2025 by reducing energy consumption and further improving production efficiency.

### Improvement in Total Waste Generation

Owing to ongoing improvement measures at each site, such as reducing packaging materials by using returnable boxes and reducing the use of evaluation sheets, total waste generation per basic unit improved by 2.2% in 2024, exceeding the 1% improvement target. In 2025, we will aim to continuously achieve our targets by

advancing collaborative activities with partners, such as reducing packaging for procured materials.

### Improvement in Water Usage Per Basic Unit in Production

Due to factors including equipment maintenance and greater cooling water usage due to high temperatures, water usage per basic unit improved by 0.6%, missing the 1% improvement target. In 2025, we will move ahead with actions to meet the improvement target, including raising the efficiency of the cleaning process for manufacturing equipment.

## Improvement in Emissions of Controlled Chemical Substances Per Basic Unit

Due to factors including an increase in parts cleaning, emissions of controlled chemical substances per basic unit fell by 0.9%, missing the 1% improvement target. In 2025, we will move ahead with actions to meet the improvement target, including review of chemical substance use conditions and operating conditions of detoxification equipment.

### 2025 Targets Unchanged from 2024.

	2030 Targets	2024 Achievements*2
Improvement in per-unit Life cycle CC emissions index (compared to 2008)	50% improvement	44.6% improvement
	2024–2026 Targets	2024 Achievements*2
Overall (Life cycle)	3%-per-year average improvement in Life cycle CO <sub>2</sub> emissions improvement index per product	Average annual 3.76% improvement (2008–2024)
Products	3%-per-year average improvement in raw materials and use CO <sub>2</sub> emissions improvement index per product	Average annual 2.22% improvement (2008–2024)
	2024 Targets*1	2024 Achievements*2
Operational Sites	Energy consumption per basic unit: 2.4% improvement	4.6% improvement

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\*1 Calculation based on average annual improvement rate of the three most recent years. For energy consumption at Japanese operational sites, however, calculation as stipulated in Act on Rationalizing Energy Use. The basic unit denominator is decided according to the characteristics of each operational site (production volume, effective floor area, workforce, etc.)

\*2 For scope of data collection: https://global.canon/en/sustainability/report/pdf/data-2025-e.pdf

#### Index of Life Cycle CO<sub>2</sub> Emissions Per Product Unit



## **Achievement of Product Targets**

Improvement in Energy Consumption Per Basic Unit

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## **Overview of Environmental Impacts**

Total product life cycle CO<sub>2</sub> emissions (Scope 1-3)\* in 2024 were approximately 8.10 million t-CO<sub>2</sub>e. Chiefly as a result of actions to conserve energy, increased use of renewable energy, and the switch to electricity with lower CO<sub>2</sub> emissions, we achieved a reduction of approximately 300,000 t-CO<sub>2</sub>e over the entire product life cycle. The resources (input) that Canon used in its business activities and emissions (output) to the global environment over the entire product life cycle are as shown in the following chart.

#### Life Cycle GHG Emissions

Message from the CEO

Scope 1: Direct GHG emissions (combustion of city gas, LPG, light oil, kerosene, non-energy-derived GHG, etc.)

Scope 2: Indirect GHG emissions (consumption of electricity, steam, etc.)
 Scope 3: Supply chain-related GHG emissions (production of purchased goods and services, upstream transportation and distribution, use of sold products)

---- Basic unit of consolidated net sales (Scope 1-3)



\* Data for 2024 has been third-party assured. In addition, some of the data for 2022 and 2023 has been recalculated in line with the 2024 calculation method.

#### GHG Emissions in 2024

Category	Scope	2024 (1,000 t-CO2e)	Calculation Method
Scope 1	Direct GHG emissions	198	<ul> <li>Calculated by multiplying fuel usage by the emission factor corresponding to each type of fuel</li> </ul>
	Indirect GHG emissions based on market standards	733	<ul> <li>Calculated by multiplying the emission factor published for each contracted supplier by the electricity consumption used for each supplier</li> </ul>
Scope 2	Indirect GHG emissions based on location standards	847	<ul> <li>Calculated by multiplying the emission factor estimated to be the average in a specific region, regardless of the type of electricity, by the electricity consumption used in that region</li> </ul>
Scope 3	Supply chain-related GHG emissions	7,173	
Category 1	Purchased goods and services	3,201	- Calculated by multiplying the weight of each material input (including any inputs emitted as waste) by the emission factor for each material/process.
Category 2	Capital goods	733	- Calculated by multiplying the total amount of each asset category of purchased capital goods by the emission factor for each asset category.
Category 3	Fuel- and energy-related activities not included in Scope 1 or Scope 2	171	<ul> <li>Calculated by finding the total for fuel and electricity usage at each operational site and then multiplying it by the emission factor from fuel extraction to burning and power generation.</li> </ul>
Category 4	Upstream transportation and distribution	391	<ul> <li>Logistics from the supplier to Canon production sites is calculated by finding the average transport distance and transport volume and then multiplying it by the emission factor for transportation.</li> <li>Logistics from production site to customer's warehouse is calculated by multiplying the emission factor of transportation by logistics performance data.</li> <li>Emissions related to warehouse storage are calculated by multiplying the warehouse's electricity consumption by the emission factor for electricity</li> </ul>
Category 5	Waste generated in operations	24	<ul> <li>The total weight of waste generated by material and disposal process at each operational site is derived and then multiplied by the end-of-life treatment emission factor.</li> </ul>
Category 6	Business travel	50	- The emission factor for each transportation method is multiplied by the total payment amount for each transportation method.
Category 7	Employee commuting	138	- The emission factor for each transportation method is multiplied by the total payment amount for each transportation method.
Category 8	Upstream leased assets	0	<ul> <li>- CO<sub>2</sub> emissions from leased buildings and vehicles are applicable, but both are included in Scope 1 and Scope 2.</li> </ul>
Category 9	Downstream transport and distribution	52	<ul> <li>Average transport distance and weight of transported products is calculated for each region and multiplied by the emission factor for transportation.</li> <li>Emissions related to warehouse storage are calculated by multiplying the electricity consumption, derived from the annual average inventory, by the emission factor for electricity</li> </ul>
Category 10	Processing of sold products	0	- Emissions from production by outsourcing partners of intermediate products used in sale of Canon-branded products are included in Category 1.
Category 11	Use of sold products	2,196	- Lifetime energy usage is calculated for each product and then multiplied by the average electricity emission factor.
Category 12	End-of-life treatment of sold products	175	- Sold products are categorized by material and then the emission factor of end-of-life treatment is multiplied by each based on the volume of materials used.
Category 13	Downstream leased assets	42	- Annual electricity consumption is calculated for leased assets and then multiplied by the emission factor for electricity
Category 14	Franchises	0	Not applicable
Category 15	Investments	0	Not applicable

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2024 Material Balance

\*2 Plastic from used products for use as raw materials in new products

Canon compiles data for greenhouse gas (GHG; energy-derived greenhouse gas CO<sub>2</sub>, and non-energy derived greenhouse gases PFCs, HFCs, SF<sub>6</sub>, N2O, methane, and NF3). For CO2 emission factors for electricity, figures provided by individual electric supply companies are used, but publicly disclosed region-specific figures are used when figures are not provided by electric supply companies (Please refer to the website for the operational sites included in aggregation: https://global.canon/en/sustainability/report/pdf/data-2025-e.pdf. For figures on customer use, electricity consumption of products shipped in a given year is calculated based on the average lifetime and printing volume, and converted to the CO2 equivalent using CO<sub>2</sub> emission factors for electricity, which are calculated in the same way as the above methods. Past data may be revised due to improvements in the precision of data collection.

#### Third-party Assurance of GHG Emissions (Converted to CO<sub>2</sub>)

Third-party assurance has been obtained for CO<sub>2</sub> emissions data appearing in "2024 Material Balance" and "Life Cycle GHG Emissions (CO<sub>2</sub> Equivalent)" in 2024 and for each figure in "Scope 3 GHG Emissions in 2024."

## **Energy-saving Product Design**

**Environmentally Conscious Designs for Office Equipment** 

Canon's imageRUNNER ADVANCE DX C3900F series of MFDs use industry-leading low-temperature fixing toner that offers significantly improved fixing temperatures compared to conventional toners. As a result, they reduce power consumption by up to 15%<sup>\*1</sup> compared to previous models—an industry-leading typical energy consumption (TEC\*2) value. This toner boosts transfer

efficiency by controlling the shape of toner particles, resulting in less post-printing residue, meaning the same toner bottle can print roughly twice as many pages before it is returned. This reduces the amount of toner waste, notably in high volume printing conditions, leading to lower environmental impact. The eco-conscious design extends to the use of replaceable parts\*3 with longer lifespans that need replacing less often.



imageRUNNER ADVANCE DX C3900F (model shown includes optional features)



- \*1 Figure applies only to A3 model. The previous models in this comparison are the imageRUNNER ADVANCE DX C3835F, C3830F and C3826F that launched sales in October 2021
- \*2 Typical energy consumption (TEC) is based on in-house comparison with MFDs qualifying for the International Energy Star Program (digital color copiers with copy, fax and scan capabilities printing at 25–35 pages/ min); data as of August 1, 2023.
- \*3 Intermediate transfer belt, secondary transfer outer roller

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## **Calculation and Disclosure of Carbon Footprint of** Products (CFP)

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We utilize the LCA approach to help estimate the life cycle CO<sub>2</sub> emissions of Canon products. Life cycle is divided into five stages (procurement of materials; production; transportation; usage and maintenance; disposal and recycling), and we utilize LCA to calculate GHG emissions for each stage, which are converted into CO<sub>2</sub> equivalents. The CFP is a visualization tool, helping to identify emissions-intensive processes to help us design Canon products that are more energy efficient. Additionally, to enable customers to select products with lower CO<sub>2</sub> emissions, we work to disclose relevant information based on SuMPO EPD\*1 under the SuMPO environmental labeling program of the Sustainable Management Promotion Organization (SuMPO). In 2024, through collaboration with our suppliers, we were able to incorporate and disclose their primary data in SuMPO EPDs.

Additionally, by taking advantage of the Carbon Offset Program utilizing CFP promoted by Japan's Ministry of Economy, Trade and Industry, we have put in place a system for the carbon offset\*<sup>2</sup> of CO<sub>2</sub> emissions throughout the product life cycle of our office multifunction devices and some production printer products to address customer demands. Offset CO<sub>2</sub> emissions in response to customer demands totaled 1,129 tons in 2024.

- \*1 The Ecoleaf program was renamed SuMPO EPD in April 2024.
- \*2 Carbon offset involves initiatives in which a company strives to reduce its own greenhouse gas emissions, while offsetting amounts it cannot reduce by reducing or absorbing emissions elsewhere.
- Reference: Products registered for SuMPO Environmental Labeling Program (Japanese website only) https://corporate.canon.jp/sustainability/environment/customer/ products/cfp Reference: Products certified under Carbon Offset Program making use of CFP (Japanese website only)
- https://corporate.canon.jp/sustainability/environment/customer/ products/cfp-certified

## **Greater Energy Efficiency at Operational Sites**

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Reducing Power Consumption in Production Using Production Green Cost Management (GCM) At Canon, we use "GCM" to refer to the management framework we have developed that targets parallel reductions in costs and CO<sub>2</sub> emissions, alongside decarbonization efforts based on the development of green technologies. Within this framework, we focus on "production GCM" initiatives that aim to reduce the power used at the production stage. In production GCM, factory's energy data is automatically collected and plotted in graphs (visualization of electricity) through established systems, which has facilitated not only the instant identification of wasteful operations (analysis of reduction potential), but

also the systematic accumulation of data across the entire company, thereby enabling the immediate discovery of appropriate reduction measures (expansion of reduction measures).

Canon Group Overview

**Energy Cost Reduction Working Group** 

Canon created the Energy Cost Reduction Working Group in 2014 as a horizontally integrated organization to take Group-wide action on reducing energy consumption. The working group has promoted reduced energy consumption by undertaking a thorough-going analysis of the required operating environment for production equipment in the on-site manufacturing process and using its findings for instance to reduce equipment operating time, cut out excess use of pressurized air and cooling water, and adjust air conditioner settings. Measures that prove effective are adopted for horizontal rollout to Japan and overseas production sites. Moreover, staff members from our corporate headquarters in charge of this initiative perform a diagnosis of energy performance during visits to production sites all over the world. There, they check the operating status and settings of production equipment and then use their observations to make improvements to the operating efficiency of facilities and equipment and provide staff with relevant on-site training.

Since its launch, this initiative has resulted in Canonwide energy savings of 255,960 kL (crude oil equivalent).

#### Measures widely rolled out in 2024

Upgrades to high-efficiency air-conditioning units

Changes to washing water temperature

Insulation for molding machine cylinders

#### Organizational Chart of Energy Cost Reduction Working Group





System dashboard used in

production GCM

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#### Cumulative Energy Savings Through Working Group Activities (Cumulative) (kL: crude oil equivalent)



## Use of Renewable Energy

Canon is working to expand the use of renewable energy in a variety of ways, taking into account the regional prevalence of renewable energy and the initiatives of various countries. For example, we have installed solar generation panels on the premises of Canon Vietnam's Thang Long Factory, Canon Zhongshan Business Machines, and other sites, using the renewable energy generated. In addition, at five factories of four production sites—Canon Suzhou, Canon Vietnam (Thang Long Factory and Tien Son Factory), Canon Hi-Tech Thailand (Ayutthaya Factory), and Canon Prachinburi Thailand renewable energy certificates, which document the environmental value of renewable energy, were obtained again in 2024. This means that 100% renewable energy was being used at these locations.

Sales marketing companies such as Canon Deutschland and Canon (China) are also using renewable energy certificates to ensure that 100% of electricity consumption in their offices comes from renewable energy sources. Such use of renewable energy earned Canon Europe and Canon UK an "excellent" evaluation under the BREEAM\* environmental assessment standard.

## As a result of these initiatives to use renewable energy, total worldwide renewable energy consumption by Canon companies was 307,846 MWh in 2024, roughly a 1.2 times increase over 2023.

\* Abbreviation for Building Research Establishment Environmental Assessment Method. An environmental sustainability assessment method developed by Britain's Building Research Institute that evaluates buildings under nine categories, including health and wellbeing, energy, and waste.



Solar panels installed at Canon Vietnam's Thang Long Factory

## Greenhouse Gas Emissions at Operational Sites

The efforts of the Energy Cost Reduction Working Group, coupled with the rigorous streamlining of production processes and other actions by our operational sites to reduce energy use and adopt renewable energy, resulted in an approximately 2.7% year-on-year reduction in GHG emissions at operational sites, to 931,000 t-CO<sub>2</sub>e. In 2025, we will push ahead with efforts to reduce CO<sub>2</sub> emissions, mainly by saving energy and utilizing renewable energy sources at our business locations.

## GHG Emissions at Operational Sites



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\* For information on our basic approach to calculating GHG emissions, please refer to P26. Some of the data for 2022 and 2023 has been recalculated in line with the 2024 calculation method.

## **CO**<sub>2</sub> Reductions in Logistics

We are working to reduce our logistics-related CO<sub>2</sub> emission at every stage from procurement to sales. To reduce the environmental impact of transportation, we are promoting modal shifts by switching from air to sea and from road to rail or ferry transport.

We are also making an active effort in reducing the total transportation distance by promoting "container round use" which means turning import containers to reuse them for exports. In Vietnam, we actively promoted container round use through partnerships with other companies, achieving a container round use ratio of approximately 80% in Vietnam as of 2024.

Furthermore, alongside our existing efforts, we are pressing ahead with the switch to EVs for inland transportation in China.

Additionally, in transport packaging, we are working to improve transport loading efficiency by downsizing packaging, promoting the reduction of plastic in packaging materials, and reusing used cardboard as

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cushioning material. In warehouses, we are also working on reducing our environmental impact by limiting electricity consumption with LED lighting and utilizing renewable energy by installing solar panels.

#### Overview of Container Round Use (Vietnam)



#### Using More Eco-Friendly Materials



Using polystyrene foam

All-cardboard packaging

## Reducing Impact in Product Use

Thanks to energy-saving technologies used in office equipment, Canon products achieved cumulative energy savings of 7,067GWh between 2013 and 2024. This is expected to result in a CO<sub>2</sub> reduction of 3,169,000 tons.

#### Energy/CO<sub>2</sub>-saving Effects of Office Equipment (Cumulative) Cumulative amount of energy saved

---- Cumulative CO<sub>2</sub> emissions reduction effect of sold products (GWh) (1,000 t-CO<sub>2</sub>)



\* Covered products: Electrophotographic multifunction devices and laser printers for offices (excluding production printers).

\* Energy-saving effect using the average energy (electricity) consumed by products sold five years prior to each respective year, assuming that products sold each year are in use for five years.

\* CO<sub>2</sub> emissions factors are calculated by using the weighted average of sales per region based on emission factors published by the Federation of Electric Power Companies (in Japan) and the International Energy Agency (outside Japan).

# Contributing to Society by Reducing CO<sub>2</sub> Emissions

In addition to reducing life cycle CO<sub>2</sub> emissions through hardware measures, we are deploying IT solutions to improve the efficiency of work operations, reduce the movements of people and objects, and realize resource and energy savings. This also promotes CO<sub>2</sub> reduction in society as a whole. We are combining conventional visual inspection with high-resolution image capture, proprietary image processing, and AI technologies in the inspection of bridges and tunnels. By detecting cracks or other deformities using images of the structures, the system requires fewer workers and eliminates the need for physical movement of objects, enabling greater operational efficiency, realizing high performance, and reducing CO<sub>2</sub> emissions. By delivering a range of solutions to society, Canon will continue contributing to reducing CO<sub>2</sub> emissions not only in its own operations but also in society as a whole.



Examples of tunnel and bridge maintenance

Furthermore, with the recent advancements in IoT and the anticipated explosive increase in data processing due to AI utilization, there are calls for greater energy efficiency in data centers that consume enormous amounts of electricity. The Canon IT Solutions Group is promoting environmental activities in data centers with the aim of reducing CO<sub>2</sub> emissions and protecting the environment through the data center business. More specifically, it is making improvements to daily operations in collaboration with customers, such as optimizing air conditioning efficiency and cooling water temperature, as well as coming up with better equipment layouts.

The Nishi-Tokyo Data Center has gained "top-level" facility accreditation for its outstanding global warming countermeasure efforts, as well as "S" class status under Japan's Act on Rationalizing Energy Use. Also, the Okinawa Data Center became the first in Okinawa Prefecture to run on essentially 100% renewable energy. We have also donated CO<sub>2</sub> reduction credits generated from our CO<sub>2</sub> reduction activities.

Okinawa Data Center Operates on essentially 100% renewable energy

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# **Resource Efficiency**

Canon promotes recycling through the 3Rs: reduce, reuse, and recycle.

## **Managing Risks and Opportunities**

Amid concerns about cost increases due to resource constraints and regulatory compliance, Canon recognizes that improving resource efficiency and introducing 3R technologies can potentially enhance competitiveness and reduce costs. We are therefore undertaking various activities because we see opportunities in the growing demand for products that contribute to a circular society and CO<sub>2</sub> reduction through resource recycling efforts.

	2024 Targets*1	2024 Achievements*2
Operational Sites	Total waste generation per basic o 1% improvement	unit: 2.2% improvement
	Risks	Opportunities
<ul> <li>Increased procurement costs of raw materials due to resource constraints</li> <li>Stricter resource-efficiency regulation and associated compliance costs (products/services)</li> <li>Increased costs for collection and recycling of used products in each region</li> <li>Damage to corporate image from slow transition to resource efficiency</li> </ul>		<ul> <li>Business cost reduction through improved resource efficiency</li> <li>Enhanced competitiveness through 3R design and developmen of advanced technologies that promote resource efficiency</li> <li>Increased demand for products/consumables that contribute to resource efficiency (e.g., remanufactured products)</li> <li>Enhanced corporate image through publicity of our advanced approach to resource efficiency</li> <li>Offering the value of CO<sub>2</sub> emissions reduction effect through efforts to recycle resources</li> </ul>

\*1 Calculation based on average annual improvement rate of the three most recent years. The basic unit denominator is decided according to the characteristics of each operational site (production volume, effective floor area, workforce, etc.)

\*2 For scope of data collection: https://global.canon/en/sustainability/report/pdf/data-2025-e.pdf

## **Resource Efficiency**

Canon seeks to recycle used products into new ones to maximize the value brought about by resource efficiency. In particular, we have emphasized such initiatives as closed-loop recycling of toner cartridges and the remanufacturing of office multifunction devicescollecting them post-use and making them into products with good-as-new quality. Currently, Canon has sites conducting recycling, in Japan, Germany, France, the United States, and China. We are continuing initiatives aimed at circulating resources within the same regions where they are consumed. Since 2008, we have reused

38,642 tons of products and parts directly and extracted 47,681 tons of plastic from used products for use as raw materials in new products. Going forward, we will continue to reinforce activities at Canon recycling sites around the world, contributing to both a resource efficiency and the realization of a carbon-neutral society.

Amount of reused Amount of plastic used as raw material products and parts 38,642 tons 47,681 tons

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Flowchart of Resource Efficiency

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Reference: Remanufacturing of Multifunction Devices  $(\rightarrow P32)$ Toner Cartridge Closed-Loop Recycling (→P33)

### Product-to-Product Recycling Volume (Cumulative)



\* Product recycling initiatives have been ongoing since before 2007. Data are based on 2008 as the baseline year.

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## Canon Recycling Sites Worldwide



## Improving the Resources Recycling Rate for Printing Business Products

The resource recycling rate is a numerical figure indicating what proportion of the sales volume by weight of Canon's Printing Business utilizes recycled materials or components. We have set targets of 20% for 2025 and 50% for 2030, after recording a value of around 16% in fiscal 2022. The sales volume measures the aggregate weight of all Group inputs and outputs,



At Canon, we are taking the following initiatives to boost the resource recycling rate.

#### <In new machines>

- Incorporating recycled materials (recycled plastic and iron)
- Introducing and expanding easily recyclable platformtype designs

<At recycling sites>

- Developing technology geared towards improving the reuse rate of recycled machines and parts
- Improving the purity of separated recycled resources such as iron, nonferrous metals, and plastics
- Increasing the types and production volume of closedloop recycled materials

Initiatives at recycling sites are being expanded from Canon Eco Technology Park in Japan, Canon's core recycling hub, to Canon Giessen, Canon Virginia, and other overseas recycling sites.

Actions in 2024 to improve reuse and recycling led to a resource recycling rate of approximately 17%.

## Value Created by Resource Efficiency

We see initiatives at Canon's recycling sites as not only contributing to a resource efficiency but also contributing to a carbon-free future. The reuse of parts through remanufacturing and the recycling of plastics through closed-loop recycling allow us to reduce the amount of CO<sub>2</sub> emissions generated by raw material procurement and transportation compared with using new raw materials. Canon Eco Technology Park (operated by Canon Ecology Industry Inc.) emitted approximately 2,700 tons of Scope 1 and 2 CO<sub>2</sub> through site operations. We believe that these efforts have resulted in a reduction of approximately 14,100 tons of CO<sub>2</sub> emissions.

#### Example of Canon Eco Technology Park

CO <sub>2</sub> emissions from site operations (t-CO <sub>2</sub> )	CO <sub>2</sub> emissions from resource efficiency (t-CO <sub>2</sub> )
5,000	5,000
Approx. 2,700	tons
0	0
-5,000	5,000
-10,000	_10,000
_15,000	-15,000 Approx. 14,100 tons
-20.000	-20.000



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**Environmentally Conscious Design** To make effective use of our limited resources, it is imperative that resource recycling is at front of mind in product design. Starting from the design and development stage, Canon gives careful consideration to the whole process through to collection and recycling of end-of-life products. Our Environmentally Conscious Design Guidance summarizes the various considerations that contribute to resource recycling, such as miniaturization, weight reduction, adoption of environmentally friendly materials, extending product lifespan, improving maintainability, and facilitating disassembly and separation for reuse and recycling. All

## Incorporating Recycled Materials (Recycled Plastic and Iron)

Canon has hitherto promoted the use of recycled plastic

of these items are incorporated into the design process.

in some plastic parts used in multifunction devices and other products. In the new multifunction device imageFORCE C7165, released in November 2024, we achieved the use of over 30% recycled plastic by weight in the plastic materials used in the main unit.

imageFORCE C7165 (with optional attachments)

Also, starting with new products slated to be released in 2025, we will be using recycled iron for the steel parts used in multifunction devices and printer parts.

As recycled plastic is made from waste plastic and recycled iron is made from iron scrap, the introduction of these recycled materials reduces the amount of new resources used and helps increase the resources recycling rate.

Regarding recycled iron in particular, Canon directly supplies iron scrap obtained from dismantling its used multifunction devices and printers to recycled iron manufacturers. By using the recycled iron produced by these manufacturers, Canon is involved in the entire resource recycling process, thereby facilitating the circulation and effective use of limited resources.

## **Remanufacturing of Multifunction Devices**

Since 1992, Canon has undertaken remanufacturing of used multifunction devices. This process involves a system that automatically determines which parts should be reused, based on operating data about the equipment, such as the number of years in use, its history of breakdowns, and the number of pages printed. Then, following strict reuse standards, we replace any parts that show wear or deterioration. The production line and inspection processes used are on a par with those for devices made only with new parts. When a remanufactured device is shipped, it is guaranteed to offer the same level of quality as a new product. We market remanufactured devices from the imageRUNNER ADVANCE series under the Refreshed series brand in Japan and under the ES series brand in Europe.

In the Refreshed series, we have achieved a reused parts ratio of over 90% in all color multifunction devices. Especially in the imageRUNNER ADVANCE C3530F III-RG, we achieved an industry-leading reused parts ratio of 95.5% by removing the smallest imperfections with the use of sandblast polishing.\* And to promote the recycling of resources even further, we use approximately 83% recycled plastic in all of the plastic used in the packaging materials. In addition, Canon is creating product platforms to standardize parts and designing products that are easy to reuse and recycle through disassembly and cleaning.

\* A technique for polishing resin surfaces by blasting with microparticles

## Received the METI Minister's Prize at the FY2024 3Rs (Reuse, Reduce, and Recycle) Promotion Merit Awards for its Initiatives to Expand Remanufacturing of Multifunction Devices

Award background: Recognized for achieving a high level of environmental performance (high reused parts ratio) and like-new high quality.



Utilizing operational data to improve the efficiency of collection and remanufacturing

\* https://www.3r-suishinkyogikai.jp/commend/commend/ (Japanese only)



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## **Reuse of Parts**

Canon collects parts from used products for maintenance purposes. Parts extracted from used products and collected parts undergo disassembly, washing, cleaning, and reassembly before being reintroduced to the market as components of remanufactured products or as maintenance parts. Canon Giessen in Germany, Canon Virginia in the U.S., and Canon Eco Technology Park in Japan are engaged in the reuse of parts. The latter in particular is meeting maintenance demand after ceasing the production of machine casings by operating production lines for new and reused parts in parallel. By reusing some of the collected parts in the production of new parts, we can reduce the use of new resources.

## **Development and Use of Recycled Plastic** with PCR\* Rate of 70-100%

Canon Ecology Industry operates a closed-loop recycling system in which plastic parts extracted from collected machines are separated, washed and crushed to form pellets. The recycled plastic pellets are shipped to Canon production sites, creating a loop with a PCR rate of 70-100%. The cumulative volume of pellets shipped as of the end of 2024 was 51 tons.

\* PCR= post-consumer recycling (proportion of materials from returned post-use products that is recycled)

## **Initiatives Regarding Consumables**

Toner Cartridge Closed-loop Recycling In 1990, Canon launched its Toner Cartridge Recycling Program, the first such program in the industry. The program continues to operate today. Returned used toner cartridges are brought to Canon recycling sites and sorted by model. The reusable parts are then picked out, washing and maintenance are performed, and the parts are reused in new products. Parts that cannot be reused are crushed and separated by material using physical characteristics such as electrostatic properties and specific gravity. The primary material of toner cartridges is the high-impact polystyrene (HIPS) used primarily for the housing. HIPS can be used repeatedly to make new toner cartridges, a unique feature of Canon's closed-loop recycling process. We conduct used toner cartridge collection in 24 countries and regions (with a cumulative collection volume of about 473,000 tons<sup>\*1</sup> as of the end of 2024) for recycling at four sites\*<sup>2</sup> worldwide. As of 2024 we have achieved a cumulative reduction in the use of new resources of approximately 340,000 tons\*1.

\*1 Including OEM products

\*2 Japan: Canon Eco Technology Park, United States: Canon Virginia, France: Canon Bretagne, China: Canon Dalian Business Machines

Reduction of approximately Use of new 340,000 tons\*1 resources

**Collection and Recycling of Ink Cartridges** Canon has been collecting and recycling used ink cartridges since 1996. As of the end of 2024, the total volume of collected cartridges was 2,976 tons. In Japan, in conjunction with other printer manufacturers, Canon operates the Ink Cartridge Satogaeri (Homecoming)

Project, a program that utilizes collection boxes for used ink cartridges in post offices, libraries, and other locations. Schools also collect cartridges through activities related to the Bellmark Campaign. Outside Japan, cartridge collection boxes are placed in large retail stores, companies, schools, and other locations. Collected cartridges are primarily closed-loop recycled as cartridge parts.



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Collection box for the Ink Cartridge Satogaeri (Homecoming) Project

**Collection/Recycling of Used Toner Bottles** At the Canon Eco Technology Park in Japan, since 1998 we have been collecting used toner bottles and reusing them simply as containers and for the purpose of recycling the plastic materials.

Since 2022, Canon Bretagne in France has built a system for replenishing recovered toner bottles and supplying them to the regional market. This has not only further reduced the volume of plastic used, but also realizes energy savings at the point of toner bottle fabrication.

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## State-of-the-Art Automated Recycling Plant at Canon Eco Technology Park

In February 2018, we opened the Canon Eco Technology Park. Based on a "clean and silent" design concept, which overturns the traditional image of recycling operations, the facility has implemented advanced systems to further boost recycling efficiency. The Canon Automated Recycling System for Toner Cartridges (CARS-T) is a process in which, after separation using a camera-based process, used toner cartridges are crushed and materials automatically separated for recycling of the main component, high-impact polystyrene (HIPS). The sorting purity of the recycled plastic reaches 99% or greater\* with the intensive use of various separation technologies at the different stages of the process. With the recycling system for ink cartridges (Canon Automated Recycling System for Ink Cartridges: CARS-I), a camera-based automatic sorting process is applied to used ink cartridges. The automated process line covers disassembly, pulverization and washing. Separated materials are reused for ink cartridge components and packaging. Resources that cannot be recycled in product-to-product recycling are diverted to material recycling or thermal recovery processes to help maximize resource efficiency.

Furthermore, to expand the production of recycled plastic materials, in autumn 2024 we introduced a Raman spectroscopy sorting device (manufactured by Canon) that is capable of sorting black plastic. The device was exhibited at the Circular Economy Expo in October 2024, where it demonstrated sorting plastic pieces by irradiating them with laser light to recognize each one, measuring their position and color, and then sorting them using an air jet.

\* 99% or greater based on Canon's in-house sorting method



The Canon Automated Recycling System for Toner Cartridges (CARS-T)

## **Action to Reduce Disposable Plastics**

We are working to find alternatives for single-use plastics in our product packaging materials. Among the Canon products launched in 2024, 15 inkjet printers utilize pulp molds. Our office MFD imageFORCE C7165\* and the imagePROGRAF series of large-format inkjet printers both use corrugated board. Also, corrugated board is used in the packaging materials for some laser cartridges.

\* Not applicable to Asia (excluding Taiwan)



The issue with corrugated board is their increased weight, as more material is usually needed to achieve the same functionality as expanded polystyrene. To reduce packaging volumes while maintaining functionality, we are adopting packaging designs based on the use of



Assembled corrugated board packaging

prefabricated corrugated board, which reduces the weight and helps to lower CO<sub>2</sub> emissions in the transportation process.

We aim to eliminate petroleum-based single-use plastics\* in the packaging materials of newly designed products of the imaging group by 2030. Starting with the PowerShot V10 released in 2023, we have eliminated the use of plastic packaging in 24 models, including the EOS R5 Mark II, RF35mm F1.4 L VCM, and related accessories. (products announced in FY2024)

\* This refers to petroleum-derived plastics, and excludes the raw materials used for labels, coatings, and adhesives



EOS R5 Mark II adopted plant-based non-woven fabric and paper bags, reducing the plastic used in packaging

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Additionally, Canon is a member of the Clean Ocean Material Alliance (CLOMA), a public-private sector alliance that seeks a solution to the problem of marine plastic pollution through accelerated innovation and collaboration among a wide range of interested parties across industry borders. In coordination with CLOMA, we are working on a range of initiatives, including reducing the use of plastics and developing recycle-friendly products, technologies, and systems.

Plastic Busters Campaign (Stop plastic pollution)

Canon Opto Malaysia, in cooperation with the Selangor State Department of Environment, held an event on World Environment Day at the National Botanical Garden Shah Alam to raise awareness of environmental issues. A total of 500 reusable bags were distributed to attendees to promote the reduction of single-use plastic usage.



Plastic Busters of Canon Opto Malaysia

# Initiatives to Reduce Waste at Operational Sites

Canon is working hard to reduce the amount of waste it generates. Efforts include increasing recycling through sorting and collection and minimizing initial waste generation. In particular, we have sought to determine which factors most significantly affect waste generation at production sites for each division and each production process. Canon Prachinburi (Thailand) is engaged in the recycling of plastic scraps generated during production, while Canon Dalian Business Machines is working on the filtration and recycling of grinding fluids. In addition, Fukushima Canon and the Toride Plant have introduced an automatic collection and aggregation system for waste data at the time of disposal, making it easier to allocate waste by workplace and facilitating efficient reduction activities.

Total waste generated in 2024 was 93,942 tons, an increase of 9.6% compared to 2023.

#### Total Waste Generated



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 \* Excludes disposal of products collected after use.
 \* The scope of aggregation mainly includes companies that have acquired ISO 14001 consolidated certification.

Initiatives Related to In-house Waste Recycling and Outside Resource Recovery

Canon actively works to reduce the amount of waste originating from its operations and to reuse or recycle waste where possible, appropriately disposing of any waste that can be neither reused nor recycled in accordance with the law. Our various operational sites employ a range of in-house recycling schemes, including reprocessing waste plastic from injection molding as artificial wooden benches or recycling it for other items. Even in the case of waste that must be sent outside the company, we outsource the recycling of each resource to ensure that it does not enter landfills\*. Rather, we contract with companies that reprocess waste into materials. In 2024, contracted companies processed 92,229 tons of waste from Canon back into materials.

\* Except for some general waste generated by business activities that is disposed of under government oversight.

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# **Chemical Substances**

Canon thoroughly manages chemical substances in products and those used in manufacturing processes.

## **Managing Risks and Opportunities**

As a company that operates globally, Canon cannot ignore the various risks we face, such as that stricter regulations will increase the costs of chemical substance management and cause the suspension of production or disruption to the parts supply chain among suppliers. From this perspective, we are committed to supplying safe products and maintaining competitiveness through more advanced chemical substance management, contributing to management efficiency across the supply chain and to international standardization.

	Explanation	
Prohibited substances	Chemical substances which cannot be used in products	
Use-restricted substances	Chemical substances for which we are working to find alternatives by specific deadlines	
Controlled substances	Chemical substances for which the amount should be monitored	

## Utilization and Development of the chemSHERPA System for Information Sharing on Chemical Substances

To manage chemical substances appropriately, it is important to share information on the chemical substances contained in materials, parts, and products accurately and efficiently along the supply chain from upstream to downstream, and to ensure compliance with all applicable regulations. After adopting the IEC62474\* international standard data scheme, Canon in 2017 began utilizing the chemSHERPA data scheme for information sharing, standardized under the initiative of Japan's Ministry of Economy, Trade and Industry. As of 2024, more than 99% of survey replies from suppliers have been made through chemSHERPA. This has led to increased workplace efficiency while helping alleviate the administrative burden on suppliers. Meanwhile, for suppliers who have difficulty with the reply process, we have prepared guide manuals in Japanese, English, and Chinese to promote the progressive global adoption of chemSHERPA.

\* Material Declaration for Products of and for the Electrotechnical Industry. International standards issued by the IEC (International Electrotechnical Commission) in March 2012 aiming to streamline the material declarations on chemical substances and compositions contained in the products of the electrotechnical industry in the global supply chain.

2024 Targets*1			2024 Achievements*2
Operational Sites	Emissions of controlled chemical substances per basic unit: 1%		0.9% deterioration
	Risks	Ор	portunities
<ul> <li>Increased chemical substance management costs due to strengthened and expanded regulations</li> <li>Suspension of production or disruption to parts supply chain due to serious noncompliance by suppliers</li> <li>Damage to corporate image due to poor regulatory compliance</li> </ul>		<ul> <li>Supplying safe products an through more advanced ch</li> <li>Cost reduction through inc including within the supply</li> <li>Enhanced corporate image international standardizati</li> </ul>	Id maintaining competitiveness nemical substance management reased management efficiency, y chain through contribution to on

\*1 Calculation based on average annual improvement rate of the three most recent years. The basic unit denominator is decided according to the characteristics of each operational site (production volume, effective floor area, workforce, etc.)

\*2 For scope of data collection: https://global.canon/en/sustainability/report/pdf/data-2025-e.pdf

## Approach to Managing Chemical Substances

Canon strictly manages chemical substances in products as well as those used in manufacturing processes. Our basic approach to management involves confirming products do not contain regulated chemical substances that exceed the prescribed standard and production sites do not discharge regulated chemical substances that exceed the prescribed standard.

# Management of Chemical Substances in Products

Canon has built a Canon-wide environmental assurance system for managing chemical substances in products.

Taking the laws and major environmental-labeling requirements around the world into consideration, we established in-house standards in line with the most stringent regulations in the world, and are working to develop products that comply with these standards. Specifically, we classify and rigorously manage chemical substances as shown in the table below. To ensure rigorous management and compliance with laws and regulations, the latest Canon Green Procurement Standards (Ver. 16.0), issued in July 2024, make even stronger demands of suppliers, clarifying the need to provide reliable chemical substance information.

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## Participation in Study of Next-Generation Information Sharing Scheme

Discussions are underway across industries on the Chemical and Circular Management Platform (CMP), a next-generation information sharing scheme that seeks to address issues that face current information sharing methods, such as lowering the burden of chemical substance surveys throughout the supply chain and the need to readminister surveys when regulations change. Taking part in the CMP discussions as a key member, Canon will continue to work through these activities to address issues in the sharing of information about chemical substances and reduce the burden across the supply chain.

### Fluorine-free Water Repellent Coating Material

PFAS are known as "eternal chemicals" because they persist in the environment for long periods of time. Since they can contaminate tap water and soil and cause damage to health, there are growing calls for their reduction. To address social demands for the reduction of PFAS, Canon Optron has developed OR-510, a fluorine-free coating material. Offering water repellent and antifouling properties and a low refractive index, the coating makes it easier to wipe off fingerprints on smartphones and tablets and reduces the adhesion of water droplets without interfering with the optical properties of glasses, sunglasses, and camera lenses.



OR-510 Coated

OR-510 Uncoated

# Managing Chemical Substances Used in Manufacturing Processes

The chemical substances handled during manufacturing at Canon include "controlled chemical substances"

#### List of Controlled Chemical Substances

regulated in terms of safety such as negative impact on human health, the environment, and flammable risk. Canon categorizes these substances and has put effective measures in place for each category.

Rank	Explanation
А	Substances specified by the Chemical Weapons Convention, the Stockholm Convention, the Montreal Protocol and the Convention concerning Safety in the Use of Asbestos, as well as specified greenhouse gases (PFCs/HFCs/SF6), other soil and groundwater pollutants, and substances that significantly impact people's health
В	Greenhouse gases other than PFCs/HFCs/SF6, greenhouse gases whose global warming potential (GWP) has been determined by the IPCC, volatile organic compounds (VOCs), and other substances designated by Canon
С	Chemical substances with defined compliance requirements, including compliance with reference values and the ascertainment of usage and storage quantities

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#### Reducing Use and Emissions of Controlled Chemical Substances

Canon engages in various initiatives at its operational sites to reduce emissions of controlled chemical substances, including reducing the volume of substances used by improving production processes and reusing the substances. In 2024, Canon Dalian Business Machines took steps to reuse and recycle solvents, as did Canon Inc., Taiwan, amid other efforts to replace controlled chemical substances with other substances.

# Emissions of Controlled Chemical Substances and Amount of Chemical Substances Designated by the PRTR System\*

0.015





 \* PRTR System: Pollutant Release and Transfer Register System, a notification system for the transfer and release of chemical substances.
 \* Controlled chemical substances exclude regulated substances.

\* The scope of aggregation mainly includes companies that have acquired ISO 14001 consolidated certification.

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## Reducing Emissions into the Atmosphere and Waterways and Preventing Pollution Canon alleviates the environmental impact of its operational sites by reducing emissions of NOx<sup>\*1</sup> and SOx<sup>\*2</sup>, which are major causes of air pollution and acid rain; reducing discharge of phosphates and nitrogen compounds, which cause the eutrophication of water environments; and, reducing BOD<sup>\*3</sup> and SS<sup>\*4</sup>, which indicate an environmental impact in water areas. One example of this is Canon Components, the first member of Canon to introduce a new treatment process to reuse the active carbon contained in waste sludge. By removing the small residue of ink in treated wastewater, this process realizes reduced environmental impact.

To prevent air pollution, when installing or updating equipment that uses fuel, we opt for fuels that minimize generation of air pollutants (such as sulfur oxide, nitrogen oxide and soot), and have banned the use of heavy oil in principle. Furthermore, we have designated ozone-depleting substances and persistent organic pollutants cited in the Stockholm Convention on Persistent Organic Pollutants as banned substances. With regard to wastewater, each operational site sets standard values based on local laws and regulations. Also, control values are set at 80% of the standard values as management standards at each site. We regularly check the status of compliance with management standards.

- \*1 Nitrogen oxides (NOx) A major cause of air pollution, acid rain and photochemical smog, NOx is generated when the nitrogen in fuels is oxidized or when nitrogen in the atmosphere is oxidized during hightemperature combustion.
- \*2 Sulfur oxides (SOx) A major cause of air pollution and acid rain, SOx is generated when fossil fuels, such as oil and coal, are burned.
- \*3 Biochemical oxygen demand (BOD) BOD is the amount of oxygen consumed when microorganisms degrade organic matter in water. Larger figure indicates worse water quality.
- \*4 Suspended solids (SS) A collective term used for substances of less than 2 mm in diameter that float in the air and do not dissolve.

### Soil and Groundwater Management Status

Canon places high priority on soil and groundwater protection. In line with this, we established the Canon Group's Basic Policy on Soil and Groundwater Pollution and implemented comprehensive measures based on it. In the unlikely event that soil or groundwater pollution is found at one of our operational sites, cleanup and remedial actions are carried out in close accordance with all relevant laws (see table below). Canon has also adopted an internal standard for acquiring new land, conducting a preliminary soil examination and carrying out any other necessary procedures, such as soil remediation, before making the purchase. We also monitor the chemical substances used at each site and, considering applicable national and regional standards, develop risk countermeasures according to the local situation.

## PCB Waste Management

In accordance with relevant laws, Canon strictly manages polychlorinated biphenyl (PCB), which damages living organisms and the environment. As of December 2024, no operational sites stored highly concentrated PCB waste.

#### Status of Soil and Groundwater Management Activities

Operational Site	Substances	Substances Measures	
Shimomaruko	1,2-dichloroethylene	Injection of treatment agents, water quality measurement	
Utsunomiya parking lot 1	Fluorine and its compounds, etc.	Pumping, water quality measurement	
Toride	Trichloroethylene, etc. Hexavalent chromium and its compounds	Covering, pumping, water quality measurement	
Canon Ecology Industry	Trichloroethylene, 1,1-dichloroethylene	Covering, pumping, water quality measurement	
Canon Components	Mercury and its compounds	Covering, water quality measurement	

\* Reports are made to the authorities concerning sites where remediation is in progress.

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# **Biodiversity**

Under our Biodiversity Policy, we have formulated the slogan 'Nature Positive' and are pursuing activities rooted in local communities worldwide.

### **Managing Risks and Opportunities**

The reduction in the supply of printing paper due to the decrease in forest resources, unstable water supply caused by abnormal weather, and the disruption of local ecosystem balance pose risks that constrain business activities. At the same time, regional water stress brought about by business activities also warrants attention. From this perspective, we ensure that we conduct business in harmony with the local community by capitalizing on our own products and technologies in conserving ecosystems, contributing to the local community, and devising actions to minimize our impact on the environment.

2024 Targets*1		2024 Achievements*2
Operational Sites	Water usage per basic unit: 1% improv	vement 0.6% improvement
	Risks	Opportunities
<ul> <li>Reduced supply and higher cost of printing paper due to declining forestry resources</li> <li>Restraints on business activities due to disruption of local ecosystems</li> <li>Impairment of stable water supply and impacted business operations due to extreme weather events</li> </ul>		<ul> <li>Application of our products and technologies to ecosystem conservation</li> <li>Enhanced corporate image through contribution to local communities</li> </ul>

\*1 Calculation based on average annual improvement rate of the three most recent years. The basic unit denominator is decided according to the characteristics of each operational site (production volume, effective floor area, workforce, etc.)

\*2 For scope of data collection: https://global.canon/en/sustainability/report/pdf/data-2025-e.pdf

## **Biodiversity Policy**

Canon recognizes biodiversity as essential for a sustainable society. We carry out various activities to conserve and protect biodiversity under the Canon Group Biodiversity Policy.

Canon believes that actions to conserve biodiversity will prevent the loss of economic activity, create jobs and business, and lead to Canon's sustainable development. For this reason, we are currently assessing issues related to the natural environment, including our dependence on natural capital and our impact on such capital, and are steadily increasing our disclosure on these issues in accordance with the framework of the Task Force on Nature-related Financial Disclosures (TNFD).

Reference: Canon Group Biodiversity Policy https://global.canon/en/sustainability/environment/biodiversity/policy/

Initiatives to Support Continuous Use of Sustainable **Forestry Resources within Value Chain** To help support biodiversity across the value chain, Canon promotes the use of sustainable forestry resources as the raw materials for the paper used in its products. Having established procurement policies favoring the purchase of paper products derived from sustainably sourced wood pulp in 2015, we sell office paper made under forest certification schemes or using environmentally conscious raw materials.

Reference: Basic Policy on the Procurement of Timber Products https://global.canon/en/sustainability/environment/biodiversity/policy/

## **Canon Bird Branch Project**

Biodiversity refers to the way living things interact as they coexist on earth. Within this sphere, birds occupy the top position in a local ecosystem pyramid of plants, insects, and small animals, symbolizing the cycle of life. Emblematic of our activities based on the Canon Group Biodiversity Policy is the Bird Branch Project, which Canon has been promoting since 2015. The project encompasses a range of bird-centered activities at operational sites in Japan and overseas. For example, Canon's Shimomaruko headquarters complex in Tokyo includes a greenspace with a wide variety of trees that we call the Shimomaruko Woodland. Under the supervision of the Wild Bird Society of Japan, a monthly census of the migration of wild birds is carried out. The number of observed species has grown from 23 in 2014 to 43 as of the end of 2024, indicating the success of our efforts to promote species diversity.

At Canon Ecology Industry, with the support of experts from the Wild Bird Society of Japan, we have been actively working to attract kingfishers to the retention pond at the site since 2020. This has included releasing small fish species such as gudgeon and ginbuna that are common prey for kingfishers, which has resulted in an adult kingfisher being observed at the site.

In addition to maintaining green space on the grounds, Oita Canon Materials is pursuing greening activities that pay special attention to harmony with the surrounding environment and Japan's four seasons. The subsidiary also installed nesting boxes to create a bird habitat and conducted a seasonal plant and animal life census in collaboration with the National Institute for

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Environmental Studies, as well as hosting factory tours for elementary school students.

Canon Fuji-Susono Research Park properly maintained and managed the green space that covers 88% of the site, as well as planting trees and installing nesting boxes to create an environment hospitable to incoming wild birds. In addition, we conducted local cleanup activities, including areas surrounding the park office, and held on-site environmental classes and career education for elementary and junior high school students.

Canon China held a bird watching event in June 2024 in collaboration with three Canon companies in Beijing and Shanghai. More than 50 employees and their families took part, under the guidance of experts. Canon China is also actively disseminating information via its website and social media.

Canon U.S.A. carries out a variety of activities, including Bird Watching Walks, where employees observe wild birds with experts while exploring the premises.

At other sites as well, we have created biotopes, with bird baths and nesting boxes installed and kept clean and measures taken to protect against bird strikes, creating on-site environments conducive to bird life. By sharing successful nesting inside nesting boxes and other activities, it gives employees an opportunity to study aspects of the lives of wild birds even in familiar surroundings. Meanwhile, 12 of our operational sites, including Oita Canon Materials, participate in the seasonal wildlife monitoring scheme proposed by the National Institute for Environmental Studies. Participants report the species of bird, plant, reptile, and insect observed at the site as well as the date on which the first birdsong of each species is heard, the date on which it is first seen, and the date on which each tree or plant

begins to flower. These data also make a useful contribution to academic studies.





The common kingfisher that flew into the site



Bird Watching Walk at Canon U.S.A.



Forest clean-up activities

Provision of greenspace



Environmental outreach classes



Sand dam

construction

Environment

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nesting boxes

Worldwide rollout of locally focused activities









Restoration of coral reefs

Protection of marine mammals and sea turtles



recognized for its role in the

Canon Bird Branch project.

The Oita Plant of Oita



"Nature Symbiosis Site" certificate

\* Other effective area-based conservation measures



Tree-planting activities

River clean-up activities



Beach cleanup



Contributing to "30by30 Global" Target

Canon's Shimomaruko Headquarters was certified as a

"Nature Symbiosis Site" under a scheme by the Ministry

of the Environment. This project certifies areas where

biodiversity conservation is being promoted through

private-sector initiatives. It forms part of the Japanese

government's plans to protect at least 30% of Japan's

target. Certified areas were registered as OECM\* sites on

an international database in 2024. The recently certified

Shimomaruko Woodland is home to nearly 1,000 trees,

including around 80 different species. Besides helping to

preserve local biodiversity, the green space has also been

land and sea by 2030, as part of the global "30by30"

In 2023, a green zone located on the premises of

Reforestation activities



Wastewater recycling systems

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Environmental protection activities

Elimination of invasive species

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## 'Nature Positive' Initiatives at Canon

Biodiversity has come to be recognized in recent years as an issue facing global society as a whole, and the notion of 'nature positive' initiatives that seek not only to conserve but also restore biodiversity has gained attention. Canon has adopted Canon-wide slogan 'Nature Positive' to guide our collaboration with stakeholders at marketing and production sites worldwide in developing activities in line with local needs.

Start of Tree Planting Activities to Create a New Forest To replace the trees cut down for the construction of its new headquarters building, Canon Production Printing Netherlands has planted a new forest under the guidance of the nature conservation organization Het Limburg Landschap\*. A total of about 2.66 hectares of former farmland has been designated as permanent

### Using Imaging Technology to Conserve Coral Reefs

Canon Europe have partnered with the London-based Coral Spawning Laboratory to support global coral reef conservation efforts. The cameras and lenses provided to the Coral Spawning Laboratory are expected to contribute to the conservation of coral reefs by being used to observe and study the life cycle of corals, such as how and when they release eggs that are not visible to the naked eye.

#### Comment from Researchers at the Coral Spawning Lab

It is thought that we probably have a window of no more than eight years left to restore global coral reefs. If we don't make any significant positive impact by then, it is possibly too late. At the Coral Spawning Lab, we are seeking to

replicate the conditions of nature, but are able to apply much more control. This allows us to evaluate which approaches work and which don't, including flow rates, feeding methods, and lighting intensity. As part of the process of recording the development and growth of coral, we use lots of imagery to learn about the coral's health, using things like its light and color. Now, we are able to incorporate Canon's imaging technology into that research process. The equipment Canon provides allows us to closely monitor the life cycle of the coral while also communicating our activities to the world.

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Sustainable Environment Creation Program: Branch Out Canon Canada's Branch Out program gives employees at all levels the opportunity to contribute to creating green spaces and sustainable environments in their local communities during their working hours. In 2024, Branch Out reached a major milestone, celebrating 10 years of positive environmental impact. Since 2014, Canon Canada employees have volunteered more than 10,000 hours, planted over 36,000 trees, and removed more than 18,000 m<sup>2</sup> of invasive species. These efforts are just one of the reasons why Canon Canada has been named one of Canada's Greenest Employers for the sixth year in a row.

Creating nesting boxes

Wetlands Habitat Conservation for Migratory Birds In the Mai Po Nature Reserve, a famous wintering ground for migratory birds, volunteers from Canon Hongkong, Canon Electronic Business Machines (H.K.), and Canon Engineering Hong Kong worked to remove overgrown vegetation that was hindering the birds from foraging for food. Employees used eight wheelbarrows to collect grass, which became additional food for three water buffaloes that live in the Mai Po Nature Reserve.



Employees planting trees



Environment

"forest." With a total of around 5.850 trees and 7.300 bushes planted, the new forest will become part of a

\* Het Limburg Landschap nature conservation organization: the state

foundation in the Netherlands for the management of natural sites with the aim of conserving, managing, and developing nature and landscapes.

natural link between two local nature reserves.

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Volunteers clearing overgrown vegetation

#### Protecting Insects

Canon Giessen is working to protect insects by installing dead hedges and insect hotels\* for insects to live in. They also scatter flower seeds to create and improve a habitat and food source for insects, and also provide a water source lined with moss and stones to prevent the insects from drowning. Insect populations in Europe have been shrinking for more than 10 years, with the loss of habitat, the use of agricultural insecticides, the lack of nesting areas, and climate change all contributing to the decline. Preventing insect decline through these efforts also helps protect the birds that feed on the insects.

\* Insect hotel: A habitat for insects made from natural materials like bamboo and other wood types



The installed insect hotel

## Water Resources Policy

At Canon, we rely on numerous water resources in its production processes. We have therefore formulated a Canon Group Water Resources Policy, and we work both to promote the effective use of water and to prevent water pollution. We also recognize that water is closely linked to climate change and other environmental issues, and we understand impact on the environment.

Based on our corporate philosophy of *kyosei*, at Canon we are working with various parties—including local communities and our suppliers—to reduce our use of water resources, and to minimize our impact on the environment.

Reference: Canon Group Water Resources Policy https://global.canon/en/sustainability/environment/water/policy/

# Initiatives for Sustainable Use of Water Resources

### Reducing Water Usage

Canon collects water data by intake source (public water system, industrial water system, or groundwater) and manages water resources carefully so as not to exceed intake limits for the different regions in which it operates. We also set and manage targets for the volume of water used in production, and constantly strive to further reduce water usage by improving production processes, raising water-usage efficiency and enhancing the quality of our water management.

Third-party Assurance

## Helping to Significantly Reduce Water Usage in Semiconductor and Electronic Devices Manufacturing Semiconductors are an indispensable part of our everyday lives. Amid mounting demand for semiconductors in recent years, semiconductor plants are being built across regions both in Japan and overseas. From the perspective of both the environment and costs, there are strong calls for semiconductor plants to reduce their environmental impact.

The semiconductor manufacturing process involves the use of a large volume of water resources for cleaning materials and cooling manufacturing equipment. Taking the needs of the environment and customers into account, Canon ANELVA has developed a new product family, Adastra, with the aim of conserving energy and resources, including cooling water. The company significantly revised the cooling water system of Adastra products, reducing cooling water usage by 55%

compared to previous models and reducing energy-related CO<sub>2</sub> emissions by 18%. Modules can also be combined flexibly and the equipment can be used in the fields of semiconductors and other electronic devices, making it suitable for an array of development and mass production scenarios.

As Adastra products gain use in a broad range of fields and in a variety of situations, they will contribute to a better future for people and the natural environment.





Adastra series of semiconductor and electronic part manufacturing equipment

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#### Water Recycling at Production Sites

Canon promotes the recycling of water resources. For example, taking into consideration its impact on the marine ecosystem of nearby Beppu Bay, which abounds with precious natural resources and habitats, the Kitsuki Plant of Oita Canon employs a fully closed wastewater system that discharges only rainwater. At Canon Ecology Industry, wastewater from equipment used in air conditioning and other infrastructure is treated and recycled for reuse in the production process of toner and ink cartridges. Canon Inc., Taiwan's production site re-uses the wastewater from the cleaning equipment in the polishing process. We are also working to keep water consumption at our marketing sites to an appropriate level by measuring and monitoring the amount of water used at main sites. To reduce water consumption at its head office building through water recycling, Canon Marketing Japan is cooperating with the Shinagawa Grand Commons Community Development Council, an association of local business enterprises, in a reclaimed water utilization project under which recycled water supplied by the Tokyo Sewerage Bureau is used for flush toilets and other purposes. In 2024, water consumption increased by 0.3% from the previous year to 8,693,000 m<sup>3</sup>. This reflected larger water volumes used in cooling for facility maintenance purposes and due to the higher prevailing temperatures, which more than offset the ongoing efforts of Canon sites to reduce water usage.

#### Use of Water Resources



\* Third-party assurance obtained for water consumption figures from 2018.
\* The scope of aggregation mainly includes companies that have acquired

ISO 14001 consolidated certification.

# Water Risk in Regions Where Production Sites Are Located

Canon assesses locations to confirm available water intake volume before establishing operational sites and facilities. We use the AQUEDUCT water-risk mapping tool provided by the World Resources Institute\* for quantitative evaluation and reconfirmation of water risk in regions where production sites are located, and work to reduce water consumption in response to local conditions. Furthermore, among our production sites and plants in Japan and overseas, although four locations were found to be at medium-high risk of flooding near rivers or along coastal areas, we have already implemented necessary measures according to the situation at each location. (→P22)

\* World Resources Institute: WRI is an independent institute based in the United States that conducts policy research and provides technical assistance concerning environmental and development issues around the world.

# Water Risk (Quantitative) in Countries and Regions with Major Production Sites

Third-party Assurance



\* Result of "physical risk quantity" assessment of production sites (as of end of 2020) using AQUEDUCT water-risk mapping tool (Version 4) (as of February 2025)

## Water Resource Conservation Initiatives

Arakawa River Water Quality Maintenance and Environmental Conservation Activities Since its founding, Fukushima Canon has worked to protect the environment and to maintain the water quality of the Arakawa River, a Class A river that flows through the center of Fukushima City. Employees participate in the Arakawa River cleanup campaign organized by the Council to Consider the Future Arakawa River.

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Employees and their families participating in the Arakawa River water quality maintenance and environmental conservation activities

#### Mangrove Planting

Canon Business Machines (Philippines), Inc. planted mangroves in collaboration with local city officials on the coast of Lemery, a city on the island of Luzon. Mangroves are said to be a cradle of life because they foster rich ecosystems; they also help prevent water pollution. Moreover, they hold the promise of contributing to lower CO<sub>2</sub> emissions. This project planted 500 mangrove seedlings.



Employees taking part in mangrove planting activities

**Environmental Compliance and Pollution Prevention** Canon Virginia (CVI) and Canon Environmental Technologies (CETI) are committed to preventing water pollution. Both CVI and CETI received the Compliance Gold Award from the Hampton Roads Sanitation District, the wastewater regulatory authority and wastewater treatment operator in Hampton Roads, Virginia. The award recognized both companies' compliance with wastewater regulations and outstanding pollution prevention activities. The district also presented CETI with the Pollution Prevention Award for its implementation of a CRIC\* toner cartridge recycling line.

\* CRIC: Circulate Resources Inside Canon toner cartridge automated recycling project.



CVI and CETI employees show their awards

**Coastal Cleanup Activities, Participation in International Research Activities** Canon Inc., Taiwan took part in an environmental event organized by the Ministry of Environment. Employees cleaned up Haomeili Beach in Chiayi County, collecting a total of 1,096 kilograms of marine debris. In addition, the company used a marine debris survey form provided by ICC\* to report on their activity to the ICC organizers.

\* International Coastal Cleanup: ICC is an international initiative organized by U.S.-based nonprofit organization Ocean Conservancy, which involves surveying debris picked up in the same manner at the same time in oceans, rivers, lakes, and other bodies of water around the world, and sharing the data.



Third-party Assurance

Employees participating in coastal cleanup

**Coastal Cleanup Activity: Clean Coasts for Tomorrow** Employees from the Mumbai office of Canon India worked with the youth from villages the company supports on the outskirts of Mumbai to clean up the local Aksa and Gorai beaches. Canon India aims to raise environmental awareness, particularly among the younger generation, and stresses the importance of protecting coastal and marine ecosystems.



Employees and youth from the village who took part in the cleanup activity