Materiality 5

Preventing Pollution and Conserving Ecosystems

Goals for the Fiscal Year Ending March 2031 (What Nikon Intends to Achieve)	What Nikon Needs to Do	Related SDGs	Targets for the fiscal year ended March 2022	Scope	Results
• Zero usage of hazardous chemical substances in manufacturing processes • Zero hazardous chemical substances contained in products • Continue to preserve the environment in the vicinity of company facilities through local community contribution activities that take marine plastic pollution issues into account • Use FSC-certified paper for all paper items bearing the Nikon logo	**By the fiscal year ending March 2031, strengthen the system for appropriate management and reduction of hazardous chemical substances used in production processes or contained in products** • Comply with the laws, ordinances and regulations of the countries and regions where we operate and also manage the use of chemical substances appropriately based on more rigorous voluntary targets • Aim to maintain the natural environment of communities and provide a comfortable living environment	12,14,15	• Promote substitution for restricted halogenated substances and HFCs based on the Hazardous Chemical Substances Guideline	Nikon and Group manufacturing companies	• Confirmed usage termination deadlines Methylene chloride (Halogen-based): March 31, 2024 HFCs and other prohibited substances: March 31, 2025
			• Comply with the laws and regulations of each country governing hazardous chemical substances • Strengthen the management system for the chemical substances contained in products	Nikon Group	• Straps provided with some binoculars (e.g., the MONARCH 5) contains substances restricted under the REACH Regulation • Revised the management system for hazardous chemical substances contained in products
			• Perform local community contribution activities that take marine plastic pollution issues into account at least once a year at every facility	Nikon Group	• Local community contribution activities that take marine plastic pollution issues into account: 29 activities with a cumulative total of 1,057 participants (at 21 facilities)
			• Promote changing Nikon logo-bearing documents to be printed on FSC-certified paper	Nikon Group	• Newly ordered product catalogs: Around 95% for use in Japan, North America and Europe are printed on FSC-certified paper, excluding special paper types

Reducing Hazardous Chemical Substances in Products

Responding to Regulations on Hazardous Chemical Substances

System and Framework

To safeguard human health and reduce environmental risks, the Nikon Group strives to implement rigorous chemical substance management that adheres to international regulatory frameworks. More specifically, we ensure compliance with international environmental laws and regulations, including the EU RoHS directive*1 and REACH regulation*2. Nikon products are made from a very large number of materials and components. For this reason, we work closely with our procurement partners to conduct surveys using chemSHERPA, a scheme that facilitates sharing information on chemical substances in products, reducing the use and discharge of hazardous chemical substances in the supply chain.

*1 EU RoHS Directive
RoHS stands for "Restriction of Hazardous Substances." This directive restricts use of specified hazardous substances in electrical and electronic equipment.

*2 An EU regulation on chemical substances that came into effect in 2007. REACH stands for "Registration, Evaluation, Authorisation and Restriction of Chemicals." Under this regulation, manufacturers and importers of chemical substances are required to register information on the safety and use of these substances.

Promoting Green Procurement (➡ P99)

Main Measures for Chemical Substance Management

1. Researching recent global trends in related laws and regulations
   - Collecting information from external committees, etc.
2. Implementing surveys of hazardous chemical substances in products
   - Conducting surveys via the supply chain
   - Making effective use of IT to realize efficient data management
   - Implementing chemical analysis, etc.
3. Discussing countermeasures of the Nikon Group
   - Utilizing the relevant internal environment-related systems (committees, etc.)
4. Communicating countermeasures, both internally and externally, in a timely manner
   - Providing instructions regarding reduction of hazardous chemical substances, switching over to alternative substances, etc.
   - Formulating and updating the Nikon Green Procurement Standards
5. Confirming compliance with laws and regulations
   - Implementing product/packaging assessments
6. Confirming how procurement partners manage chemicals and helping to upgrade their processes
   - Implementing CMS assessments for procurement partners
   - Providing support to procurement partners for building CMS systems

Abolition of All Ozone-Depleting Substances

Activities and Results

As of the fiscal year ended March 2009, the Nikon Group has abolished the use of substances that contribute to the depletion of the ozone layer (HCFCs). These substances had previously been used as refrigerants needed to regulate the temperature in FPD lithography systems and semiconductor lithography systems. For devices previously sold that used HCFCs as their refrigerant, the Nikon Group is developing new types of air-cooling units that do not use HCFCs, and which can be installed in these older devices. With this modification, the Nikon Group is helping to not only reduce the use of HCFCs, but also to extend the product lifespan of older devices.

Technology Without Hazardous Substances

Activities and Results

The Nikon Group works to develop technologies that do not employ hazardous substances.

Use of Lead- and Arsenic-free Technology

In the 1990s the Nikon Group adopted the use of lead- and arsenic-free glass*, in the recognition that the lead and arsenic used in most optical glass at that time had a serious environmental impact. We are also thoroughly utilizing lead-free solder. Today, with the exception of certain products with special specifications for industrial use, the utilization rate of lead-free solder in new designs is 100%.

* Nikon has developed a new type of glass that contains absolutely no lead or arsenic for the optical glass used in the lenses and prisms built into its optical instruments. Nearly all of Nikon's product lines have a 100% utilization rate of lead- and arsenic-free glass.

Adoption of Hexavalent Chromium-free Technology for Surface Treatment Processes

Nikon has formulated rigorous technical standards in order to discontinue the use of heavy metals (hexavalent chromium, lead, cadmium, and mercury) in all surface treatment processes, including plating. We provide separate technical support to the procurement partners to which we outsource surface treatment processes, and use chemical analysis to check actual products delivered.

Replacement of Parts Containing the Organofluorine Compound PFOA

In July 2020, the widely-used organofluorine compound PFOA became a prohibited substance under the EU's 2019/1021 persistent organic pollutants (POPs) regulation*. Prior to this, the Nikon Group designated organofluorine compound PFOA as a prohibited substance in the Nikon Green Procurement Standards in January 2020 and completed the replacement of parts which contained this substance.

*An EU ratified regulation under the Stockholm Convention containing provisions regarding production, market sale, restrictions on use, and measures to reduce unintentional releases of persistent organic pollutants (POPs).

Restricting the Use of Substances Restricted Under the REACH Regulations*1

In the fiscal year ended March 2022, straps provided with some Nikon binoculars (e.g., the MONARCH 5) were found to contain polycyclic aromatic hydrocarbons (PAHs) *2, a restricted substance under the REACH regulation, at levels exceeding standard values. This was due to the Nikon Group's lack of thorough guidance and management of its parts suppliers.
The Nikon Group takes this matter very seriously and is working to prevent recurrence. Measures to prevent recurrence include re-educating the relevant employees with regard to the REACH regulation, conducting surveys of chemical substances contained in our supply chain in accordance with the REACH regulation, and using analytical surveys as necessary to strengthen processes.

*1 See P81 for Reach regulation
*2 Polycyclic aromatic hydrocarbons (PAHs).
Since December 27, 2015, tight restrictions have been imposed on standard content levels of eight PAHs for some uses.

FY2021 Quality Issues (➡ P41)

Management and Reduction of Hazardous Chemical Substances

Policy and System for Management of Chemical Substances

System and Framework
Activities and Results

The Nikon Group has established and enforces the Hazardous Chemical Substances Guideline, which is stricter than the relevant statutory requirements, as a self-directed chemical substances management measure. Management standards have been established in relation to chemical substances used in the production process and contained in products, according to the risks to the environment and to health. These substances are classified as "Prohibited," "Reduced," "Controlled," or other. In particular, we have set deadlines for terminating the use of "Prohibited" substances as we work toward eliminating these substances altogether.

Following the total elimination of HCFCs in the fiscal year ended March 2021, we are taking measures against HFCs, which are greenhouse gases, and dichloromethane, which are believed to be carcinogenic. For the fiscal year ended March 2022, we have narrowed down the list of candidate alternatives and have made selections for a number of these. For HFCs, our reductions are significantly ahead of the Montreal Protocol, which targets reduction of at least 85% by 2036. We are working to develop technologies to minimize emissions of dichloromethane to the atmosphere, including sealing and substitution.

Control and Reduction of Chemical Substances in Manufacturing

System and Framework
Activities and Results

The Nikon Group implements measures aimed at preventing the incidence of environmental pollution. In concrete terms, the Nikon Group continues to strive to reduce the risk of environmental pollution to as close to zero as possible by implementing environmentally-friendly management of chemical substances, from purchase to use to disposal.

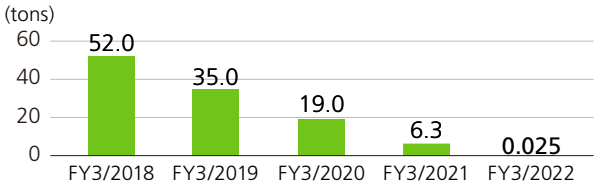
When purchasing a new chemical substance, a system has been established whereby a safety data sheet (SDS)* is obtained and a risk assessment is conducted. Measures based on the results of the assessment are then checked and confirmed by the environment department and the health and safety department from an expert's point of view.

In addition, the Chemical Substance Risk Control Team, which is a working group spanning each business unit, sets common targets for the Group in order to reduce hazardous chemical substances used in the production process.

Since the fiscal year ended March 2019, we have been working to terminate the use of 1-bromopropane. As of the fiscal year ended March 2021, the use of this substance has ended at almost all production sites, and a complete change to safer alternative substances is planned to finish by the fiscal year ending March 2023.

* Safety data sheet (SDS): To promote improvements in the appropriate management of chemical substances by business enterprises, when a chemical substance specified by the Chemical Substances Control Law (CSCL), or a product containing such a substance, is transferred or supplied from one enterprise to another, the transferring or supplying enterprise is required to provide, in advance, a safety data sheet (SDS) noting information about the characteristics of the chemical substance and how it should be handled.

● Amount of 1-Bromopropane Handled at the Nikon Group



Nikon Group's PRTR*1 and VOCs

System and Framework
Activities and Results

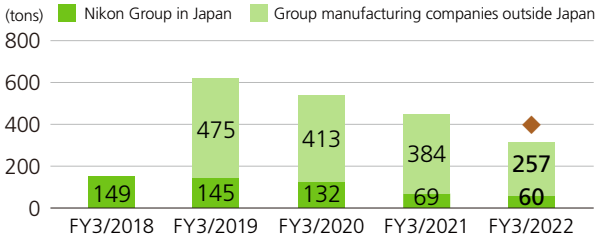
At the Nikon Group in Japan and Group manufacturing companies outside Japan, we use the Hazardous Chemical Substances Guideline to reduce the use of and manage chemical substances subject to inclusion in a pollutant release and transfer register (PRTR), and also carry out safety controls on the handling and disposal of these substances based on the safety data sheets (SDS). In addition, the Nikon Group carries out environmental information surveys twice a year to compile data on uses, disposals, transfers, etc. We implement internal management that is more rigorous than the PRTR, conducting surveys for all substances of which 100g or more are handled per year, based on our own standards, as compared to Japan's PRTR system which only requires reporting for substances of which 0.5 tons or more (or 1 ton or more, depending on the substance) are handled per year.

In efforts to reduce the amount of volatile organic compounds (VOC) *2 emitted into the atmosphere, the Nikon Group has been implementing measures to make cleaning equipment more airtight and improve the rate of reuse. In the fiscal year ended March 2022, we also strove to further reduce emissions by compiling air emission reduction measures that incorporate information obtained from outside organizations and sharing them with all of our sites. In the fiscal year ended March 2022, VOC emissions totaled 60 tons from the Nikon Group in Japan and 257 tons from Group manufacturing companies outside Japan.

*1 PRTR → P57

*2 100 major VOCs as indicated by the Ministry of the Environment

● VOC Emissions of the Nikon Group in Japan and Group Manufacturing Companies Outside Japan



◆:Values in Data Index assured by third party

Control and Disposal of Polychlorinated Biphenyl (PCB) Waste

Activities and Results

With regard to waste and in-use electrical equipment containing polychlorinated biphenyl (PCB), which can be harmful to living organisms and the environment, the Nikon Group conducts surveys of all Group companies to confirm whether they possess any such equipment, observes stringent safekeeping practices in compliance with relevant laws and regulations, and submits all required notifications to the relevant governmental authorities.

In the fiscal year ended March 2020, Nikon completed treatment of all high-density PCB waste in the Nikon Group. In the fiscal year ended March 2022, Nikon completed treatment of all transformers which create low-density PCB waste at three of its business facilities. Currently, one Group business facility in Japan possesses transformers which create low-density PCB waste. After consultation with a government-certified waste disposal operator for industrial waste, we intend to carry out treatment of this low-density PCB waste, completing treatment within the deadline of March 31, 2027 specified in the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes (PCB Special Measures Law)*.

* The Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes
A special measures law aimed at promoting the appropriate processing of polychlorinated biphenyl (PCB) waste.

Prevention of Air, Water and Soil Pollution

Activities and Results

The Nikon Group not only complies with laws, regulations, ordinances, and other rules for the prevention of air, water, and soil contamination from emission of hazardous chemical substances, but also promotes initiatives such as concluding agreements with local organizations and setting voluntary standard values in this area.

Continuing from the previous fiscal year, neither Nikon nor any Group manufacturing company in Japan emitted regulated substances into the air or into wastewater at levels exceeding those permitted by the relevant standards in the fiscal year ended March 2022.

Biodiversity Conservation

Basic Approach

Approach and Policy
Activities and Results

Corporate activities are profoundly linked to biodiversity. The Nikon Group obtains resources needed in its businesses from ecosystems and causes impacts on ecosystems from its business activities, such as emission of chemical substances and greenhouse gases. At the same time, we believe that we can contribute to biodiversity conservation through products, with a focus on the fields of nature observation, research and education.
The Nikon Group recognizes the need for biodiversity conservation for *Realizing a healthy and environmentally safe society*, which forms part of the Nikon Long-Term Environmental Vision, and is implementing related activities to this end.

Relationship between Ecosystem Services, Business Activities and Environmental Activities

At the Nikon Group, we conducted analysis and assessment of dependence and impact on biodiversity in our business activities, led by the relevant corporate departments. We also conducted hearings for business units, and an analysis and evaluation using the specialist standpoint of each department revealed high levels of dependence and impact within ecosystem services, specifically provisioning services, regulating services, and cultural services.
The Nikon Group actively works to reduce the greenhouse gas emissions and the use of hazardous chemical substances, including those stipulated in the EU RoHS Directive*[1], as well as taking steps to reduce paper usage and making a proactive effort to use FSC-certified paper*[2]. These activities help to reduce the negative impact on ecosystems. The Nikon Group is also able to exert a positive impact on ecosystems by providing products for use in educational and research activities, and by implementing corporate citizenship activities.
Going forward, the Nikon Group will continue to implement a range of environmental activities while remaining mindful of the need to preserve biodiversity.

*1 See P79 for EU RoHS Directive
*2 FSC-certified paper
Paper certified as made from wood harvested from appropriately managed forests.

● Main Nikon Group activities relevant to ecosystem services

Ecosystem services with a high level of dependence/impact		Specific examples	Major initiatives
Provisioning services	Wood materials and fibers	Use of paper as product materials (operation manuals, catalogs, packaging materials, etc.)	Reducing the Amount of Paper Used for Instruction Manuals (➡P75) Paper Usage with Consideration for Biodiversity (➡P86) Paper Resource Initiatives (➡P76)
		Use of paper in business activities (copy paper, etc.)	
	Fresh water	Use of water in business activities	Protection of Water Resources (➡P77)
Regulating services	Maintenance of air quality	Emissions of chemical substances in business activities	Reducing Hazardous Chemical Substances in Products (➡P81) Management and Reduction of Hazardous Chemical Substances (➡P83) Promoting Green Procurement (➡P99)
	Regulation of climate	Greenhouse gas emissions in business activities	Reduction of Greenhouse Gases in the Supply Chain (➡P61) Initiatives to Reduce Greenhouse Gas Emissions in Products (➡P63) Initiatives to Reduce Greenhouse Gas Emissions at Business Facilities (➡P64) Initiatives to Reduce Greenhouse Gas Emissions in Distribution (➡P68)
	Water purification and waste treatment	Generation of waste, including water discharge, in business activities	Initiatives Aimed at Reducing Waste, etc. (➡P76) Protection of Water Resources (➡P77) Management and Reduction of Hazardous Chemical Substances (➡P83)
Cultural services	Ethical values	Use of products for educational and research purposes Corporate citizenship activities	Support for Biodiversity Conservation and Restoration (➡P88) Encouraging Future Generations to Appreciate Global Environmental Issues (➡P138)

Paper Usage with Consideration for Biodiversity

Activities and Results

Paper, a forest resource, is one of the resources that the Nikon Group benefits from ecosystem services. The Nikon Group strives to reduce paper consumption as a part of the conservation of biodiversity and forest resources.
In addition, under our Paper Procurement Policy, we have recommended conversion to paper use that is mindful of the sustainable use of forest resources.
In product development, we verify the environmental sustainability of the paper resources that we use by implementing the Nikon Product Assessment and Nikon Packaging Assessment at the planning and design stage as well as at the prototyping and production stage, as we promote the utilization of biodiversity-friendly paper resources.

Reducing Resource Usage in Packaging and Instruction Manuals (➡ P75)
Nikon Product/Packaging Assessment (➡ P58)

Web Paper Procurement Policy
https://www.nikon.com/about/sustainability/environment/safety/Paper_Procurement_Policy.pdf

Conversion to Using FSC-certified Paper*

The Nikon Group is, in accordance with its Paper Procurement Policy, switching over to the use of FSC-certified paper. In initial conversions, we are prioritizing high-quantity paper use cases with a major impact on society.
In Japan, we are using FSC-certified paper for product catalogs and for printed materials, corporate envelopes, name-cards, and other items issued or used by Nikon's administration departments.
We have been implementing measures to promote the shift over to using FSC-certified paper for the paper used by our business units; in the fiscal year ended March 2022, FSC-certified paper was used for 95% of all product catalogs issued in Japan, North America, and Europe. We have also nearly completed shifting over to FSC-certified paper for instruction manuals, such as those for microscopes and measuring instruments.
The NIKKOR Z 100-400mm f/4.5-5.6 VR S, launched in February 2022, was the first interchangeable lens to use paper for its packaging box.

* See P85 for FSC-certified paper

Participation in the Consortium for Sustainable Paper Use

Nikon has joined the Consortium for Sustainable Paper Use*. Through participation in this consortium and its exchanges of information with member companies, Nikon is working to promote appropriate use of paper throughout society while strengthening its own efforts in this area.

* Consortium for Sustainable Paper Use (CSPU)
A consortium established in 2013 by a group of corporations that are playing a leading role in promoting sustainable paper use in Japan, the World Wide Fund for Nature (WWF) Japan (a major international environmental NGO), and Response Ability, Inc., a company that is working to promote sustainability in the corporate sector.

CSPU
Consortium for Sustainable Paper Use

The CSPU logo

Activities in Industry Groups

Activities and Results

Nikon participates in the Environmental Strategy Liaison Committee Biodiversity Working Group (WG) formed by the four leading Japanese electric and electronic (E&E) industrial associations*, and works to promote biodiversity conservation and restoration activities alongside the associations' member companies. This working group undertakes a wide variety of activities, including the publication of biodiversity awareness-raising materials and handbooks for activity implementation, the conducting of surveys on biodiversity-related trends, the holding of training activities, and the creation and publishing of a public database of case-studies on biodiversity conservation work undertaken by the associations' member companies.
In the fiscal year ended March 2022, we engaged with governments, NGOs, The Convention on Biological Diversity, ESG evaluation organizations, and initiative participant companies in a focus on collecting and exploring essential information on growingly-important biodiversity trends with the associations' members companies. These trends included the Post-Aichi Targets that will replace the Aichi Targets that expired in 2020, the Taskforce on Nature-related Financial Disclosures (TNFD) that was launched in June 2021, and the Science-Based Targets for Nature (SBTN), whose initial guidance was released in September 2020.
Nature-positive, a posture to return biodiversity loss to a recovery trajectory, has become a major issue for international society like carbon neutrality in climate change. Given this, we will continue to deepen our partnerships and consider ways in which the industry as a whole and our Group can respond appropriately in the fiscal year ending March 2023.

* The four leading Japanese electric and electronic (E&E) industrial associations are as follows.
These associations are collaborating on biodiversity initiatives.
JEMA: The Japan Electrical Manufacturers' Association
JEITA: The Japan Electronics and Information Technology Industries Association
CIAJ: Communications and Information Network Association of Japan
JBMIA: Japan Business Machine and Information System Industries Association

Initiatives at Each Business Facility

Activities and Results

The Nikon Group contributes towards the conservation of biodiversity and the protection of the natural environment in local communities.
In addition, having become aware that around 80% of ocean waste was originally urban waste that was washed into the sea, we are making a serious effort to keep the areas around our facilities clean, as well as working to beautify nearby footpaths and flowerbeds, etc. We also actively participate in and collaborate on environmental conservation activities organized by local communities to protect rare plant and animal species, etc., as well as other activities undertaken to revitalize the local community.
In the fiscal year ended March 2022, although the COVID-19 pandemic led to restrictions on activity content and the number of activities that could be held, a total of 1,057 Nikon employees participated in community contribution activities over the course of the year.

Nikon Corporation, Sendai Nikon Corporation, Miyagi Nikon Precision Co., Ltd., Hikari Glass Co., Ltd., Nikon Engineering Co., Ltd., Nikon Solutions Co., Ltd., Nikon Systems Inc., Nikon Business Service Co., Ltd., Nikon Product Support Corporation, Nikon Lao Co., Ltd. (Laos)
With the collaboration of local government authorities, these Nikon organizations implemented clean-up activities for garbage, fallen leaves, and other debris from parks, roads, and footpaths in the vicinity of the respective site.
In May 2021, Yokosuka Plant became an endorser of Yokosuka City's Declaration of Action against Marine Plastic Waste and joined other endorsing organizations in beach cleanup activities at Wadanahama Beach and other locations.
Also, the Nikon Yokohama Plant has registered to participate in the Hama Road Supporter program that is being implemented by Yokohama City Government. Besides carrying out clean-up activities to clean garbage, etc. from roads near the plant, the Nikon Yokohama Plant has also been implementing activities to beautify the nearby roads, for example by planting and cultivating miniature sunflowers, violas, tulips, and other plants in roadside flower-beds.

Clean-up near Nikon's Oi Plant

Tulips planted and cultivated by Yokohama Plant employees

Tochigi Nikon Corporation, Tochigi Nikon Precision Co., Ltd., and TNI Industry Corporation

These organizations undertake clean-up activities in the vicinity of each facility, and collaborated with a Tochigi Prefecture government-sponsored association for cleaning up the Naka River in line with the goal of "Realizing Zero Plastic Waste in our Forests, Countryside, Rivers and Lakes."

Tochigi Nikon Corporation employees clean up the banks of the Naka River

Optos, Inc., Optos Plc

Optos, Inc. participated in clean-up activities in the town of Hudson, Massachusetts in the United States. Optos Plc participated in the Fife Coast and Countryside Trust project to restore the sand dunes east of St. Andrews, England, exterminating the invasive tree lupine plant and helping with local ecosystem preservation.

Dune restoration project (Optos Plc)

Nikon (Thailand) Co., Ltd.

In conjunction with World Environment Day, established by the United Nations as June 5, 2021, the company conducted clean-up activities around its plant and distributed 100 mango saplings to employees, with each asked to grow a mango tree at their home.

Nikon (Thailand) Co., Ltd. employees and their families plant mango trees

Support for Biodiversity Conservation and Restoration

Activities and Results

Nikon has been supporting the AKAYA Project of the Nature Conservation Society of Japan (NACS-J) since 2006. This project involves research and verification testing aimed at conservation and restoration of biodiversity in the Akaya Forest, which is centered around an around 10,000 hectare area of national forest in the north of Minakami Town in Gunma Prefecture, and which has been designated by UNESCO as the Minakami Biosphere Reserve, as well as promoting sustainable community development that makes effective use of forest resources. In addition to providing our digital cameras and binoculars to support research activities, Nikon also encourages employees of the Nikon Group in Japan to participate in volunteer activities to help regenerate the natural forests.

Furthermore, Nikon helped to plan and create a booklet, "AKAYA NOTE," in cooperation with people involved in the Akaya Project, and has been distributing it to the people of Minakami every year since 2019. In Minakami Town, this booklet is utilized in environmental education at schools, where UNESCO biosphere reserve classes are taught by visiting teachers.

Nikon Group employees participate in volunteering activities that seek to accelerate the regeneration of natural forest by removing trees and plants that retard the growth of young trees. The effectiveness of these activities has been verified by periodic monitoring surveys.