Materiality 4

Promoting Resource Circulation

The 3Rs for Products and Packaging

Environmental Action Plan Achievements for Fiscal Year 2024 [Summary] ➡p.049
Environmental Action Plan Targets for Fiscal Year 2025 [Summary] ➡p.050

Basic Approach

As the world shifts into a circular economy, companies exist as members of society expected to consider product life cycles that prevent waste generation and reduce environmental impact to the greatest extent possible.

The Nikon Environmental Policy discusses maximizing resource efficiency by optimizing raw material usage and extending product lifespan, etc., moving away from the use of virgin resources, and considering environmental friendliness throughout the product life cycle for the circular economy. Guided by this policy, the Nikon Group engages in the 3Rs (reduce, reuse, recycle) for products and packaging in the product development and design phases.

Web Nikon Environmental Policy

Strategy

Risk

Many countries are tightening laws and regulations regarding the resource circulation of products and packaging (e.g., mandatory reuse of waste and taxation), and mandating the disclosure of amount information regarding plastic use. As laws and regulations are tightened, we face potential risks in procurement challenges and higher costs as recycled materials are likely to become scarce in the market. As the circular economy progresses, we also face potential risks of sales decline, a loss of social trust, and disinvestment due to slower responses to changing market and consumer preference in product choice.

Opportunities

We recognize opportunities to reduce business costs through reduced and more efficient use of plastics and other resources, to expand our business by offering technologies and products that contribute to the transition to a circular economy, and to earn the trust of our stakeholders.

The 3R Initiatives of the Nikon Group

- Reduce
  - ① Promote to materials with low environmental impact, make products smaller, and reduce the number of parts
  - ② Extend product lifespan
  - ③ Reduce plastic packaging materials
  - ④ Promote the switchover of containers and packaging from plastic to paper and bio-based plastic materials
- Reuse
  - ① Pursue the reuse of products, parts, materials, and packaging
  - ② Expand sales of used products
  - ③ Decide whether to continue the sale of used equipment
- Recycle
  - ① Decide on the new adoption of recycled materials
  - ② Pursue the adoption of recycled materials (research, etc.)
  - ③ Promote the switchover from plastic packaging and containers to recycled materials

Strategy

Given our diverse range of products, the Nikon Group must base our strategies on the characteristics of each business. We organize the necessary measures to reduce, reuse, and recycle, and set appropriate targets for each business.

Nikon Long-Term Environmental Vision and Medium-Term Environmental Goals ➡p.048

Governance

Each business unit in the Nikon Group sets its own targets based on the Nikon Environmental Action Plan. Meetings related to product environment, organized under the Products Subcommittee (a subordinate committee to the Quality Committee), confirm progress, review and make decisions on response policies. These meetings share information on product environment laws and regulations, while promoting the development of Eco-friendly Products and the 3Rs related to products and packaging materials. Results are reported semiannually in Quality Committee and Products Subcommittee meetings.

Environmental Management Promotion System ➡p.053

Risk Management

To avoid risks related to resource recycling for products, we share the latest information on laws and regulations, as well as case studies of initiatives at other companies, with each business unit at meetings related to product environment. Each business unit conducts product and packaging assessments at the phase of product planning and development, as well as at the phase of the prototype and production, confirming assessment results and the status of the 3Rs initiatives at these meetings.

Environment-Related Risk Management ➔p.057

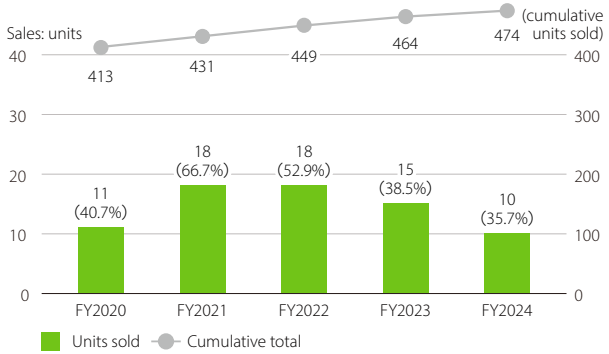
Major Initiatives

Sales of Refurbished Semiconductor Lithography Systems and Reuse of Projection Lenses

The Nikon Group has commercialized a service for collecting and reconditioning used Nikon semiconductor lithography systems from customers, where we replace and reconfigure parts and install the refurbished systems for new customers in and outside Japan. This business activity is an example of the Nikon Group's practice of reusing our own products within the Group. As of fiscal year 2024, the Nikon Group had sold a cumulative total of 474 refurbished products. We also began services to refresh and upgrade FPD lithography systems in fiscal year 2024.

The Nikon Group is also working on extending the life of lithography systems by using Nikon's latest technology to refresh and replace projection lenses which have deteriorated from long-term use at client locations and cannot maintain basic exposure performance.

● Sales Volume of Refurbished Semiconductor Lithography Systems (for ICs)



∗ Figures in parentheses indicate share of total units sold

Extending Product Life

To extend product lives for our customers, Nikon offers our Plaza Inspection Pack and Periodic Maintenance inspection and cleaning services.

The Plaza Inspection Pack is a daily care service for cameras and accessories. Our Nikon Plaza service centers in Tokyo and Osaka inspect and clean cameras, lenses, and camera accessories through this service.

The Periodic Maintenance service is to inspect each part of the camera equipment and lenses, check accuracy, clean details, and perform other services in an environment fully equipped with inspection equipment and devices.

We also refresh and upgrade projection lenses for older FPD lithography systems to extend product lives for customers.

Battery Recycling

The Nikon Group works through JBRC[*1] to recycle used digital cameras and other rechargeable batteries collected in the Japanese market.

∗1 Japan Portable Rechargeable Battery Recycling Center (JBRC): An organization that recycles small rechargeable batteries in line with the Act on the Promotion of Effective Utilization of Resources.

Battery recycling marks

Recycling and Reuse of Nikon Products

We also work to collect and recycle used electrical and electronic equipment around the world in compliance with the laws and regulations of each country, based on the latest information.

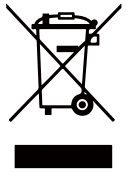
Under the WEEE Directive[*2], European countries in particular have been establishing national laws in relation to the collection and recycling of used electrical and electronic equipment.

In response to these laws, the Nikon Group has been working to fulfill our responsibility for the collection and recycling of Nikon digital cameras and other products. The Nikon Group has registered with local collection

organizations in more than 30 countries, establishing collection and recycling networks in each of these. We are also implementing product assessments at their design stages to promote easy-to-disassemble designs, reductions in the types of raw materials used, and extensive utilization of recycled resources, to comply with the provisions of the Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment *3 in Japan.

As to reuse, part of our services includes accepting digital cameras returned from customers, repairing them, and then selling them as refurbished cameras in and outside Japan.

*2 Waste Electrical and Electronic Equipment (WEEE) Directive: Legislation enacted in the EU in 2003 (and amended in 2012) requiring EU Member States to collect and recycle waste electrical and electronic equipment.
*3 Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment: Enacted on April 1, 2013. This legislation stipulates the responsibilities of various entities, including national and local public bodies, business operators and manufacturers, with respect to the promotion of recycling of small waste electrical and electronic equipment such as digital cameras and game devices.



EU recycling symbol

Use of Recycled Plastic Materials in Products

The Nikon Group sets the use of recycled materials as an assessment item in our product assessments and promotes the active use of recycled materials from the development stage. Currently, we use recycled plastic materials in digital camera body caps, binocular eyepiece caps, and for certain other components.

Eyepiece caps for binoculars

Recycling of Packaging Materials

The Nikon Group promotes the recycling of packaging materials for Nikon products including digital cameras in Japan by outsourcing the task to the Japan Containers and Packaging Recycling Association.

In Europe, under the EU Packaging and Packaging Waste Directive, each country has established a packaging waste recovery and recycling system in accordance with its national laws. In the EU, the Nikon Group pays recovery and recycling fees to recycling organizations in each country, cooperating in promoting the collection and recycling of containers and packaging materials in various countries. In addition, we facilitate sorted collection by providing recycling marks and material indications on product containers and packaging materials as specified in each country.

Examples of recycling marks in each country

Reducing Plastics in Packaging

In recent years, marine pollution from plastic waste has become a global problem. In response, the Nikon Group implements a number of measures that include reducing the amount of disposable plastics used in product packaging and at production sites, using paper-based materials instead of plastics, etc.

We are currently shifting plastic packaging materials to paper for imaging products. For example, we switched the cushioning material for the telephoto NIKKOR Z 28-135mm f/4 PZ lens, launched in April 2025, from formed plastic to paper. We have also eliminated the plastic window on the individual box for certain accessories.

We reduced the amount of plastics used in packaging for healthcare products by approximately 97% compared with the previous packaging to change the packaging method as using stretch packaging that covers products in transparent film, rather than using foam plastic cushioning materials.

Conventional packaging

Stretch film packaging

Using Bio-Based Plastic Packaging Materials

As a measure to reduce petroleum-based plastics, Nikon is moving forward with the switch to bio-based plastics for packaging materials.

We have already switched from petroleum-based to bio-based foamed plastic cushioning materials for the package for certain healthcare products and industrial products.

In addition, we reduced the amount of plastic cushioning material used in the package for certain healthcare product units by approximately 24% after modifying the shape and materials used for cushioning.

Example of bio-based plastics

Management and Reduction of Waste

Environmental Action Plan Achievements for Fiscal Year 2024 [Summary] ➡p.049
Environmental Action Plan Targets for Fiscal Year 2025 [Summary] ➡p.050

Basic Approach

As society transitions to the circular economy, companies are expected to reduce waste, reuse, and recycle resources, and reduce their environmental impact to the greatest extent possible.

The Nikon Group is committed to maximizing resource efficiency and minimizing waste as part of our efforts to create a circular economy. We reduce final landfill disposal of waste or recycle waste as resources, and we are committed to environmental considerations throughout the product life cycle, striving to reduce waste from product manufacturing processes and business sites.

Web Nikon Environmental Policy

Strategy

Risk

Waste-related laws and regulations have been tightened further in recent years due to the shortage of waste disposal sites, illegal dumping, and the resulting pollution. Amid these circumstances, we recognize risks, including higher costs in waste management, costs to respond in the unlikely event we violate laws or regulations, and a loss of public trust and investment withdrawals due to negative attention from the public announcement of our company name.

Opportunities

We recognize opportunities to reduce business costs through waste reduction and the efficient use of resources, as well as opportunities to maintain public trust through proper management and disposal of waste.

Strategy

We adopted the concept of zero emissions, striving to not only reduce emissions but to reduce emissions to zero for society as a whole by using waste as a resource in other industries. Here, we introduced our own level-specific targets into zero emission initiatives to reduce final landfill waste volumes and encourage resource circulation.

We established the Waste Disposal Guidelines to ensure the proper outsourcing of waste disposal (including the selection and contracting of appropriate outsourced waste disposal contractors) in accordance with the laws of each country. The Waste Disposal Guidelines require all production facilities to confirm proper disposal of waste through the monthly management of discharge dates, disposal completion dates (intermediate disposal), discharge type, discharge weight, and amount of landfill waste (including the amount of final disposal not recycled). We evaluate waste management at each site through EMS assessments to identify issues and make improvements. Furthermore, departments in charge of waste disposal train employees at the relevant sites to improve overall waste management.

Nikon Long-Term Environmental Vision and Medium-Term Environmental Goals ➡p.048

Governance

The Nikon Group sets waste reduction targets and manages data for each location and Group company. The Local Environmental Subcommittee secretariat, which operates under the Environmental Subcommittee, checks the results and the status of achievement of targets for each party.

Environmental Management Promotion System ➡p.053

Risk Management

Every site and Group company in Japan uses a waste management system to manage monthly waste data (date of discharge, type of discharge, weight, amount of landfill waste, etc.) and monitor whether waste is transported and disposed of in accordance with laws and regulations.

Every site overseas conducts waste management. An annual HQ EMS Assessment is conducted to confirm that all waste is handled in accordance with the laws and regulations of each country.

Environment-Related Risk Management ➡p.057

Major Initiatives

Towards Zero Emissions

The Nikon Group has introduced level-specific targets into zero emissions initiatives. Nikon and Group manufacturing companies in Japan maintain Level S status. Hikari Glass (Changzhou) Optics Co., Ltd. (China), Nikon X-Tek Systems Ltd. (UK), and Nikon SLM Solutions (Germany) achieved Level S status in fiscal year 2024. In addition, Nanjing Nikon Jiangnan Optical Instrument Co., Ltd. (China) and Optos Plc (UK) achieved Level 1 status, while other Group manufacturing companies are making further efforts to achieve Level 1 by fiscal year 2030.

Zero Emission Level-Specific Targets

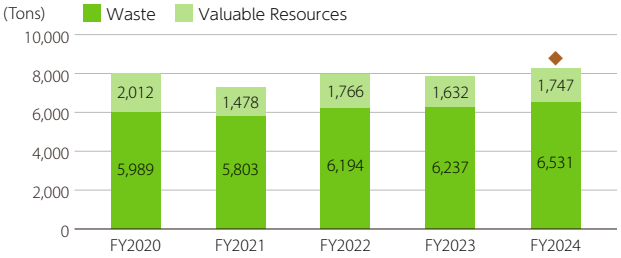
Level S: Final landfill disposal rate of less than 0.5%
Level 1: Final landfill disposal rate of less than 1%
Level 2: Final landfill disposal rate of less than 5%
Level 3: Final landfill disposal rate of less than 10%
Level 4: Final landfill disposal rate of less than 20%

Note:
1. Final landfill disposal rate = Final landfill amount / (waste + valuable resources)
2. The final landfill amount is the amount of waste disposed of by landfill at the final disposal site.

Waste Reduction Performance

The amount of waste (excluding valuable resources) generated by the Nikon Group in Japan and by the Group manufacturing companies outside Japan during fiscal year 2024 was 6,531 tons. This figure represented a reduction of 16% (1,240 tons), achieving the Group target of reducing the total waste generated from operations by at least 4% compared to fiscal year 2018 (7,530 tons or less in total waste). The total amount of final landfill waste generated was 244 tons◆, with 6,287 tons of waste recycled (not including valuable resources).

Waste Generated by the Nikon Group in Japan and Group Manufacturing Companies outside Japan



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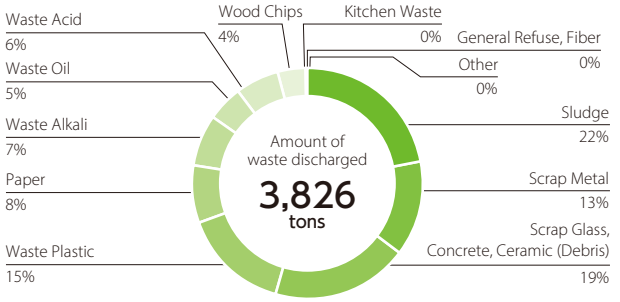
Breakdown by Category of Waste (Waste + Valuable Resources) Generated by the Nikon Group in Japan (Fiscal Year 2024)



Initiatives in the Manufacturing Process

In August 2023, Miyagi Nikon Precision Co., Ltd. began separating soft vinyl (bubble cushioning material and plastic bags) for sale as valuable resources. This vinyl had previously been disposed of as industrial waste. The company collected the used vinyl through the effective use of available space in company transport vehicles returning from transporting parts. This initiative enabled the company to convert approximately 37% of used soft vinyl into valuable resources.

Abrasive agents used to polish optical glass are discarded as abrasive sludge after use. Abrasive sludge accounts for around 19% of waste discharged by the Nikon Group in Japan. The Nikon Group established a method to reuse these abrasives, achieving a 45% reduction in abrasive sludge waste at the Nikon Shonan Branch, which produces photomask substrates. We are working to further reduce this abrasive sludge.

At Sendai Nikon Corporation, we are taking actions to recycle resources. For example, plastic waste is sorted by material and color, gate parts from molded products are crushed, and heating is used to reduce the volume of extruded polystyrene foam. With regard to metal waste, oil is separated from metal shavings by centrifugal separation, thereby enhancing the value of recycled valuable resources.

Paper Resource Initiatives

The Nikon Group is working to reduce document printing by digitizing meeting materials and encouraging the use of computers and tablets to confirm engineering drawings and forms. We are also working to reduce paper usage by changing the settings on multifunction printers and installing software to reduce accidental or unnecessary copying.

Protection of Water Resources

Environmental Action Plan Achievements for Fiscal Year 2024 [Summary] ➡p.049
Environmental Action Plan Targets for Fiscal Year 2025 [Summary] ➡p.050

Basic Approach

Large quantities of water are used in the production processes for optical lenses, part of Nikon's main product category, and for the quartz glass used in these lenses. For example, during the optical lens polishing process, water has to be added frequently in order to keep the polishing agent at the right consistency. Similarly, in the quartz glass production process, our waste gas purification devices require water to remove acid components from waste gases. For these reasons, water is not only an indispensable resource for Nikon Group business, but it also affects the global environment through water discharge and other means. Working to conserve water resources is therefore essential for business continuity.

The Nikon Group formulated the Nikon Environmental Long-Term Vision looking ahead to fiscal year 2050. Of the three pillars, realizing a resource circulating society depicts our vision for water and resources, while realizing a healthy and environmentally safe society corresponds to our vision for water safety. To achieve these goals, the Nikon Environmental Policy stipulates the conduct of regular water risk assessments, monitoring of water withdrawal, proactive water reuse, and the establishment and compliance of voluntary standards exceeding legal requirements. In this way, we reduce our environmental impact stemming from water use to the greatest extent possible. In addition, we aim to implement steady initiatives and improve standards through employee training on water-related initiatives and related laws and regulations as part of employee environmental education.

Web Nikon Environmental Policy

Strategy

Risk

The Company recognizes water-related risks including difficulties in securing sufficient water resources and related operational difficulties due to climate change, extreme weather events, or other disasters. These water risks apply to not only our direct operations but also to our entire supply chain, including procurement partners. Flooding and inundation caused by typhoons and long rains may inflict damage to work sites of the Company or our suppliers, and disrupt logistics, leading to potential disruptions in operations. The further progression of climate change may increase the probability of these risks.

If for some reason we are unable to treat wastewater properly and comply with relevant laws and regulations, we recognize the risk of incurring costs to respond, a loss of public trust, and investment withdrawals due to negative attention from the public announcement of our company name.

Opportunities

We believe that pursuing the efficient reuse and recycling of water resources will lead to business cost reductions.

Our efforts also represent an opportunity to earn trust by, for example, responding appropriately to stakeholder demands regarding water risk.

Strategy

To conserve water resources, the Nikon Group monitors the amount of water withdrawal, discharge, and reuse, implementing proactive initiatives for effective water use.

Beginning in fiscal year 2021, the Group also introduced a new freshwater consumption indicator *, as we believe it is important that water used should be returned at an equal or better quality than when it was withdrawn. The Nikon Group believes that reducing freshwater consumption leads to a reduction in the load on water withdrawal in each region. We also believe reducing freshwater consumption leads directly to reduced water-related costs, such as costs for tap water.

For fiscal year 2024, the Nikon Group reduced freshwater consumption by 6.4% to 1,756,000 m^3, achieving our Environmental Action Plan goals for the fiscal year to reduce water withdrawal by at least 2% compared with fiscal year 2018.

* Freshwater consumption: Sum of withdrawal volumes A, B, and C, minus returned water volume D (A+B+C-D).
A: Water withdrawal from municipal water supply facilities (tap water, industrial water, etc.)
B: Water withdrawal from surface water (lakes, rivers, etc.)
C: Water withdrawal from groundwater
D: Return water of equal or better quality than the withdrawal source (applicable to B and C only)

Nikon Long-Term Environmental Vision and Medium-Term Environmental Goals ➡p.048

Governance

The Nikon Group sets reduction targets and manages data for each location and Group company. The Local Environmental Subcommittee secretariat, which operates under the Environmental Subcommittee, checks the results and the status of achievement of targets for each party.

Environmental Management Promotion System ➡p.053

Risk Management

Since many water risks are specific to each region, each location and Group company identifies risks, determines initiatives to address identified risks, and incorporates risks into targets. The Local Environmental Subcommittee secretariat leads the assessment of the potential future impact on corporate activities of water-related issues. The secretariat works with outside specialists once every three years to conduct such assessments. In 2019, we conducted a water risk assessment using Aqueduct *1 for 16 domestic and overseas business facilities with high water withdrawal. We confirmed that there are no areas with significantly high water stress *2 in the regions where the Nikon Group conducts business activities.

In fiscal year 2024, we assessed the water risks of our suppliers in light of recent requests for the Group to understand and identify water risks in our supply chain. Specifically, we conducted a water risk survey of 245 suppliers (262 sites) selected by procurement departments, identifying priority sites.

The Nikon Group uses an environmental data collection system to monitor data on water withdrawal, water discharge, freshwater consumption, etc., on a monthly basis for each location and Group company. Each site and Group company sets its own standards for wastewater quality, which are stricter than legal requirements, and monitors said standards on a regular basis. In the unlikely event that a site or Group company exceeds the standard values, the party in question reports the incident immediately to the relevant parties in accordance with the environmental accident reporting procedures established by the Nikon Group. The party in question then takes action to minimize environmental impact.

*1 Aqueduct: A world map and information tool showing global water risks, provided free of charge by the World Resources Institute.
*2 Water stress: A condition in which demand for water exceeds supply.

Environment-Related Risk Management ➡p.057

Major Initiatives

Appropriate Wastewater Treatment

The Nikon Group uses large amounts of water in our manufacturing processes. When discharging water used, the Group applies appropriate wastewater treatment to minimize the environmental impact on waterways in each region.

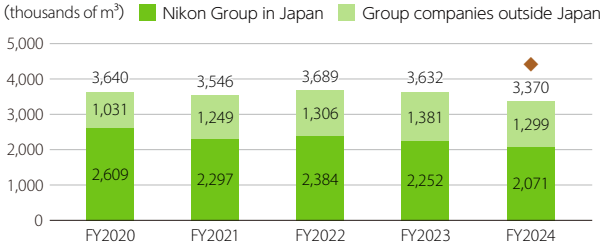
Specifically, we established voluntary standards even stricter than discharge standards found in each region, and we treat wastewater in accordance with wastewater quality levels alongside regular monitoring of the water discharge situation.

Water Withdrawal and Discharge

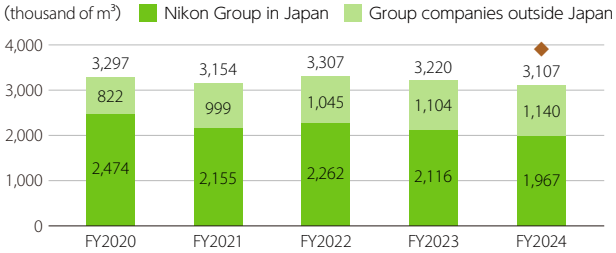
Nikon Group water withdrawal for fiscal year 2024 was 3,370,000 m^3 (Nikon Group in Japan accounting for 2,071,000 m^3 and Group manufacturing companies outside Japan accounting for 1,299,000 m^3). Water discharge volume amounted to 3,107,000 m^3 (Nikon Group in Japan accounting for 1,967,000 m^3 and Group manufacturing companies outside Japan accounting for 1,140,000 m^3). We reduced freshwater consumption by 6.4% to 1,756,000 m^3, achieving our target of reducing freshwater consumption by at least 2% compared to fiscal year 2018.

In addition, at the business facilities and the Group manufacturing companies that make use of considerable amounts of water, we pay special attention to ensuring that wastewater generated in manufacturing processes is properly treated, and endeavor to reuse as much water as possible. The fiscal year 2024 water reuse rate of the Nikon Group amounted to 8.1%.

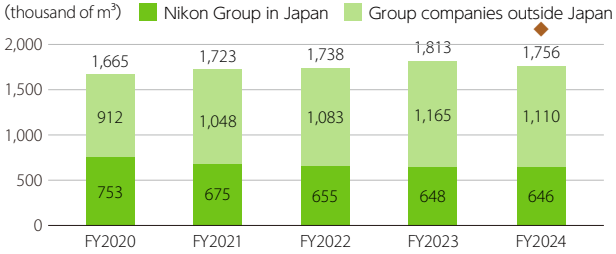
● Changes in Water Withdrawal



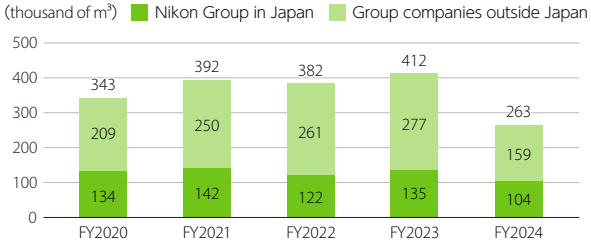
Changes in Water Discharge



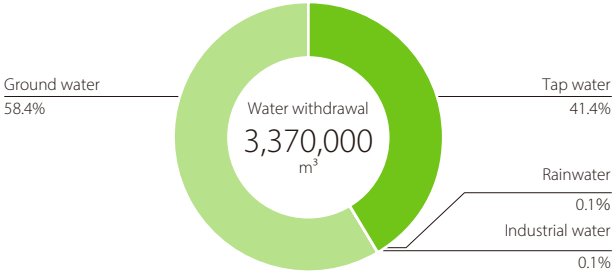
Changes in Freshwater Consumption



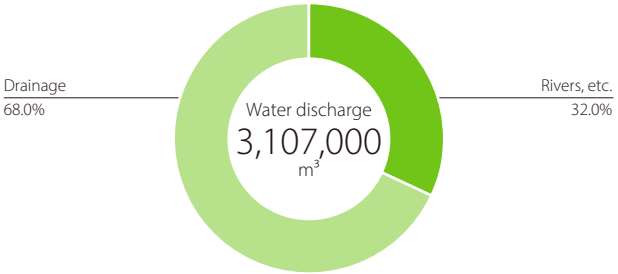
Changes in Water Consumption



Breakdown of Water Withdrawal (Fiscal Year 2024)◆



Breakdown of Water Discharge (Fiscal Year 2024)◆



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Water Reuse Measures

Case Example of Wastewater Reuse (Nikon Shonan Branch)

When manufacturing photomask substrates, the Nikon Shonan Branch uses a large amount of water resources during the polishing and cleaning processes. Accordingly, during fiscal year 2018, the Nikon Shonan Branch implemented a mechanism to reuse the wastewater from the cleaning process as supply water for pure water production equipment. As a result, over the course of fiscal year 2024, the Nikon Shonan Branch reused approximately 9,600 m^3 of water discharge, reducing water withdrawal 7.5% compared with water withdrawal prior to adoption.

Effective Use of Concentrated Water (Nikon Kumagaya Plant)

Nikon Kumagaya Plant manufactures semiconductor lithography systems, a process requiring a large amount of ultrapure water. The process of producing semiconductor lithography systems requires large amounts of ultrapure water. To generate ultrapure water, tap water is first fed into an ultrapure water apparatus and separated into pure water and concentrated water using RO membranes. The pure water is treated further to produce ultrapure water. However, the concentrated water had previously been discharged as wastewater. In fiscal year 2018, Nikon adopted a process to reuse this concentrated water effectively to supplement water used in cooling towers. In addition, we have been increasing the number of cooling towers reusing this concentrated water since

October 2020. As a result, the Nikon Kumagaya Plant reused approximately 36,000 m^3 of concentrated water as supplementary water for cooling towers in fiscal year 2024. This reused water accounted for approximately 12% of the total water withdrawal at the Nikon Kumagaya Plant.

Reuse of Domestic Wastewater and Treated Water (Nikon Lao Co., Ltd.)

Nikon Lao Co., Ltd. (Laos) is located in a district with only basic water supply infrastructure, and has been actively implementing measures to improve water resource efficiency. The company purifies domestic wastewater for reuse in flushing toilets and in the company garden sprinkler system. Nikon Lao also reuses treated water as a coolant.

Wastewater treatment system at Nikon Lao Co., Ltd.

● Changes in Water Reuse at the Nikon Group in Japan and Group Manufacturing Companies outside Japan