> Environmental Strategy > Environmental Management Promotion System > Risk Management > Indicators and Targets > Promoting a Decarbonized Society > Resource Circulation

> Preventing Pollution and Conserving Ecosystems

Materiality 3

Promoting a Decarbonized Society 🔯 🔽





# **Basic Approach**

In light of the emerging impacts of climate change and social trends toward decarbonization, the Nikon Group identified environmental considerations throughout the product lifecycle within the Nikon Environmental Activity Policy. We defined the realizing a decarbonized society as one pillar of the Nikon Long-Term Environmental Vision. In January 2024, we obtained certification for our Net-Zero target for net zero greenhouse gas emissions throughout the value chain by fiscal year 2050 in line with requirements established by the SBT Initiative\*. At the same time, we recertified our previously approved greenhouse gas reduction targets (short-term targets) for fiscal year 2030. Meanwhile, we accelerated our target year by 20 years to achieve 100% renewable energy by fiscal year 2030, rather than our previous target year of fiscal year 2050.

**Decarbonization Initiatives** 

Our Medium-Term Management Plan for fiscal years 2022 to 2025 defines targets to reduce Scope 1 and Scope 2 greenhouse gas emissions by 46.5% compared with 2013 levels to achieve a 30% rate of renewable energy use. We achieved these targets ahead of schedule in fiscal years 2023 and 2022, respectively. We will continue working toward achieving our fiscal year 2030 targets.

\* Science Based Targets (SBT) Initiative: The SBT Initiative is a collaboration between CDP, an international NGO working on environmental issues such as climate change, the United Nations Global Compact, World Resources Institute, and the World Wide Fund for Nature. The initiative targets achieving the Paris Agreementmandated objective of holding the increase in the global average temperature to below 2°C above pre-industrial levels. It certifies the CO<sub>2</sub> emission reduction targets of companies that are in line with emissions reduction scenarios based on scientific facts.

### The Nikon Group's Science Based Targets (SBT)

Net-Zero target

Reach Net-Zero\* greenhouse gas emissions across the value chain by fiscal year 2050

Short-term targets

Reduce Scope 1 and 2 GHG emissions by 57% by fiscal year 2030 compared to the base year of fiscal year 2022 Reduce Scope 3 greenhouse gas emissions by 25% by fiscal year 2030 compared to the base year of fiscal year 2022.



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

<sup>\*</sup> Reducing GHG emissions (Scope 1, 2, and 3) across the value chain by 90% and neutralizing remaining emissions in accordance with standards set by the SBT Initiative



Nikon Environmental Activity Policy

https://www.nikon.com/company/sustainability/environment/ environment policy.pdf

Contents/Editorial Policy Message from the CEO and COO Corporate Citizenship Activities Nikon Group Profile Nikon's Sustainability **Business Activity** Environment Society/Labor Governance

> Environmental Strategy > Environmental Management Promotion System > Risk Management > Indicators and Targets > Promoting a Decarbonized Society > Resource Circulation > Preventing Pollution and Conserving Ecosystems

# **Strategy**

### Risk

We recognize the following climate change risks faced by the Nikon Group.

[Financial impact] High: 10 billion yen or more, Medium: 1 to 10 billion yen, Low: 1 billion yen or less [Urgency] High: Within 3 years, Medium: 3 to 10 years, Low: Later than 10 years

Risks Faced by the Nikon Group			Financial Impact	Urgency	Response
Physical risks (acute and chronic)	An increase in typhoons, floods, and other weather-related disasters could disrupt supply/operations or reduce asset values due to damage to major production sites (Japan, Thailand, etc.) and supplier sites, disruption of logistics networks, and other factors. In addition, a rise in sea levels may increase the probability of these risks.		High	Medium	Promoting Total Supply Chain Management activities     Promoting Business Continuity Management (BCM)
	A rise in average temperatures could lead to increased electricity costs due to increased load on cooling and other air conditioning equipment. In particular, strict temperature controls required in manufacturing and transporting precision equipment may become unreasonably difficult, or management costs may increase.		Small	Low	Promoting aggressive energy-saving activities
	Long-term changes in precipitation patterns, as well as droughts, could constrain the use of water resources and adversely affect operations.		Medium	Low	Reducing water withdrawal     Promoting water resource recycling
Transition risks	Policies and regulations	Introduction or expansion of carbon pricing policies, such as carbon taxes, could increase Nikon's operating costs if applied to us. In addition, purchase prices may increase if these are applied to suppliers.     Changes in national energy policies where we have business sites could lead to higher electricity prices, which would increase operating costs and purchasing costs.	High*	Medium	Reducing greenhouse gas emissions through promotion of energy conservation and adoption of renewable energy Reducing greenhouse gas emissions through modal shifts and improved distribution routes Requiring suppliers to reduce greenhouse gas emissions
	Technologies	Failure to reduce emissions during product use and shift to low-carbon manufacturing methods and materials could result in reduced sales opportunities.	High	Low	Reducing greenhouse gas emissions through promotion of energy conservation and adoption of renewable energy Improving energy-saving performance for products Creating new materials and manufacturing methods
	Markets/ Reputation	Failure to adequately meet customers' decarbonization requirements could result in reduced sales opportunities.     Inadequate response to decarbonization could damage our evaluations/reputation and affect stock price and sales.	Medium	Low	Reducing greenhouse gas emissions through promotion of energy conservation and adoption of renewable energy     Promoting proactive information disclosure

<sup>\*</sup> Specific example: Carbon tax system in the Netherlands

In 2021, the Netherlands began levying a carbon tax equivalent to 30 Euros per ton of greenhouse gas emissions, targeting manufacturing firms and other firms in the industrial sector. This carbon tax equivalent to 30 Euros every year, and by 2030 it is expected to have risen to 125 Euros per ton of emissions. A similar trend toward the introduction of carbon taxes, there is a possibility that the scope of applicability may be extended in the future. For instance, the Nikon Group's manufacturing companies in Europe had total annual greenhouse gas emissions of around 1,300 tons in fiscal year 2020. If these companies were to become subject to carbon taxes and no measures were taken to reduce emissions, the Group could face an annual carbon tax bill of around 162,500 Euros.

The Nikon Group recognizes the following opportunities in connection with climate change.

[Applicable period] Short-term: Within 3 years, Mediumterm: 3-10 years, Long-term: Later than 10 years

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Opportunities for the Nikon Group	Applicable Period
Rising evaluation of Nikon by consumers, institutional investors, and others for our technologies and business activities (as follows) contributing to a decarbonized society could lead to increased sales and higher stock prices. Increase energy efficiency in society with additive manufacturing and fine processing using optics Additive processing contributing to longer product lifespans through repair of existing parts, etc. Robots with sophisticated hands and eyes and device manufacturing processes, that enhance manufacturing efficiency Longer lasting light sources and more durability in our products, that contribute to a healthy global environment Image production technologies that contribute to a society where people connect, transcending time and space and real and virtual.	Short- to long- term
Achieving efficiency in production processes and distribution, as well as carrying out energy-saving activities, could reduce future carbon taxes and energy costs.	Short- to long- term
Total Supply Chain Management, a practice designed to prepare for physical risks, and improvements in our BCM could make our business structure more robust.	Short-term

# Strategy

In November 2018, Nikon endorsed the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB). We conduct disclosures based on the TCFD final report.

Nikon conducts analyses of climate-related risks and opportunities by comprehensively considering a number of

factors, such as the characteristics of business, the location conditions of production sites and business facilities, the recent degree and frequency of natural disasters due to climate change, industry trends, trends in related laws and regulations, representative concentration pathway (RCP) scenarios used in the IPCC climate change forecasts, and survey results and scenarios carried out by external research institutes. Accordingly, we identify and evaluate risks under the 2°C and 4°C scenarios.

The 2°C scenario recognizes the tightening of greenhouse gas emissions and other regulations, as well as the associated market demands. The 4°C scenario recognizes the rising frequency in natural disasters, including flooding and rising temperatures. In both scenarios, we recognize the changes in costs associated with the transition to renewable energy, and we undertake measures to adapt to climate change as a business strategy, taking the financial impacts into account. Nikon will continue to carry out and improve its scenario analysis going forward.

We conduct sustainability initiatives, including climate change response, under our Medium-Term Management Plan. We also reflect an evaluation of sustainability initiatives, including climate change, in executive compensation. We discussed and determined the shortterm Net-Zero SBT target for fiscal year 2023 and goals for adopting renewable energy.

Nikon Long-Term Environmental Vision and Medium-Term Environmental Goals → p.067

### Governance

The Nikon Group Sustainability Committee, chaired by the representative director and president, identifies risks and opportunities, and discusses strategies, indicators, targets, and performance. After these discussions, the committee decides whether to make decarbonization-related investments. Under this committee, the Environmental Subcommittee examines risks and opportunities related to climate change, drafts strategies and indicator/targets, and manages progress.

The Corporate Sustainability Department implements Group-wide climate-related responses based on decisions of the Sustainability Committee. The activities of this committee are reported to the Board of Directors at least once a year. In turn, the Board manages and supervises the appropriateness, effectiveness, and risks of environmentrelated activities, including climate change.

The Sustainability Committee met four times in fiscal year 2023, while the Environmental Subcommittee met two times, deliberating and deciding matters related to climate change response.

Environmental Governance → p.060

# **Risk Management**

The Risk Management Committee manages risks on a group-wide basis, while the Sustainability Committee uses its expertise to identify and assess environmental risks, including those from climate change, discussing how to respond. Matters discussed and approved by each committee are

Contents/Editorial Policy Message from the CEO and COO Corporate Citizenship Activities Nikon Group Profile Nikon's Sustainability **Business Activity** Environment Society/Labor Governance

> Environmental Strategy > Environmental Management Promotion System > Risk Management > Indicators and Targets > Promoting a Decarbonized Society > Resource Circulation > Preventing Pollution and Conserving Ecosystems

**Achievements** 

reported to the Board of Directors. We conduct financial simulations in our Medium-Term Management Plan related to the potential impact of identified risks, identifying and recognizing these risks with other potential factors.

Once again, in fiscal year 2023, we conducted a risk identification survey and compiled a risk map presenting results by scale of impact and probability of occurrence. We provided the results of this work to relevant departments to establish a shared overall awareness of risks. The risks identified have also been reflected in our Environmental Action Plan and other plans and used throughout the Nikon Group.

Environment-Related Risk Management System → p.064

# **Indicators and Targets**

### **Indicators and Targets (Target Fiscal Year)**

Scope 1 and 2 reduction (compared to FY2022): 57% (FY2030)

#### FY2023

#### Plan

Vs. FY2013: 36.5%

#### Results

Vs. FY2013: 66.9%

### FY2024

#### Plan

Vs. FY2022: 50%

\*Base fiscal year before a target review conducted in March 2024.

### Indicators and Targets (Target Fiscal Year)

Scope 3 reduction (compared to FY2022): 25% (FY2030)

#### ► FY2023

#### Plan

- 1. Reduce environmental impact by making effective use of the LCA methodology
- 2. Create at least 50% Eco-Friendly products

#### Results

- 1. Conducted LCA calculations for all new products
- 2. Approximately 79% of new products certified as Eco-Friendly products

### FY2024

#### Plan

- 1. Reduce environmental impact by making effective use of the LCA methodology
- 2. Create at least 50% Eco-Friendly products

### **Indicators and Targets (Target Fiscal Year)**

Renewable energy adoption rate: 100% (FY2030)

#### ► FY2023

Plan

25%

#### Results

69.3%

#### FY2024

#### Plan

69% or more

Nikon Long-Term Environmental Vision and Medium-Term

Environmental Goals → p.067

Environmental Action Plan Fiscal Year 2023 Results [Summary] > p.068

Environmental Action Plan Fiscal Year 2023 Results [Summary] > p.069

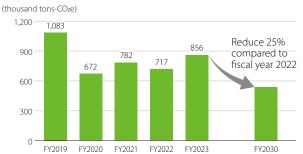
The Nikon Group calculates greenhouse gas emissions in the entire value chain in accordance with the Greenhouse Gas Protocol (GHGP).

Our Scope 1 and Scope 2 results were 87,352 tons-CO<sub>2</sub>e emissions. As we describe below, the impact of renewable energy resulted in a significant reduction. We will continue to make steady progress toward achieving our medium-term targets. Our Scope 3 results were 856,454 tons-CO<sub>2</sub>e emissions. We conduct reduction measures that include making products smaller, lighter, and more energy-efficient. At the same time, sales and production increased year on year with business growth.

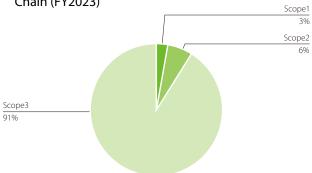
#### Scope 1+2 Emissions



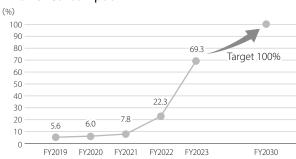
Scope 3 Emissions



 Ratio of Greenhouse Gas Emissions in the Value Chain (FY2023)



#### Ratio of Renewable Energy as a Share of Electric Power Consumption



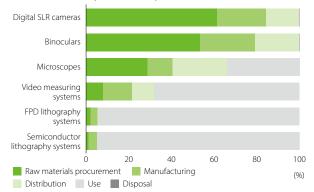
# **Major Initiatives**

# Reducing Greenhouse Gas Emissions in **Products**

# **Environmental Impact Assessment Using the LCA** Methodology

Nikon calculates CO<sub>2</sub> emissions in each phase of a product's lifecycle by conducting evaluations of our environmental impact using the Life Cycle Assessment (LCA) methodology. These evaluations are carried out for a range of products, including some of our most popular models. As a result, CO<sub>2</sub> emissions tend to be high in the raw material procurement phase for imaging products and in the use phase for flat panel displays (FPD) and semiconductor lithography systems, as well as industrial metrology. From this, we understand that it is important for us to make improvements at these phases, and we are therefore incorporating this into new product development. We calculated CO<sub>2</sub> emissions for all new products in fiscal year 2023.

### Percentage of CO<sub>2</sub> Emissions Throughout the **Product Lifecycle for Major Nikon Products**



### CO<sub>2</sub> Reduction Measures for Products

For imaging products, we have the highest amount of CO<sub>2</sub> emissions at the raw material procurement phase.

The Z8 full-frame mirrorless camera launched in May 2023 is approximately 32% lighter, 30% smaller, and uses 18% fewer parts than the Z9, another full-frame mirrorless camera. As a result, we reduced CO<sub>2</sub> emissions over the product life cycle per unit by approximately 23%.



The Z8 full-frame mirrorless camera

### **Promoting GHG Reductions** with Procurement Partners

The Nikon Group encourages major procurement partners to calculate and reduce GHGs as one of the assessment categories within our environmental management system.

In fiscal year 2023, we participated in the CDP Supply Chain Program\*, requesting that 50 50 major procurement partners disclose information. A total of 34 companies provided greenhouse gas emissions and other climate change-related information through the CDP platform. When making this request, we offered three briefing sessions for the procurement partners in question. We also offered individual guidance and time for guestion-andanswers on calculating GHG emissions as needed.

Message from the CEO and COO Contents/Editorial Policy Nikon Group Profile Nikon's Sustainability **Business Activity** Environment Society/Labor Governance Corporate Citizenship Activities

> Environmental Strategy > Environmental Management Promotion System > Risk Management > Indicators and Targets > Promoting a Decarbonized Society > Resource Circulation > Preventing Pollution and Conserving Ecosystems

Throughout fiscal year 2024, we will continue to participate in the CDP Supply Chain Program, expanding the number of targeted procurement partners to 100 companies to better understand partner's Scope 1, 2 and 3 emissions.

\* CDP Supply Chain Program: An information disclosure program conducted by CDP, an international NGO working in climate change and other environmental fields. Member companies that disclose information on climate change, water, forests, etc., through CDP use this platform to request environmental information disclosure from their suppliers.

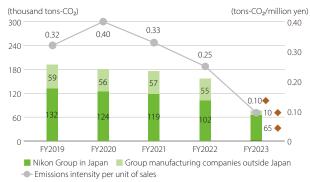
Promoting Green Procurement → p.113

# Reducing Greenhouse Gas Emissions at **Business Facilities**

### Status of CO<sub>2</sub> Emissions from Energy Consumption and Reduction Measures

CO<sub>2</sub> emissions from the energy consumption of the Nikon Group in Japan and Group manufacturing companies outside Japan for fiscal year 2023 amounted to 74,687t-CO<sub>2</sub>, down 52.3% year on year. Emissions per unit of sales improved significantly year on year due to CO<sub>2</sub> emissions from energy consumption reductions and increased sales. Going forward, we will take further measures to reduce CO<sub>2</sub> and cut our emissions.

### Changes in CO<sub>2</sub> Emissions from Energy Consumption



\*1 The following values were used for CO₂ conversion factors. [Electricity]

Japan: CO<sub>2</sub> emission factors without adjustment for each electric power utility noted in the "List of Basic Emissions Factors by Electric Power Utility" specified in the Act on Promotion of Global Warming Countermeasures UK: Residual mix

USA: NERC regional residual mix

Other countries: International Energy Agency (IEA) factors for the respective country

[City gas]

Japan: Value obtained by multiplying the gas company-specific values under the guidance document of the Action on the Rational Use of Energy (Energy Conservation Act) by the figure located in Appendix 2, List of Calculation Methods and Emissions Factors for Calculation, Reporting, and Announcement Systems, specified in the Act on Promotion of Global Warming Countermeasures by 44/12

UK: Factors from the Report on Greenhouse Gas

Other countries: Equivalent values to a typical Japanese gas company [Heat and other fuels]

Factor from the List of Calculation Methods and Emissions Factors for Calculation, Reporting, and Announcement Systems specified in the Act on Promotion of Global Warming Countermeasures (figure from fiscal year 2009

- \*2 The above factors were also used for the calculation of CO<sub>2</sub> emissions according to market-based criteria for Scope 1 and Scope 2 in p.071.
- \*3 Emissions have been calculated using the Basic Emission Factors, subtracting the renewable energy portion from total energy consumption.
- :Values in Data Index assured by a third party

### Nikon Group Energy Management

The Nikon Group conducts monthly energy management operations at each business facility. Each business facility

enters the amount of energy used by type into our internal system, which is monitored by the Local Environmental Subcommitee secretariat. Any significant increase or decrease is confirmed with the person in charge at the business facility as needed. We verify the status of energy management through ISO 14001 EMS assessments, and the Environmental Subcommittee receives reports twice a year on the energy consumption by the group as a whole.

To reduce CO<sub>2</sub> emissions from energy consumption derived from energy consumption, the Nikon Group improves product development and production processes, makes production equipment more efficient, implements energy conservation measures, and adopts renewable energy.

In addition, we pursue initiatives and improve standards in a steady manner through employee training on energy conservation and other topics as part of employee environmental education.

### Utilizing Renewable Energy

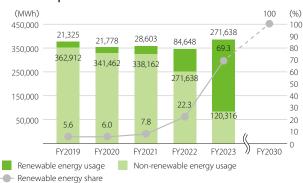
The Nikon Group pursues renewable energy as an effort to reduce greenhouse gas emissions from business facilities.

Our goal is to increase the ratio of renewable energy to electricity consumption to at least 30% by fiscal year 2030 through in-house power generation, electricity plans, renewable energy certificates, and other means. As a result of our efforts, we achieved 69.3% in fiscal year 2023, significantly outperforming both our fiscal year target and the target for fiscal year 2030. Several of our locations, including Tochigi Nikon Corp., Tochigi Nikon Precision Co., Ltd., and Nikon (Thailand) Co., Ltd., have achieved 100% renewable energy electricity use. We reviewed the Nikon Medium-Term Environmental Goals as we aim to expand and accelerate the use of renewable energy further. We will continue our efforts as we consider renewable energy

additionality\* and sustainability to contribute further to the wider adoption of renewable energy in society.

\* Requirement that the impact encourages new renewable energy installations

#### Renewable Energy as a Share of Electric Power Consumption



### Membership in RE100

Nikon joined RE100\*, an international initiative seeking to have companies source 100% renewable energy for electricity used in business activities. We aim to switch to 100% renewable energy-derived electricity used in the Group's business activities by fiscal year 2030, and we plan to work actively alongside other RE100 member companies to foster the development of the renewable energy market and to encourage governments in this area.

\* RE100 Run as a partnership by the Carbon Disclosure Project (CDP) and The Climate Group (an NPO focused on activities in response to climate change), RE100 is an international initiative with participation from companies all over the world.





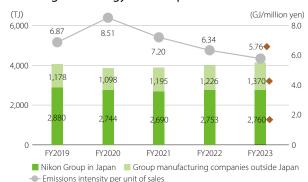
### Conserving Energy at Business Facilities

When planning new equipment installation at all Nikon Group business facilities, one important process is energy saving checks, and determining whether or not to install the equipment based on these checks.

After the equipment has been installed, its energy use is monitored, and its performance is managed compared to the forecast.

Furthermore, a range of energy saving initiatives are ongoing at each business facility, including switching over to energy saving lights, using motion sensor-equipped lighting, and working to make air conditioning equipment and office machinery more efficient.

#### Changes in Energy Consumption



\* The following values were used for calorific-value conversion factors. [Electric power] Factors given in the guidance document for the Periodic Report pursuant to the Act on the Rational Use of Energy (Energy Conservation Act)

Japan: Gas company-specific factors under the guidance document for the Periodic Report pursuant to the Act on the Rational Use of Energy (Energy Conservation Act)

UK: Values calculated from the factors for the Report on Greenhouse Gas Other countries: Equivalent values to a typical Japanese gas company [Heat and other fuels] Factors given in the guidance document for the Periodic Report pursuant to the Act on the Rational Use of Energy (Energy Conservation Act; fiscal year 2009 edition used)

◆: Values in Data Index assured by a third party

#### Main Energy-Saving Initiatives at Business Facilities

Governance

Energy-Saving Initiative	Initiative Content		
Adjusting design and development	Reducing experiments and prototyping through effective use of AI, CAE, and external technical information		
Conserving energy in production equipment	Integrating and replacing production equipment, and making existing equipment more energy-efficient		
Enhancing productivity	Improving conformity rates through IE analysis, optimizing work flow lines and production spaces, and automating production		
Upgrading transformer equipment	Switching over to highly efficient receiving and transformer equipment		
Adjusting utilization of transformer equipment	Integrating transformers, reducing electricity consumption from equipment on standby, and switching equipment off when not in use		
Upgrading air conditioning equipment	Improving cooling efficiency and streamlining equipment footprint through replacement of cooling and refrigeration equipment, reducing power consumption by replacing motors		
Adjusting air conditioning usage	Optimizing temperature and humidity settings and scheduling usage periods		
Reducing heat dissipation and heat absorption loss	Insulating piping and exterior walls, optimizing heat exchangers, integrating piping and bypasses		
Adjusting building facilities	Upgrading to insulating window glass and energy-saving elevators		
Conserving energy in lighting	Switching over to LED lights, adjusting the spacing of lights, and adjusting brightness		
Conserving energy in vacuums and compressed air equipment	Switching over to highly efficient pumps, adopting bypassing for piping, optimizing pressure, and optimizing pump operation controls		
Adjusting water usage	Improving the efficiency of water pumps installed in receiving tanks and optimizing piping		
Upgrading company vehicles	Purchase environmentally friendly vehicles (electric vehicles, fuel cell vehicles, etc.)		
Improving driving practices for company vehicles	Achieving energy-efficient driving through training to optimize driving styles and making use of driving recorder analysis		

### Improving Product Development Efficiency

By continuing to strive for further improvement and evolution in the core technologies that underpin our manufacturing operations, the Nikon Group is able to enhance the efficiency of development and production operations and raise quality standards. In turn, we also reduce our environmental impact by achieving reductions in energy consumption and the generation of waste.

Optical technologies, one of the core technologies of the Nikon Group, is supported by optical glass with high performance and quality. The development and manufacturing processes for optical glass use high temperatures from melting furnaces and require repeated experiments, which leads to high energy consumption and a large amount of waste. Therefore, the Nikon Group has focused on quality engineering methods to achieve significant efficiency gains in the development and manufacturing processes for optical glass, improving evaluation methods, using simulations to reduce the number of experiments, shortening lead times, and improving the accuracy of stamping (metalworking).

As a result, the Nikon Group reduced energy consumption, greenhouse gas emissions, and waste emissions, leading to a greatly reduced impact on the environment. The simulations and technical data established in these measures have been applied and extended to the development and manufacturing processes of other lens materials, thereby helping to further reduce environmental impact.

# Initiatives for Commuting and Company Vehicles All Nikon Group business facilities are making efforts to adopt fuel-efficient, environmentally friendly vehicles, such as hybrid cars, as company vehicles. As an example,

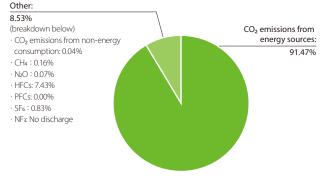
in December 2021, Nanjing Nikon Jiangnan Optical Instrument Co., Ltd. (China) switched two employee shuttle buses from gasoline-powered to electric vehicles. Also, Nikon began using a fuel cell vehicle as a company car. Many business facilities are also working to mitigate environmental impact from their employees' commute, through means like encouraging employees to utilize car sharing, cycle to work, and actively use public transport.

# CO<sub>2</sub> Emissions from Non-Energy Consumption and Other Greenhouse Gas Emissions and **Reduction Measures**

For fiscal year 2023, CO<sub>2</sub> emissions from non-energy sources\*1 and other greenhouse gases\*2 totaled 6,961t-CO₂e, accounting for 8.5% of the greenhouse gases emitted by Nikon and Group manufacturing companies. Of these gases, HFCs contained in detergents used in the manufacturing process constituted the largest category at 7.4%.

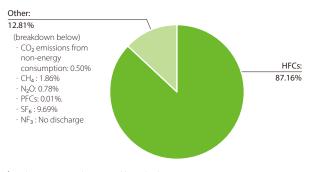
The Nikon Group is working to establish alternative technologies while implementing chemical substance management thoroughly in accordance with the Hazardous Chemical Substance Guideline in order to reduce CO<sub>2</sub> emissions from non-energy sources and other greenhouse gases.

#### Breakdown of Greenhouse Gas Emissions from Nikon and Group Manufacturing Companies •



:Values in Data Index assured by a third party

### Breakdown of CO<sub>2</sub> Emissions from Non-Energy Consumption and Other Greenhouse Gas Emissions •



:Values in Data Index assured by a third party

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<sup>\*1</sup> CO<sub>2</sub> emissions from non-energy sources: CO<sub>2</sub> generated by fire extinguishers, sprays, waste incineration, etc.

<sup>\*2</sup> Other greenhouse gas: CH4, N2O, HFCs, PFCs, SF6, NF3

> Preventing Pollution and Conserving Ecosystems

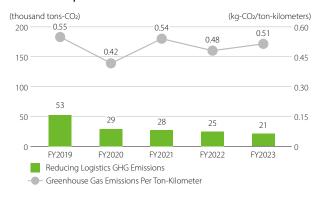
# Reducing Logistics Greenhouse Gas(GHG) **Emissions**

### **Visualizing Logistics GHG Emissions**

Nikon products are manufactured mainly in Asia and sold worldwide. Based on this structure, we visualize transportation routes, cargo volume, and GHG emissions, striving to reduce emissions.

In fiscal year 2023, GHG emissions for domestic transportation amounted to 699t-CO<sub>2</sub> and 20,568t-CO<sub>2</sub> for international trading, including transportation within foreign country borders. The Nikon Group outperformed our target of reducing emissions by 2.7% compared to the previous fiscal year, reducing greenhouse gas emissions by 16.1%.

### Logistics GHG Emissions in Japan, Internationally, and Outside Japan



#### **Promotion of Modal Shifts**

The Nikon Group promotes modal shifts\*1 to reduce environmental impact, shifting the main mode of transportation from air and trucks to marine, rail, and ferry transport.

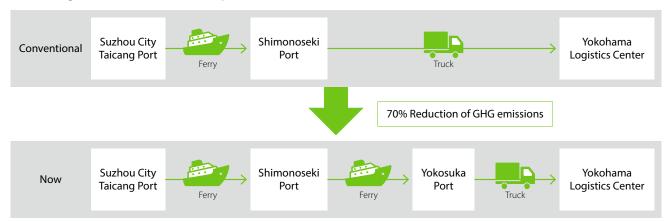
In April of fiscal year 2023, we switched domestic transportation within China from long-distance trucks to ferries for the transportation of precision equipment from Nanjing Nikon Jiangnan Optical Instruments Co., Ltd. Ferry transportation offers easy schedule management (timeliness), temperature and humidity control, and RORO cargo handling\*2 with little vibration to the goods transported. For this reason, Nikon uses ferries to transport products from China. We also use ferries for domestic transportation after arrival in Japan. In this way, we reduced greenhouse gas emissions by approximately 70% compared to conventional truck transportation. This is

also an effective countermeasure to the 2024 Problem of a growing driver shortage.

In October, Hikari Glass (Akita Prefecture), a Nikon Group company in Japan that manufactures optical glass and other products, switched transportation to the Port of Tokyo from truck to rail as part of the export leg to Chinese Group company, Hikari Glass (Changzhou) Optics Co., Ltd. Hikari Glass also conducted trials to reduce truck transportation, including changing the port of loading from Tokyo to Akita. These measures resulted in greenhouse gas emissions reductions of approximately 52% and 78%, respectively. This approach is also an effective countermeasure to the aforementioned 2024 Problem.

- \*1 Modal shift: This term is normally used to refer to shifting the method of transportation in order to reduce the impact on the environment.
- \*2 RORO cargo handling: RORO stands for roll on roll off, meaning truck boarding (roll on) and disembarkation (roll off). Trucks, trailers, and other vehicles selfdrive to the vessel to load and unload cargo.

### Switching to ferries for domestic transportation



> Environmental Strategy > Environmental Management Promotion System > Risk Management > Indicators and Targets > Promoting a Decarbonized Society > Resource Circulation > Preventing Pollution and Conserving Ecosystems

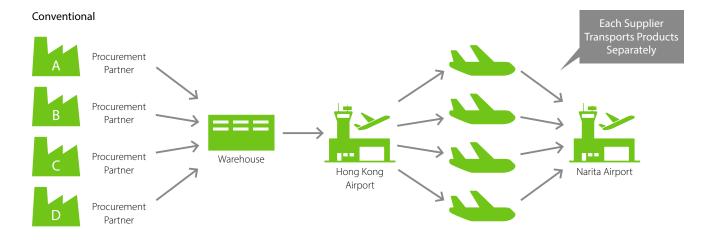
# **Environmentally Friendly Transportation**

As well as gradually shifting over to the use of environmentally-friendly vehicles with low fuel consumption for delivery trucks, etc., the Nikon Group is also working to promote eco-driving (fuel-efficient driving) by having drivers attend regular seminars on eco-driving sponsored by the Japan Trucking Association.

We are also reducing the number of trucks used in domestic transportation for exports from our warehouses. We accomplish this goal by improving loading efficiency through the selection of optimal packing boxes based on volume calculations and by consolidating shipments from different business units.

In addition, Nikon Vision, which manufactures and sells telescopes and binoculars, conducted a buyer's consolidation trial in June 2023. Buyer consolidation combines airfreight from multiple suppliers in Hong Kong in a single ocean container for ocean transport. We expect this measure to reduce greenhouse gas emissions by approximately 95% compared to conventional air transportation from each supplier. We performed a second transport operation in October. We intend to continue this initiative in the future, albeit on an irregular basis.

# Buyer's Consolidation by Nikon Vision



#### **Buyer Consolidation**

