

Co-creating Value with the Environment

Materiality	Strengthening efforts to protect the global environment 	
Description of Main Activities	FY2022 Activities	Issues and FY2023 Strategies
<ul style="list-style-type: none"> Promoting greenhouse gas reductions Promoting recycling of resources (water, waste, etc.) 	<ul style="list-style-type: none"> Received third-party verification of CO₂ emissions and energy consumption Installed a solar power generator (Discovery Research Laboratories in Tsukuba) Began the switch to hydroelectric power (Odawara Central Factory) 	<ul style="list-style-type: none"> Promoting the switch to renewable energy (Head Office area) Expanding installations of solar power generators (Head Office area and Odawara Central Factory) Strengthening water resource management initiatives
<ul style="list-style-type: none"> Continuing activities to protect and cultivate endangered species at the Yamashina Botanical Research Institute 	<ul style="list-style-type: none"> Futaba aoi dedications: Aimed to be the number one company in the number of dedications of futaba aoi (<i>Asarum caulescens</i>) to Kamigamo Shrine. Also began examining methods of propagation by suckering in FY2022. Conservation of <i>Chrysanthemum seticospe</i>: Exhibited at the Green-Water Promenade of Kyoto Station and at the Kan-in no Miya Residence in the Imperial Palace. Provided seedlings and participated in replanting activities. Conducted an initial survey of vegetation on the mountain and forests around Daigoji Temple. 	<ul style="list-style-type: none"> Futaba aoi dedications: Continued cultivating suckers from Kamigamo Shrine and experimenting with propagation using suckers. Preservation of <i>Chrysanthemum seticospe</i>: Conducting plant education activities through the propagation and exhibition of <i>Chrysanthemum seticospe</i>. Continuing to survey the mountain and forests around Daigoji Temple.

Environmental Management

Nippon Shinyaku is aware of its responsibility toward the environment and has established a Basic Environmental Policy to reduce its environmental impact in all areas of its business activities. The Environment Committee, chaired by the Director in charge of Business Management & Sustainability, was established to put this policy into practice and determines the direction and targets of our environmental preservation activities.

WEB About environmental initiatives at Nippon Shinyaku
<https://www.nippon-shinyaku.co.jp/english/sustainability/esg/environment/>

■ Environmental Targets Plan

The Environmental Targets Plan sets specific voluntary targets for the Company to carry out to comply with its Basic Environmental Policy. We succeeded in reaching all of the targets of our 6th Nippon Shinyaku Environmental Targets Plan from FY2020 to 2022. In FY2023, we established the 7th Nippon Shinyaku Environmental Targets Plan (FY2023–2025), and we aim to enhance corporate value through ESG management and create a sustainable society by putting the SDGs into practice by working toward these targets.

Nippon Shinyaku's Basic Environmental Policy

At Nippon Shinyaku, our mission is to help people lead healthier, happier lives. When we seek growth, it should be growth in harmony with the natural environment. That is why we strive to protect, sustain, and improve the environment through eco-considerate business activities.

1. Environmental commitment

We will effectively operate a Company-wide organization responsible for environmental issues and establish clear targets for our collective pursuit of environmental conservation initiatives.

2. Environmental preservation

We will accurately judge the impacts of our business activities on the environment (including global warming, resource depletion, and environmental pollution) and continuously improve our environmental preservation activities (conserving energy and reducing greenhouse gas [GHG] emissions, water usage, and waste) in order to enable sustainable and efficient use of resources and prevent pollution (by appropriately managing and reducing wastewater and gaseous emissions).

3. Conservation of biodiversity

We will pay due consideration to the conservation of biodiversity in our business activities.

4. Legal compliance

We will comply with the environmental laws and regulations of each country or region where we operate, our internal environmental rules and all other applicable rules to fulfill our social responsibility.

5. Education and training

We will educate and train all directors and employees so that they can recognize the importance of environmental conservation and act in a responsible manner.

6. Disclosure

We will proactively disclose information about our environmental preservation activities and communicate with our local communities and other stakeholders to build relationships of trust with them.

The 7th Nippon Shinyaku Environmental Targets Plan (FY2023-2025)

Item	Targets
Climate change alleviation	Greenhouse gas emissions (Scope 1, 2) by FY2030 by 42% from the FY2020 benchmark Greenhouse gas emissions (Scope 1, 2) by FY2025 by 21% from the FY2020 benchmark
Water resources management	Reduce water use intensity by 10% from the FY2021 level by FY2025
Waste management	Reduce the final amount of landfilled waste by 75% from the FY2005 level by FY2025 Set the target waste plastic recycling rate for FY2025 at 65% or above Set the target waste recycling rate for FY2025 at 60% or above
Chemical substance management	Promote appropriate management of chemical substances, including those designated in the Pollutant Release and Transfer Register (PRTR) system provided for by the Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement, and constantly reduce releases of such substances in the environment
Environmental management	Continue the certification of the environmental management systems (ISO 14001 and KES Step 2) so as to effectively improve environmental performance
Biodiversity	Promote biodiversity conservation activities

Disclosure Based on the TCFD Recommendations

In December 2021, Nippon Shinyaku declared its support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)*. In addition to working to address already identified risks from the perspective of risk management, we conducted a scenario analysis of climate-related risks and opportunities in line with the framework of the TCFD recommendations.



* TCFD: Abbreviation of Task Force on Climate-related Financial Disclosures. Established in 2015 by the Financial Stability Board (FSB) to develop recommendations for more effective climate-related disclosures to be made by companies to investors, lenders, and insurance underwriters.

■ Governance

The Director in charge of Business Management & Sustainability serves as Officer in charge of response to climate issues. This Director chairs the Environment Committee, which meets four times a year to ensure the implementation of Nippon Shinyaku's Basic Environmental Policy, which was formulated by the Board of Directors. The committee formulates other environmental policies, promotes environmental preservation and other initiatives, and checks the results of environmental preservation activities, including the annual CO₂ emissions reduction.

The same Director is also a member of the President-chaired Sustainability Committee, which meets twice a year, so that Group-wide sustainability activities will be further enhanced. The Nippon Shinyaku Group has identified tackling climate change as one of its material issues. The details and progress of

the relevant activities are reviewed by the Sustainability Committee. The results of the Environment Committee and Sustainability Committee's investigations are reported at least once a year to the Board of Directors.

■ Scenario analysis

Recognizing the enormous impact climate-related risks and opportunities will yield on the company's business strategies, Nippon Shinyaku has identified the risks and opportunities of climate change and evaluated their importance according to the following process. This analysis and evaluation into climate change-related risks and opportunities was conducted utilizing a 1.5° C warming scenario and a 4° C warming scenario. First, climate-related risks and opportunities were comprehensively sampled. Next, the sampled climate risks and opportunities were sorted according to their relationship to the company's pharmaceuticals and functional food businesses. Finally, their importance was evaluated based on two criteria: degree of impact on the company, and probability of occurrence.

■ Strategy

Nippon Shinyaku is continually working to improve its environmental conservation activities (conserving energy and reducing CO₂ emissions) based on its Basic Environmental Policy in order to achieve carbon neutrality by 2050. The company's long-term goal is to realize net-zero CO₂ emissions by FY2050. In addition, Nippon Shinyaku is also monitoring climate-related risks across its entire supply chain. Nippon Shinyaku views the transition to a low-carbon economy as an opportunity, and recognizes the reduction of costs through energy conservation and recycling, and the development of relevant products as means to increase its competitiveness.

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Identified Risk/Opportunities and Measures

Category	Impact on Nippon Shinyaku	Measures	Period			
			Short-term	Mid-term	Long-term	
			- 2025	2026-2030	2031 -	
Transition risks	Policies and laws	Risk of energy costs and procured goods prices increasing due to carbon taxes and strengthened energy conservation laws		●		
		Delay in response to global environmental regulations		●		
	Markets	Increases in market prices of procured goods due to increases in demand for raw materials (pharmaceuticals) Risk of decreases in demand due to increases in product prices in accordance with increased market prices of procured goods (functional foods)	<ul style="list-style-type: none"> Introduction of an internal carbon pricing system in order to promote investment in reducing greenhouse gas emissions Proactive deployment of energy conservation and renewable energy measures Inter-Group education and momentum-fostering initiatives Implementation of monitoring of environmental regulation trends by the Environment Committee 		●	
		Stoppage of plant operation and business activities due to depletion of raw materials and other resources	<ul style="list-style-type: none"> Proactive support for suppliers' carbon neutral activities to deal with risk of increased procurement costs Maintenance of diverse suppliers Enhancement of stockpile capabilities 			●
Evaluation	Negative impact on stock prices and fundraising due to delay in tackling climate change	<ul style="list-style-type: none"> Promotion of initiatives and information disclosure in line with the TCFD recommendations Improvement of corporate value through ESG evaluation 		●		
Physical risks	Acute risks	Increased risk of disruptions to supply chain, including raw material procurement and product shipping logistics, due to increases in regional torrential rains and large-scale typhoons	<ul style="list-style-type: none"> Process automation Maintenance of diverse suppliers Strengthening cooperation with suppliers Enhancing plant production and quality control systems and in turn reducing product risks through means such as inspections of manufacturing contractors' plants, organization of all information concerning materials and products, and revising product standards and testing procedures 		●	
		<ul style="list-style-type: none"> Increased frequency of damage to facilities and increased repair costs due to abnormal weather and weather-related disasters Suspension of business activities due to damage to associated facilities, including those of the company as well as collaboration research companies 	<ul style="list-style-type: none"> Formulation of concrete guidelines for action in the event of a disaster 		●	
	Chronic risks	Risk of need to move plants and other sites due to impact of rising sea levels	<ul style="list-style-type: none"> Promotion of investment concerning disaster prevention and response 		●	
		Depletion of water resources and water intake limits due to changes in rainfall patterns (reduction in profits due to reduced production capacity) Insufficient raw material procurement due to climate change	<ul style="list-style-type: none"> Evaluation of risks regarding existing site water supply security and water shortages as well as abnormal weather Maintenance of diverse suppliers 			●
Opportunities	Resource efficiency/energy	Reduction in production costs through a variety of improvements to resource efficiency, including energy conservation, reduced water utilization, and waste disposal	<ul style="list-style-type: none"> Energy-saving production and process development through IoT utilization and the promotion of energy optimization in plants 		●	
		Optimization of production and logistics processes	<ul style="list-style-type: none"> Investigation into the use of raw materials which pose a low logistics load 		●	
		Maintenance of cost competitiveness through introduction of renewable energies to reduce carbon tax burden	<ul style="list-style-type: none"> Promotion of further development of energy-saving technologies 		●	
	Resilience	Minimizing the damage of physical risks through implementation of systematic measures	<ul style="list-style-type: none"> Implementation of measures such as seismic reinforcement Preparing for long-term infrastructure disruptions such as enhancing stockpile capabilities 			●
Contribution to increasing corporate value through the company's climate initiatives, including gaining customer trust, retaining employees, improving evaluation in recruitment, and improving evaluation from ESG investors		<ul style="list-style-type: none"> Promotion of initiatives and information disclosure in line with the TCFD recommendations Acquiring SBTi validation, promotion of CDP reporting 			●	

Risk management

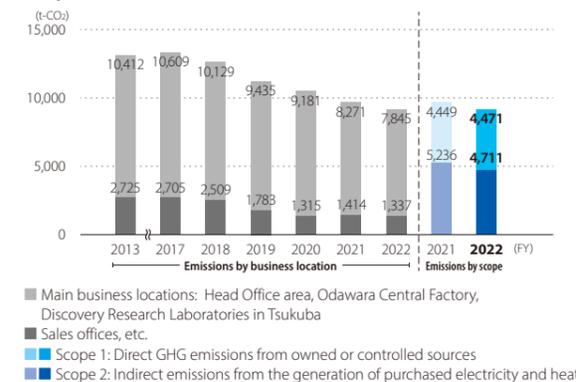
The Nippon Shinyaku Group has in place Basic Risk Management Rules, with the Director who is the Head of Personnel, General Affairs, Risk Management, Compliance & Digital Transformation acting as the Risk Management Officer, and a department dedicated to overseeing risk management. We have identified various possible risks, including climate change-related ones. Each department has devised measures to prevent the actualization of those risks and to respond to any realized risk. Further, every year, action plans are formulated to address the risks selected as highly serious for the entire Group or each department and enhance measures to prevent their actualization. The results of these activities are reported to the Risk & Compliance Committee and then to the Board of Directors at the end of each fiscal year so that activities in subsequent years will be improved.

WEB FY2023 activity themes and risk management goals
<https://www.nippon-shinyaku.co.jp/english/sustainability/esg/environment/tcfd.php#anchor04>

Indicators and targets

Nippon Shinyaku has established a greenhouse gas reduction target of reducing its greenhouse gas emissions (Scope 1 and 2) by FY2030 by 42% from the FY2020 benchmark. As a climate-related opportunity the Company has also established the ratio of hybrid vehicles for our sales activities as a key performance indicator. Further, we will be striving to assess our capital outlays and allocation by using as indicators investments in environmentally conscious facilities and facilities which contribute to reduced greenhouse gas emissions.

Scope 1 and 2 emissions volume (FY2022 results)



Initiatives to Reduce CO2 Emissions

1. Switching to renewable energy

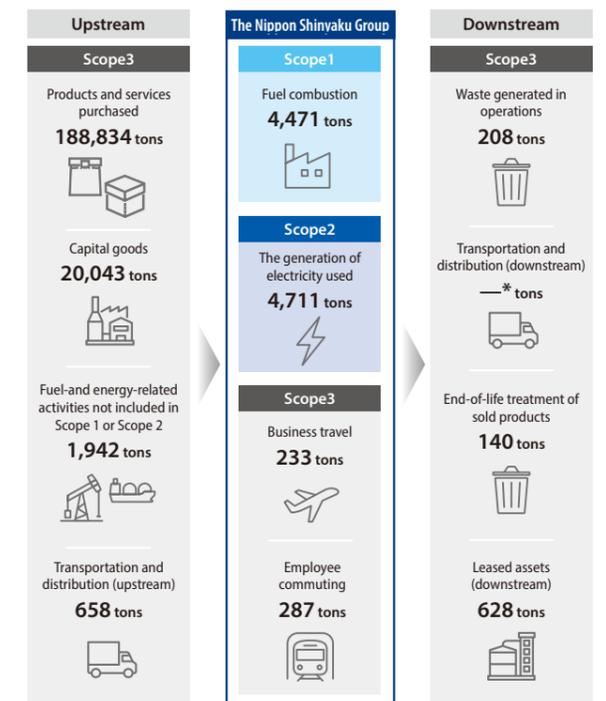
Nippon Shinyaku aims to reduce CO2 emissions to zero by FY2050, with a target of 6,088 t-CO2 in FY2030 (a 42% reduction from the FY2020 benchmark).

In April 2021, we began the switch to renewable energy, which is expected to reduce CO2 emissions by 50% in the Head Office area. In November 2022, the Odawara Central Factory began switching to hydroelectric power, which is expected to reduce their CO2 emissions by 6% in the current fiscal year. In addition, in April 2022, a solar power generator was installed at the Discovery Research Laboratories in Tsukuba, which is expected to reduce the CO2 emissions of the entire premises by 12%. We will continue to consider switching to and expanding our renewable energy sources, including solar power generators.

2. Introducing hybrid company-owned vehicles for representatives

By introducing hybrid vehicles for our sales activities and also encouraging employees to use public transportation systems while in urban centers, we are promoting measures to better respond to climate change and raising employee awareness. Nippon Shinyaku's company-owned vehicles will be entirely replaced by hybrid cars over a four-year period starting from

Supply chain emissions (FY2022 results)



- Scope 1** Direct emissions from owned or controlled sources (in-house use of fuel and industrial processes)
- Scope 2** Indirect emissions from the generation of purchased electricity and heat
- Scope 3** Indirect emissions, other than Scope 1 and Scope 2 emissions, from the supply chain

* Emissions in FY2022 have not yet been calculated due to a partial lack of data disclosure from relevant pharmaceutical wholesalers at the time of calculation.

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FY2020, except in heavy snowfall areas. In FY2022, hybrid cars already accounted for 80% of the company's fleet of sales vehicles.

As in the previous fiscal year, we continue to reduce energy consumption through equipment improvement, promote energy conservation following the guidelines for electricity conservation and saving energy, and educate employees on the importance and necessity of environmental preservation through in-house educational programs.

■ Received third-party verification

To improve the reliability of our environmental information, we received verification from a third party, SGS Japan Inc., based on verification standards (ISO 14064-3:2019 and SGS Japan's verification procedures). The verification covers Scope 1 and Scope 2 and energy consumption.

WEB Independent Third-Party Verification Statement
<https://www.nippon-shinyaku.co.jp/english/sustainability/esg/environment/climatechange.php#anchor05>

Promoting the Recycling of Resources

■ Basic attitudes and targets

Recognizing the limits of resources derived from natural capital, we at Nippon Shinyaku are constantly striving to reduce the amounts of resources we use, adopting various methods, including reuse and common use. We are also focusing our effort on the active use of recycled raw materials to ensure that the waste resulting from our activities is recycled or reused. We are working to reduce the quantities of waste generation and waste disposal in landfills, which are general indicators for the abovementioned efforts. We appropriately manage the quality of used water for discharge, including cooling water used at production sites, in compliance with applicable laws and regulations so that water sources will be safeguarded from pollution.

We have set and promote a long-term target of increasing the percentage of recycled waste plastic to 65% (in conformity with the goals set in the Voluntary Action Plan on the Environment – Creating a Sound Material-Cycle Society adopted by the Federation of Pharmaceutical Manufacturers' Associations of Japan) by FY2030.

■ Initiatives for resource recycling

1. Appropriate treatment and utilization of waste materials

We recycle metals and collect and sort out plastic waste in compliance with the Waste Disposal and Public Cleansing Act*¹ and applicable Kyoto City ordinances.*²

In the Head Office area and at the Discovery Research Laboratories in Tsukuba, we have adopted an integrated waste management

service (ASP service) capable of appropriate and continuous support to waste management. This enables us to confirm responsible waste treatment and disposal by our service providers. Furthermore, in the Head Office area, we disclose information regarding waste materials from time to time on the in-house intranet based on the KES*³ environmental management system standard.

*1 Law concerning waste disposal and public cleansing

*2 City of Kyoto's ordinances on reduction and proper treatment of waste

*3 Abbreviation for Kyoto Environmental Management System Standard, enforced by the specified non-profit corporation KES Environmental System since 1999. The number of registered companies exceed 5,000.

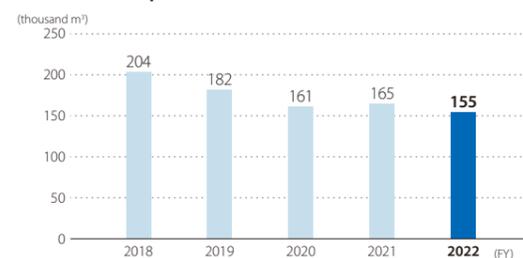
2. Water consumption and risk assessment

Water consumption in FY2022 was 155 thousand m³ and Nippon Shinyaku was not involved in any cases of finable violations against laws or regulations on drawing or discharging water.

In the assessment of water stress at the three main business locations using WRI AQUEDUCT (3.0)*⁴, the Odawara Central Factory and the Discovery Research Laboratories in Tsukuba fell into a medium water risk area, and no business locations fell into a high water risk area.

*4 WRI AQUEDUCT(3.0): A set of water risk assessment tools developed and presented by the World Resources Institute (WRI)

Water consumption (main business locations*)



* Main business locations: Head office area, Odawara Central Factory, Discovery Research Laboratories in Tsukuba

In addition, as in the previous fiscal year, we continue to promote the reduction of package waste and office paper, and have joined the Plastic Smart campaign launched by the Ministry of the Environment of Japan.

Appropriate Management of Chemical Substances

■ Basic attitude and goals

For a pharmaceutical company that handles a variety of chemical substances, their appropriate management is a vital social responsibility. At Nippon Shinyaku, we ensure responsible management of all chemicals, and a dedicated committee, established in compliance with the company's Basic Regulations on the Management of Chemical Substances, clarifies the

company's policy in this regard so that chemicals are managed correctly by all departments. Thanks to our IT system that enables a comprehensive and exhaustive inspection of the status of legal and regulatory compliance concerning chemical substances, we maintain a responsible management mechanism concerning all chemicals handled in-house in conformity with the latest applicable laws and regulations. Furthermore, we regularly assess workplace risks, including those related to chemical substances, from the perspective of occupational health and safety to realize the highest level of workplace safety.

■ PRTR method-based management

Business operators that handle one ton or more of any designated Type 1 chemical substances per year under the Pollutant Release and Transfer Register (PRTR) method defined under the Act on Specific Chemical Substances are required to file notices of these chemicals. We report that we are appropriately managing them.

■ Management of Highly Active Substances at Odawara Central Factory

The manufacturing plant for highly active solid formulations at the Odawara Central Factory is equipped with the latest triple containment structure. In this structure, highly active chemicals are contained first by equipment, second by air current and chamber pressure, and third by building, thereby preventing leakage into the external environment and taking maximum care for safety, quality, and environmental protection.

Conservation of Biodiversity

The Yamashina Botanical Research Institute conserves approximately 3,000 varieties of plants, including 160 species that are the botanical origins of herbal medicines recorded in the Japanese Pharmacopoeia, 480 rare plant species, including 0.7% of the plants regulated by CITES, such as *Welwitschia mirabilis* and aloes, 12% of the plants on the Japanese Red List of the Ministry of the Environment, and 5% of the plants in the Red Data Book of Kyoto Prefecture. Nippon Shinyaku is committed to these ex situ conservation efforts as a materiality issue.

■ Botany education activities

The Yamashina Botanical Research Institute routinely holds tours by appointment, tours for university students studying pharmacology and agriculture and pharmacists, indigo dyeing workshops for elementary school students, public holiday tours, and other events designed to raise awareness of conserving the diversity of useful plants.



Ex situ conservation of rare plants at the Yamashina Botanical Research Institute



Late autumn tour of Yamashina Botanical Research Institute
 Plant survey in the mountain and forests around Daigoji Temple

■ Conservation activities for plants that have a place in traditional Kyoto culture

We conserve and propagate plants that have a place in traditional Kyoto culture, such as futaba aoi (*Asarum caulescens*) and *Chrysanthemum seticospe*. Through the Aoi Project, a general incorporated foundation, we have dedicated 140 pots of futaba aoi to Kamigamo Shrine and provided seedlings to Kyoto City's Kikutani Forest of Flowering Chrysanthemums.

■ Survey of plants in the mountain and forests around Daigoji Temple, a World Cultural Heritage site

In June 2021, the G7 Nature Compact committed to the "30 by 30" initiative, whereby national governments designate more than 30% of land and sea areas as protected areas by 2030. As a result, attention is focusing on temple and shrine forests as areas other than protected areas that can contribute to biodiversity conservation. Focusing on the Daigoji Temple forest in the southern part of Kyoto City, Nippon Shinyaku has conducted eight surveys since April 2022 and identified 157 species of higher plants in 78 families.

■ Ex situ conservation of the Japan-designated Natural Monument, ayumodoki

The ayumodoki (*Parabotia curtus*) is a freshwater fish endemic to Japan that has been drastically reduced due to environmental changes in its habitat and is now distributed only in the Kameoka Basin and Okayama Prefecture. Yamashina Botanical Research Institute collaborated with the Ministry of the Environment's conservation and propagation project and succeeded in raising ayumodoki naturally in artificial ponds within its park grounds. We will continue to help conserve valuable wildlife as part of our biodiversity conservation activities.