

Environment



Basic Philosophy

In accordance with the Sanki Engineering Group Environmental Policy, we strive to conserve the global environment in all our business activities, including the supply chain, with the intention of realizing a decarbonized society, recycling-oriented society, and society in harmony with nature. Having identified our efforts in response to environmental issues as a key management concern, we are primarily working to contribute to a decarbonized society as our top-priority material issue as well as to use engineering to build a comfortable environment.

Sanki Engineering Group Environmental Policy
<https://www.sanki.co.jp/en/csr/environment/management/>

Environmental Management System

● Basic Policy and Management System

Our integrated management system, consisting of an EMS (ISO 14001) and a QMS (ISO 9001), manages the impact in terms of risks and opportunities of our business activities on the environment, including the natural environment that surrounds the Group. Under our system for implementing environmental management, headed by the president, each division sets targets and formulates plans for the implementation of measures in accordance with its annual action plan. Progress is reviewed at the divisional and general meetings.

In addition, the Sustainability Committee, which is mainly composed of directors, discusses sustainability issues in general and deliberates and determines actions to address environmental issues, including climate change. Progress is monitored by the Board of Directors, and issues that may have a significant impact on our management and business strategies are discussed in the Management Meeting and Board of Directors meetings, depending on their relative importance, and incorporated into the Medium-Term Management Plan.

● Virtuous Cycle in Management System

In addition to providing training programs on EMS, we are working to improve the level of management by encouraging our employees to acquire qualifications required by environment-related laws and regulations.

After the waste incineration facilities we constructed in 2019 were cited for noncompliance, we followed our standard procedures to take action to prevent any recurrence, and we are continuing to strengthen our management system. In fiscal 2022, we conducted four environmental management training sessions (one for new employees and three for internal auditors), which also included Group companies.

We also ensure the effectiveness of our management system through internal audits and checks during ISO certification audits. In fiscal 2022, no nonconformities were found in the internal or external audits, and there were no violations of environmental laws and regulations or issues reported regarding noise, dust, or odor at construction sites, confirming that our management system is operating properly.

● Environmental Risk Assessment

We assess environmental risks at each construction site, including those overseas, before construction begins. We use our own JOB Environmental Aspects Assessment List, consisting of 10 aspects and approximately 70 items, for an accurate and efficient review of the wide variety of applicable environment-related risks and regulations, depending on the nature of work and the surrounding environment. In fiscal 2023, we made major revisions to the list, in particular to improve its sustainability elements and take into account local bylaws. Assessing environmental risks, including potential

Scope of ISO 14001 Certification

All our business activities and services, including those overseas, are considered in managing our environmental impact.

<https://www.sanki.co.jp/en/csr/environment/management/>

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Quality and Environmental Management System

Number of Employees with Environment-Related Qualifications (as of April 1, 2023)

- **Certified environmental measurer**
Non-consolidated: 7
Consolidated: 8
- **Supervisor of management of industrial waste subject to special control**
Non-consolidated: 183
Consolidated: 208
- **Pollution prevention manager (cumulative total)**
Non-consolidated: 61
Consolidated: 92
- **Qualified person for energy management**
Non-consolidated: 88
Consolidated: 91

Environmental Aspects Assessed under the JOB Environmental Aspects Assessment List (FY2023)

1. Reduced use of resources and energy for customers and users
2. Reduction and proper disposal of waste
3. Abnormal situations and outflow of contaminants
4. Consideration for areas surrounding construction sites
5. Consideration for unique environmental needs
6. Natural disasters
7. Legal compliance
8. Local bylaws governing job location
9. Temporary materials and equipment, and office and other supplies
10. Other aspects

ones, can allow us not only to reduce our environmental impact but also to avoid work schedule delays and additional costs by gaining the understanding of local communities and government authorities related to our work sites.

Addressing Climate Change toward a Decarbonized Society

● Information Disclosure Based on TCFD Recommendations

The Sanki Engineering Group has endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and therefore discloses climate-related information in accordance with the required framework. Of the five material issues identified for sustainability management, we place the highest priority on contributing to a decarbonized society, and we are addressing climate change by mitigating risks and capturing opportunities.

● Governance

The Sanki Engineering Group established the Sustainability Committee, chaired by the president and composed of members of the Board of Directors, to address climate change and sustainability issues in general. The committee discusses and makes decisions on key issues and actions for realizing sustainability management. All deliberations and decisions made by the committee are reported to the Management Meeting and the Board of Directors for review and approval. Issues that may have a significant impact on our business and management strategies are also presented to the Management Meeting and the Board of Directors for further discussion and approval, depending on their relative importance.

The Sustainability Promotion Council, established as a subordinate body of the committee and composed of persons in charge of the related practical matters in each department, communicates the deliberations and decisions of the committee to the entire Group, discusses and supports specific activities to promote sustainability, and monitors progress.

● Risk Management

Our Risk Management Committee oversees and manages risks that impact the entire Group. It identifies and categorizes business-related risks, determines the subcommittees in charge and content of control plans, assesses the risks by quantifying their impact and frequency insofar as possible, formulates and implements priorities and response policies, and conducts periodic reviews.

With regard to climate-related risks, the Climate Change Risk Subcommittee conducts scenario analysis to extract and assess the impact of climate change risks. The decided measures are submitted to the Sustainability Committee, Management Meeting, and Board of Directors for further decision and approval, depending on the relative importance of the assessed risk, and are then implemented by all the departments of the Group. Measures included in the Medium-Term Management Plan are incorporated into the execution plans of each division to manage their progress.



Recognized as an "A List" company, the highest rating given by the CDP in the area of climate change. The CDP is an international non-profit organization that oversees the global disclosure system for companies in managing their environmental impact.

Click here for details:

<https://www.sanki.co.jp/news/release/article468.html> (Japanese only)

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Sustainability Management Promotion System

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Sustainability Risk Management

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Risk Management Promotion System

● Strategies

Scenario analysis is conducted to gain an understanding of the medium and long-term impact of climate change on business. Risks and opportunities identified through the analysis are incorporated into Phase 3 of the Century 2025 medium-term management plan and addressed as part of the plan.

● Scenario Analysis and Financial Impact Assessment

We analyzed 1.5°C and 4.0°C scenarios in terms of relations to policies and market trends, and we also analyzed physical changes engendered by events such as disasters. For each scenario, causes of Group-wide risks and opportunities have been identified and their degree of impact on business

verified and assessed in the three stages of high, medium, and low.

Adopted Scenarios	Reference Scenarios
<p>1.5°C scenario Net zero is reached by 2050 by taking stringent measures against climate change, and the temperature increase in 2100 is limited to 1.5°C or below from the level of the Industrial Revolution</p>	<ul style="list-style-type: none"> ● IEA: Net Zero Emissions by 2050 (NZE) ● IPCC: Shared Socioeconomic Pathways (SSP1-1.9)
<p>4°C scenario Stringent measures against climate change are not taken, and the temperature increase in 2100 is around 4°C from the level of the Industrial Revolution</p>	<ul style="list-style-type: none"> ● IEA: Stated Policies Scenario (STEPS) ● IPCC: Shared Socio-economic Pathways (SSP5-8.5)

■ Risks and Opportunities

Risks	Transition Risks			
	Category	Policies and Regulations	Technology	Review
Possible event	Increase in carbon taxes and prices for renewable energy certificates (RECs) and stricter CO ₂ emission regulations	Advances in energy conservation and renewable energy technologies	Increased demand for climate action and information disclosure	
Impact on business	Increase in carbon tax burden and costs of purchasing RECs	Increase in construction costs due to rising costs of materials and equipment, and other expenses	- Technological obsolescence - Delayed technological support due to lack of technical capabilities and engineers	Concerns over a possible washout and decline in corporate brand image due to insufficient climate action and information disclosure
Timeline	Medium- to long-term	Medium- to long-term	Medium- to long-term	Short-term/medium- to long-term
Impact	1.5°C scenario: Moderate 4°C scenario: Minor	1.5°C scenario: Major 4°C scenario: Moderate	1.5°C scenario: Major 4°C scenario: Moderate	1.5°C scenario: Major 4°C scenario: Minor
Response	Promote decarbonization measures and capital investment	Strengthen procurement capabilities through centralized purchasing, DX, etc.	- Promote development of energy conservation and renewable energy technologies - Promote open innovation - Secure human resources and enhance engineer training	- Promote decarbonization measures and capital investment - Proactively disclose information
Opportunities	Physical Risks			Resilience
	Category	Acute	Chronic	
Possible event	More frequent and severe natural disasters	Rising temperatures		
Impact on business	- Delays in procurement of materials and equipment - Suspensions or delays in construction - Stagnation of business operations due to infrastructure failures	- Increased risk of heat stroke and other occupational hazards - More severe labor shortages due to deteriorating working conditions at construction sites	Increased construction costs due to decreased productivity and increased costs for countermeasures	
Timeline	Short-term/medium- to long-term	Medium- to long-term	Medium- to long-term	
Impact	1.5°C scenario: Moderate 4°C scenario: Major	1.5°C scenario: Moderate 4°C scenario: Major	1.5°C scenario: Minor 4°C scenario: Major	
Response	- Operate BCMS for maintaining effective BCPs - Strengthen cooperation with partner companies	- Promote occupational health and safety in cooperation with partner companies - Develop technologies to prevent occupational hazards and robot replacements	Improve productivity through DX promotion	
Opportunities	Markets		Resilience	
	Category	Markets		
Possible event	Expansion of energy conservation and renewable energy markets	Growing need for greater cooling capacity	Expansion of climate services market	
Impact on business	- Increased demand for ZEB and other energy conservation projects - Increased demand for energy creation projects	Increased demand for renovation work to boost cooling capacity	- Increased demand for renovation projects to cope with disasters - Increased demand for construction projects and services to cope with disasters	
Timeline	Short-term/medium- to long-term	Medium- to long-term	Medium- to long-term	
Impact	1.5°C scenario: Major 4°C scenario: Moderate	1.5°C scenario: Minor 4°C scenario: Moderate	1.5°C scenario: Minor 4°C scenario: Moderate	
Response	- Promote development of energy conservation and renewable energy technologies - Promote open innovation - Strengthen the SANKI YOU Eco Contribution Point system	- Strengthen system to quickly respond to customer needs - Strengthen the maintenance system	- Promote LCE Business - Strengthen the total integration business of building ICT - Expand consulting services - Operate BCMS to maintain an effective BCP	

● Indicators and Targets

In February 2022, we established the Sanki Carbon Neutral Declaration as a long-term goal, and we have incorporated our carbon transition plan into the medium-term management plan. We will address climate change by focusing on reducing greenhouse gases based on the following indicators.

■ Greenhouse Gas Reduction Targets

Scope	Base Year	FY2025 (medium-term management plan)	FY2030	FY2050
Scope 1, 2	FY2020	40% reduction	Carbon neutrality	Carbon neutrality
Scope 3	FY2020	10% reduction	-	Carbon neutrality
Reductions through the SANKI YOU Eco Contribution Point system	FY2018–FY2020 (average)	30% increase	-	-

■ Greenhouse Gas Emissions

Category	Emissions (t-CO ₂)	Results*		Changes (%)		
		Base Year FY2020	FY2021	FY2022	Compared to the base year	YoY
Scope 1, 2	8,061	7,849	5,341	-34%	-32%	
Scope 1	Direct emissions from businesses owned or controlled by the Company	1,658	1,722	1,743	+5%	+1%
Scope 2	Indirect emissions caused by use of purchased electricity or heat	6,403	6,127	3,598	-44%	-41%
Scope 3		6,161,990	5,005,392	3,931,712	-36%	-21%
Category 1	Products and services purchased	344,460	345,217	355,854		
Category 2	Capital goods	7,419	5,518	7,763		
Category 3	Fuel and energy activities not included in Scope 1 and 2	1,006	1,336	1,358		
Category 4	Upstream transportation and distribution	819	1,123	846		
Category 5	Waste generated in operations	1,481	1,744	1,856		
Category 6	Business travel	332	401	402		
Category 7	Employee commuting	658	965	963		
Category 11	Use of sold products	5,800,139	4,643,385	3,558,271		
Category 12	End-of-life treatment of sold products	1,483	1,381	1,548		
Category 13	Downstream leased assets	4,193	4,322	2,851		
Total		6,170,051	5,013,241	3,937,053	-36%	-21%

*Scope: Sanki Engineering Group

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*Scope: Sanki Engineering Group
We have obtained third-party assurance for the results.

Note: Categories 8, 9, 14, and 15 are not applicable.

Independent Third-Party Assurance Report

<https://www.sanki.co.jp/en/csr/governance/multistakeholder/>

● Initiatives for Emissions Reduction (Scope 1 and 2)

To reduce emissions at our plants, offices, and construction sites, we have been thoroughly implementing energy conservation activities by effectively operating facilities at each location. At the Sanki Techno Center and Yamato Product Center, we have installed several energy-saving systems to reduce energy, including those that apply our proprietary technologies. The Sanki Techno Center switched to electricity derived from renewable power sources to meet its electricity needs in April 2022, resulting in a reduction of 2,651 t-CO₂ compared to the previous level. Our Kansai Branch Office also switched to carbon neutral electricity following its relocation. We consequently reduced our total amount of Scope 1 and 2 emissions in fiscal 2022 by 34% compared to the fiscal 2020 level. Looking ahead, we will consider installing solar photovoltaic panels and converting Company vehicles to EVs.

■ Energy Consumption

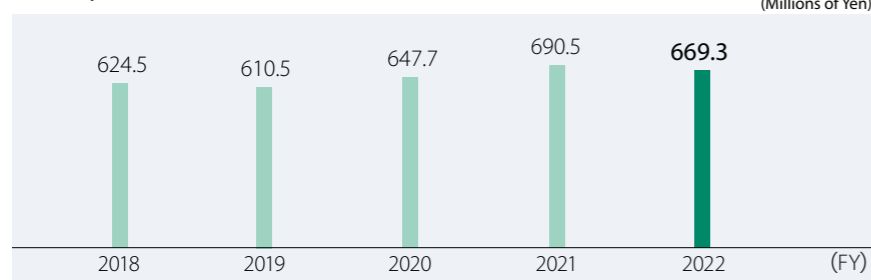
	FY2022	(MWh)
Energy consumption*	22,793	

● Contribution to Reductions through Our Business Activities (Scope 3)

The Sanki Engineering Group's Scope 3 emissions for fiscal 2022 are predominantly Category 11, at 91%. We therefore seek to help customers save and generate energy to reduce CO₂ emissions and cut lifecycle costs through our business activities by enhancing the functionality and comfort offered by the technologies and products of each of our businesses. Through these efforts, we achieved a 36% reduction in Scope 3 emissions in fiscal 2022 compared to the fiscal 2020 level.

In our LCE Business, we seek to reduce environmental impact across the entire product lifecycle, from planning and design in facilities construction to operational maintenance after completion and also renovation. This assists in shifting to a decarbonized, zero-waste society as well as environmental preservation. We will continue to expand business contributions to save and create energy, such as biomass power generation plants, and pursue resource circulation through wastewater treatment facilities and waste treatment facilities. We will also continue to focus on research and development related to environmental preservation to continue reducing emissions from our business activities.

■ R&D Expenditures Related to Environmental Preservation



● Registered ZEB Planner

Sanki Engineering is a registered ZEB Planner, which seeks to promote the widespread introduction of ZEBs* introduced by Japan's Agency for Natural Resources and Energy, under the Ministry of Economy, Trade and Industry. As a ZEB Planner, we act as the contact point for customers planning to adopt ZEB in construction projects and play our part in developing a decarbonized society by supporting ZEB planning.

Energy-Saving Systems Installed at Sanki Engineering Facilities

- **Sanki Techno Center**
 - EcoSearcher® real-time heat source optimization system (proprietary technology)
 - selFort® smart HVAC system for offices (proprietary technology)
- **Yamato Product Center**
 - Periloop thermal stratification HVAC system (proprietary technology)
 - Solar photovoltaic panels

*Scope: Sanki Engineering Group
We have obtained third-party assurance.

Independent Third-Party Assurance Report

<https://www.sanki.co.jp/en/csr/governance/multistakeholder/>



Trans-Heat Container for delivering thermal energy



Woody biomass gasification plant



*Net-Zero Energy Buildings maintain comfortable environments while reducing annual energy consumption to as close to zero as possible by enhancing energy-saving performance using solar power generation and other measures.

● SANKI YOU Eco Contribution Point System

The Sanki Engineering Group's SANKI YOU Eco Contribution Point system contributes, along with our partners, to preventing global warming and realizing a sustainable society. Under the system, when we propose an energy-saving solution that reduces CO₂ emissions to a customer and that proposal is adopted, the amount of the achieved emissions reduction is converted to Eco Contribution Points, used to support environmental conservation activities.

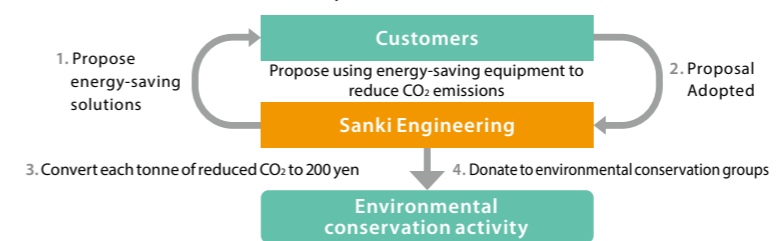
Under the Medium-Term Management Plan "Century 2025" Phase 3, we aim to bolster this system as a measure for reducing Scope 3 emissions. In addition, we have accelerated our efforts to achieve the Sanki Carbon-Neutral Declaration, issued in February 2022, by raising the price per ton of CO₂ reduction from 100 yen to 200 yen starting in fiscal 2022. In fiscal 2022, we received 322 orders (on a consolidated basis) and reduced CO₂ emissions by 50,382 tons, up 97% from the average of the three-year period from fiscal 2018 to 2020, thereby achieving the KPI in the Century 2025 Phase 3 of the medium-term management plan. The cumulative volume of CO₂ emissions reduced since the first year (fiscal 2010) on a consolidated basis reached 317,692 tons, with over 21,000 trees planted.

We will continue to develop proposals for reducing CO₂ emissions and offer an even greater contribution to environmental conservation activities.

■ Proposals for CO₂ Reduction and Outcomes

	FY2018		FY2019		FY2020		FY2021		FY2022	
	Numbers	CO ₂ reduction	Numbers	CO ₂ reduction	Numbers	CO ₂ reduction	Numbers	CO ₂ reduction	Numbers	CO ₂ reduction
Proposals										
Consolidated	411	50,072	405	45,685	379	68,810	431	134,399	488	131,820
Non-consolidated	370	45,531	377	44,756	352	68,243	367	112,550	452	105,116
Orders received										
Consolidated	183	20,699	181	27,624	214	28,430	263	35,848	322	50,382
Non-consolidated	163	16,608	163	27,221	200	28,296	218	14,355	294	24,533

■ SANKI YOU Eco Contribution Point System



Contributing to a Zero-Waste Society

● Current State of Industrial Waste

With respect to industrial waste discharged at our construction sites, we seek to understand the current status by compiling data on waste discharged at sites where Sanki Engineering is the prime contractor. Due to the impact of large construction projects that involved demolition, our industrial waste emissions increased in fiscal 2022.

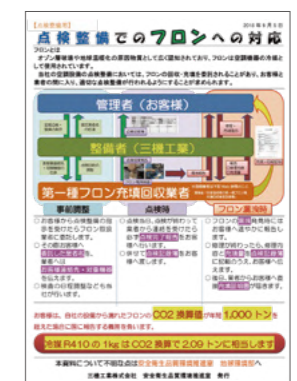
We have maintained the recycling and reduction rate for industrial waste, excluding waste disposed at final landfill sites, at 89.8% (non-consolidated) and 90.0% (consolidated) in fiscal 2022. We will continue to promote proper disposal by monitoring and analyzing the discharge of industrial waste. In fiscal 2022, the waste disposal cost for construction sites was 525,051,000 yen (non-consolidated)



The logo of the SANKI YOU Eco Contribution Point system expresses our aspiration to contribute to social development and create harmony with the natural environment. ECO2: We reduce CO₂ emissions through our contribution to ecology.

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Medium-Term Management Plan "Century 2025" Phase 3



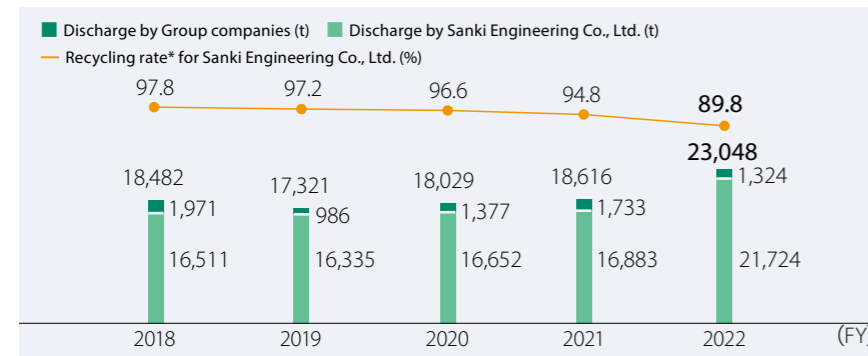
Explanation for handling CFC during HVAC inspections

and 554,862,000 yen (consolidated). Furthermore, we have been properly disposing waste CFC and halons, the cost of which was 30,391,000 yen (non-consolidated) and 39,897,000 yen (consolidated) in fiscal 2022.

With the aim of ensuring the proper disposal of industrial waste, we have made digital manifests available to all departments for waste management. The rate of introduction of digital manifests was 99.2% on a non-consolidated basis and 98.9% on a consolidated basis in fiscal 2022.

We work to reduce emissions of waste plastics and promote the recycling of plastics in accordance with the Plastic Resource Circulation Act.

Changes in the Amount of Industrial Waste Discharged



Proper Disposal of Hazardous Substances

We properly dispose of hazardous substances in accordance with the laws and regulations while informing our employees about proper methods of managing these substances. We have created and distributed posters to inform them of the revisions in storage and disposal procedures for mercury-laced waste in accordance with the revision of the Waste Management and Public Cleansing Act*. Regarding asbestos, we prepare a flow chart for the proper disposal of asbestos at construction sites for renovation work. Also, in accordance with the Air Pollution Control Law, we will properly report the presence or absence of asbestos-containing building materials at construction sites during demolition and renovation work.

Limiting Water Use

At each site where facilities are owned by the Sanki Engineering Group, we regularly monitor water use and continuously consider ways to improve the efficient use of our water resources to reduce usage. Most of the water used is for offices and training accommodations, and the resumption of training camps increased water use in fiscal 2022.

Water Use (m ³)		
	FY2021	FY2022
Water use	37,065	44,088
Tap water	10,540	13,884
Well water	26,525	30,204

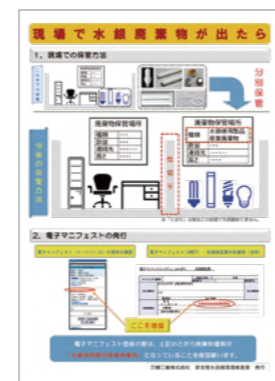
Realizing a Society in Harmony with Nature

Our Response to Biodiversity

In April 2022, we established the Sanki Engineering Group Action Guidelines on Biodiversity, which is part of the Sanki Engineering Group Environmental Policy. Under the guidelines, we will further strengthen our activities for planting and nurturing trees and promoting environment-related facilities.

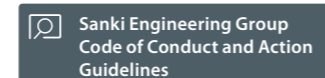
*Scope: Industrial waste discharged at sites where Sanki Engineering is the prime contractor and at domestic Group companies
Recycling rate: Sanki Engineering Co., Ltd.

*Waste Management and Public Cleansing Law



Poster: "How to handle mercury-laced industrial waste"

Scope: Eight sites including the Sanki Techno Center, Yamato Product Center, Nasu Techno Station, and field offices.



<https://www.sanki.co.jp/en/csr/policy/conduct-code.html>

Signing a Reforestation Agreement

Since fiscal 2010, we have supported reforestation through the SANKI YOU Eco Contribution Point system. After raising the point conversion rate for this program, we signed agreements in March 2023 to expand our support for environmental conservation activities, including a Forest Conservation and Management Agreement for the Corporate Forest Project with Shirahama Town in Wakayama Prefecture as well as Lake Biwa Afforestation Partnership Agreements with the Konze Forestry Association and the Ritto Tourism Association, witnessed by officials of Shiga Prefecture and Ritto City, respectively. We will continue to engage in reforestation and other community-based activities through tree-planting events that involve the participation of Group employees as well as other community outreach activities.

Tree-Planting and Nurturing Activities

In addition to the tree-planting and nurturing activities under the SANKI YOU Eco Contribution Point system, we created the Sanki Forest in Kai City, Yamanashi Prefecture, in 2015 to commemorate the 90th anniversary of our founding, and a Kansha-no-Mori in 2020 to commemorate the 10th anniversary of the SANKI YOU Eco Contribution Point system. We donate to reforestation projects that take full advantage of the diversity of local vegetation and tree-planting activities that lead to enriching the bounties of the sea, and also engage in environmental conservation activities that include employee participation.

Furthermore, we facilitated donations to three projects by four organizations in fiscal 2022 to support environmental conservation activities for forest management under the SANKI YOU Eco Contribution Point system.

Donation History for Tree-Planting Projects

Project	Recipient	Location
Corporate Supporter System	More trees	Shibuya Ward, Tokyo
Shiga Prefecture/Lake Biwa Afforestation Partnership Agreement: SANKI YOU Forest Biwako Konze	Konze Forestry Association Ritto Tourism Association	Ritto City, Shiga Prefecture
Wakayama Prefecture/Forest Conservation and Management Agreement: SANKI YOU Forest Nanki-Shirahama	Ohechi Forest Association	Shirahama Town, Wakayama Prefecture
Planting trees in the Hikobae Forest on Mt. Yagoshi	NPO Mori wa Umi no Koibito	Ichinoseki City, Iwate Prefecture
Planting trees in a forest surrounding Shonan Village	Silva Association, Shinwa Gakuen	Yokosuka City, Kanagawa Prefecture
Kansha-no-Mori forestation to commemorate the 10th anniversary of the SANKI YOU Eco Contribution Point system	NPO Environmental Relations	Kai City, Yamanashi Prefecture
Creation of the Sanki Forest to commemorate the 90th anniversary of our founding	NPO Environmental Relations	Kai City, Yamanashi Prefecture
Creation of the Kijimadaira Beech Forest	NPO The Life style Research Institute of Forests	Kijimadaira Village, Nagano Prefecture
Creation of the Present Tree Forest	NPO Environmental Relations	Takayama City, Gifu Prefecture, Miyako City, Iwate Prefecture, Sammu City, Chiba Prefecture

Use of Sewage Sludge

Taking advantage of our knowledge and experience with sewage sludge, which has been attracting significant attention as a recyclable resource, we are working to use it as a fertilizer. Most of the incinerated sewage sludge currently disposed of in landfills contains a large amount of phosphorus, a main component in fertilizer. In addition to developing low-cost, energy-saving technology for extracting phosphorus, we are also engaged in research and development for the use of insects to treat sludge and its conversion into feed and fertilizer.



Keidanren Initiative for Biodiversity Conservation



Ministry of the Environment's 30by30 Alliance For Biodiversity

