Kyoto City Environmental Basic Plan
Annual Report

Environmental Report

- FY2022 (FY2022) Results -

京都市
CITY OF KYOTO

Kyoto City Basic Environmental Plan　About the Annual Report

This report is prepared as an annual report based on Article 8 of the Kyoto City Basic Environmental Ordinance, and summarizes the results of the inspection and evaluation of the progress in fiscal 2022 of the measures listed in the Kyoto City Basic Environmental Plan (2016-2025), which is the master plan for the city's environmental administration and was partially revised in March 2021. The results of the inspection and evaluation are summarized in this report.

For the inspection and evaluation of progress, the latest results are compiled for "objective indicators," which are evaluated using objective numerical values, and "subjective indicators," which are used to grasp the degree of realization by citizens through questionnaires, and are reported to the Kyoto City Environmental Council (Environmental Basic Plan Evaluation Study Subcommittee) after inspection and evaluation, to receive opinions and recommendations for future plan promotion. The results are then reported to the Kyoto City Environmental Council (Basic Environmental Plan Evaluation Study Subcommittee) to receive opinions and recommendations for the promotion of future plans.

Kyoto City Basic Environmental Ordinance (Extract)

(Annual Report)

Article 8.　The Mayor shall annually prepare and publish a report that identifies the state of the environment and the measures taken by the City with respect to environmental conservation.

Contact].

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Outline of Kyoto City Basic Environmental Plan

2nd☞. Inspection and evaluation methods in the progress of the plan

3rd☞☞. Progress by Long-Term Goals

Long-term goal 1 A decarbonized city where sustainable development is possible

Long-term goal 2 A comfortable, safe and secure town in harmony with a natural environment rich in biodiversity

Long-term goal 3 A recycling-oriented town that effectively uses resources and energy and reduces environmental impact

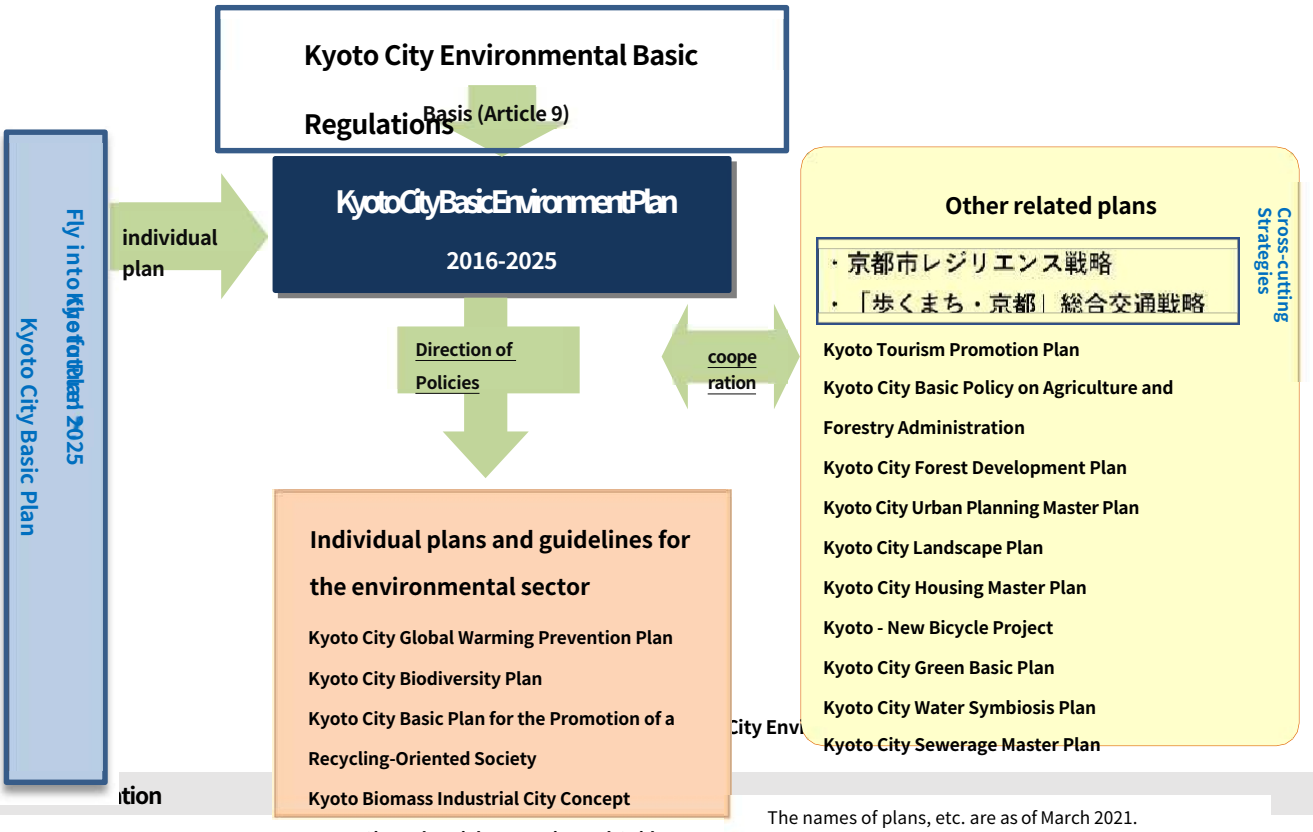
Long-term goal 4 Create people and systems to comprehensively promote environmental conservation

Fourth☞ Summary (Future Directions)

Outline of Kyoto City Basic Environmental Plan

1 Positioning of the plan

The Kyoto City Basic Environmental Plan (hereinafter referred to as the "Plan") The Kyoto City Environmental Basic Plan (hereinafter referred to as the "Plan") was formulated in March 2016 (2016) in accordance with Article 9 of the Kyoto City Basic Environmental Ordinance. The Plan is a master plan for environmental administration that outlines long-term goals for environmental preservation and measures (basic measures) in individual fields related to environmental preservation, as well as the "Habatake Mirai e. Kyoto Plan 2025" (Kyoto City Basic Plan)! Kyoto Plan 2025 (Kyoto City Master Plan).



The names of plans, etc. are as of March 2021.

The 10-year period is from fiscal year 2016 (Heisei 28) to fiscal year 2025 (2025).

Fiscal 2020 is the interim year of this plan, and since it was necessary to reflect changes in the circumstances surrounding environmental issues, such as the entry into force of the Paris Agreement[*1] and the adoption of the IPCC[*2] Kyoto Guidelines, as well as the contents of the individual plans in the environmental field to be newly formulated in the city, we have revised some parts of this plan, including setting new targets. The plan has been partially revised to reflect changes in environmental issues, such as the adoption of the Kyoto Guidelines, as well as the content of individual plans in the environmental field to be newly formulated.

1 Paris Agreement: A new international framework after 2020 that sets goals such as reducing greenhouse gas emissions from human activities to net zero in the second half of the century.

2 Intergovernmental Panel on Climate Change. It was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to conduct a comprehensive assessment and report on anthropogenic climate change, impacts, adaptation and mitigation measures from scientific, technical and socio-economic perspectives.

3 System of measures in the plan

In order to achieve the "Long-term Objectives," which are long-term goals for environmental conservation measures and initiatives, this plan promotes "Basic Policies," which provide direction for the promotion of specific measures and initiatives, aiming to create "an environmentally symbiotic and decarbonized city, Kyoto, where people's lives are in rich harmony with the global environment.

In addition to the long-term goals for each field, we have established a cross-sectoral long-term goal, "Human and Mechanism Development for Comprehensive Promotion of Environmental Conservation," to promote measures in a comprehensive manner.

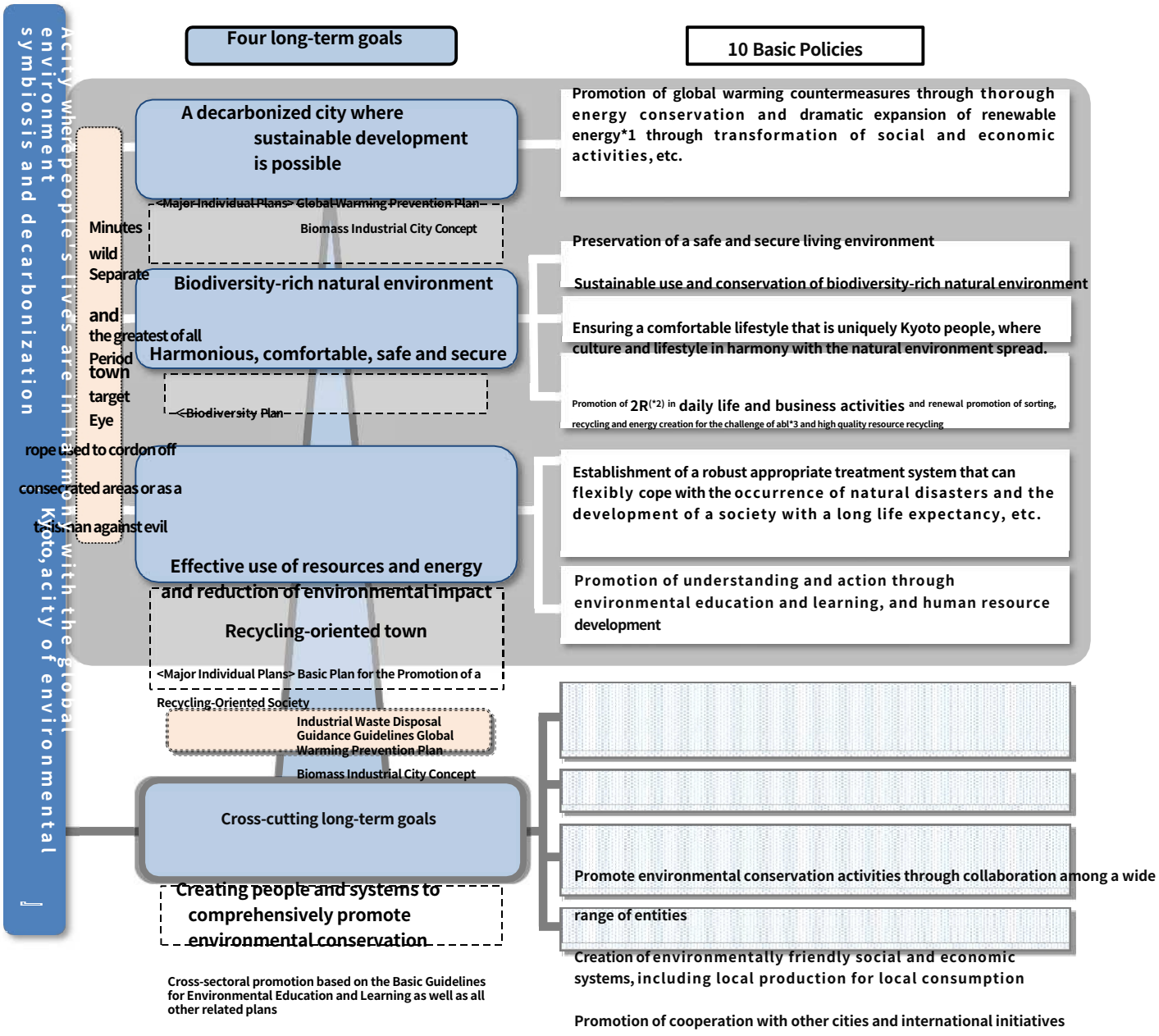


Figure 1.2 System of Policies

1 Renewable energy: Energy produced by using solar, wind, and other energy sources that can be used permanently.

2R: The 2Rs are a combination of "reduce," which means not making or buying things that become waste, and "reuse," which means reusing.

3 Renewable: The use of resources that can be regenerated in a shorter time than fossil resources such as oil (renewable resources: natural resources such as plants) as raw materials, thereby reducing resource depletion and greenhouse gas emissions.

4 Promotion of the plan

(1) Basic Approach to Plan Promotion

In order to ensure the effectiveness of the plan and its steady promotion, it is important to periodically monitor and evaluate the status of achievement of long-term goals and basic measures, and to review them appropriately on an ongoing basis.

Based on this, the progress of this plan will be managed using the PDCA cycle based on the concept of environmental management.

(2) Promotion Structure of the Plan

Every year, the City will monitor the progress of this plan using environmental indicators (see Chapter 2.1), inspect and evaluate it, and report to the Kyoto City Environmental Council to receive opinions and recommendations for the future promotion of the plan. The contents of this report will be published as an annual report, the "Environmental Report" (this document), based on Article 8 of the Kyoto City Basic Environmental Ordinance, on the city's website and in other media.

(3) Progress Management of Plans

Progress management of this plan will be carried out in accordance with the following

■ Inspection and evaluation of progress

We will inspect and evaluate the progress of this plan by surveying citizens and obtaining the latest figures on environmental indicators.

■ Review of inspection and evaluation results

Based on the progress and evaluation results of the plan, as well as the opinions and recommendations of the Kyoto City Environmental Council, the relevant departments, etc. will consider implementation of new projects, review of existing projects, or improvement of specific individual measures and actions.

In addition, for the purpose of accurate inspection and evaluation of the progress of the plan, environmental indicators will be reviewed after the plan is formulated, including the adoption of new environmental indicators and the setting of new or revised target values, as appropriate.

Figure 1.3. Planning Progress

Article 2☞ Methods of Inspection and Evaluation in the Progress of the Plan

1 Basic Concept

The progress of this plan will be managed using "environmental indicators" that have been established to monitor the progress of each long-term goal and basic measures.

The "environmental indicators" include "objective indicators" that evaluate the status of measures and initiatives using objective numerical values and "subjective indicators" that are evaluated based on the results of a questionnaire survey (hereinafter referred to as "questionnaire survey") concerning the degree of realization of citizens. In the inspection and evaluation of the plan, a comprehensive evaluation will be made from both objective and subjective perspectives.

2 Methods of Inspection and Evaluation by Environmental Indicators

(1) objective indicator

For objective indicators, if the Kyoto City Basic Plan or sectoral plans set targets for each fiscal year, they are consistent with . If the Kyoto City Basic Plan or sectoral plans set targets only for fiscal 2025 or 2030, the actual results for fiscal 2019 are basically used as the base value, and the target values for fiscal 2025 are allocated equally to each fiscal year up to the target value for fiscal 2030 (for some objective indicators, such as the total greenhouse gas emission reduction rate, the base value and target value are set consistent with the ordinance, etc.). (For some objective indicators, such as the total greenhouse gas emission reduction rate, the base value and target value shall be set in a manner consistent with the ordinance, etc.), and the target value for each fiscal year (hereinafter referred to as the "annual target value") shall be set by evenly allocating the value to each fiscal year. The target values for each fiscal year (hereinafter referred to as "annual target values") are set and evaluated on a 5-point scale according to the percentage of achievement of the actual values against the annual target values.

(The evaluation categories are shown in Table 2.1.)

In addition, with regard to the "status of achievement of municipal conservation standards* for air pollution" and "status of achievement of municipal conservation standards for water pollution" among the objective indicators, the City will strive to achieve the municipal conservation standards as soon as possible, and if they have already been achieved, the City will strive to maintain the current status. The target value for each fiscal year shall be 100% each year.

Kyoto City Environmental Preservation Standards. The city has established its own standards, which are stricter than the national environmental standards, as desirable standards to be maintained in order to protect the health of citizens and preserve a comfortable living environment and a good natural environment.

Table 2.1 Evaluation categories of objective indicators

evaluation value	Percentage of actual results achieved relative to fiscal year target
★★★★★	More than 100 %* (*)
★★★★☆	80% or more but less than 100
★★★☆☆	60% or more but less than 80
★★☆☆☆	40% to less than 60
★☆☆☆☆	Less than 40

The maximum percentage of achievement of the city's conservation standards for air and water pollution shall be 100%.

(2) subjective index

For the subjective indicators, we surveyed citizens and asked them to select their level of realization for each indicator from a list of five choices.

The respondents were asked to respond from a list of options (see Table 2.2).

≪Survey Summary.

Survey method: Internet-based survey
Survey target: 1,000 men and women (aged 15-79) living in the city Survey period: February 9, 2023 (Thursday)

~ Tuesday, February 28

Gender and age composition ratios are based on the Kyoto City Basic Resident Ledger population.

age	masculine gender	female
15～ 19 years old	13	16
20～ 29 years old	90	87
30～ 39 years old	67	70
40～ 49 years old	85	89
50～ 59 years old	88	92
60～ 69 years old	65	72
70～ 79 years old	75	91
plan	483	517

For the evaluation of subjective indicators, a score was assigned to each selection (see Table 2.2), and each score was multiplied by the number of respondents for each selection, and the total score was divided by the number of respondents (1,000 and evaluated on a 5-point scale.

(See Table 2.3).

Table 2.2. Questionnaire Selections and Scores

Questionnaire. choice	allotment (allocation) of marks
I feel that way.	2 points
If anything, I feel that way.	1 point
I'd rather not feel that way.	-1 point
I don't feel that way.	-2 points
I don't know.	0 points

Table 2.3. Evaluation categories of subjective indicators

Criteria level) Rating (Citizens' realization	evaluation value
★★★★★(Very high)	0.5 or more
★★★★☆(Slightly higher)	More than 0.1 but less than 0.5
★★★☆☆(Can't say either way)	-0.1 to less than 0.1
★★☆☆☆(Slightly lower)	-0.5 to less than -0.1
★☆☆☆☆(Very low)	-0.5 or less

<Reference> Calculation example

Out of 1,000 respondents,

The number of respondents who answered "agree" was 150, and the number of those who answered "somewhat agree" was 200,

The number of respondents who answered "somewhat disagree" was 250, and the number of those who answered "somewhat disagree" was 100,

If the number of "don't know" responses is 300

$$\frac{2\times 150 + 1\times 200 + (-1)\times 250 + (-2)\times 100 + 0\times 300}{1{,}000} = 0.05$$

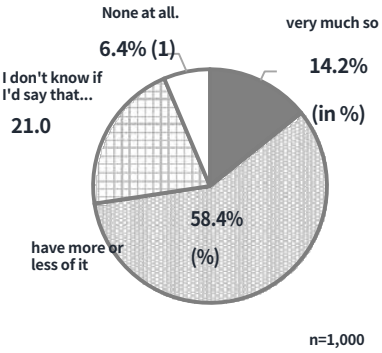
* More than -0.1 Less than 0.1 ", so the evaluation is "★★★ ☆☆☆☆ (undecided)".

In addition to the age range of respondents and the administrative district in which they live, the results of the survey also include the following attributes,

They were asked, "Are you interested in environmental conservation and environmental issues?" and "Has your awareness of environmental conservation changed in the wake of the spread of the new coronavirus infection?"

As shown in Figure 2.1, the total of respondents who are interested in environmental conservation and environmental issues (the sum of "very much" and "somewhat") was 72.6%, down 0.9 points from 73.5% in the previous year.

As shown in Figure 2.2, the total of "awareness of environmental conservation has changed in the wake of the spread of the new coronavirus infection" was 46.9%, accounting for about half of the respondents.



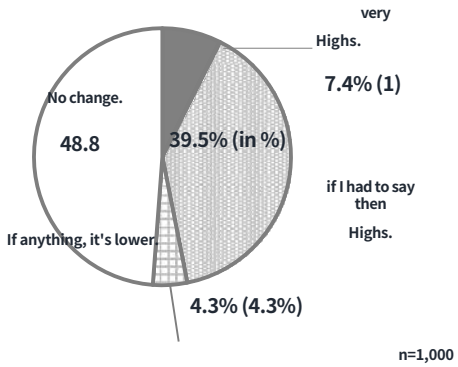


Figure 2.1 Concern for environmental preservation and environmental issuesmind

Figure 2.2 Spread of new coronavirus infection Change in awareness of environmental conservation in the wake of the Great

Long-term goal 1 ecarbonized city where sustainable development is possible

The effects of global warming, such as rising temperatures, torrential rains, and droughts, are becoming increasingly apparent and serious in many parts of the world, and the situation can be described as a "climate crisis.

Based on this, with a sense of pride and mission as the place where the "IPCC Kyoto Guidelines" were adopted to support the birth of the "Kyoto Protocol" and the implementation of the "Paris Agreement," and in collaboration with citizens and businesses, we will develop global warming countermeasures that do not remain an extension of the past but look toward a shift in social and economic activities, and aim to realize a decarbonized city where sustainable development is possible through energy conservation We aim to realize a decarbonized city where sustainable development is possible through thorough energy conservation and the dramatic expansion of renewable energy.

1 Results of evaluation of environmental indicators

(1) objective indicator

(3) Although we achieved our annual target for the ratio of renewable energy to electricity consumption, (1) the reduction rate of total greenhouse gas emissions was 88%, and (2) the reduction rate of energy consumption was 33%.

objective indicator	standard value (Fiscal year)	Fiscal year target (Fiscal year)	actual results (Fiscal year)	Assessment Results (Achievement rate)	target value (Fiscal year)
(1) Reduction rate of total greenhouse gas emissions (Compared to FY2013 (H25))	19.4% (19.4%) (Fiscal year 2018 (H30))	25.3%*1 (FY2021(R3))	22.3%*2 (FY2021(R3))	★★★★☆ (88%)	46%. (FY2030(R12))
(2) Energy consumption reduction rate (Compared to FY 2018 (H30))	- (Fiscal year 2018 (H30))	4.5% (4.5%) (FY2021(R3))	1.5%*2 (FY2021(R3))	★☆☆☆☆ (33%)	18% or more (FY2030(R12))
(3) Renewable energy as a percentage of electricity consumption Logy Ratio	Approx. 15 (Fiscal year 2018 (H30))	20.1%*1 (FY2021(R3))	26.3%*2 (FY2021(R3))	★★★★★ (100% or more)	35% or more (FY2030(R12))

The target values for FY1999 are set based on the policy evaluation of the Kyoto City Basic Plan.

2 The latest results for "1) Total greenhouse gas emissions reduction rate," "2) Energy consumption reduction rate," and "3) Renewable energy as a percentage of electricity consumption" are for FY2021.

(2) subjective index

Regarding the degree of realization of citizens, (1) "Very high" for a sense of urgency about global warming, (2) "Cannot say either" for efforts to prioritize public transportation, (3) "Somewhat high" for progress in energy and electricity conservation efforts, and (4) "Somewhat high" for progress in introducing renewable energy.

subjective index	Assessment Results
(1) Crises that seem to be caused by global warming, such as torrential rains and heat stroke, are our own Do you feel you are closing in on life?	★★★★★ (0.86/very high)
(2) I feel that efforts to prioritize walking, bicycling, and public transportation are progressing year by year. -ist (used after a noun indicating someone's occupation, pursuits, disposition, etc.)	★★★☆☆ (-0.01 / undecided)
(3) Do you feel that energy conservation and electricity saving efforts are progressing year by year?	★★★★☆ (0.37/slightly high)
(4) Do you feel that efforts to introduce renewable energy are progressing year by year?	★★★★☆ (0.26/slightly high)

2 Progress of basic measures

basic policy

Promotion of global warming countermeasures through thorough energy conservation and dramatic expansion of renewable energy through transformation of social and economic activities, etc.

In order to achieve net zero carbon dioxide emissions in 2050, which is required to realize a decarbonized society, we need to save energy by transforming social and economic activities, especially the four areas of lifestyle business energy mobility エネルギー and renewable エネルギー The goal is to accelerate the diffusion of

Under the "Transformation of the ライフスタイル In the "transformation of the environment," we will steadily promote the spread of homes and equipment with high environmental performance, and promote the spread of de-carbonized and environmentally conscious consumption (ethical consumption). In addition, we will promote the spread of decarbonized and environmentally conscious consumption (ethical consumption).

In the "business transformation," we will create a mechanism to promote voluntary efforts by businesses, further promote the creation of innovation through industry-academia-government collaboration, break away from industries based on mass production and consumption, and change business styles to promote a shift to businesses that can achieve both decarbonization and economic development.

Under "Energy Conversion," in addition to introducing the maximum amount of renewable energy within the city, we will also promote the selection of electricity derived from renewable energy sources. In addition, we will promote initiatives aimed at building a system in which all energy consumed is covered by renewable energy, such as expanding the supply of renewable energy in cooperation with other regions and conducting surveys and research on building a decentralized energy system on a regional and community basis.

In the "Mobility Transformation," we will promote the spread of next-generation vehicles such as electric vehicles, and will also work with the "Walking City Kyoto" initiative to develop an environment that encourages walking and bicycle use, reduce dependence on automobiles by improving the convenience of public transportation, and create a variety of mobility services based on new technologies and concepts. Kyoto", and to reduce dependence on automobiles by improving the convenience of public transportation, etc.

In Kyoto, the effects of climate change due to global warming, such as the recent increase in extremely hot summers and torrential rains, have caused significant damage. In light of this, we will enhance our efforts in adaptation measures (*) to avoid or mitigate damage caused by climate change, while taking advantage of the diverse functions of nature.

Adaptation measures: Measures to prevent, avoid, or mitigate damage from climate change, such as flooding and heat stroke.

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(1) Main Initiatives for FY2022 (2022)

Selection as a Decarbonization Leading Region

In response to the government's "Decarbonization Leading Areas" initiative, which aims to create areas with zero CO_2 emissions by 2030 with the goal of achieving net zero CO_2 emissions by 2050, we propose a plan that includes the creation of decarbonized residential areas at the former site of Fushimi Technical High School, and other existing areas such as cultural heritage sites, shopping districts, and green human resources☞ development centers. The plan includes the decarbonization of existing urban areas such as cultural heritage sites, shopping areas, and green human resource development centers, etc,

The selection was made in November 2022.

In order to steadily realize the initiatives of the Leading Decarbonization Areas, the "Kyoto City Leading Decarbonization Areas Agency Core Member Project Team" and the "Kyoto City Leading Decarbonization Areas Promotion Team" were established as an all-agency promotion structure. In addition, the "Kyoto City Consortium for Decarbonization Leading Regional Promotion" was established as the core of collaboration among businesses, financial institutions and other related organizations.

The ceremony to award the certificate of selection

Lifestyle Transformation

Initiatives of the "Kyoto Decarbonization Lifestyle Promotion Team - 2050 Kyoto Creation Meeting

Based on the discussions in the "Kyoto Decarbonization Lifestyle Promotion Team - 2050 Kyoto Creation Meeting", which was established with citizens, businesses and academics, especially young people who will lead Kyoto in the future, to promote a shift to sustainable lifestyles, a "Decarbonization Lifestyle Promotion Team from Kyoto - 2050 Kyoto Creation Meeting" was held in October 2022, with the aim of creating a "decarbonized lifestyle" by 2050. Carbon-Deficit-Free Lifestyle

We have developed a vision for the Ill.

To achieve this goal, we have demonstrated 8 projects to transform the lifestyles of citizens into decarbonized ones in cooperation with companies and other organizations.

As part of these efforts, we set up collection boxes for used clothing at 57 locations in the city and held the "RELEASE ⇔ CATCH" project, which aims to circulate used clothing within the community, and the "Circulation Fest" event, which aims to foster the habits of reducing, reusing, and recycling in the youth culture.

The results of these efforts have been published on our official website.

The information was disseminated through various media such as "2050 MAGAZINE.

Catchphrase to disseminate the vision

Circulation Festivals

Business Transformation

Creating Green Innovation

The Kyoto Knowledge Industry Creation Forest, a general incorporated association established by the city, prefectural government, and industry in an all-Kyoto structure, provides support for research and development of new businesses and products with the aim of creating and nurturing green industries. The Kyoto Municipal Industrial Technology Research Institute, a local independent administrative agency, has been studying coloring technology for plastics and synthetic fibers, and has developed a dyeing method with less environmental impact than conventional methods, taking into consideration chemical substances that remain in the environment.
We have been engaged in the research and development of In addition, while also utilizing external funding, we are working with various businesses and research institutions to develop R&D and technology that will lead to a reduction in the environmental impact of manufacturing.

Its molding sample

Promotion of further emission reductions by large emitters (Specified Business Operators) and medium-sized businesses (Semi-Specified Business Operators)

We revised the emission reduction plan system for specified business operators, including raising the target reduction rate and changing priority measures for the next plan period (FY2023-FY2025), and held a briefing session (online) for the targeted business operators in advance of the revision.

Awareness of energy conservation and decarbonization and further e

emony

The purpose of this award is to provide an opportunity for quasi-special b

(In fiscal 2022, we began operating the "Energy Consumption Repor

(owners of buildings with a total floor space of 1,000 m2 or more) to report the annual amount of energy consumed in their business activities, etc. The system provides feedback on the CO_2 emissions of individual businesses and energy conservation proposals showing recommended energy conservation initiatives. In addition to providing feedback, we encouraged further decarbonization efforts by holding energy efficiency and conservation diagnoses and online energy efficiency and conservation seminars.

Promoting ESG Investments

Aim to achieve net-zero CO_2 emissions by 2030, promote investment in Kyoto from Japan and abroad, and further utilize ESG investments and loans* by companies and financial institutions in Kyoto.
In December 2022, the city issued its first green bond.

Issue Amount 5 billion yen Interest rate
Interest rate 0.259% (0.259%)

Use of funds: Energy-saving renovation projects (conversion of facilities to LED), projects to improve city-owned facilities with superior environmental performance, and river improvement projects

Of the ¥5 billion issued, 59 companies and organizations have expressed an interest in purchasing approximately ¥40 billion.

Conversion of lighting equipment in the Children's Mirai Kan to LED

Environment (E: Environment), Society (E: Society) Environment (E: Environment), Society
(Investments and loans that take into account social (S) and governance (G) issues

Energy Conversion

Expand installation of renewable energy facilities

In order to realize a disaster-resistant, sustainable, and decarbonized society, we launched the "Residential Renewable Energy for Local Production for Local Consumption and Local Circulation Promotion Project" in FY2022 to dramatically expand the use of renewable energy, as well as to promote local production for local consumption of renewable energy and local economy. In this project, as the "Kyoto Renewable Energy Club," the "environmental value of on-site consumption of renewable energy in homes is compiled and sold to companies in the city and returned to citizens (on-site consumers of renewable energy) as "san-san points," local points that can be used at stores and other locations in the city, as well as to the residents of the city who have installed solar power generation systems.

When a storage battery or V2H* recharge/discharge system is installed at the same time as the installation of the equipment, 200,000 yen worth of "san san points" will be awarded (Kyoto Renewable Energy Club members: 333 cases, number of installations: 116 cases). (In addition, based on the Kyoto City Ordinance on Global Warming Countermeasures, the installation of renewable energy equipment (solar power generation equipment, etc.) in specified buildings (newly constructed or expanded buildings with a total floor area of 2,000 m^2 or more) has been mandatory since fiscal year 2012 (Heisei 24). In April 2022, the amount of renewable energy required will be increased from 30,000 megajoules (MJ) or more per year to 60,000 MJ or more per year, and the installation of 30,000 MJ or more per year will also be required for semi-specified buildings (new buildings and additions with a total floor area of less than 300-2,000 m^2). The new law also requires the installation of a minimum of 30,000 MJ per year in new buildings and additions of less than 300-2,000 m(2) of floor space. In September 2022, a subsidy program will be launched to subsidize the installation of equipment in excess of these mandated amounts, thereby promoting the further diffusion of renewable energy.

We are working to expand the scope of our business.

A system that allows electric power stored in the batteries of electric vehicles and other vehicles to be exchanged with both the building and the building.

Expand installation of solar power generation equipment

The "Group Purchasing Project for Solar Power Generation Equipment" was implemented to realize price reductions by taking advantage of economies of scale by soliciting a wide range of potential purchasers of solar power generation equipment and consolidating demand for a certain amount of equipment. (Group Purchasing Project Registration

(Number of recorded households: 637)

In addition, in order to expand the installation of solar power generation equipment through "Zero Yen Solar," a new business model that installs solar power generation equipment with zero initial cost, the "Solar Power Generation Platform Project" was implemented to promote matching between businesses that offer "Zero Yen Solar" plans and facility owners (citizens and businesses) in the city. The "Solar Power Generation Platform Project" was implemented.

(Number of "0 yen solar" contracts: 16)

The City actively introduced renewable energy such as solar power generation equipment in public buildings it maintains, including the University of the Arts and Minami-taishin Elementary School (solar power generation equipment was installed in 3 facilities through new construction and in 8 facilities through renovation).

Illustration of Solar Power Generation Equipment Group Purchase Project

Zero Yen Solar" project information flyer

(FY2021) (FY2021) (FY2021)

Mobility Transformation

Expanding the use of next-generation vehicles

In order to promote the use of next-generation vehicles, we took advantage of various opportunities to educate the public about them, such as at environmental education facilities and by lending fuel cell vehicles (FCVs) to companies, etc.

In addition, nine "hands-on hydrogen learning projects" were held to provide visitors with a hands-on experience of hydrogen energy through the use of smart hydrogen stations (SHS) and FCVs that can produce hydrogen from solar energy.

Collaboration with universities, temples, shrines, etc., to create illumination la

Four times use of next-generation vehicles as a power source for it-up

The event included examples of how electric vehicles (EVs) and other next-generation vehicles can be used for functions other than transportation.

In addition, efforts are being made to promote and expand the use of next-generation vehicles by requiring automobile dealers in the city to explain automobile environmental information when selling new vehicles and to report the sales results of next-generation vehicles in their new vehicle sales reports starting in FY2022.

Efforts to realize "Walking City Kyoto

To further evolve Kyoto as a "Walking City" that prioritizes people and public transportation, we are promoting initiatives based on the "Walking City Kyoto" Comprehensive Transportation Strategy 2021, which was formulated in November 2021.

Formation of a public transportation network to realize sustainable urban development ("public transportation network" initiative)

Creating an attractive town where everyone "wants to go out" and where pedestrians have priority (initiatives for "town development")

Further promotion of smart lifestyles that value a pleasant lifestyle on foot ("Lifestyle" initiatives)

Under the three pillars of the "3 pillars," citizens, businesses, government, and visitors play their respective roles and cooperate with each other to promote their efforts.

As part of the "Public Transportation Network" initiative, we promoted barrier-free transportation, such as the barrier-free Toba-kaido Station (Keihan). In addition, we promoted efforts to decentralize the time of year, time and place for sightseeing and measures to prevent tourist buses from staying on the road, as well as to promote the use of railroads and buses.

The Company promoted the decentralization of travel by providing travel information, transfer information, and guidance to those who want to travel to and from the city. As part of our "urban development" efforts, we implemented area management measures (e.g., reducing the influx of vehicles) on Shijo Dori. As for "lifestyle" initiatives, we promoted MM (Mobility Management*) in cooperation with local communities in order to secure future public transportation users. In the Arashiyama and Higashiyama areas, two of Japan's most popular tourist destinations, temporary traffic restrictions were implemented to smooth traffic flow and create safe and comfortable pedestrian spaces, and traffic measures such as park-and-ride were implemented.

A series of efforts to encourage individual residents and workplaces to shift from excessive reliance on cars to walking and public transportation, and to encourage a change in voluntary behavior.

Adaptation Efforts

Kyoto Climate Change Adaptation Center

In July 2021, the Kyoto Climate Change Adaptation Center was established as a center for collecting, analyzing, and disseminating information on climate change impacts and adaptation in Kyoto, in collaboration with Kyoto City, Kyoto Prefecture, and the Institute for Global Environmental Studies. Based on the results of the Kyoto Climate Change Impact Study conducted in FY2021, the Center collected and analyzed information on five priority areas: paddy rice (agricultural crops), tea (agricultural crops), landscape and gardens, heat, and animal damage.

The information collected and analyzed will be used in an online symposium Climate Change and Agriculture: Issues in Kyoto" (2023) (held on February 20, 2023 with 91 participants; a recording of the event is available on YouTube) and the "Kyoto Climate Change Adaptation Center Newsletter" (the second issue published in March 2023).
In December 2021, the Kyoto Climate Change Adaptation Center (KCCA) opened its website. In addition, the Kyoto Center for Climate Change Adaptation's website, launched in December 2021, provides information on the Center's activities, survey and research results, and other information to citizens and businesses by posting information on its projects, activity results, lecture materials, etc. for fiscal 2022.

Maintenance of rain garden, etc.

A "rain garden" is a planting space with a structure that temporarily stores rainwater that falls on the ground and allows it to slowly percolate into the ground (rainwater runoff control), rather than discharging it directly into the sewage system. The "rain gardens" are expected to be effective for landscaping, greening, water purification, and mitigation of the heat island effect, and are attracting attention as one of the green infrastructures that have been spreading in recent years. 3 locations in 2022

(The "rain garden" has been maintained at four corners of the Kujo Oishibashi Intersection, the southeast corner of the Higashi-oji Niomon Intersection, and in the civic green space in front of Higashi Honganji Temple, bringing the total number of locations to eleven. Local citizens and supporters of roadside trees cooperate in daily maintenance such as cleaning activities to maintain the function and appearance of the "rain gardens". In addition, to prevent urban flooding, prevent pedestrians from slipping, and prevent heat island effects, the sidewalks are permeable pavement that excels in water circulation.

Rain garden developed at the northwest corner of the Kujo Oishibashi intersection

(2) Progress on Environmental Indicators

objective indicator

(1) Reduction rate of total greenhouse gas emissions

Total greenhouse gas emissions in FY2021 were approximately 6.09 million tons, and the reduction rate of total greenhouse gas emissions was 22.3% compared to FY 2013, up 1.4 percentage points from the previous year, but below the annual target of 25.3%* for FY 2021.
The first time I saw the project, I was surprised to see that the project was not a success.

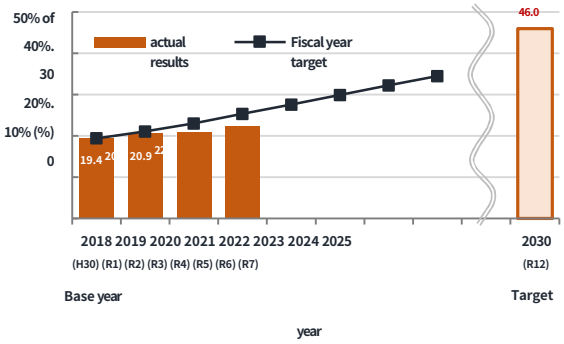


Figure 3-1.1 Percentage reduction in total greenhouse gas emissions

The target values for fiscal year 2012 are based on the policy evaluation of the Kyoto City Basic Plan.

After the Great East Japan Earthquake, the reliance on thermal power generation increased, the CO_2 emission factor* for electricity worsened, and greenhouse gas emissions skyrocketed. The coefficient subsequently improved, and with progress in energy conservation and electricity-saving efforts, greenhouse gas emissions peaked in 2012 and have declined for nine consecutive years.

It is the amount of carbon dioxide (CO_2) emitted when 1 kWh of electricity is generated, and varies depending on the power source composition and other factors.

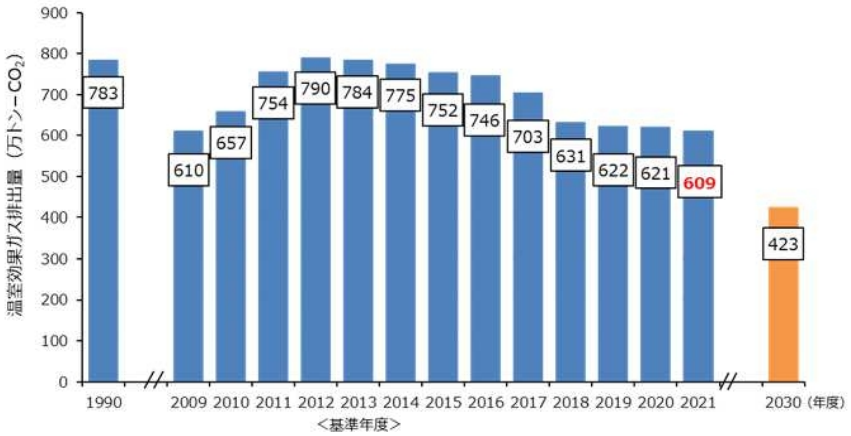


Figure 3-1.2. Total greenhouse gas emissions

Table 3-1.3. Breakdown of total greenhouse gas emissions

[Unit: 10,000 t-CO2]

	基準年度 (2013年度)	前年度 (2020年度)	2021年度	増減率 基準年度比 (2013年度)	増減率 前年度比 (2020年度)
実際に排出された温室効果ガス排出量 ①	807.1	643.7	633.4	▲ 21.5%	▲ 1.6%
二酸化炭素（CO_2）	753.9	571.3	558.0	▲ 26.0%	▲ 2.3%
エネルギー起源※1	732.6	549.3	535.6	▲ 26.9%	▲ 2.5%
産業部門	103.6	69.3	81.0	▲ 21.7%	+16.9%
運輸部門	155.5	143.7	133.3	▲ 14.3%	▲ 7.3%
家庭部門	212.5	177.3	159.6	▲ 24.9%	▲ 10.0%
業務部門	261.0	159.0	161.7	▲ 38.0%	+1.7%
非エネルギー起源（廃棄物部門）	21.4	22.1	22.4	+4.7%	+1.4%
メタン（CH_4）	3.7	2.4	2.4	▲ 35.9%	▲ 1.6%
一酸化二窒素（N_2O）	7.8	7.1	7.7	▲ 0.7%	+9.0%
代替フロン等※2	41.6	62.9	65.3	+57.0%	+4.0%
吸収量 ②（森林，農地，緑地）	22.9	23.1	24.1	+5.1%	+4.1%
温室効果ガス排出量 ①－②	**784.1**	**620.6**	**609.3**	**▲22.3%**	**▲ 1.8%**

1 "Energy origin" means carbon dioxide emitted from the combustion of fossil fuels (including the consumption of electricity). 1 "Energy-derived" refers to carbon dioxide emitted from the combustion of fossil fuels (including the consumption of electricity).

*2 "CFC substitutes, etc." means hydrochlorofluorocarbons. (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3), which refers to the four gases.

Note: Due to rounding, the percentage change, total, and the sum of each factor may not add up.

(terajoule: 1 trillion joule), and the energy consumption reduction rate is 1.5% compared to FY 2018, a decrease of 3 points from the previous year.

（The annual target for FY2021 was lower than the target for FY2021.

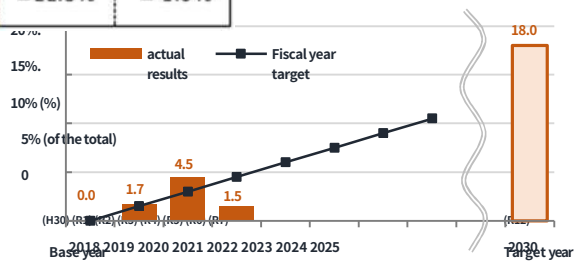


Figure 3-1.4 Energy Consumption Reduction Rate

Looking at energy consumption by sector, the residential sector accounted for 28.3%, the business sector 28.7%, the transportation sector 23.7%, and the industrial sector 14.4%. Energy consumption in the residential and transportation sectors decreased from the previous year, while the business and industrial sectors increased (up 14.7% and 19.5% from FY2020), partly due to the resumption of economic activities that had declined due to the effects of the new coronavirus infection.

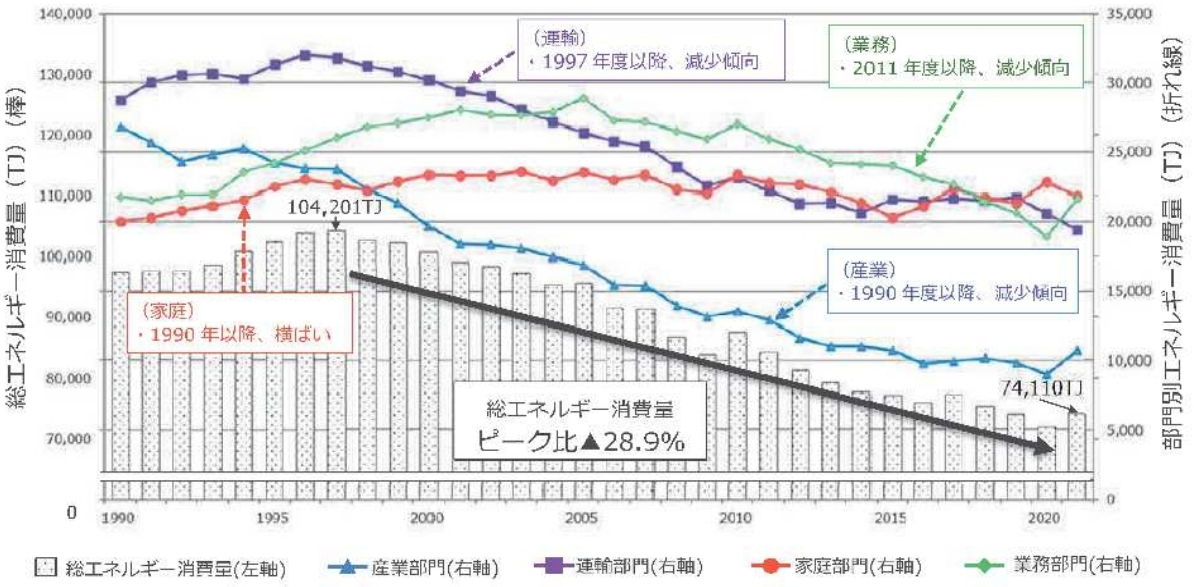


Figure 3-1.5. Total energy consumption and energy consumption by sector

Renewable energy as a percentage of electricity consumption

In FY2021, the ratio of renewable energy to total electricity consumption was 26.3%, down 0.2 percentage points from the previous year.

In order to increase the ratio of renewable energy in the electricity supplied by electric power companies, the government and electric power companies are required to make renewable energy a main source of power.

We are seeking to promote initiatives.

Target values for FY are based on the policy evaluation of the Kyoto City Basic Plan.

is set up.

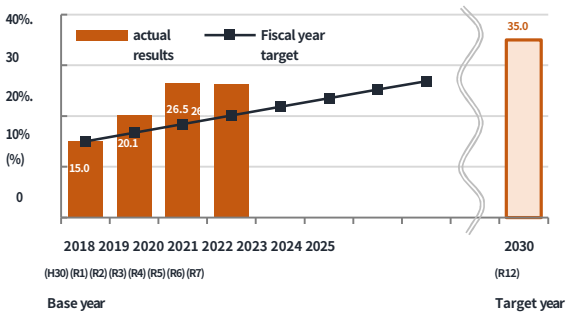


Figure 3-1.6 Power Consumption as a Percentage of Renewable Energy Ratio

subjective index

(1) Do you feel that crises that you think are caused by global warming, such as heavy rains and heat stroke, are looming in your daily life?

The "agree" (the total of those who answered "agree" and "somewhat agree") for this indicator was 78.4%, while the "disagree" (the total of those who answered "disagree" and "somewhat disagree") was 16.5%, indicating that the citizens' level of awareness of this indicator was very high.

(listed on p. 7) was rated "very high.

In recent years, we have seen an increase in the number of heat wave days and heat stroke sufferers, as well as frequent torrential rains and other natural disasters, which we have heard about through the media and other sources.

It is believed that a higher percentage of citizens are realizing the effects of spherical warming.

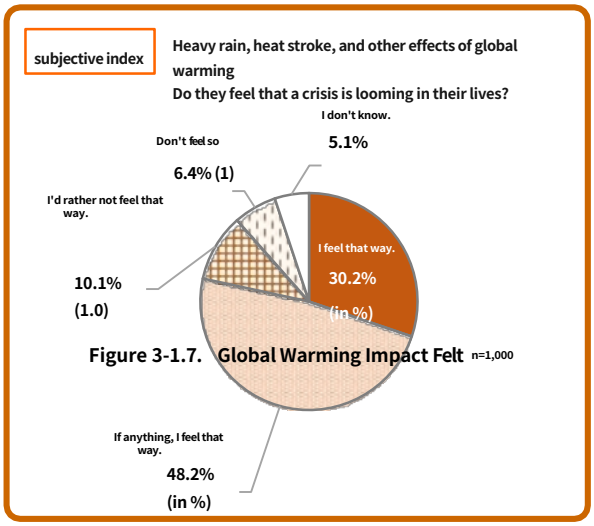


Figure 3-1.7. Global Warming Impact Felt n=1,000

Furthermore, when asked about how they feel their quality of life has improved as a result of their efforts to address global warming (multiple responses), the most common responses were switching to LED lighting (44.6%), increased use of walking and bicycling
(31.8%) and replaced with energy-efficient appliances (24.9%), many felt that their quality of life had improved.

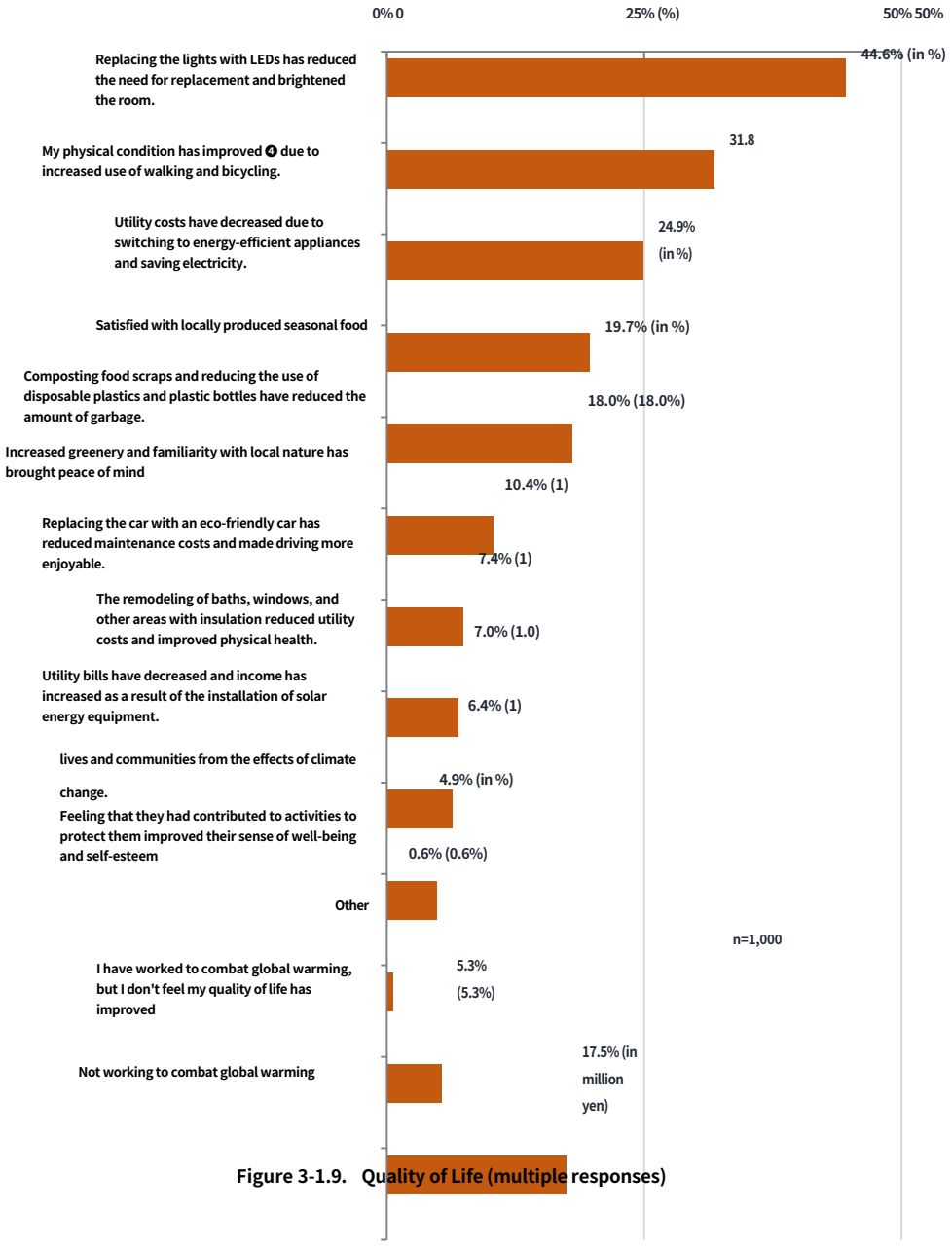


Figure 3-1.9. Quality of Life (multiple responses)

(2) Do you feel that efforts to prioritize walking, bicycling, and public transportation are progressing year by year?

The "agree" rating for this indicator was 47.5%, down 0.9 points from 48.4% in the previous year. On the other hand, 41.9% of the respondents answered "don't feel so," indicating that the citizens' perception of the indicator (see p. 7) was "undecided.

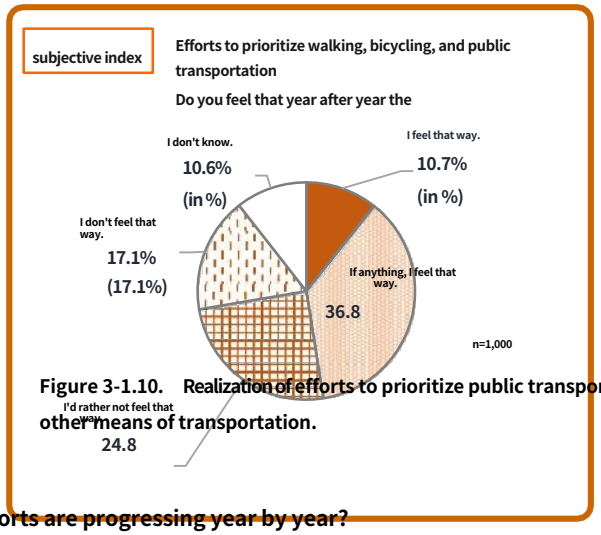


Figure 3-1.10. Realization of efforts to prioritize public transportation and other means of transportation.

(3) Do you feel that energy saving and electricity saving efforts are progressing year by year?

The "agree" score for this indicator was 61.8%, up 0.9 points from 60.9% in the previous year. On the other hand, 28.5% of the respondents did not agree, indicating that the citizens' perception of this indicator (see p. 7) was "somewhat high.

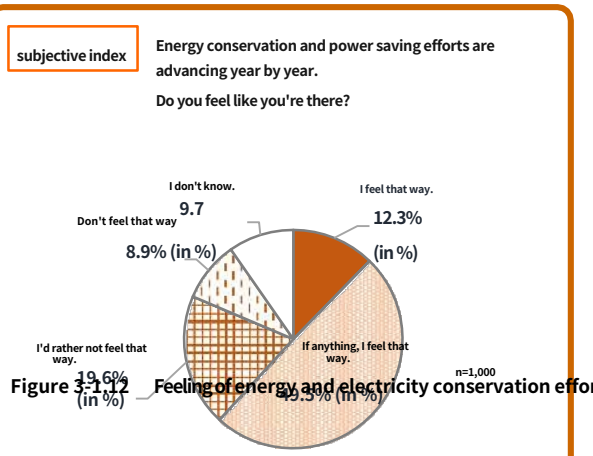


Figure 3-1.12 Feeling of energy and electricity conservation efforts

(4) Do you feel that efforts to introduce renewable energy are progressing year by year?

The percentage of respondents who "agree" with this indicator was 55.4%, down 0.7 points from 56.1% in the previous year. On the other hand, 30.3% of the respondents did not agree with the indicator, indicating that citizens' perception of the indicator is not as high as it was in the previous year.
(listed on p. 7) was rated "somewhat high.

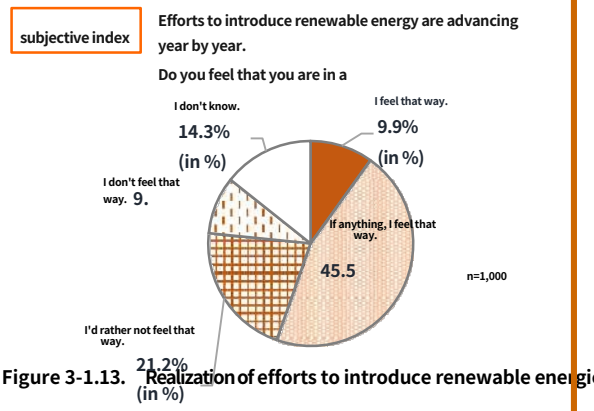


Figure 3-1.13. Realization of efforts to introduce renewable energies

When asked about the use of renewable energy at home (multiple responses), 8.5% installed solar panels and 7.7% used renewable electricity, while,

80.2% of the respondents answered that they "do not use" renewable energy. Efforts to introduce renewable energy have been progressing year by year.

households compared to the percentage of those who feel that they are

We found that the percentage of renewable energy use in the

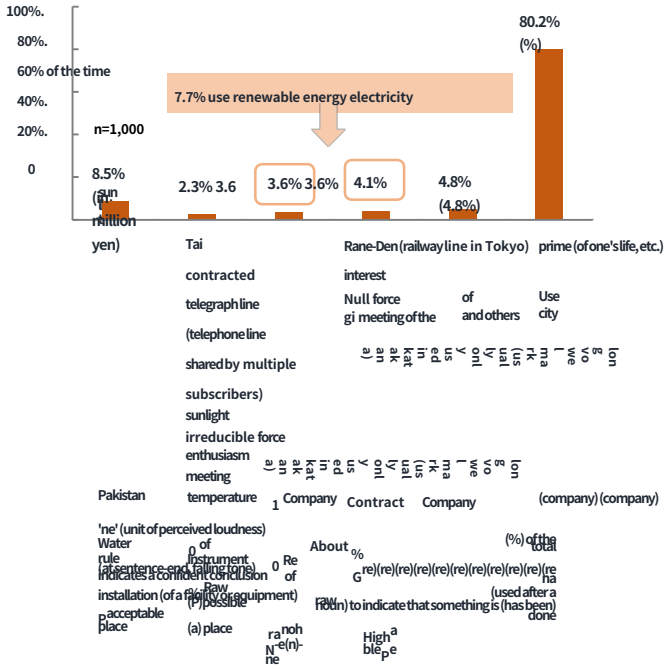


Figure 3-1.14. Feeling of Efforts at Home (multiple responses)

Long-term goal 2

A comfortable, safe and secure town in harmony with a natural environment rich in biodiversity

With a history spanning more than 1,000 years, our city has nurtured a unique and diverse culture and traditions, which have attracted many people to live in harmony with the natural environment and enrich their hearts and minds. The city's rich natural environment, known as "Yamashisuimyo," has supported the city's traditional festivals, Kyoto vegetables, and machiya townhouses, which are designed to provide light and ventilation, as well as traditional festivals.

Therefore, in order to respect and appreciate nature, and to ensure that Kyoto's lifestyle, culture, and industry are inherited together with nature, the city will maintain and preserve the air, water, and soil in good condition, and ensure a safe and secure environment in which citizens can live with peace of mind, and will aim for a pleasant, comfortable city where culture and lifestyle in harmony with a natural environment rich in biodiversity can flourish. We aim to create a comfortable city with a rich and relaxing atmosphere where culture and lifestyles can spread in harmony with a biodiverse natural environment.

1 Results of evaluation of environmental indicators

(1) objective indicator

The achievement rates were 83% for (1) city conservation standards for air pollution and 89% for (2) water pollution. (3) The number of participants in the "Kyoto Living Creatures and Culture Collaborative Restoration Project" was 296, a decrease from the previous year.

The number of respondents increased by 60 in total, for an achievement rate of 83.4%.

objective indicator	standard value (Fiscal year)	Fiscal year target (Fiscal year)	actual results (Fiscal year)	Assessment Results (Achievement rate)	target value (Fiscal year)
(1) Municipal conservation standards for air pollution Achievement* 1	83.3% (%) (2019(R1) fiscal year)	100.0% (100.0%) (FY2022(R4))	83.3% (%) (FY2022(R4))	★★★★☆ (83%)	100.0% (100.0%) (every fiscal year)
(2) Municipal conservation standards for water pollution status of achievement	87.5% (%) (2019(R1) fiscal year)	100.0% (100.0)% (100.0) (FY2022(R4))	89.4% (%) (FY2022(R4))	★★★★☆ (89%)	100.0% (100.0)% (100.0) (every fiscal year)
(3) Collaborative project for the revitalization of Kyoto's living creatures and culture Number of Initiators	231 Person (2019(R1) fiscal year)	355 persons *2 (FY2022(R4))	296 Persons (FY2022(R4))	★★★★☆ (83.4%)	700 persons *3 (400 persons) (FY2025(R7))

1 The average of the percentage of achievement of the city conservation standard (the number of times the city conservation standard was achieved/the total number of measurements) for each measurement item.

The target values for FY2 are set based on the policy evaluation of the Kyoto City Basic Plan.

3 The target was revised from the original target of 400 persons when the system was expanded in FY2022 (to include individuals as well).

(2) subjective index

Citizens were undecided about both (1) clean air and river water and (2) preservation of a good natural environment inhabited by a variety of living creatures, while those who felt that (3) the expansion of culture and lifestyle in harmony with the natural environment were slightly less satisfied.

subjective index	Assessment Results
(1) Do you feel that the air and river water are kept clean?	★★★☆☆ (0.06 / undecided)

(2) Do you feel that a good natural environment with a variety of living creatures is maintained?	★★★☆☆ (-0.05 / undecided)
(3) Do you feel that culture and lifestyle in harmony with the natural environment are spreading?	★★☆☆☆ (-0.11/slightly low)

2 Progress of basic measures

basic policy

2-1 Preservation of a safe and secure living environment

The city will strive to protect the health of citizens and preserve a safe and secure living environment by establishing desirable standards for air and water pollution, and measuring and monitoring them at various locations in the city, as well as by providing citizens and businesses with appropriate education and guidance for the preservation of the living environment.

(1) Main Initiatives for FY2022 (2022)

Environmental surveys of air and water quality, etc.

Based on the Air Pollution Control Law, the environmental standards of the country and the city conservation standards at 14 measuring stations Six air pollutants (sulfur dioxide, nitrogen dioxide, suspended particulate matter, carbon monoxide, photochemical oxidants, and fine particulate matter (PM2.5)) were continuously monitored.

In addition, in accordance with the Water Pollution Prevention Law, the following data were collected at 42 locations on 22 rivers.

The following is a list of the environmental standards and municipal conservation standards set forth in the National Environmental Standards and the Municipal Conservation Standards in the

The Company conducted constant monitoring of items related to the preservation of the living environment and the protection of human health, which were being monitored by the Ministry of Health, Labour and Welfare.

In addition, we also monitored automobile noise, dioxins, etc.

In order to grasp the actual status of microplastics in the city's rivers, surveys were conducted on sunny days at seven locations including the Kamo River in FY2021, and on rainy days at two locations in the Katsura River in FY2022.

General Environmental Atmospheric Measurement Station

Monitoring and guidance to factories, etc. based on pollution-related laws and regulations

The two Environmental Coexistence Centers, which serve as contact points, conducted on-site inspections and provided guidance to workplaces based on the receipt of notifications and complaints about air, water, noise, odor, and other pollution-related matters.

Regarding complaints, we worked with the relevant organizations to resolve them as soon as possible.

In addition, maintain proper management of land with soil contamination.

In order to prevent the contamination of the area, we provided guidance on notification, designated the contaminated area, instructed countermeasures against contamination, and conducted on-site investigations.

Operation of Environmental Impact Assessment System

In implementing large-scale development projects, etc., we aim to conserve a healthy and bountiful environment by giving appropriate consideration to the environment.

In order to ensure that the Kyoto City Environmental Impact Assessment Ordinance (Ordinance on Environmental Impact Assessment, etc. of the City of Kyoto) is implemented, the Kyoto City Environmental Impact Assessment Ordinance was adopted.

The environmental impact assessment is being conducted in accordance with the Environmental Impact Assessment Law (enacted in June 1999, revised in April 2013) and other relevant laws and regulations.

In FY2022, one case of method statement procedures for a Class 1 project (new building construction) and one case of consideration statement procedures for a Class 2 project (new building construction) were conducted*.

*Construction of railroads and highways in this city.
The Environmental Impact Assessment Law requires that projects in the "Class 1" category (projects subject to the Environmental Impact Assessment Law) be classified into two categories: Class 1 projects, which are larger in scale than those subject to the Law, and Class 2 projects, which are smaller in scale than those subject to the Law, and require the necessary environmental impact assessment procedures.

(2) Progress on Environmental Indicators

objective indicator

(1) Status of achievement of city conservation standards for air pollution

Achievement of city conservation standards for air pollution remained generally favorable at 83.3%, unchanged from the previous year.

Of the six measurement items, five of them (sulfur dioxide, nitrogen dioxide, suspended particulate matter, carbon monoxide, and PM2.5) achieved the standard (100%) at all measuring stations, as in the previous year. On the other hand, the remaining five photochemical oxidants did not achieve the standard at all measuring stations. Although photochemical oxidants, which may pose a health hazard, cause photochemical smog, the number of days a photochemical smog advisory* was issued was 0.

The regulation is issued when the concentration of photochemical oxidants is twice the national environmental standard (the same value as the city's environmental preservation standard) or higher (0.12 ppm) and the concentration is deemed to continue for a certain period of time.

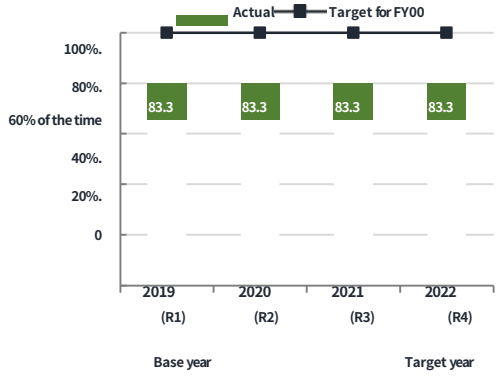


Figure 3-2.1. Status of Achievement of City Conservation Standards for Air Pollution

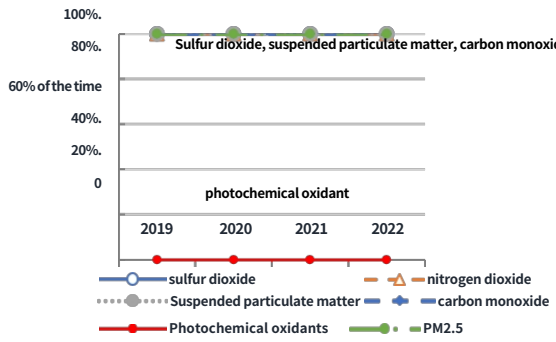


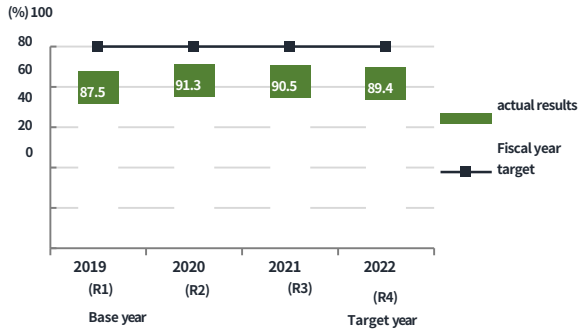
Figure 3-2.2. Status of Achievement of City Conservation Standards for Air Pollution (by item)

(2) Status of achievement of city conservation standards for water pollution

The achievement status of the city's conservation standards for water pollution was generally good at 89.4%, although it decreased by 1.1 percentage points from the previous year.

Of the items related to preservation of the living environment, BOD (Biochemical Oxygen Demand), a typical indicator of water pollution, and total zinc, nonylphenol, and other items related to preservation of aquatic life all achieved the standard (100%). On the other hand, pH (hydrogen ion concentration) and coliform count were not achieved.

All 26 items related to the protection of human health achieved the standard (100%).



≪Survey items related to water pollution≫.

Items related to preservation of living environment

BOD (Biochemical Oxygen Demand)

COD (chemical oxygen demand), DO (dissolved oxygen)

SS (suspended solids and suspended solids), total nitrogen, total phosphorus

pH (hydrogen ion concentration), coliform count, total zinc

Nonylphenol, LAS (11 items in total)

Items related to the protection of human health

Cadmium, total cyanide, lead, arsenic, total mercury, PCBs

Figure 3-2.3. Status of Achievement of Municipal Conservation Standards for Water Pollution

subjective index

(i) Do you feel that the air and river water are kept clean?

The percentage of respondents who "agree" with this indicator was 48.9%, up 4.0 points from 44.9% in the previous year. On the other hand, 37.1% of the respondents answered "Disagree," indicating that the citizens' level of awareness (see p. 20) was about the same as that of the previous year.

The rating was "undecided."

As for the reasons (multiple responses) for "don't feel so" and "rather don't feel so," those related to air (atmosphere) were "unpleasant smell from exhaust gas from vehicles such as cars" at 26.7%, followed by "stains on laundry, windows, etc." at 17.0%.

As for those pertaining to rivers, 64.7% of the respondents selected "because garbage is flowing in the river," followed by 27.0% who selected "because the water in the river is often muddy, not because of the rain.

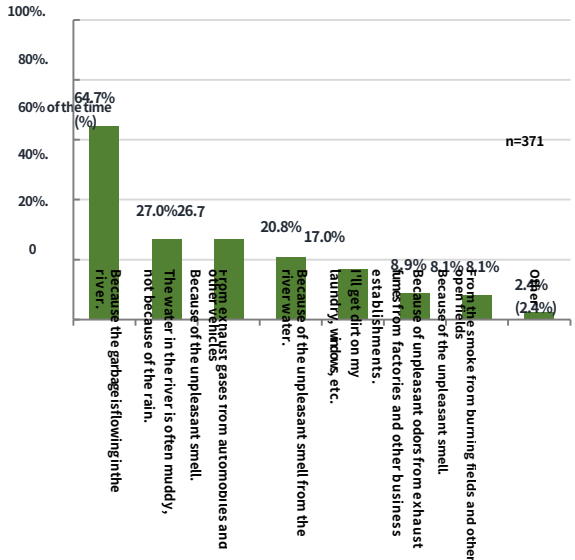


Figure 3-2.5. Reasons for not feeling clean air/river (multiple responses)

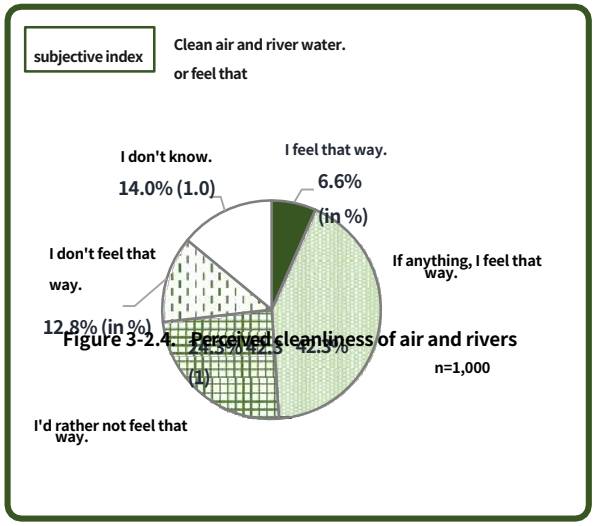


Figure 3-2.4. Perceived cleanliness of air and rivers

basic policy

2-2 Sustainable use and conservation of biodiversity-rich natural environment

We are committed to "sustainable use of biodiversity that supports Kyoto's uniqueness" and "conservation and restoration of habitats and species diversity" to conserve a natural environment rich in biodiversity.

We will also promote "a shift to biodiversity-conscious lifestyles" and "the establishment of mechanisms for social change," such as the promotion of ethical consumption, in order to promote actions for the conservation of biodiversity by all entities.

In addition, by developing greenery and waterfront areas that take advantage of nature's diverse functions, we will help prevent and mitigate disasters.

(1) Main Initiatives for FY2022 (2022)

Kyoto Biodiversity Leader Declaration System

In 2022, we launched the "Kyoto Biodiversity Leaders Declaration System" to increase the number of people who take action for biodiversity conservation (leaders), and to promote understanding of biodiversity and provide opportunities for people to take action. In 2022, we launched the "Kyoto Biodiversity Leaders Declaration System" to provide an opportunity to increase the number of people who take action to conserve biodiversity and to promote understanding of biodiversity and encourage action.

Practice what you can do to conserve biodiversity, including "consideration" and "activities and support for the conservation of living creatures and nature.

Those who declared their intention to participate in the program were encouraged to take action by receiving information on events, courses, etc., as needed via e-mail, etc., according to their declarations.

We also worked to increase the number of declarants by publicizing the program at events and through all channels, including schools, businesses, and activity groups.

The activities of those declared by the

Kyoto Living Creatures and Culture Collaborative Restoration Project Certification System

Sustainable use of biodiversity that supports Kyoto's uniqueness

cake wrapped in bamboo leaves

In order to make the festival more memorable, the festival is held at the same time as the) and the Gion Matsuri (Gion Festival), where zongzi (dumplings) are made.

The Kyoto City Government recognizes organizations that implement sustainable efforts to conserve and regenerate living things that have supported Kyoto's uniqueness, such as chimakizasa, which is essential to the Kyoto Festival, okera, which is burned during the Kera Pilgrimage, and fujibakama, which appears in the Tale of Genji, and provides technical assistance as needed.

The "Kyoto Living Creatures and Culture Collaborative Restoration Project" dispatches specialists to

Preservation of Ominyesi

The "Project Certification System" was operated.

In 2022, we expanded the scope of the program to include individuals as well, and conducted a workshop on the conservation of rare plants outside of their habitats, and newly certified them as ☞creators.

Cultivation workshops

Nature observation and habitat survey

In order to promote understanding of the importance of biodiversity and the rich natural environment of the region, the "Local Creatures Detective Group," a nature observation program conducted as a class at elementary schools, was held 25 times (rivers: 18 times, parks, mountains, etc.: 7 times).

In addition, with the cooperation of citizens, the "Kyoto Wildlife Habitat Survey" was conducted to assess the abundance of greenery and waterside areas by monitoring the habitats of swallows, damselflies, cicadas, and Japanese bush warblers.

and received 224 reports.

Kyoto Creatures Habitat Survey

(Target species: Japanese bush warbler)

Establishment of the Kyoto Biodiversity Center

In order to protect "Kyoto's natural blessings" that have supported Kyoto's traditions, culture, and lifestyle, and to pass them on to the next generation, we have established the "Kyoto Nature Conservation Center" in 2038.
Based on the "Comprehensive Collaborative Agreement on the Promotion of Biodiversity Conservation" concluded with Kyoto Prefecture in March 2023, we will continue to promote the conservation of biodiversity by 2023.
In April, the "Kyoto Biodiversity Center" was established in collaboration with Kyoto Prefecture.

The Kyoto Biodiversity Center is a non-profit organization that provides a wide ra

The three offices are the Headquarters Office (Kyoto Botanical Garden Hall), which is in charge of activities and coordination, the Exchange Office (Sakyo Ward Office), which is in charge of networking and information transmission, and the Information Office (Kyoto Prefectural University), which accumulates biodiversity information and compiles it into a database.
Under the theme of "Inheritance," we are promoting effective and sustainable biodiversity conservation efforts.

(Exchange Office Location)

(2) Progress on Environmental Indicators

objective indicator

Number of participants in the Kyoto Living Creatures and Culture Collaborative Revitalization Project

In FY2022, the system was revised to expand the scope of the project to include individuals in addition to organizations and companies, thereby broadening the scope of the project. As a result, the number of participants in the Kyoto Living Things and Culture Collaborative Restoration Project increased by 60 from the previous fiscal year to 296, with a target achievement rate of 83.4% for the fiscal year. The number of organizations and companies

There are 236 participants in the program.

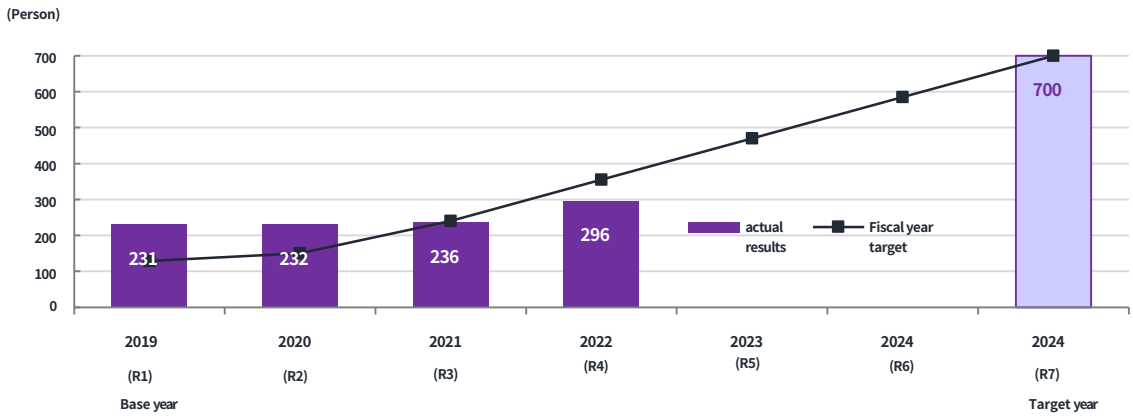


Figure 3-2.7 Number of participants in the Kyoto Living Creatures and Culture Collaborative Restoration Project

subjective index

(2) Do you feel that a good natural environment with a variety of living creatures is maintained?

The "agree" score for this indicator was 42.2%, up 0.3 points from 41.9% in the previous year. On the other hand, 41.8% of the respondents answered "don't feel so," indicating that they were "undecided" in their perception of the indicator (see p. 20).

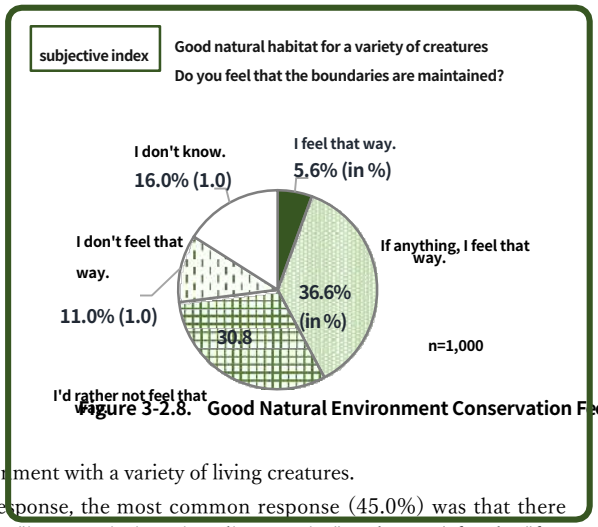


Figure 3-2.8. Good Natural Environment Conservation Feeling

I don't feel that way" about the preservation of a good natural environment with a variety of living creatures.

As for the reason (multiple responses) for the "somewhat disagree" response, the most common response (45.0%) was that there are few opportunities to see living things, followed by 40.9% for the "increase in invasive alien species" and 34.4% for the "few habitats/habitats for living things." Those who chose "increase in invasive alien species" and "lack of habitats and ☞living areas for living creatures" as reasons were considered to have some knowledge of which creatures are invasive alien species and what kind of habitats and ☞living areas for living creatures are available. We found that people who are interested in living creatures usually feel that a good natural environment is not maintained.

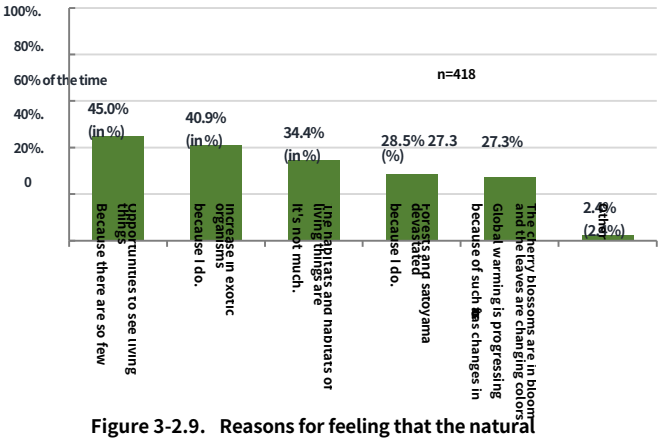


Figure 3-2.9. Reasons for feeling that the natural environment is not preserved (multiple responses)

When asked what they are doing to protect biodiversity (multiple responses), 40.4% of respondents answered that they "give consideration to biodiversity in my daily life. On the other hand, 45.5% of the respondents answered that they were "not working on anything.

The following examples are provided for each option in the survey

Learning and disseminating information on biodiversity

(e.g., use zoos, aquariums, botanical gardens, and environmental learning facilities (Kyoto Ecology Center, Sastena Kyoto). Learn about biodiversity (e.g., share information on living creatures discovered). Share information on living creatures they have discovered, etc.)

Consider biodiversity in your daily life

(e.g.: Do not feed wild birds and animals. ☞Keep pets responsibly until the end, and do not abandon or release them. Use and consume environmentally friendly products and services, etc.)

Get in touch with nature and other living creatures.

(e.g., ecotourism, green tourism, nature walks)

Participate in the following activities (e.g., greening of yards, hedges, balconies, walls, etc.)

Supporting the conservation of living creatures and nature, and conservation activities

(e.g., preserve habitats of living creatures, participate in biodiversity surveys, donate to biodiversity conservation activities, etc.) Donate to biodiversity conservation activities, etc.)

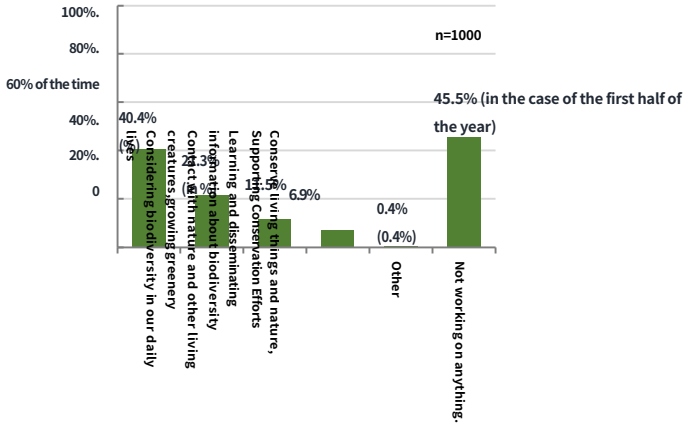


Figure 3-2.11. Protecting Biodiversity

What we are working on (multiple responses)

basic policy

2-3 Ensuring a comfortable lifestyle unique to Kyoto people, where culture and lifestyle in harmony with the natural environment spread

In addition to preserving the nature-rich urban landscape, we will promote the development of parks and familiar green and waterfront environments, and strive to ensure a comfortable lifestyle that is uniquely Kyoto-like.

(1) Main Initiatives for FY2022 (2022)

Kyoto Living Creatures and Culture Collaborative Restoration Project Certification System

[Revisited] (See p. 24)

Preservation of urban landscapes rich in nature

Based on the Kyoto City Natural Landscape Preservation Ordinance and the Kyoto City Scenic Area Ordinance, the Kyoto City Sanzan Forest Landscape Preservation and Restoration Guideline was established to preserve the rich natural landscape known as "Yamashisuimei" and to promote forest landscape creation through collaboration among the government, local organizations, and local temples.

Various entities, including hospitals and companies, collaborated in the "Mt. Ogura Restoration Project," which aims to restore a forest where people can experience the colors of the four seasons.

Ogura Mountain Restoration Project Activities

Promote the spread of environmentally friendly buildings appropriate for Kyoto

CASBEE Kyoto" is a national standard for evaluating the overall environmental performance of buildings, and incorporates unique Kyoto criteria such as the promotion of wood use, the use of natural materials for both the environment and landscape, and consideration for historical and regional characteristics, Through these evaluations, we are working to promote the spread of environmentally friendly buildings that are appropriate for Kyoto.

In FY2022, 39.1% of the buildings in the Kyoto area were ranked A (very good) or higher in the CASBEE Kyoto report (compared to 23.8% in FY2021). (23.8% in FY2021).

(Kyoto City Water Supply and Sewerage Bureau General Office Building)

Greening of urban areas

In accordance with the Kyoto City Green Basic Plan, the Oike-dori sponsor flowerbed project*1 and the planting of "Japanese flowers" that have been popular since ancient times, with the aim of creating a good living environment full of greenery.

The maintenance and management of "Japanese flower beds "*2 was carried out in collaboration with local volunteers. In addition, we maintained street trees (pruning, cutting, replanting, and pest control), which play an important role in terms of landscape and disaster prevention.

1 102 flowerbeds are operated on the symbolic road (between Horikawa Dori and Kamogawa River).

2 Four locations on the Symbol Road (between Tomikoji Dori and Ogawa Dori)

(2) Progress on Environmental Indicators

objective indicator

Same as the objective indicator "(iii) Number of people involved in the Kyoto Collaborative Restoration of Living Things and Culture Project" (p. 25) in Basic Measure 2-2 "Sustainable Use and Conservation of a Natural Environment Rich in Biodiversity.

subjective index

(3) Do you feel that culture and lifestyle in harmony with the natural environment are spreading?

The "agree" score for this indicator was 39.7%, up 1.7 points from 38.0% in the previous year. On the other hand, 43.4% of the respondents did not agree with the indicator, indicating that the citizens' level of awareness (see p. 20) was not as high as that of the previous year.

The rating was "somewhat low."

When those who answered "agree" or "somewhat agree" were asked about the spread of culture and lifestyles in harmony with the natural environment (397 respondents), they answered, "The importance of taking good care of things, such as 'mottainai' and 'shimatsu no kokoro' (a spirit of gratitude for the things we don't waste), and the importance of the environment.

The most frequent response was "a spiritual culture that is a reflection of the country's culture" at 70.0%, followed by "a culture that is a reflection of the country's culture,
The top response, at 53.7%, was "Food culture utilizing local ingredients such as Kyoto vegetables," the same response as the previous year.

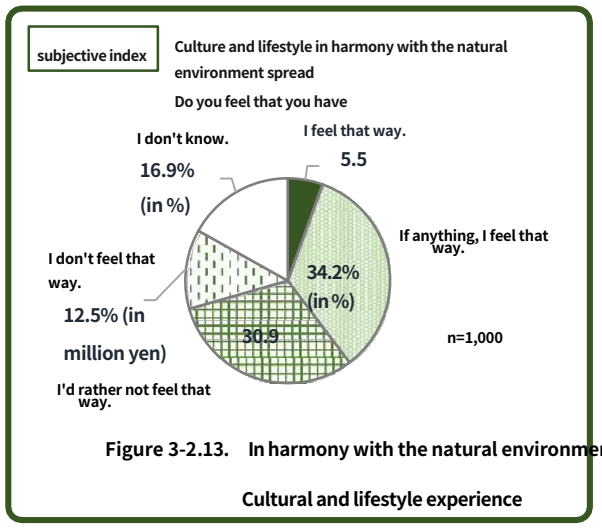


Figure 3-2.13. In harmony with the natural environment

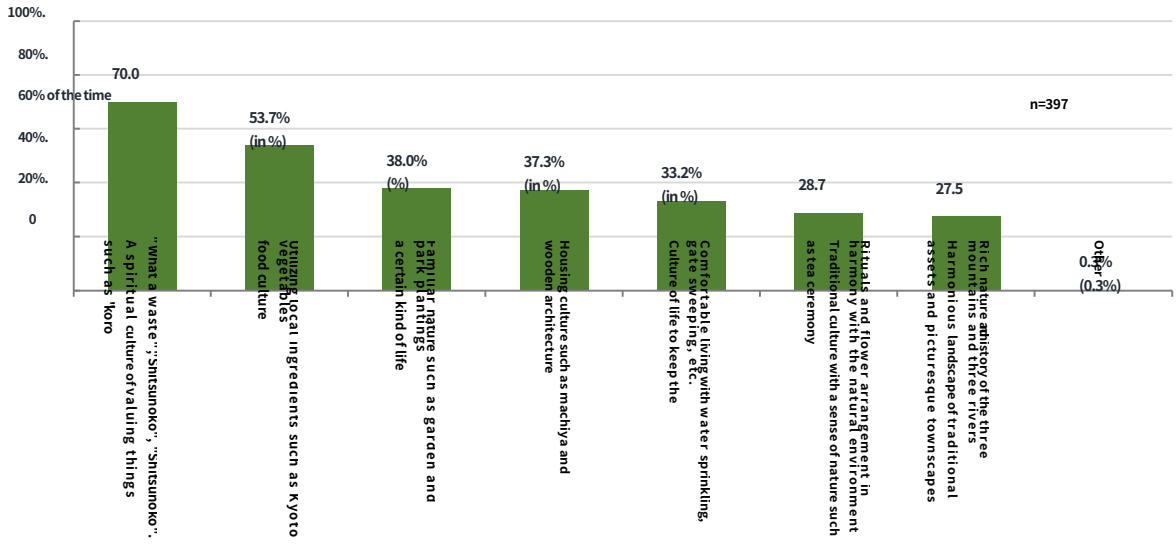


Figure 3-2.14. As culture and living in harmony with the natural environment,

Which ones do you feel are spreading (multiple responses)

Long-term goal 3

A recycling-oriented town that effectively utilizes resources and energy and reduces environmental burdens

However, thanks to various waste reduction efforts and the understanding, cooperation, and efforts of citizens and businesses, we were able to halve the amount of waste from the peak period and achieve a significant reduction in the cost of waste disposal in addition to the effective use of resources and energy and the reduction of environmental impact. In addition to effective use of resources and energy and reduction of environmental impact, we have also been able to significantly reduce waste disposal costs. However, in recent years, the pace of waste reduction has slowed down, the percentage of waste recycled has stagnated, and greenhouse gas emissions from the waste sector have remained flat. Therefore, in order to realize a recycling-oriented city, we will promote new measures that add the concept of renewable (utilization of renewable resources) to the existing 2R (reduce generation and reuse), sorting, and recycling, in order to further effective utilization of resources and energy, reduce environmental impact, and extend the life of the city's only final disposal facility, Together with citizens and businesses, we aim to build a sustainable recycling-oriented society that will serve as a model for the rest of the country.

1 Results of evaluation of environmental indicators

(1) objective indicator

(1) Amount of waste incinerated and (2) amount of food waste generated achieved the fiscal year's targets. The plastic waste sorting rate (households) achieved 99%.

objective indicator	standard value (Fiscal year)	Fiscal year target (Fiscal year)	actual results (Fiscal year)	Assessment Results (Achievement rate)	target value (Fiscal year)
(1) Amount of waste incinerated	38.2 million tons (2019(R1) fiscal year)	366,000 tons*1 (FY2022(R4))	343,000 tons (FY2022(R4))	★★★★★ (100% or more)	330,000 tons (FY2030(R12))
(2) Food loss emissions	61,000 tons (2019(R1) fiscal year)	57,000 tons (FY2022(R4))	54,000 tons (FY2022(R4))	★★★★★ (100% or more)	46,000 tons (FY2030(R12))
(3) Plastic waste sorting rate (Household)(*2)	46%. (2019(R1) fiscal year)	49%. (FY2021(R3))	48%. (FY2021(R3))	★★★★☆ (99%)	60%. (FY2030(R12))

The target values for FY1999 are set based on the policy evaluation of the Kyoto City Basic Plan.

2 The latest data for "(3) Plastic waste sorting rate (households)" is FY2021.

(2) subjective index

Regarding the degree of realization by citizens, the scores were "very high" for (1) living without garbage and (2) progress in garbage sorting and recycling.

subjective index	Assessment Results
(1) I feel that people are spreading a waste-free lifestyle, such as carrying their own bags. Gramineae	★★★★★ (1.06/very high)
(2) Do you feel that there are locations close by where you can separate and dispose of garbage, and that garbage separation and recycling is progressing?	★★★★★ (0.54/very high)

2 Progress of basic measures

basic policy

3-1 Promotion of 2R in daily life and business activities, and promotion of sorting, recycling, and energy generation for the challenge of renewables and high-quality resource recycling

In addition to promoting the 2Rs of general waste, such as reducing food loss (untouched food and leftovers) and disposable plastics, we will also work on the new fourth "R: Renewable (utilization of renewable resources)" to shift to environmentally friendly lifestyles (ethical consumption, etc.) and business activities that do not generate waste. We will also work on the new fourth "R: Renewable (utilization of renewable resources).

In addition, we will promote sorting and recycling by citizens and businesses by establishing a sorting and collection system that is highly convenient for citizens, focusing on miscellaneous garbage and plastics, as well as enhancing recycling receptacles, mainly for food waste and biomass such as wood waste.

After thorough 2R and sorting/recycling, the remaining waste will be recycled to the maximum extent possible by generating energy from waste through a combination of power generation using heat from incineration and biogas power generation using methane gas extracted from fermented food scraps as fuel.

We will also promote efforts to reduce the environmental burden of industrial waste by providing information and raising awareness among waste generators and processors so that they can take environmental conservation measures such as reducing waste generation, promoting reuse and recycling, and encouraging the use of industrial waste that is difficult to recycle as an alternative fuel to coal by converting it into solid fuels. We will also promote efforts to reduce environmental burdens, such as encouraging the use of industrial waste that is difficult to recycle as an alternative fuel to coal by converting it into solid fuels.

We will respond to violations such as improper processing in a strict and prompt manner by appropriately conducting on-site investigations and providing guidance, etc., as necessary.

(1) Main Initiatives for FY2022 (2022)

Reduction of food loss (leftovers and untouched food)

Raising awareness of food loss reduction

In addition to the 3kiri food waste campaign, which we have been calling for, we also recommend that you use food products at the front of the product shelf if they are to be eaten immediately or used up within their consumption or expiration dates.

(The program called for the systematic consumption of food products purchased after the "te-me-tori" or "te-me-tori" program (food products that are close to their expiration dates).

In addition, a new website was launched to provide an enjoyable way to learn about ways to reduce food loss and to introduce wisdom and ideas for reducing food loss at home, while existing websites introduced technologies and services useful for reducing food loss from businesses and organizations to promote collaboration among businesses and organizations working to reduce food loss. In addition, the existing website introduces technologies and services that help businesses and organizations reduce food loss.

Reduction of food loss in restaurants, food supermarkets, etc.

In FY2022, a total of 1,770 restaurants, lodging facilities, and food retail stores were certified as "stores promoting zero leftovers" for their efforts to reduce food loss.

In addition, we have been reviewing the sales deadlines set by food retailers as a matter of business practice, and have been further promoting efforts to "extend sales deadlines," in which food products are sold within their best-before or best-consume dates, and in FY2022, 73 food supermarkets and other businesses implemented this measure.

In addition, we subsidized a portion of the necessary expenses for three organizations engaged in food bank activities, which receive donations of foods that cannot be distributed due to packaging damage, product switching, etc. from food-related businesses and provide them to welfare facilities and other facilities in need.

135 Households 3 days of untouched food from burnable trash

Reduction of food loss through collaboration with the private sector

In August 2020, the City concluded a partnership agreement with Mizkan Holdings Co., Ltd. and has been working together to raise awareness about food loss reduction by preparing leaflets introducing recipes for pickles and hot pots using surplus vegetables, etc., and distributing them at food supermarkets in the City.

In FY2022, in addition to the above initiatives, we will newly collaborate with Mizkan Holdings Corporation, Daiwa Gakuen, and GOOD NATURE STATION.

In addition to developing and selling pickle sandwiches that utilize even the core and peel of the vegetable, we distributed recipe books and held cooking classes.

P

Reduction of plastics and resource recycling

Reduction of single-use plastics

In order to reduce the use of plastic bottles, the My Bottle Recommendation and Support Program publicized to citizens the number of stores, etc. (243 stores from 39 companies) that accept My Bottle and promoted the installation of water supply machines in various facilities, both public and private, in the city to further promote the use of My Bottle. As a result, the number of water supply machines installed has increased to about 140.

In April 2022, the "Law Concerning the Promotion of Resource Recycling of Plastics" will be enforced, requiring businesses to promote the recycling of disposable plastic products such as spoons and toothbrushes.

12 The requirement to reduce the number of products offered to consumers has triggered a

Flyers were created to raise awareness of the need to reduce single-use plastics.

Further separation and recycling of plastics

Under the Law for Promotion of Recycling of Plastic Resources, municipalities are required to collect plastic

Therefore, we have decided to start the sorted collection of plastic products as well as plastic containers and packaging from April 2023, and we have been working to raise awareness of this issue to gain the understanding of citizens by utilizing various media such as citizen newspapers and leaflets. We have been working to gain the understanding of citizens by using various media such as newsletters and flyers.

In addition, in order to promote complete recycling from PET bottles to PET bottles, the city is working with retailers, collection and transportation companies, recycling companies, and other private sectors to establish a system to collect PET bottles in a high-quality and efficient manner, and also to recycle PET bottles accepted as recyclable waste in the city. In April 2022, the city started to recycle PET bottles that were accepted as recyclable waste.

Base collection and collective collection of recyclables, etc.

Of the five items, used tempura oil, fluorescent tubes, reusable bottles, dry cell batteries, and paper cartons, with the aim of creating an environment in which citizens can discharge recyclable materials in their daily lives in the community, Locations that collect 3 or more items are designated as "resource collection sites" and are located in administrative facilities, educational facilities, community halls, commercial facilities, etc. (138 sites).

In addition, the city beautification office is located in parks and schools close to

Staff members go out to collect 18 recyclable items and hazardous and dangerous waste.

In FY2022, we conducted the following mobile collection sites.

	Number of times implemented
Collection of recyclables and hazardous and dangerous waste (on Saturdays, Sundays, and holidays)	113 times
Collection of recyclables (weekdays)	1,481 times

In addition, to support voluntary local efforts to reduce waste and recycle, we have established a subsidy system for residents' groups and condominium owners/management companies that conduct "community collections" of used paper, used clothing, and other resource materials. In fiscal 2022, 3,093 groups engaged in collective collection.

Reduction of business waste

The city requires owners of large commercial buildings over a certain size and food-related businesses with a total floor space of more than a certain amount of stores and other facilities in the city to submit a waste reduction plan every fiscal year, provides guidance on proper discharge and reduction of waste, and offers guidance and education based on the reduction plan to promote voluntary waste reduction and recycling by the businesses. In addition, guidance and education based on the reduction plan are provided to promote voluntary waste reduction and recycling by businesses.

In addition, based on inspections of incoming materials conducted at the Clean Center, guidance and awareness-raising activities are also conducted for improperly discharging businesses.

The business establishments that are actively engaged in reducing and recycling, and those that are engaged in particularly excellent 2R activities, are awarded with the Excellent Award.

The "Excellent Business Establishments for 2R and sorting/recycling activities" (16 business establishments in FY2022) are certified as business establishments,

The "2R Special Excellent Business Office System" (four business offices in FY2022) is designed to motivate business operators and raise their awareness of waste reduction and 2R activities.

reatment

Use of guidebooks and other educational materials for proper disposal practices, as well as waste management at large business sites. By holding training sessions for those responsible for waste management, we raise awareness of waste among business operators and provide detailed education for further reduction and proper disposal of business waste.

Review of Refuse Carry-in Fees

With the understanding and cooperation of citizens and businesses, we have been working to reduce waste disposal costs in line with waste reduction, but at present, these disposal costs cannot be covered by the fees for bringing in waste, and the difference is being covered by public funds.

In light of these circumstances, in order to promote further reduction of waste and private-sector recycling by optimizing the carrying-in fees based on the concept of the responsibility of the waste producer and the burden on the beneficiary, the 2022

（In FY2022, the ordinance was amended to revise the carrying-in fees.

In response to this, we are promoting awareness-raising to all related parties in order to revise the fees for "brought-in garbage" (*1) for about 6 months and for "garbage collected by contractors" (*2) for about 2 years).

1 Temporarily generated waste that is transported to the city's treatment facilities by citizens and businesses themselves.

2 Refuse generated daily by businesses, etc., and delivered to the City's treatment facilities by collection and transportation companies based on a regular contract.

Promotion of 2Rs through cooperation with the private sector

In order to promote the reduction and reuse of large-size garbage such as furniture and home appliances, the City is working with a private company (Class Co., Ltd.) that provides a subscription service for furniture and home appliances to encourage a lifestyle shift from "owning" to "sharing" things. In addition, we are also working with Zimoti Corporation and Market Enterprise Corporation, which offer reuse promotion services, to introduce various services on the City's website, which provides information on the disposal of oversize and drop-off refuse, in order to encourage people to reuse items before disposing of them as refuse.

Proper disposal of industrial waste

Based on the policy of (1) further promotion of emission control and recycling, (2) ensuring proper and stable treatment, and (3) coexistence of industrial waste disposers with local communities, as set forth in the "Kyoto City Industrial Waste Treatment Guidance Guidelines" formulated in March 2021, we provide guidance and on-site inspections to emitting businesses and industrial waste disposers, and patrols and guidance to control and improve violations such as improper treatment. The department conducts patrols and provides guidance to control and improve violations.

In FY2022, we certified 13 excellent workplaces for industrial waste treatment and 3R, etc., and produced a video showing good examples of sorting and recycling of waste plastics, and an educational leaflet to promote proper treatment and 3R of industrial waste for industries with many small-scale businesses.

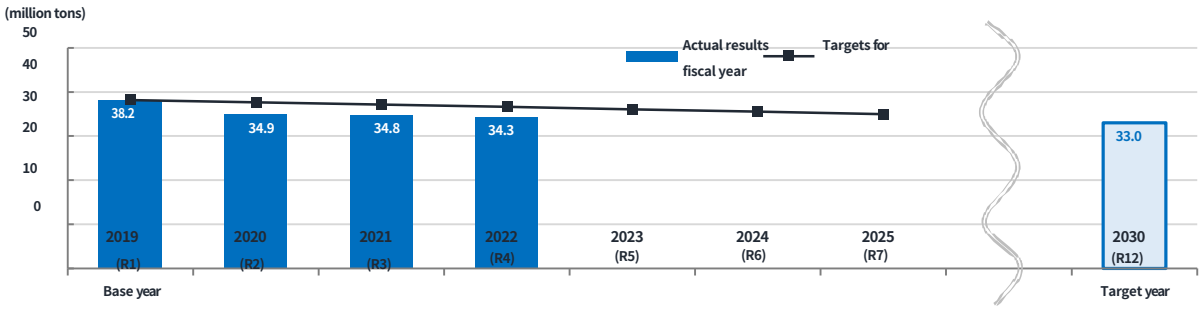
(Right) Correct way to dispose of garbage at manufactured retail stores, etc.

(2) Progress on Environmental Indicators

objective indicator

(1) Amount of refuse incinerated

The amount of waste incinerated in FY2022 was 343,000 tons, a decrease of 0.5 million tons from the previous year, achieving the annual target for FY2022.



*Fiscal year target values are set based on the policy evaluation of the Kyoto City Basic Plan.

Figure 3-3.1 Refuse incineration volume

Food loss emissions

The amount of food loss in FY2022 was 54,000 tons, a decrease of 11,000 tons from the previous year, achieving the annual target for FY2022.

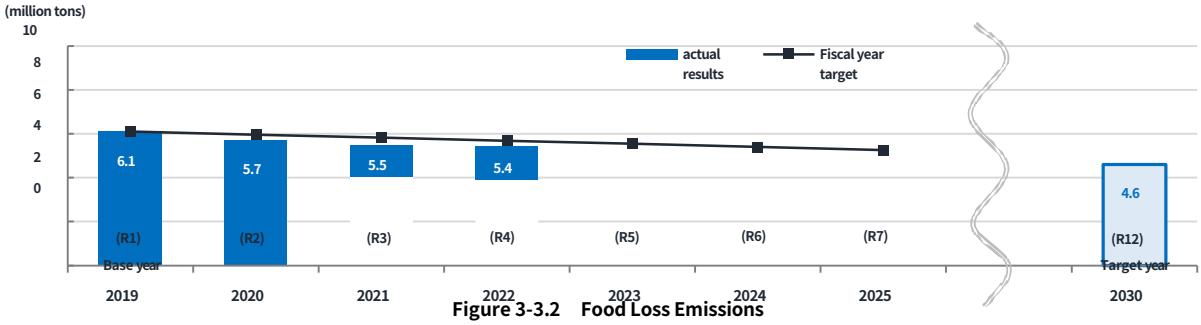


Figure 3-3.2 Food Loss Emissions

3) Plastic waste sorting rate (households)

The plastic waste sorting rate (households) in FY2021 was 48%, an increase of 1 percentage point from the previous year, and the achievement rate against the FY2021 target was 99%.

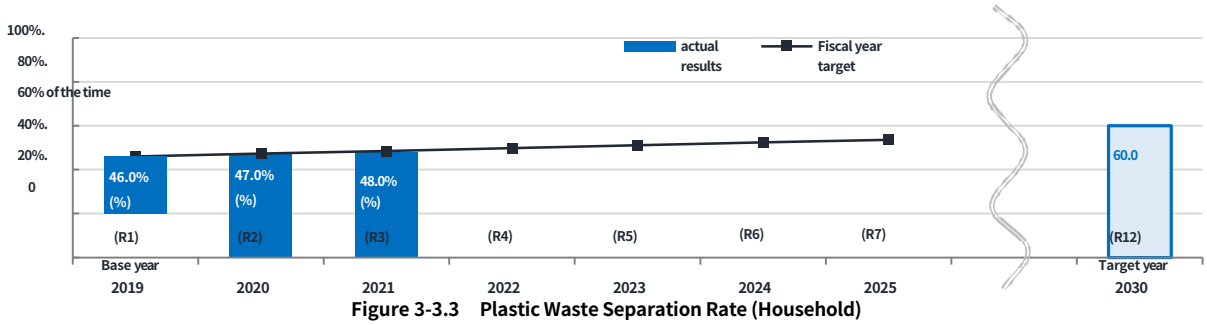


Figure 3-3.3 Plastic Waste Separation Rate (Household)

subjective index

(1) Do you feel that the use of "My bag" and other waste-free lifestyles is spreading?

The "agree total" for this indicator was 83.2%, an increase of 0.7 points from the previous year's 82.5%, maintaining a high level of satisfaction, and the citizens' realization level (shown on p. 30) was rated as "very high.

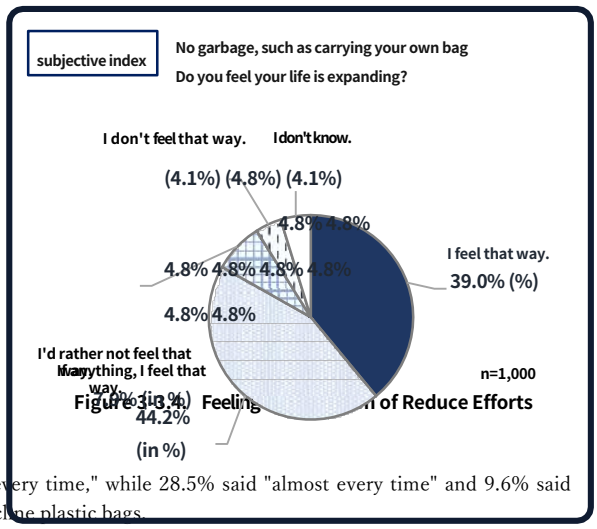


Figure 3-3.4 Feeling [illegible] of Reduce Efforts

When asked how often they decline plastic bags, 53.5% said "every time," while 28.5% said "almost every time" and 9.6% said "most of the time," indicating that 90% of respondents basically decline plastic bags.

We also asked what they are doing to reduce the number of plastic bottles (multiple responses), 51.8% of respondents chose "use my own bottle," followed by "make tea at home or drink tap water" at 50.0%.

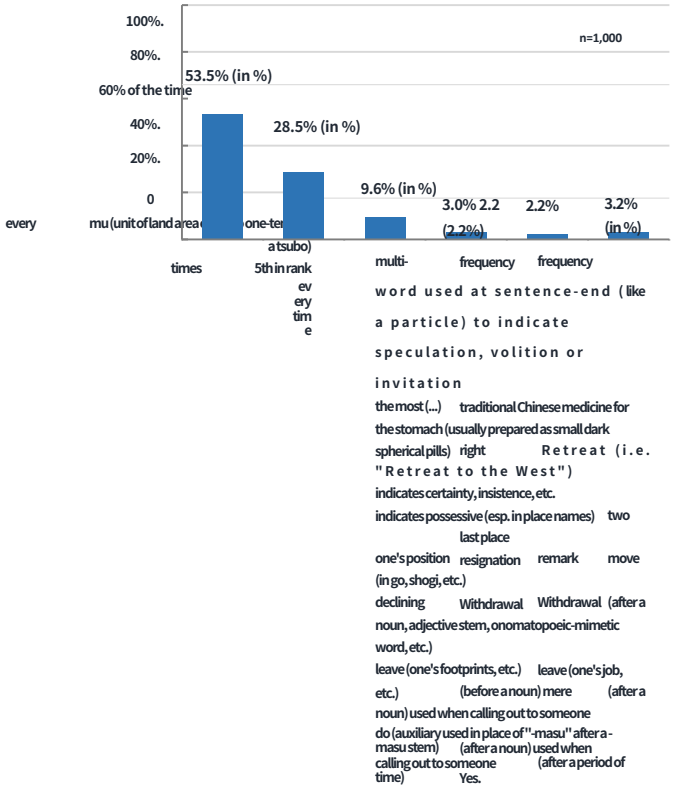


Figure 3-3.5. Frequency of declining plastic bags

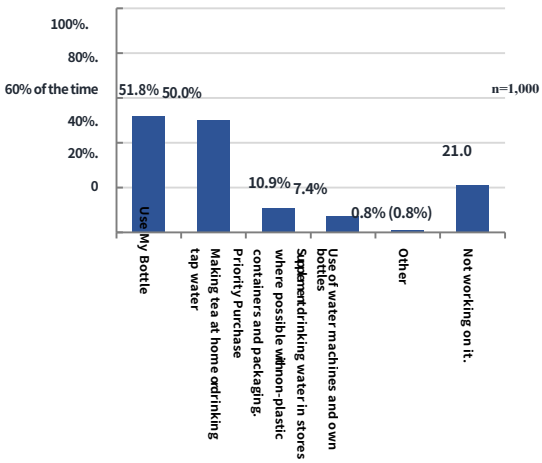


Figure 3-3.6. Efforts to reduce plastic bottles (multiple responses).

When asked what they are doing to reduce food loss (multiple answers), the largest percentage (67.8%) of respondents answered that they "try to use up all ingredients and eat all meals," followed by "try to reduce food loss.
51.3% said they would eat food even if the expiration date had passed if there was no problem, and 49.6% said they would buy food after checking the ingredients at home.

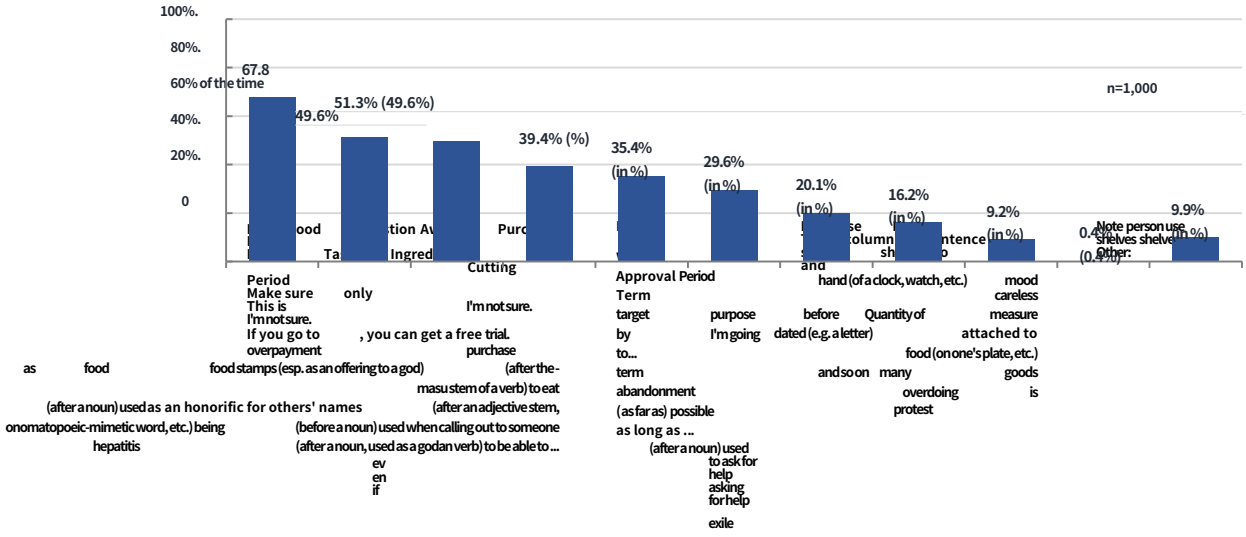


Figure 3-3.7. Efforts to reduce food loss (multiple responses)

When asked what they were doing to reuse (multiple responses), the most common response was "taking good care of things and using them longer" at 42.8%, followed by "having recycle stores take them back" at 30.1% and "repairing and reusing them" at 27.0%.

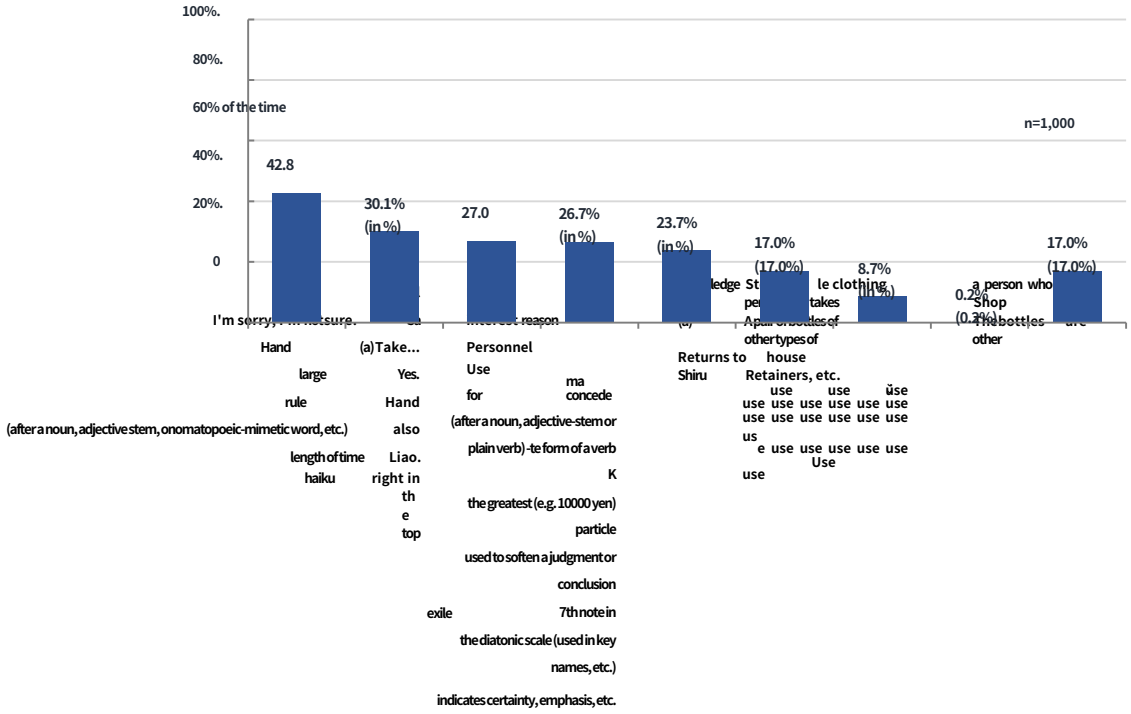


Figure 3-3.8. Reuse Efforts (multiple responses)

(2) Do you feel that garbage separation and recycling is advanced because there is a garbage sorting and disposal center nearby?

The percentage of respondents who "agree" with this indicator was 67.7%, up 0.8 points from 66.9% in the previous year. On the other hand, 22.4% of the respondents answered "Disagree," indicating that the citizens' level of awareness (see p. 30) was about the same as that of the previous year.

It was rated "very high."

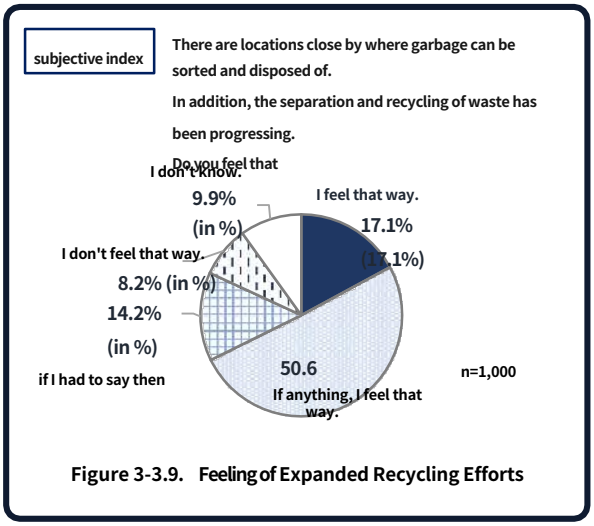


Figure 3-3.9. Feeling of Expanded Recycling Efforts

When asked about the status of sorting plastic containers and packaging, the most common response was "almost all" at 42.0%, followed by "60-80% sorted" at 36.8%.

When asked why they sometimes do not separate plastic containers and packaging (multiple responses), the most common reason was "I don't know which plastic waste containers and packaging are to be separated.

The most common reason was "I don't know how much dirt I need to remove," at 36.6%. This was followed by 33.9% for "I don't know how much dirt I need to remove" and 29.9% for "It is troublesome to remove dirt.

(It was found that there are many yus)(.)

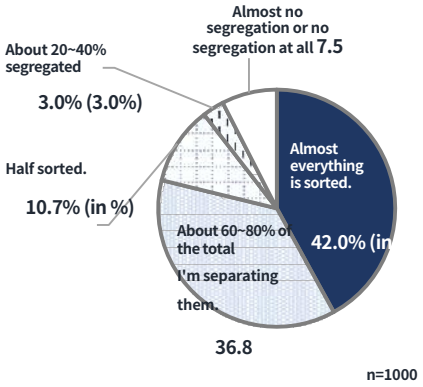


Figure 3-3.10. Status of sorting plastic containers and packaging

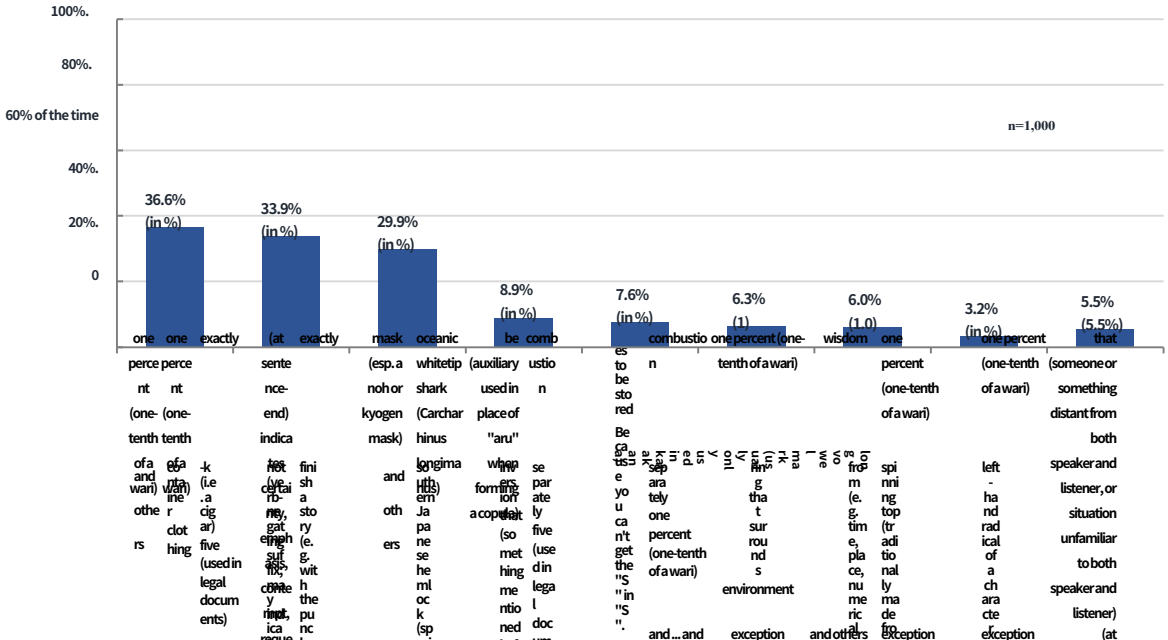


Figure 3.3.11. Reasons for not sorting plastic containers and packaging (multiple responses)

When asked about the status of separation of miscellaneous wastes, the largest percentage (38.6%) answered that they "separate almost all", followed by "". 27.5% of the respondents answered "yes".

When asked about the reason for not separating miscellaneous paper," the most common response (45.0%) was "I don't know which paper is, "miscellaneous paper. It is necessary to inform citizens about how to separate miscellaneous papers in an easy-to-understand manner.

Figure 3.3.12. Status of sorting miscellaneous waste

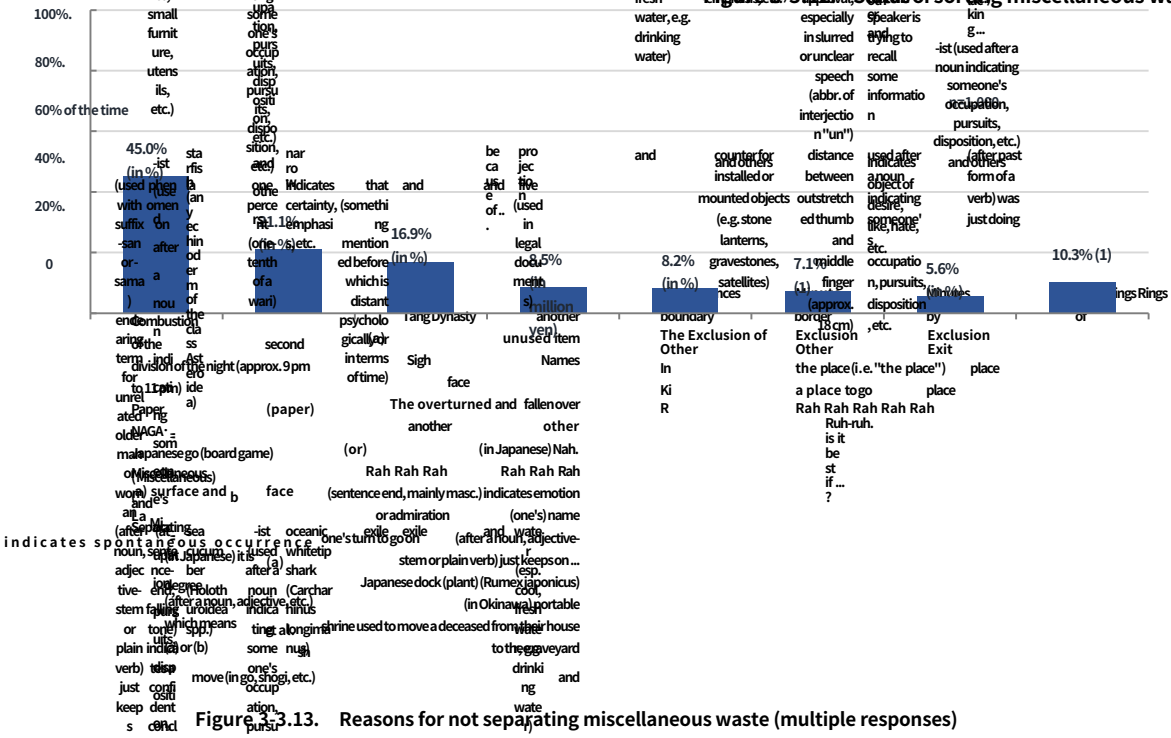


Figure 3.3.13. Reasons for not separating miscellaneous waste (multiple responses)

basic policy

3-2 Establishment of a robust proper disposal system that can flexibly cope with the occurrence of natural disasters and the development of a society with longevity, etc.

In light of the frequent occurrence of large-scale natural disasters in recent years, as well as the declining birthrate and longevity of society, we aim to build a strong and proper disposal system for general waste that can flexibly respond to these crises and changes.

(1) Main initiatives in fiscal 2022

Promotion of proper disposal of waste to further strengthen the waste disposal system

With a view to prompt response in the event of a disaster, we are studying and developing an appropriate collection system under direct management and in cooperation with the private sector. In addition, by continuously and systematically maintaining and upgrading waste treatment facilities, we are preparing for the occurrence of disasters even in normal times and promoting proper waste treatment with consideration for reducing environmental burdens.

Proper disposal of general waste

For general waste, at the three clean centers (Southern, Northeastern, and Northern), we properly disposed of waste through appropriate management and operation of the facilities, while giving consideration to preservation of the surrounding environment.

In addition, the company generates power from incinerated waste heat and biogas, and the electricity generated is used to power a clean energy center.

The surplus power was sold to electric utilities, while being used in the TER plant, the heated swimming pool, the recycling center, and other related facilities.


Southern Clean Center

In 2022 (FY2022), the amount of electricity generated will be 167 GWh, which will be used by approximately 41,800 households (annual electricity consumption per household).

The amount of electricity consumed by the company was equivalent to the annual electricity consumption of the company (calculated by assuming that the amount of electricity consumed by the company was 4,000 kWh).

Establishment of a robust disaster waste management system

Based on the "Kyoto City Disaster Waste Disposal Plan," we are preparing for disasters by raising awareness, conducting drills, and providing support in the event of a disaster, and securing personnel, equipment, temporary storage facilities, and landfill sites that will be ready to respond in the event of a disaster.

Promotion of support for garbage disposal for the elderly - Welfare Service for Garbage Collection (Magokoro Collection)

Garbage collection welfare service that comes to the doorstep of the home to collect garbage as a livelihood support for those who have difficulty taking out the garbage.
(Magokoro Collection). If the garbage has not been discharged, we also confirm the safety of the subject by calling the registered contact person.

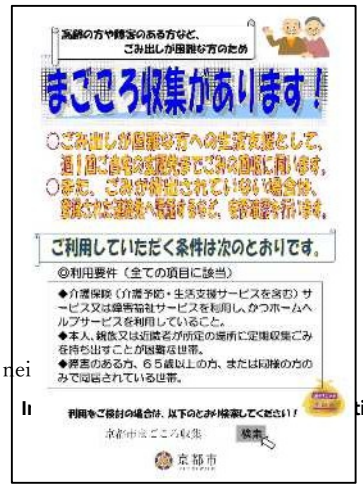
(Number of eligible households as of the end of FY2022: 4,489 households)

[Subject of the service

Residents of Kyoto City who meet all of the following criteria
The applicant must be using nursing care insurance services or welfare services for persons with disabilities and home help services.
Scheduled collection of garbage at designated locations by the individual, relatives, or nei

I tion

Households that have difficulty in taking out
Households with only persons with disabilities, persons 65 years of age or older, or similar persons living together.



Fire prevention due to lithium-ion batteries, etc.

In recent years, various electrical appliances have been equipped with lithium-ion batteries and other rechargeable batteries.

Electric batteries are now used, and the incorrect discharge method
Thus, fires and other accidents have occurred during the collection, transportation, and disposal of waste, which have become a problem throughout the country.

The City has traditionally used a "fill" method for removable items.

Electric batteries", not removable and within the target size
In addition, in FY2022, we will issue a leaflet on the proper way to dispose of waste such as knives, rechargeable batteries such as lithium-ion batteries, and home medical equipment such as syringes that require special care when disposing of them.

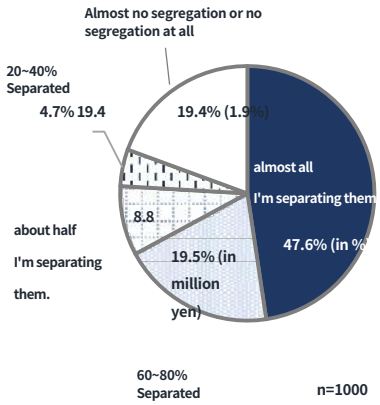


Figure 3-3.14. Citizen rechargeable batteries and small Status of Efforts to Separate Household Appliances

The Company has created and educated the public.

In addition, our city facilities have established an initial firefighting system using flame detection equipment, water spray nozzles, fire hydrants, fire extinguishers, fire buckets, etc.

Long-term goal 4 Creating a people-mechanism to promote environmental conservation in a comprehensive manner

The most important key to creating a sustainable society is to improve people's knowledge and awareness of the environment and to activate their actions. It is necessary to promote environmental education and learning in a systematic and integrated manner according to the stage of life in order to deepen the understanding of environmental connection and environmental conservation at home, school, workplace, community, and other places.

In addition to the long-term goals in the three areas, we have established "human resource development" as a long-term goal that crosses each area, and "mechanism development" to enable each entity, including citizens and businesses, to cooperate in environmental conservation activities, in order to promote environmental conservation in a comprehensive manner. We will comprehensively promote environmental preservation.

1 Results of evaluation of environmental indicators

(1) objective indicator

(1) The number of participants in the Environmental Conservation Activity Program achieved 69% of the target, (2) the number of participants in the Kyoto Collaborative Restoration of Living Things and Culture Project achieved 83% of the target, and (3) the number of applications for the Kyoto Environment Prize (cumulative total) achieved the target.

objective indicator	standard value (Fiscal year)	Fiscal year target (Fiscal year)	actual results (Fiscal year)	Assessment Results (Achievement rate)	target value (Fiscal year)
(1) Number of participants in environmental conservation activity programs	257,593 persons (2019(R1) fiscal year)	283,579 persons (FY2022(R4))	196,054 Persons (FY2022(R4))	★★★☆☆ (69%)	300,000 people (FY2025(R7))
Number of participants in the Kyoto Living Creatures and Culture Collaborative Revitalization Project <Repost	231 Person (2019(R1) fiscal year)	355 Persons (FY2022(R4))	296 Persons (FY2022(R4))	★★★★☆ (83.4%)	700 Person (400 persons) (FY2025(R7))
Number of applications for the Kyoto Environment Prize (cumulative total)	644 cases (2019(R1) fiscal year)	737 cases (FY2022(R4))	768 cases (FY2022(R4))	★★★★★ (100% or more)	830 cases (FY2025(R7))

(2) subjective index

Regarding the degree of realization by citizens, the scores were "somewhat high" for (1) opportunities for environmental learning and environmental conservation activities and (2) expansion of environmentally conscious lifestyles.

subjective index	Assessment Results
(1) Do you feel that there are more opportunities for environmental learning and environmental conservation activities in schools, companies, and communities?	★★★★☆ (0.24/slightly high)
(2) Do you feel that environmentally friendly lifestyles are spreading?	★★★★☆ (0.38/slightly high)

2 Progress of Basic Measures

basic policy

4-1 Promotion of understanding and action through environmental education and

The Kyoto Ecology Center (Kyoto City Environmental Conservation Activity Center) and the "Sastena Kyoto" environmental learning facility at the Southern Clean Center will be the core facilities for environmental education and learning, and will promote understanding and awareness of environmental conservation through collaboration with the Youth Science Center, zoos, aquariums, and other places of learning.

We will also enhance environmental education and learning opportunities for citizens and businesses in a wide range of settings, including homes, schools, communities, and business activities, in accordance with their life stages, and promote the development of leaders who will take the initiative in their communities.

(1) Main Initiatives for FY2022 (2022)

Promoting Environmental Learning in SASUTENA KYOTO

Sastena Kyoto is used by many people as an environmental learning facility where people of all ages can enjoy learning about cutting-edge environmental technology and various environmental issues.

In FY2022, we will conduct a variety of activities in a wide range of fields, such as global warming, biodiversity, waste reduction, and local history from an environmental viewpoint, in accordance with life stages.

Create programs, exhibitions and events.

The number of visitors to the museum was 37,988. (Number of visitors: 37,988)

In addition, we have begun to raise awareness through posters and videos about the dangers of disposing of lithium-ion batteries, knives, home medical equipment, etc. as burnable or recyclable waste.

In addition, environmental learning was conducted in collaboration with the Kyoto Ecology Center and the Youth Science Center, both located in the same Fushimi Ward as SASUTENA Kyoto.

Promotion of support for environmental learning and environmental activities at Kyoto Ecology Center

In commemoration of the Kyoto Conference on Climate Change Prevention (COP3), which gave birth to the Kyoto Protocol, the Kyoto Ecology Center is used by many people as a base facility to establish environmental awareness from a broad perspective, from familiar waste problems to global-scale environmental issues, and to expand the circle of environmentally friendly practical activities in all places. It is used by many people as a base facility to expand the circle of environmentally friendly activities in all places.

In FY2022, we will continue to promote the use of online and other means o

In addition to holding events, guided tours of the museum and eco-learning programs for municipal elementary schools after taking measures to prevent the transmission of the new coronavirus, we also developed a variety of activities utilizing the initiative of volunteers and human resources such as environmental volunteers ☞. (Number of visitors: 69,765)

Guided tour of the museum

Children's Eco Life Challenge

We are implementing the "Children's Ecolife Challenge," an environmental learning program in which children, who will be responsible for the future, deepen their understanding of the global environment and practice eco-life that will lead to the prevention of global warming together with their families.

In FY2022, 158 elementary schools implemented the program with their students and held pre- and post-learning sessions with teachers.

Lifestyle Transformation

[Revisited] (See p. 9)

Nature observation and habitat survey

[Revisited] (See p. 25)

Organizing exchange meetings for activities related to biodiversity conservation

In December 2022, a meeting will be held under the main theme of OECM* to share information on the initiatives of businesses and organizations, and to exchange information with other participants, with the aim of promoting initiatives by organizations and businesses related to biodiversity conservation, deepening citizens' understanding of biodiversity conservation, and promoting action. The event will be held in December 2022, with the main theme of OECM*.

The event was attended by 116 people.

*Not a protected area where nature is protected by law, but an area where nature is protected by people's livelihoods and voluntary efforts by the private sector.

Tour of environmental facilities "Eco-Bus Tour for Waste Reduction

The "Waste Reduction Eco-Bus Tour," a tour of environmental facilities, was held 30 times in FY2022 to visit waste treatment facilities such as clean centers and resource recycling centers, as well as private treatment facilities that treat and recycle industrial waste, as an opportunity to review the waste problems that are familiar to our daily lives and to further reduce waste and raise awareness of waste separation and recycling. In FY2022 (FY2022), we held the "Waste Reduction Eco-Bus Tour" 30 times.

learning facility at the Nanbu Clean Center)

Environmental Learning Initiatives in the Community

As part of an educational campaign to promote understanding and practice of waste reduction, including food loss reduction,
Since fiscal year 2017, the city has been implementing the "Shimatsu no Kokoro Raku Kou" (enjoy thinking about waste reduction in a fun way) initiative, a local study session in which city employees serve as instructors and participants can select and combine the content they wish to learn from a list of study themes.

(In fiscal 2022, the program was implemented 161 times.

In addition, at the Eco Town Station, an environmental hub close to the community, staff members will plan reuse initiatives, study session initiatives, etc., from their own perspectives, and develop unique educational activities, etc., for local residents.

At the "Environment Festa Higashiyama" held in June 2022 at the Higashiyama Ward Office, in addition to the reuse of ceramics ("Moppen Pottery Higashiyama") conducted by the Higashiyama Eco Town Station, the efforts of various organizations were introduced, such as food loss reduction, upcycling, and energy conservation efforts, in cooperation with local organizations and nearby universities, The event was attended by a large number of visitors.

Creation of the guidebook "Nature and Friends

To ensure that environmental education is effectively implemented at preschools, certified childcare centers, kindergartens, and families, an environmental education guidebook for preschool teachers, kindergarten teachers, and parents was published in 2023.

(The report was prepared in March 2023 and distributed to 405 facilities, including preschools, certified kindergartens, and kindergartens.

Guidebook "Nature and Friends

(2) Progress on Environmental Indicators

objective indicator

(1) Number of participants in environmental preservation activity programs

The number of participants in the environmental preservation activity program (the total number of participants in the projects that contribute to environmental learning conducted by the city, such as eco-learning at the Kyoto Ecology Center and the Sastena Kyoto environmental learning facility in the Southern Clean Center) in FY2022 was 196,054, a decrease from 130,096 in the previous fiscal year.

(65,958 persons), but below the target.

We resumed environmental learning and conducted online courses after taking thorough measures to prevent the transmission of the new coronavirus. On the other hand, the number of participants remained at 76% of the level in FY 2019 (FY2020), before the spread of the new coronavirus, due to the restricted use of some of the above facilities, reduced capacity of events, and a review of events (including group-type environmental learning) organized by the City in accordance with the City's Administrative and Financial Reform Plan. The number of participants remained at 76% of the level before the spread of the new coronavirus.

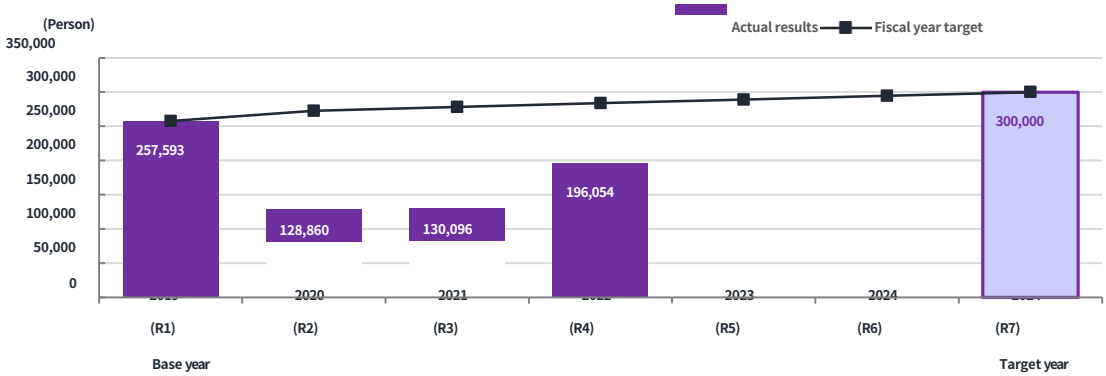
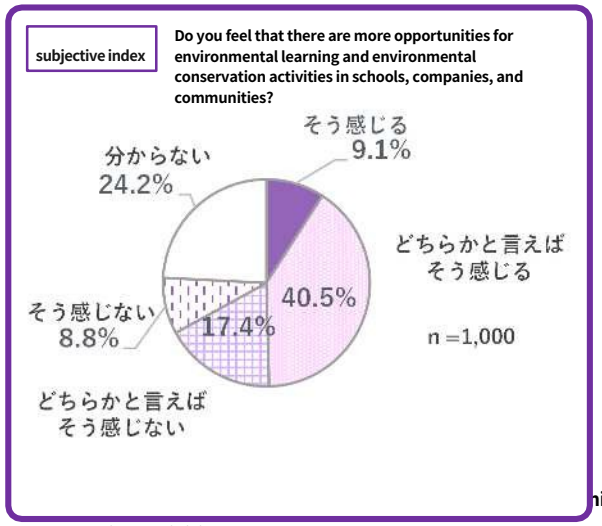


Figure 3-4.1 Number of participants in environmental conservation activity programs

subjective index

(1) Do you feel that there are more opportunities for environmental learning and environmental conservation activities in schools, companies, and communities?

The "agree" score for this indicator was 49.6%, an increase of 2.2 points from the previous year. On the other hand, 26.2% of the respondents answered "Disagree," indicating that the citizens' perception of this indicator (see p. 43) was "somewhat high.



ning and conservation activities

When asked about their "participation in environmental learning and conservation activities" (multiple responses), 20.8% of respondents answered that they "saw information on environmental issues on TV, the Internet, and SNS. On the other hand,
38.0% of the respondents were "interested but have never participated" and 22.6% were "not interested and have never participated.

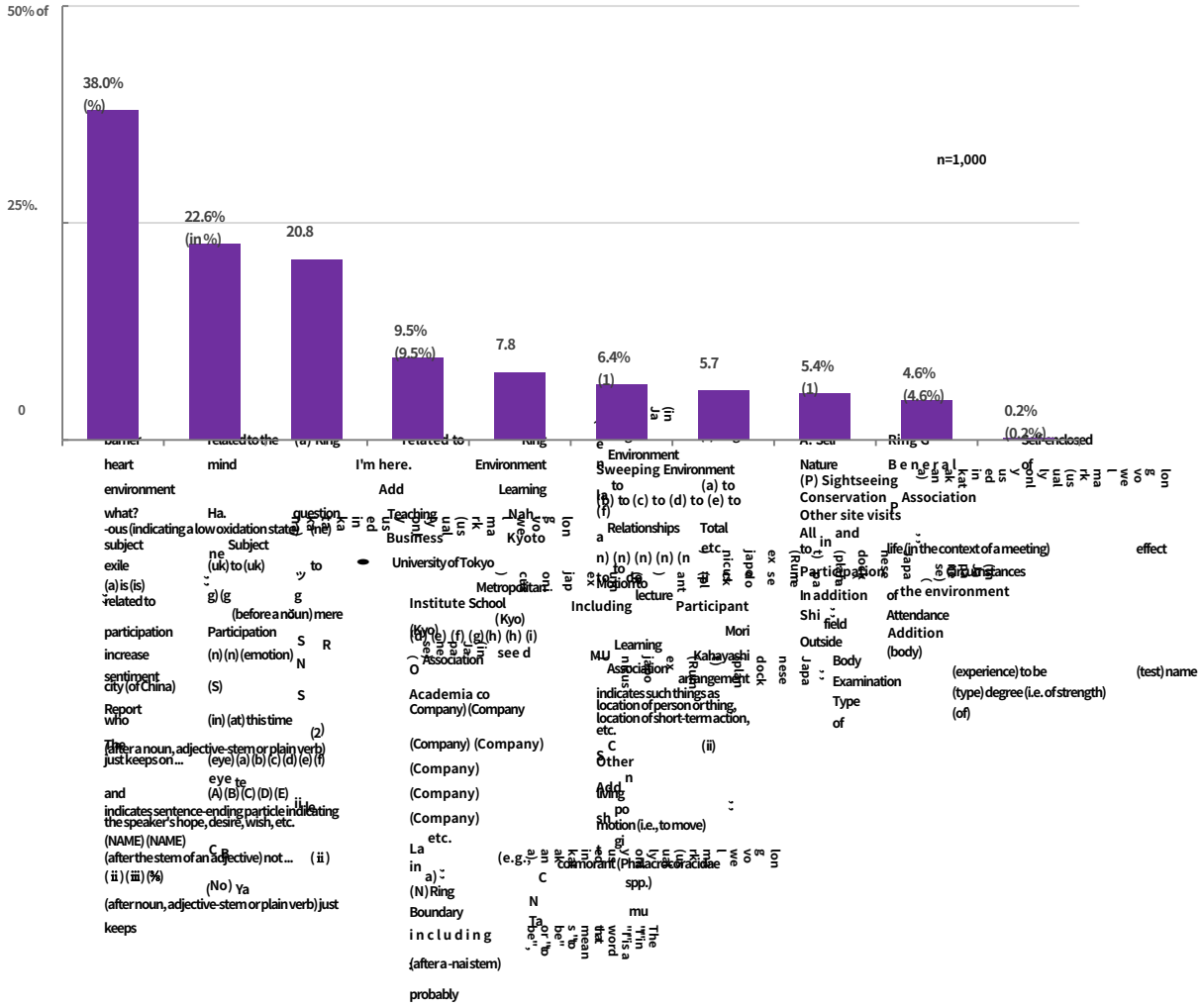


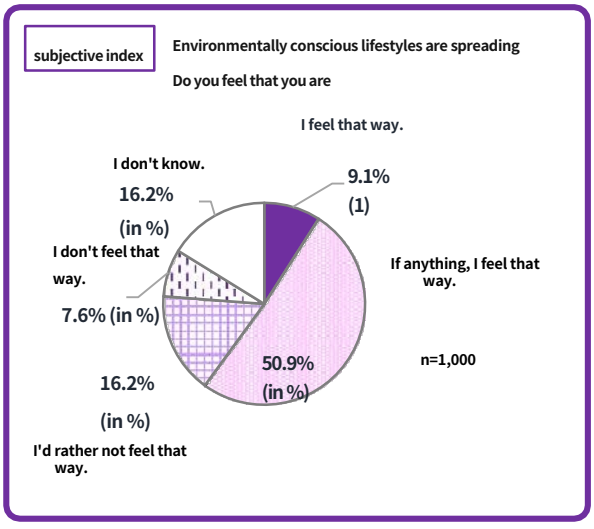
Figure 3-4.3. Participation in environmental learning and conservation activities (multiple responses)

It is important to plan environmental conservation activities that are "easy" for citizens to participate in and that they "want" to participate in, as well as to increase opportunities for citizens to participate in environmental conservation activities by disseminating information through various methods.

(2) Do you feel that environmentally friendly lifestyles are spreading?

The percentage of respondents who "agree" with this indicator was 60.0%, an increase of 2.5 points from the previous year. On the other hand, 23.8% of the respondents did not agree with the indicator, indicating that the citizens' level of awareness of the indicator was not as high as in the previous year.
(listed on p. 43) was rated "somewhat high.

It is important to continue to educate people about environmentally friendly actions that can be taken in all aspects of life, shopping, transportation, , and the workplace.



basic policy

4-2 Promotion of environmental conservation activities through

We will establish a system in which a wide range of entities, including citizens, businesses, universities, environmental conservation groups, and the City, can work together to engage in environmental conservation activities.

For citizens, we provide information on voluntary environmentally conscious actions to reduce the environmental burden of daily life and on environmental conservation activities that individuals can practice and participate in. For local communities, we dispatch personnel and support initiatives to deepen local residents' understanding of environmental conservation, and provide information that leads to exchanges and cooperation among organizations. For businesses, we promote and expand voluntary initiatives to prevent global warming and create a recycling-oriented society, and promote and raise awareness of ISO 14001*1, KES/environmental The program also promotes and raises awareness of ISO 14001(*1), KES/ Environmental Management System Standard*(2), and other certifications.

Furthermore, we will provide information and raise awareness among tourists and other visitors to the City so that they will cooperate with the measures the City is implementing to preserve the environment.

1 ISO14001: International standard for environmental management systems established by the International Organization for Standardization (ISO).

2 KES/environmental management system standard: As an easy-to-understand approach for small and medium-sized businesses, Environmental management system standards established by the Kyoto Agenda 21 Forum in 2001.

(1) Main Initiatives for FY2022

Promotion of environmental conservation activities by Kyoto City Waste Reduction Promotion Council and Eco School District Support Center

The city holds lectures on waste reduction for citizens and businesses together with the Kyoto City Council for Waste Reduction Promotion, an organization established by citizens, businesses, and the government, with the aim of realizing a town and lifestyle that reduces waste and cares for the environment. The city also supports the activities of the "Kyoto City Council for Waste Reduction Promotion", an organization established by the Kyoto City Government to promote waste reduction, and implements waste reduction measures through cooperation among citizens, businesses, and the city.

The Eco School District Support Center was established to support "Eco School Districts," school districts that are engaged in community-wide eco-activities with the aim of shifting to a community-wide environmentally friendly lifestyle and enhancing community strength. In FY2022, we will provide support for energy conservation and environmental education to all 222 "eco-school districts" in the city, and in addition to school districts, we will also provide support to other communities.

（Ten study sessions were held for schools, volunteer groups, PTAs, etc., with companies and organizations serving as lecturers.

Promote KES certification

KES (KES - Environmental Management System Standard) is a standard originated in Kyoto, Japan, which was established as a simple, low-cost, and easy-to-work-on environmental management system to promote participation in environmental conservation activities by businesses.

To promote KES certification, seminars are held for small and medium-sized enterprises, etc. 2022

（In FY2022, we held "Environmental Management Seminars" both in person and online (live-streaming) in conjunction with the "KES Refresh Seminar" of the KES Environmental Organization and the "KYOSHO ECO Salon 2022" of the Kyoto Chamber of Commerce and Industry to introduce initiatives using the environmental management system, etc. The seminar included an introduction of initiatives using the environmental management system, etc. (99 participants). (Participants: 99 persons)

Kyoto Environment Award

Since 2003, we have been accepting applications and presenting awards every year with the aim of raising public interest in the environment and further promoting various practical activities by recognizing individuals and organizations that practice activities that contribute to environmental conservation, including the prevention of global warming and the formation of a recycling-oriented society.

In FY2022, the "Coexistence with Living Things" program was selected from 51 ap

Mr. Makoto Yoshitake continues his activities under the theme of "Operation (junior high school student) was awarded the Grand Prize (Kyoto Environment Prize). In addition, 11 Special Awards and 8 Encouragement Awards were given.

Promotion of "Kyoto, the most beautiful city in the world

To promote the beautification of the city in a multifaceted and cross-sectional manner,
Led by the "Kyoto City Headquarters for Creating a Beautiful City", we are promoting city beautification projects in cooperation with citizens, local communities, and businesses, aiming to realize Kyoto, the most beautiful city in the world. In fiscal 2022, we supported the activities of organizations engaged community cleanup activities. (In fiscal 2022, we supported the activities of organizations engaged in community cleanup activities (1,498 projects, 121,604 activities).

(People)

Cleanup activities in the town

Environmental Learning Initiatives in the Community

[Revisited] (See p. 46)

(2) Progress on Environmental Indicators

objective indicator

Number of participants in the Kyoto Living Creatures and Culture Collaborative Revitalization Project <Repost>.

The number of participants in the Kyoto Living Creatures and Culture Collaborative Restoration Project increased by 60 from the previous year, to 296, with an achievement rate of 83.4% of the annual target. The number of organizations and companies involved in the project was 236.

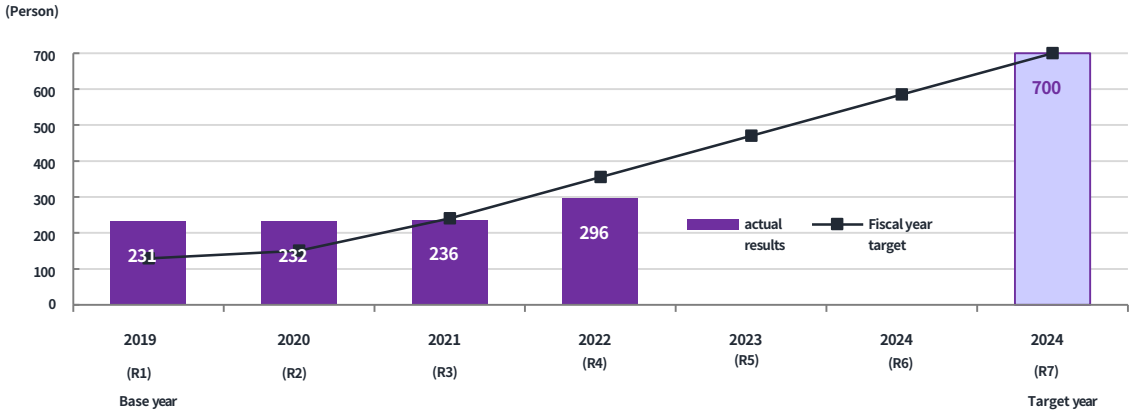
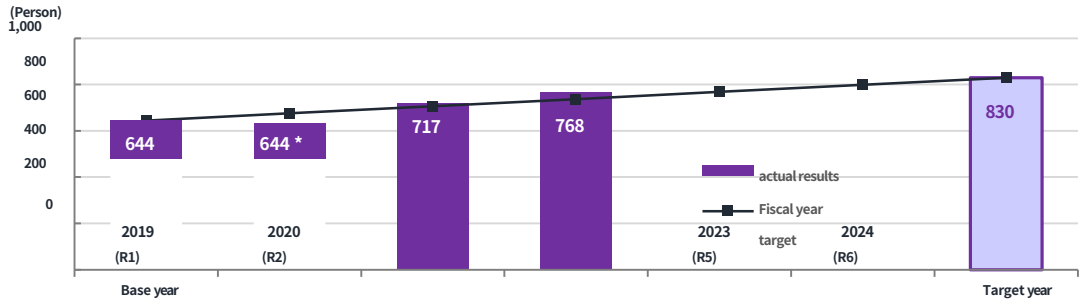


Figure 3-4.6 Number of participants in the Kyoto Living Creatures and Culture Collaborative Revitalization Project <Reproduced>

Number of applications for the Kyoto Environment Prize (cumulative total)

The total number of applications for the Kyoto Environment Prizes reached 768, achieving the annual target for FY2022. 51 applications were received in FY2022, of which 20 winners were selected based on the opinions of the Kyoto Environment Prize Selection Committee of the Kyoto City Environmental Council.



*This number is not included in the number of projects in FY2020 (R2), because the call for ideas was changed to a call for ideas in consideration of the impact of the new coronavirus infection.

Figure 3-4.7. Number of applications for the Kyoto Environment Prize (cumulative total)

subjective index

Same as Basic Measure 4-1 "Promotion of Understanding and Action through Environmental Education and Learning and Human Resources☞ Development" for "(1) Do you feel that opportunities for environmental learning and environmental conservation activities are increasing at schools, companies, and in local communities" (p. 47) and "(2) Do you feel that environmentally conscious lifestyles are expanding" (p. 48).

basic policy

4-3 Creating an environmentally friendly social and economic system, including local production for local consumption

Promote local production for local consumption by promoting seasonal vegetables from Kyoto and the use of city-grown lumber, etc., reduce carbon dioxide emissions from distribution, and create an environmentally friendly socioeconomic system.

In addition, Kyoto will foster environment-related industries and promote technological development related to environmental conservation by integrating the various knowledge Kyoto has built up over the years, including its advanced technological capabilities, artisan skills, and industry-academia-government networks, in order to achieve a rich harmony between the environment, economy, and daily life.

At the same time, we will strive to promote green products and services with low environmental impact through cooperation with environmental conservation groups and businesses.

(1) Main Initiatives for FY2022 (2022)

Creating an environmentally friendly socioeconomic structure

For the 46 vegetables produced in the city, we define the season for each item and define the vegetables to be shipped at that time as "Kyoto's seasonal vegetables" to promote local production for local consumption. The website "KYOTO Vege Style" introduces recipes of Kyoto vegetables that can be used at home and provides information on producers and direct sales. In addition, from FY2021, we are providing new support for the agriculture, forestry, and fisheries industries to help reduce environmental burdens. In addition, to promote the use of city-grown timber, subsidies were provided for 32 cases of new construction and expansion of stores and other facilities using "Miyako-somaki" timber, and for 17 cases of conversion of outdoor advertising to wood.

KYOTO Vege Style Home Page


Facilities using Miyako Somaki

Business Transformation (Creating Green Innovation)

[Revisited] (Refer to p. 10)

Promoting ESG Investments

[Revisited] (Refer to p. 10)

Promotion and awareness of ethical consumption

Consume with consideration for people, society, the environment, an

In order to promote the idea of creating a fair and sustainable community through "ethical consumption," we broadcast PR videos at city facilities, commercial facilities, etc., and disseminate information through our website and social networking services. Based on the "Agreement on Collaboration for Promotion of Ethical Consumption" with Kyoto Consumers' Cooperative Union, we will launch the "Bring Your Own Bag" campaign in January 2023, the "My Bag" campaign in February 2023, and the "Ethical Consumption" campaign in March 2013.
In May, we co-hosted an event to support ethical shopping, "Find Ethical Products! at the Kyoto Co-op Sagano store.

(2) Progress on Environmental Indicators

subjective index

Basic Measure 4-1 "Promotion of understanding and action through environmental education and learning and the development of human resources" Subjective Indicators

Regarding the question "Do you feel that environmentally conscious lifestyles are spreading," 60.0% of respondents answered "Yes, I do," an increase of 3.5 points from the previous year. On the other hand, 23.8% of respondents answered "No, I don't feel so," indicating that citizens' perception of the environment is "somewhat high.

When asked what they were conscious of when shopping or when they no longer need food (multiple responses), 50.6% said they "buy seasonal produce," 33.6% said they "put unneeded items out for recycling," and 28.7% said they "choose and buy items made from local vegetables and lumber.

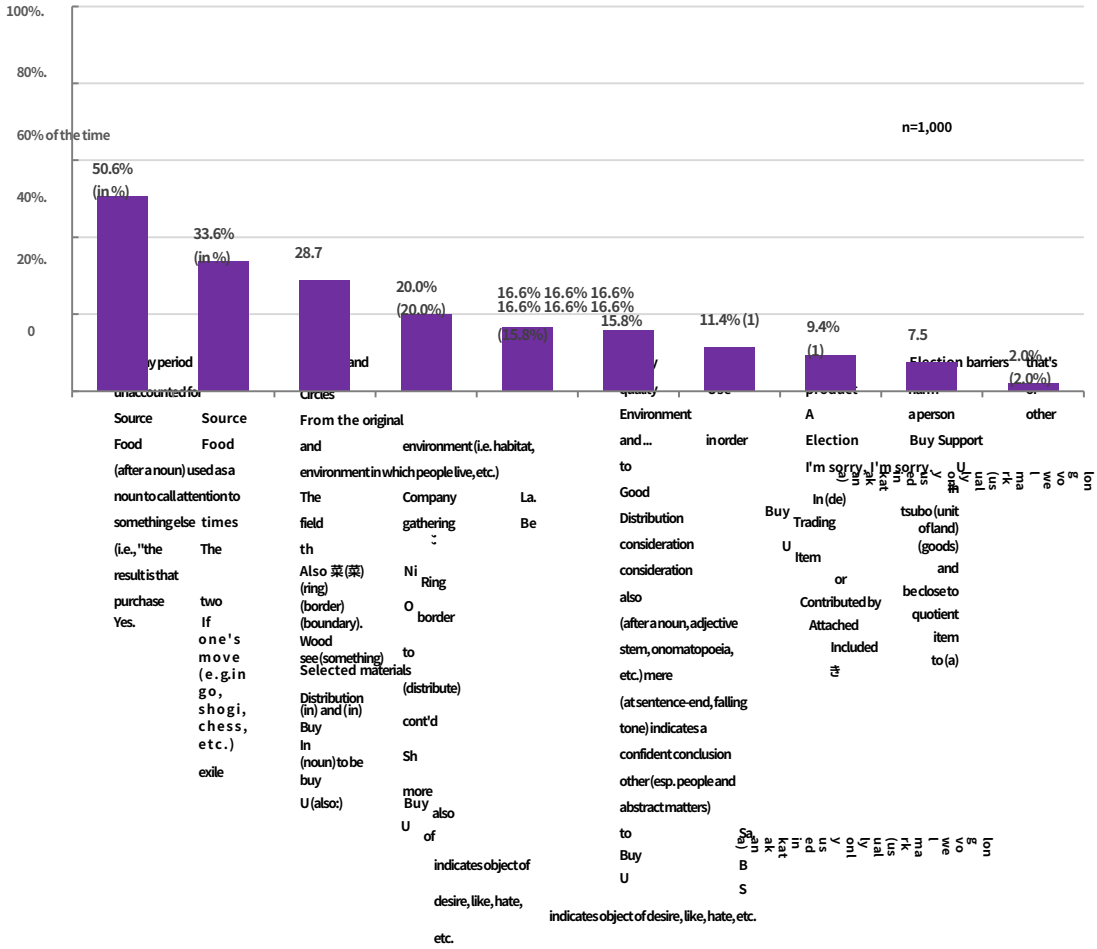


Figure 3-4.8. What people are aware of when shopping and using services (multiple responses)

basic policy

4-4 Promotion of Cooperation with Other Cities and

Global environmental problems are common issues for all mankind, and they cannot be solved by our city alone; cooperation with other cities, both domestic and international, is essential.

To this end, as the birthplace of the Kyoto Protocol and as an environmentally advanced city, the city will strive to exchange information and personnel with cities in Japan and abroad, promote and attract international conferences and academic meetings on environmental issues, and actively participate in overseas conferences to disseminate the city's advanced environmental policies.

(1) Main Initiatives for FY2022 (2022)

Promotion of international global warming countermeasures

As the birthplace of the Kyoto Protocol and the place where the "IPCC Kyoto Guidelines" were adopted to support the implementation of the Paris Agreement, we are participating in international intercity organizations such as IKREI - Council of Local Authorities for Sustainable Cities and Regions to further contribute to building a decarbonized society. In FY2022, we will be working to achieve the following goals,
At COP27 and other international conferences, the city's efforts to achieve net-zero CO_2 emissions by 2050 were widely communicated.

In addition, the company has been recognized for its leadership in the field of climate change countermeasures and other efforts, and is a member of the global climate change information disclosure system.
In the "CDP Cities," the company was selected to the A-list for the second consecutive year, as in the previous year.

On February 14, 2023, Kyoto City opened a facility in Johor Bahru, Malaysia, modeled after the Kyoto Ecology Center, as part of the JICA Grassroots Technical Cooperation Project "Project for Human Resources Development and Enhancement of the Functionalities of a Network Base for Realizing a Low Carbon Society as a Model for ASEAN. On February 14, 2023, as part of the JICA Grassroots Technical Cooperation Project "Project for Human Resources Development and Enhancement of the Functions of the Network Base for Realizing a Low Carbon Society as a Model for ASEAN," an environmental learning base facility modeled after the Kyo-Ecology Center was established in Johor Bahru.

CDP Cities" selected as A-list for the second year in a row

Malaysian edition

Establishment of Eco Center

From the questionnaire survey, we asked, "Do you know that Kyoto City has been hosting and inviting international conferences such as COP3, where the Kyoto Protocol was adopted, to solve the global warming problem, as well as disseminating Kyoto City's pioneering environmental measures at overseas conferences? 45.3% of the respondents answered "Yes, I know much about it" or "I know to some extent about it".

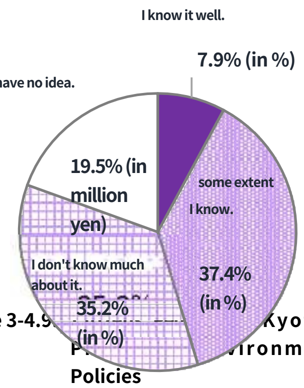


Figure 3-4.9 ... Kyoto City's ...vironmental Policies

We also asked, "What do you think about Kyoto City, the birthplace of the Kyoto Protocol, taking a pioneering approach to global warming countermeasures while deepening cooperation with other cities in Japan and overseas?
The most common response (54.2%) was "I hope that the city will continue to take measures against global warming in cooperation with other cities as it has in the past.

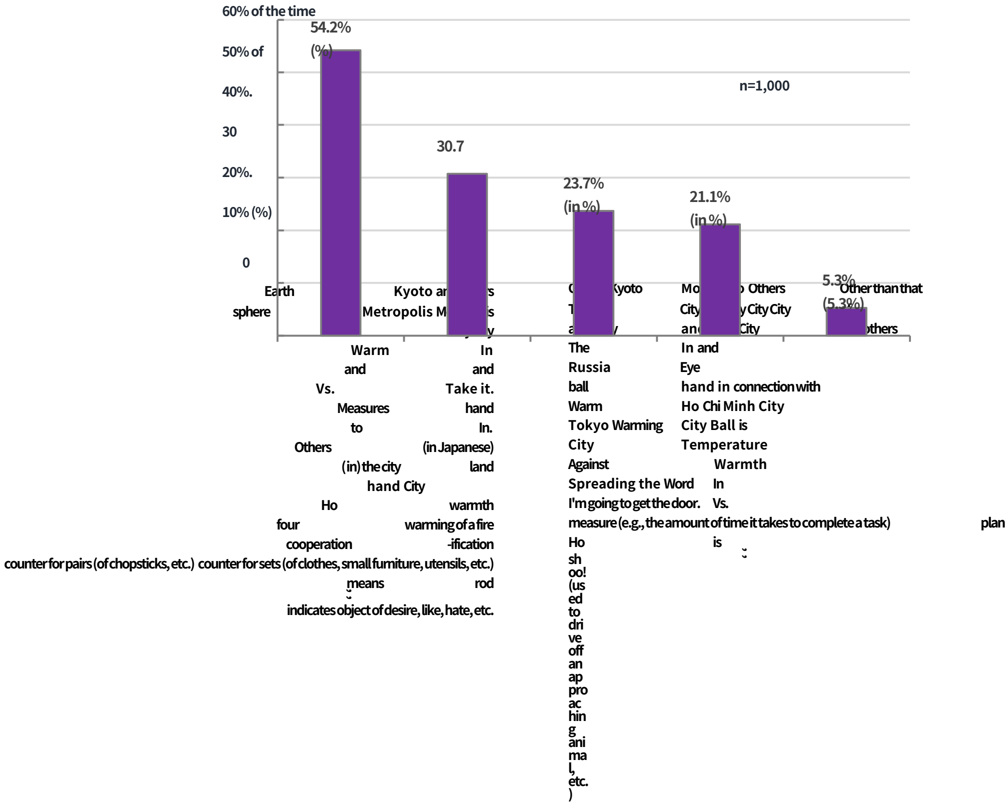


Figure 3-4.10. Pioneering efforts by Kyoto City, the birthplace of the Kyoto Protocol, to combat global warming (multiple responses)

4th☞ Summary (Future Directions)

Long-term goal 1 A decarbonized city where sustainable development is possible

The objective indicator, "total greenhouse gas emissions reduction rate," was 22.3%, falling short of the annual target of 25.3%, although greenhouse gas emissions decreased for the ninth consecutive year. This is because CO_2 emissions energy sources such as electricity, gas, and fuel oil, which account for about 85% of GHG emissions, increased in the residential sector in FY2020 due to the increase in the number of households and the increased time spent at home to prevent infection by the new coronavirus, and also increased in the industrial sector in FY2021 due to the increase in the number of households. In FY2021, the business and industrial sectors increased due to the resumption of economic activities that had been depressed by the impact of the new coronavirus infection.

On the other hand, citizens' perception of the subjective indicators "whether they feel that efforts to conserve energy and save electricity are progressing year by year" and "whether they feel that efforts to introduce renewable energy are progressing year by year" was rated as "somewhat high.

Therefore, it is necessary to strengthen measures in the residential sector in particular to achieve a 46% reduction in total greenhouse gas emissions in FY2030. In order to strengthen efforts to encourage citizens to change to a lifestyle that does not emit greenhouse gases, the Kyoto Decarbonization Lifestyle Promotion Team has been working on a vision of a decarbonized lifestyle in 2050, which was established through the efforts of the Kyoto Decarbonization Lifestyle Promotion Team, to disseminate information on the effects of greenhouse gas reduction through energy-saving actions, etc. and promote improvement of energy-saving performance of homes and increased use of renewable energy. The vision for decarbonized lifestyles in 2050, 2030

(We will promote and educate citizens to widely spread the goals and concrete actions to be taken by 2030 through the creation and demonstration of projects that will help citizens put the goals into practice. Furthermore, we will promote energy-efficient housing that is unique to Kyoto through cultural inheritance and new technologies, such as subsidies for new energy-efficient housing and insulation renovation of existing houses including Kyomachiya (traditional Kyoto townhouses), utilizing government grants.

In addition, for the business and industrial sectors, we will widely publicize examples of energy conservation measures and promote further reduction efforts through the operation of the Business Emission Reduction Plan System based on the Kyoto City Global Warming Countermeasures Ordinance, and will utilize government subsidies to promote the introduction and renovation of high-efficiency equipment and other measures to expand the use of ZEB, including the introduction of renewable energy. In addition, we will promote further initiatives to expand the use of ZEB by utilizing government grants to promote the introduction and retrofitting of high-efficiency equipment, as well as the introduction of renewable energy. In addition, the city will promote ESG investment and financing through the issuance of green bonds and other measures.

Furthermore, in addition to the waste reduction and sorting/recycling efforts that we have been promoting, we will promote renewable initiatives, which will reduce the consumption of natural resources and promote the reduction of greenhouse gas emissions associated with waste disposal.

Regarding the subjective indicator, "Do you feel that efforts to prioritize walking, bicycling, and public transportation are progressing from year to year?", the respondents were undecided.

We will further promote efforts to create a "Walking City Kyoto" that prioritizes people and public transportation. On top of this, we will further promote measures to reduce the influx of automobiles and to enhance the environment for safe and secure bicycle use, which will serve as the foundation for behavioral change.

Regarding the subjective indicator, "Do citizens feel that crises that they believe are caused by global warming, such as heavy rains and heat stroke, are looming in their daily lives?", citizens rated their realization as "very high".

Kyoto is also experiencing damage from the effects of climate change due to global warming, including an increase in extremely hot summers and torrential rains. The Kyoto Climate Change Adaptation Center, jointly established by the city, the prefectural government, and the Institute for Global Environmental Studies, will gather information on the effects of climate change on natural ecosystems, agriculture, forestry, and fisheries, culture, tradition, and tourism, and will actively promote the implementation of adaptation measures that are appropriate for the city, such as the development of "rain gardens," in conjunction with forest sink measures, to help preserve biodiversity. We will also work to conserve biodiversity.

We will share with citizens a sense of urgency about the global warming issue and the quality of life that can be improved by taking action to address the issue. We will continue to implement the following initiatives.

Long-term goal 2　A comfortable, safe and secure town in harmony with a natural environment rich in biodiversity

In protecting the health of citizens and preserving a comfortable living and natural environment, the results of constant monitoring of objective indicators, "achievement status of municipal conservation standards for air pollution" and "achievement status of municipal conservation standards for water pollution," were generally favorable.

On the other hand, in response to the question "Do you feel that the air and river water are kept clean?" for the subjective indicator, the citizens were "undecided" as to how they felt.

Of the reasons for "not feeling that the air and river water are kept clean," the most common are,
The "because there is garbage flowing in the river" was selected by 64.7% of the respondents, indicating that although the achievement rate of the city's conservation standards related to water pollution is high, visual factors such as garbage scattering affect the citizens' perception of the "cleanliness of the river water.

In the future, we will continue to provide monitoring and guidance based on pollution-related laws and regulations, as well as further improve the river environment by raising awareness of the prevention of littering and continuing river patrols to ensure that people feel that the river water is kept clean.

By making the actual situation of microplastics (plastics smaller than 5 mm) in the city's rivers known to the public, we hope that citizens and business operators will see plastic countermeasures as a more familiar problem, and further promote the beautification of streets, riverbanks, parks, and other areas.

In addition to these efforts, we will also improve citizen satisfaction with the "cleanliness of river water" through familiarization with and interest in rivers and waterfront areas through nature observation events and other activities.

Regarding the subjective indicator, "Do you feel that a good natural environment with a variety of living creatures is maintained?" citizens were undecided.

Through various opportunities such as SNS and the "Kyoto Museum of Living Things" biodiversity portal site, we will disseminate a variety of information on the conservation and sustainable use and preservation of biodiversity to make nature more accessible to citizens. We will also promote the "Kyoto Biodiversity Leader Declaration System" and other activities to encourage citizens to take biodiversity-conscious actions.

☞In addition, we will work on the sustainable use of biodiversity that supports Kyoto's uniqueness and the conservation and restoration of habitats and species diversity, such as the "Kyoto Creatures and Culture Collaborative Restoration Project Certification System," which uses the number of participants as an objective indicator, as well as the creation of mechanisms and networks to expand culture and lifestyle in harmony with the natural environment. We will also enhance the creation of mechanisms and networks to expand culture and lifestyles in harmony with the natural environment.

In addition, in order to create an environment that allows citizens to feel nature close at hand and to communicate the value and importance of biodiversity, the city will promote eco-tourism such as the "Around Kyoto Trail" and recreation using forest spaces as tourism resources, using the city's rich natural environment, lifestyle and culture in harmony with nature as the city's tourism resources. The city will promote eco-tourism and recreational activities using forest spaces as tourism resources.

Global warming and biodiversity are closely related, as it is predicted that the risk of extinction of many plants and animals on the earth is likely to increase due to global warming. The "National Biodiversity Strategy 2023-2030" formulated in March 2023 is a national initiative to promote biodiversity conservation and global warming countermeasures. While keeping a close eye on the national government's actions based on the "National Biodiversity Strategy 2023-2030" formulated in March 2023, we will comprehensively promote measures by utilizing the functions of the "Kyoto Biodiversity Center" established in collaboration with the city and prefectural governments, so that more citizens can feel that a good natural environment is maintained where a variety of living creatures live☞ We will continue to work on this.

Long-term goal 3　A recycling-oriented town that effectively uses resources and energy and reduces environmental impact

As for the objective indicators, "amount of waste incinerated" and "amount of food loss discharged," both of them achieved the annual targets thanks to the cooperation of citizens and businesses, and the achievement rate of "plastic waste sorting rate (household)" against the annual target was 99%.

In addition, citizens' perceptions of the subjective indicators, "Do you feel that the waste-free lifestyle is spreading?" and "Do you feel that progress is being made in waste sorting/recycling?

We will continue to promote waste reduction and effective use of resources by educating and informing citizens and businesses about the 2Rs and the necessity of working on sorting, recycling, and renewables (use of renewable resources), mainly targeting food loss, paper waste, and plastic waste, in order to achieve the respective targets for "waste incineration volume" and other targets. We will promote the effective use of resources.

In addition, we will promote "community collection" in which local communities engage in recycling activities such as the collection of used paper, collection of resources at collection points such as ward offices (eco-machi stations) and town beautification offices, and "mobile collection points" in which we visit local communities to collect resources. In addition, we will use these collection opportunities to communicate with citizens.

By widely disseminating information on the actual state of microplastics in the city's rivers and streams, we hope that citizens and businesses will see the marine plastic problem, and by extension, plastic countermeasures, as a more familiar issue, and further promote the beautification of streets, riverbanks, parks, and other areas. We will continue to promote the beautification of streets, riverbanks, parks, etc.

With regard to the disposal of general waste (refuse), which is the City's business, we have conducted proper disposal of general waste at the three clean centers through appropriate management and operation of the facilities, while giving consideration to the preservation of the surrounding environment.　We will continue to properly dispose of general waste and maximize the use of energy from waste by, for example, using biogas power generation at the Southern Clean Center in addition to waste power generation.

The city has been reducing waste disposal costs by reducing the amount of waste, and we will carefully explain the concept of the new fees for "brought-in" and "contractor-collected" waste, which will be revised based on the responsibility of the waste producer and the burden on the beneficiary, as well as further reducing and recycling waste. We will also work to further reduce and recycle waste.

In addition, in light of the frequent occurrence of large-scale natural disasters in recent years, as well as the declining birthrate and longevity of society, efforts will be made to develop a system for prompt disposal of disaster waste and to support the elderly in disposing of and sorting waste.

While lithium-ion batteries are becoming increasingly popular due to their convenience, there is a risk of ignition or explosion if damaged, and there is a risk of fire accidents during refuse collection, transportation, and disposal. We also request that manufacturers take further action.

With regard to industrial waste, we will continue to provide guidance and information to waste generators and processors, as well as work to educate the public to promote their understanding of the necessity and importance of industrial waste disposal.

Long-term goal 4　Create people and systems to comprehensively promote environmental conservation

Although the number of participants in the environmental conservation activities program, an objective indicator, increased compared to the previous fiscal year due to an increase in participants from a wide range of generations as a result of the resumption of environmental learning after thorough measures to prevent infection with the new coronavirus and the use of online environmental learning and SNS to widely promote awareness, the number of participants increased, From the viewpoint of infection prevention, the number of participants fell below the fiscal year's target due to restrictions on the use of some environmental learning facilities, limitation of the capacity of events such as group-based environmental learning, and a review of event implementation.

As in the previous year, the subjective indexes, "Do you feel that there are more opportunities for environmental learning and environmental conservation activities at schools, companies, and in the community" and "Do you feel that environmentally conscious lifestyles are spreading" were rated as "somewhat high" by citizens.

In order to further expand voluntary actions for environmental conservation, we will continue to promote further environmental education and learning in a wide range of settings, including homes, schools, communities, and business activities, by effectively utilizing online environmental learning, as well as participatory activities based on thorough measures against infectious diseases.

In addition, as a place for out-of-school learning and environmental learning in which the whole family can participate, the Kyoto Ecology Center and the Sasutena Kyoto environmental learning facility at the Southern Clean Center will be placed at the core of the program, while deepening cooperation with the Youth Science Center, the zoo, and other facilities, as well as enhancing opportunities for everyone to learn about countermeasures against global warming, biodiversity conservation, waste reduction, etc. by holding the "Waste Reduction Eco Bus Tour," an important initiative that also serves as a community learning session. We will also enhance opportunities for everyone to easily learn about countermeasures against global warming, biodiversity conservation, and waste reduction, such as by holding the "Eco-Bus Tour for Waste Reduction," an important initiative that also functions as a community learning session. We will also promote environmental education at all stages of life, utilizing the "Environmental Education for Preschoolers☞ Guidebook".

By doing so, we will work to establish interest in and awareness of environmental issues, encourage voluntary actions related to environmental conservation, and☞ cultivate leaders who will play a central role in environmental conservation activities.

We will continue to plan environmental conservation activities that are "easy" for citizens to participate in and that they "want to participate in," including environmental conservation activities that can be practiced and participated in by individuals, as well as increase opportunities for citizens to participate in environmental conservation activities by effectively disseminating information through various means, such as SNS. We will also dispatch lecturers to deepen local residents' understanding of environmental conservation, support their efforts, and provide information that will lead to exchanges and cooperation among organizations.

For businesses, we will promote and expand their voluntary efforts to prevent global warming, conserve biodiversity, and create a recycling-oriented society. In addition, we will promote the formation of environment-related industries☞ , promote technological development related to environmental conservation, and promote ESG investment and financing. In addition, we need to understand and engage in "ethical consumption," which includes local production for local consumption, green purchasing, and reduction of food loss, as consumer behavior that individuals can voluntarily engage in with regard to all aspects of environmental conservation, including global warming countermeasures, biodiversity conservation, waste reduction, and resource recycling, and to link this to lifestyle change. Therefore, we will disseminate information through various opportunities such as SNS to promote green products and services with low environmental impact.

Furthermore, as the birthplace of the Kyoto Protocol and the place where the "IPCC Kyoto Guidelines" were adopted, we will actively communicate pioneering environmental measures such as our city's efforts to achieve net zero CO_2 emissions by 2050 and the need for further global warming countermeasures at international conferences. We will also share examples of overseas development, such as the "Children's Ecolife Challenge" and the "Kyoto Ecology Center" in Malaysia.