January 2024

TOKYO METROPOLITAN GOVERNMENT

Green Urban Development

# TOKYO GREEN BIZ

## Tokyo Metropolitan Government

# Greenery Initiatives

## Ver.2

# Green Urban Development for the Next 100 Years

Taking every available opportunity to create and preserve greenery, the Tokyo Metropolitan Government (TMG) has advanced a range of efforts to date, with the aim to enhance the quantity and quality of greenery throughout our city.

Meanwhile, in recent years, we have seen a shift in trends related to green spaces, including the functions expected of cities and people's values. For example, greenery is being used to help address social issues, including in climate adaptation measures, and the need for open green spaces has increased as a result of the COVID-19 pandemic. In December 2022, the Kunming-Montreal Global Biodiversity Framework was adopted during COP15, establishing a set of global goals aimed at realizing a "nature-positive" world. Harmony between the natural environment and urban functions is valued more than ever before across the globe, with overseas cities engaged in promoting green infrastructure and other initiatives.

Against this backdrop, the TMG launched "Tokyo Green Biz" in July 2023. This new green project looks 100 years into the future and aims to further enhance the value of our city's greenery, which brings a sense of ease and calm to daily life, and to pass down our green spaces to future generations with the cooperation of Tokyo residents.

In August of the same year, we established an advisory board to gain the input of experts from various fields to assist in the promotion of Tokyo Green Biz. We have also taken efforts to gather an even broader range of opinions, such as through conducting surveys targeting children, youth, and foreign nationals. While incorporating these opinions and suggestions, we will strengthen existing initiatives and formulate new measures, focusing on the three perspectives of "protecting," "nurturing," and "utilizing" Tokyo's greenery.

By furthering our vision of green urban development for the next 100 years together with the citizens of Tokyo and other partners, we will expand our circle of initiatives and transform Tokyo into a sustainable city that exists in harmony with nature.

Green Urban Development
TOKYO GREEN BIZ

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# Changes in social environment surrounding greenery

## Major Greenery Initiatives to Date

Green Tokyo 10 Year Project (June 2007)

▶Doubled the number of roadside trees in Tokyo to 1 million, adding greenery to diverse urban spaces such as schoolyards and rooftops.

Comprehensive Policy for Securing Greenery (May 2010)

▶Systematic promotion of adding greenery to diverse urban spaces and conserving the declining greenery on private land.

Future Tokyo Strategy (Strategy 13 - Project for a Tokyo Filled with Greenery) (March 2021)

▶ Promoted initiatives to increase greenery and raise the level thereof in terms of quantity and quality.

**The functions required of cities and people's values are changing as the conditions facing greenery change.**

**Rising global temperatures**
**Increasingly severe natural disasters**

**Solving social issues by using greenery**

Example of use of greenery overseas (Singapore)

(Source) PUB Bishan Park pamphlet

**Changes in people's values and behavior with the global pandemic**

**Responding to a need for ample spaces**

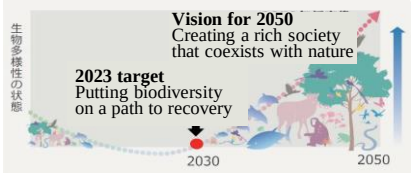
Examples of green open spaces overseas (New York)

(Source) Bryant Park website

**Realization of the global goal of "nature positive"**

**Formation of hubs for biodiversity**

Image of the realization of "nature




(Source) Bureau of Environment "Tokyo Biodiversity Strategy for 2030"

**Increasing demand for wood as a sustainable material**

**Demonstration of multi-faceted functions of forests**

Global trend for wooden

Grand Palais Éphémère (Paris)

Helsinki Central Library (Helsinki)

(Source) Helsinki City website

**Increasing global demand for food**
**Effective use of resources**

**Sustainable, multi-purpose agriculture**

Main functions of urban farmland

Supply of fresh agriculturalproduce

Providing opportunities to learn through agriculture

Accessible farming experiences/place of exchange

(Source) Ministry of Agriculture, Forestry and Fisheries website

# The diverse functions of greenery

Greenery offers **diverse functionality**, such as **creating spaces for interaction, mitigating global warming, enhancing disaster resilience**, and provides us with a **variety of blessings.**

## Primary functions of greenery

### Formation of an enriching living environment

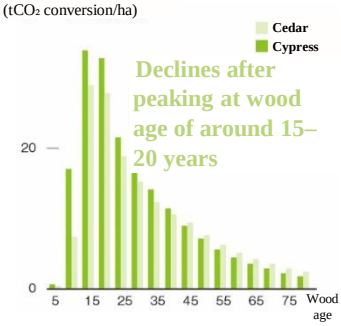
Greenery provides different colorful landscapes throughout the seasons, enriching and comforting us, reducing stress, and improving comfort.

### Formation of places to interact

The pleasurable spaces created by greenery serve as places to interact for a variety of activities, sports, and recreation in the community, nurturing our healthy minds and bodies.

### Prevention of global warming

Greenery absorbs carbon dioxide and contributes to the prevention of global warming. The planting of young trees is effective for use as wood material and absorbing a large quantity of carbon dioxide.




(Source) Created based on the "Forest Foster Parent Promotion Project" CO2 absorption calculation standards of Nagano Prefecture

### Securing habitats for wildlife

Greenery forms the foundation of ecosystems, providing habitats for wildlife, and plays an important role in securing biodiversity.

Japanese fawn lily

Ogasawara greenfinch

### Improvement of city and local disaster prevention

Green areas serve to prevent the spread of fires and as evacuation sites during disasters. Forests also give rise to rich water resources, and play an important role in protecting from disasters by limiting sediment runoff.

### Formation of scenery, views, history, arts, and culture

Greenery is the foundation of scenery and scenic views. In combination with cultural heritage resources, greenery contributes to the promotion of bustle, vitality, and tourism in the community.

## We must maximize the diverse functions of greenery

# Tokyo Breen Biz: A New Green Project

## Harmony between the natural environment and urban functions is highly valued across the globe.

**We face a major turning point where we must decide how we will shape our city and the lives of our residents.**

GREEN × BIZ

**Launch of a new green project to be promoted in cooperation with various stakeholders for the sake of Tokyo's greenery**

Green Urban Development

TOKYO GREEN BIZ

**A vision that looks 100 years into the future and aims to enhance the value of Tokyo's greenery and pass it down to future generations with the cooperation of residents, the private sector, and other stakeholders.**

# Tokyo's Greenery Initiatives

## Protect, Nurture, Utilize

**Strengthening Existing Greenery Initiatives**

**Maximizing functions of green spaces**

**Creating spaces for interaction, mitigating global warming, increasing biodiversity, enhancing disaster resilience, forming landscapes, etc.**

**Collaborating with diverse stakeholders**

**Encouraging individuals to appreciate and take efforts to nurture greenery**

**With an eye to the next hundred years, we will expand our circle of initiatives, enhance the value of Tokyo's greenery, and pass down our green spaces to future generations.**

## Efforts to Protect Greenery

- Protecting greenery rooted in the community (e.g., estate woodlands)
- Preserving areas with rich natural environments
- Introducing a new scheme to protect trees
- Conserving and managing forests that protect water sources
- Promoting a sustainable forest cycle


## Efforts to Utilize Greenery

- Building green infrastructure that leverages the functions of greenery and nature
- Making parks the face of the city by enhancing their appeal
- Leveraging greenery as local landmarks
- Promoting the appeal of rich natural environments
- Harnessing the diverse values of greenery

## Efforts to Nurture Greenery

- Nurturing greenery together through the Tokyo Green Biz Movement
- Creating greenery in line with urban development
- Creating lush greenery and open spaces
- Forming networks of greenery and water
- Developing verdant green spaces as symbols of communities

*Includes initiatives scheduled for implementation in the proposed FY2024 budget.

# ● Expert Opinions to Strengthen the Efforts

**An advisory board was established to gain the input of experts in each domain to assist in promoting Tokyo Green Biz.**

## Tokyo Green Biz Advisory Board

Established August 2023, four meetings held

[Members]

| | | |
|---|---|---|
| Mitsuyoshi Ando | Member | (Professor, The University of Tokyo Graduate School of Agricultural and Life Sciences) |
| Kaori Ito | Member | (Professor, Tokyo University of Science Faculty of Science and Technology) |
| Mifuyu Ogawa | Member | (Project Researcher, The University of Tokyo Graduate School of Agricultural and Life Sciences) |
| Hikaru Kobayashi | Member | (Research Advisor, The University of Tokyo Research Center for Advanced Science and Technology) |
| Hideo Sakai | Member | (Professor Emeritus, The University of Tokyo) |
| Yukihiro Shimatani | Member | (Distinguished Professor, Prefectural University of Kumamoto) |
| Akio Shimomura | Member | (Professor, Kokugakuin University Faculty of Tourism and Community Development) |
| Mari Yoshitaka | Member | (Fellow, Mitsubishi UFJ Research & Consulting Co., Ltd. (Sustainability) Visiting Professor, The University of Tokyo College of Arts and Sciences) |
| Midori Watanabe | Member | (3rd CFO, Euglena Co. Ltd.) |

### Advisory Board Overview

Advisory Board Meeting

**1st Advisory Board Meeting**

- Introduction of green initiatives in Tokyo
- Discussion proposal presented by the secretariat
- Exchange of opinions

**2nd and 3rd Advisory Board Meetings**

- Briefing on the status of Tokyo initiatives

(Preparation of a PR booklet, survey implementation, etc.)

- Presentations from members
- Exchange of opinions reflecting the perspectives of each member's specialist domain

**4th Advisory Board Meeting**

- Briefing on the status of Tokyo initiatives

(Survey results and analysis, etc.)

- Presentations from members
- Exchange of opinions to compile the feedback of the Advisory Board

**The opinions and proposals will be used to strengthen the City's Efforts.**

# Expert Presentations

| Member name | Theme and Description |
|---|---|
| **Member Mitsuyoshi Ando** [Agriculture] | **<The Ongoing Decline of Farmland and Greenery in Tokyo>**<br>● Farmland is being sold in parcels because of the enormous burden of inheritance taxes on farmers.<br>● The scope of the inheritance tax deferment system should be expanded to include woodlands. |
| **Member Kaori Ito** [Urban Development] | **<Urban Green Spaces Seen from Interaction with People>**<br>● If people in the city center are not proactively provided with chances to interact with nature, then green spaces and the city itself cannot be maintained.<br>● Example: Visualize information and promote ownership, such as with the New York Tree Map. |
| **Member Mifuyu Ogawa** [Plant Ecology] | **<What Greenery in Tokyo Needs for the Next 100 Years>**<br>● Seedlings that take local genetic diversity into account should be cultivated when redevelopment occurs.<br>● We should establish an environmental education hub and train environmental experts. |
| **Member Yukihiro Shimatani** [Green Infrastructure] | **<Adopting Green Infrastructure>**<br>● Greenery should be seen as a form of infrastructure, and it is important to properly evaluate the function thereof.<br>● We should develop a green infrastructure model in the Zenpukuji River basin (rain gardens, swales) |
| **Member Mari Yoshitaka** [ESG Investment] | **<Financial industry trends related to the Natural Capital domain>**<br>● The risks to corporate activity and financial institutions from changes in Natural Capital is rising. The TNFD and others has been established to build a system for disclosure thereof.<br>● Investment in the Natural Capital domain via domestic and international financial institutions is growing active. |
| **Member Hideo Sakai** <Forestry> | **<Tokyo Forestry>**<br>● How can we raise the value of forests as a resource to make forestry a growth industry? The quality, health, and growth of existing trees is improved by repeated thinning.<br>● The training and securing of personnel, such as through the Tokyo Training Forest (training for logging and transport experts), is essential to make forestry appealing. |
| **Member Akio Shimomura** <Parks> | **<Toward Coexistence Between People and Greenery>**<br>● The greenery that speaks of the characteristics and history of each area and place should be considered a community resource.<br>● Appropriate human intervention is necessary to utilize and manage greenery. |
| **Member Midori Watanabe** [Generation Z] | **<Tokyo Greenery 100 Years in the Future>**<br>● I wish to propose a corridor that connects green spaces because greenery is dispersed throughout the city and difficult to access. However, this would incur issues such as maintenance costs and personnel shortages.<br>● Tokyo is a place where people and ideas are concentrated. Young people wish for a community that ensures their well-being. |
| **Member Hikaru Kobayashi** [Environment] | **<Reconsidering environmental policy on greenery and expectations toward city initiatives>**<br>● We should set a standard for greenery for the Reiwa era and aim to create greenery with biodiversity and a rich ecosystem.<br>● If we are unable to meet the greenery goals for each mesh, then why not attract the investment and participation of developers by achieving greenery goals in other places? |

## Other Expert Opinions

- Can residential tree areas be converted to public land or made tax exempt?
- It is important to preserve agricultural land by having the government purchase it proactively.
- We should establish an environmental education hub and train environmental experts.
- Training and securing personnel is important for developing forestry.
- It is difficult to protect greenery by leaving it in its natural state. Both staff and funding is required.
- We should make information visible and promote city resident participation.
- Tokyo forests are mostly secondary, not primary, so high quality management is necessary.
- We should communicate more about the appropriate management of greenery.
- We should adopt green infrastructure.
- The environment is now the source of profits and corporate attitudes have changed.
- We must train personnel able to manage greenery.
- The concept of partnerships to promote greenery with the community and companies is important.

Etc.

# Surveys on Greenery in Tokyo

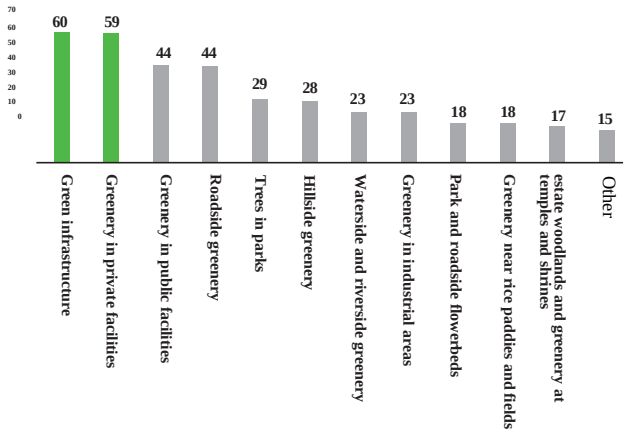
**We held a survey for children, youth, and foreign residents to obtain input from a wide range of sources.**

## Survey details

- **Questionnaires (for children, university students, foreign persons)**
- **Presentation by a youth ambassador (Do! Nuts Tokyo)**

### Survey for university students
(137 students at Tokyo Metropolitan University)

**Initiatives required to move forward with Green Urban Development for the next 100 years (select 3)**




### Presentation by Youth Ambassador

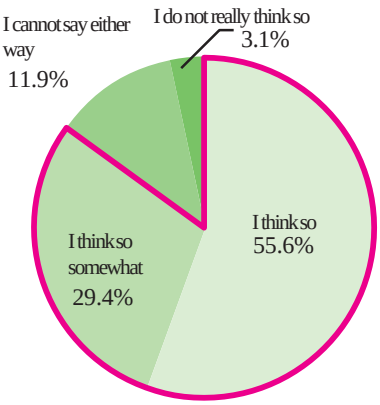
**Theme: Green Urban Development (4 people)**

- Create a campus with vibrant urban spaces that exercise creativity.
- Eliminate abandoned woodland and establish a cyclical pattern for city forests.
- Green urban design that exemplifies ○○
  - Moving Forward with Community Development through Dialog with the Spirits of the Land -
- Developing systems that evoke a desire to participate

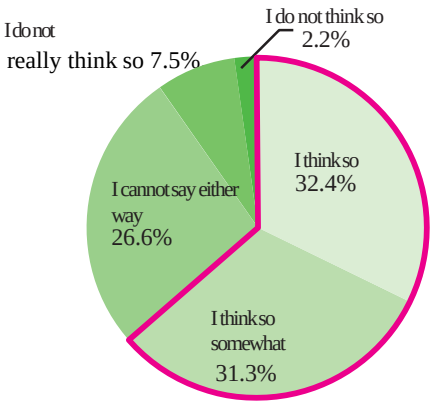

Youth Ambassador Presentation

### Questionnaire for foreign visitors
(361 foreign visitors to the Tokyo Metropolitan Government Building Observatory)

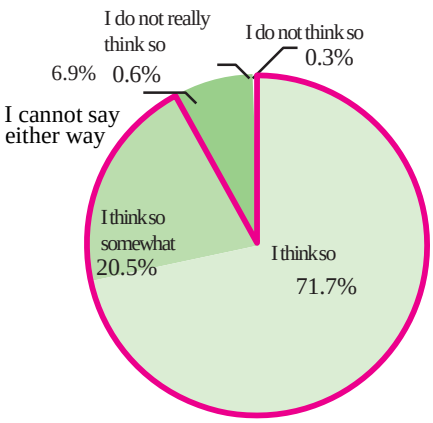
**Did you sense the greenery in the places you visited in Tokyo?**




**Did you find Tokyo to have more greenery than you expected before you came to Japan?**




**Do you feel abundant greenery is important when choosing a city to visit or live in?**



# Efforts to Protect Greenery

- **Protecting Greenery Rooted in the Community (such as estate woodlands)**
- **Preserving Areas with Rich Natural Environments**
- **Introducing a New Scheme to Protect Trees**
- **Conserving and Managing Forests that Protect Water Sources**
- **Promoting a Sustainable Forest Cycle**

Protect

# Protecting Greenery Rooted in the Community (e.g., Estate Woodlands)

## Conservation of greenery on private land, such as estate woodlands

## Overview

Estate woodlands are recognized in 800 locations throughout Tokyo, covering more than 200 hectares in total. While many residential tree areas are being designated as conservation trees and forests by the local municipality, or as citizen green spaces and special green space conservation areas under the Urban Green Space Law, many others are disappearing due to inheritance and other causes.

## Main initiatives

### ▶ Special green space conservation area program

53 green spaces in Tokyo, approximately 321 hectares, are designated as Special Green Space Conservation Areas under the Urban Green Space Law for forming beneficial natural environments.

(As of December 2023)

Nishitokyo City Shimohoya 4-chome Special Green Space Conservation Area

[Special Green Space Conservation Area designation]

| | |
|---|---|
| Merits | • 80% reduction in inheritance tax for forests, wilderness, and tree covered areas<br>• Up to 50% reduction in property tax assessment<br>• 20 million Yen deduction to transfer income tax when local government etc. purchases land |
| Limits | Restrictions to construction and harvesting trees and bamboo |

### ▶ Citizen Green Space Contract program

This program enables local governments to enter into contracts with private land owners to establish and manage citizen green spaces under the Urban Green Space Law. 56 of these locations have been established in the city.

(As of March 2022)

(*) Contract term is 5 years or more

Merits include reduction of the management burden of the land owner

Kita Karasuyama 9-Chome residential forest urban green space, Setagaya City

(Source) Website of Setagaya City

# Future Initiatives

In order to preserve valuable private greenery, such as estate woodlands, we must respond quickly when land is inherited, enable the concurrent purchase of non-forested land, such as residential land, and lessen the resistance to parting with ancestral land.

Accordingly, initiatives to strengthen government purchasing of land will be applied to the preservation of 50 hectares of nearby woodland property, such as estate woodlands, in 100 locations by 2043.

## ▶ Strengthen support for purchases during inheritance

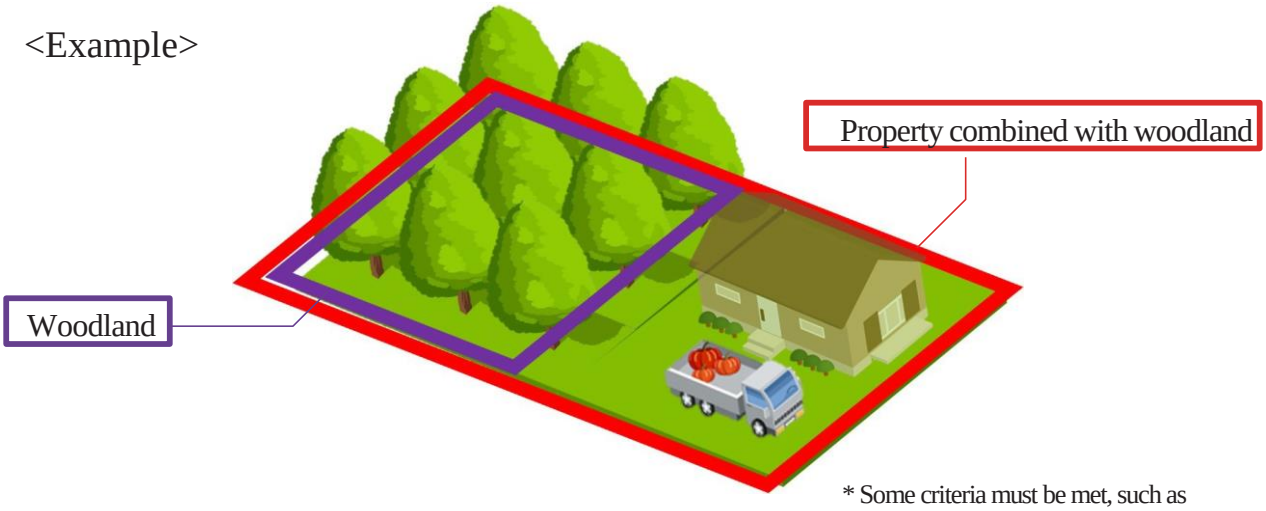
To enable responding quickly when land is inherited, new support will be provided using various funding to enable municipalities to purchase residential tree property in Special Green Space Conservation Areas.

## ▶ Park development using connected woodland

The development of parklands will be promoted through the purchase of woodland and residential properties together when estate woodlands are present on the property.

**Stronger support for municipalities by expanding park development projects with greenery**

<Example>




* Some criteria must be met, such as the scale of the woodland.

## ▶ Historic preservation initiatives for residential tree property

Efforts will be made to preserve owner's names in the names of Special Green Space Conservation Areas (such as "Former <Name> Special Green Space Conservation Area"), or install signage describing the history of the estate woodlands, with consideration for the owner's preferences.

Protect

# Protecting Greenery Rooted in the Community (e.g., Estate Woodlands)

## Initiatives to preserve agricultural land

## Overview

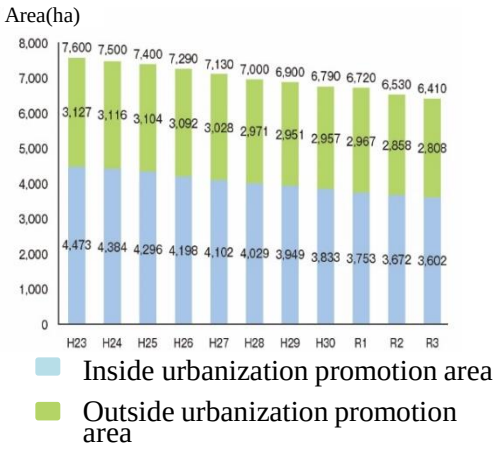
A total of 871 hectares of urbanization promotion areas and 319 hectares of urbanization control areas have disappeared over the past ten years in Tokyo, highlighting a need for initiatives to preserve valuable urban agricultural land, such as productive green land.

## Main initiatives

### ▶ Preservation of productive green land

Funding is provided to municipalities when they purchase productive green land for the purpose of agriculture. Furthermore, subsidies are also provided to help cover costs incurred when municipalities preserve greenery on productive green land by establishing parks and other measures, when agricultural activities on the urban planning park etc. cannot be expected to continue.

**Changes in agricultural land area**

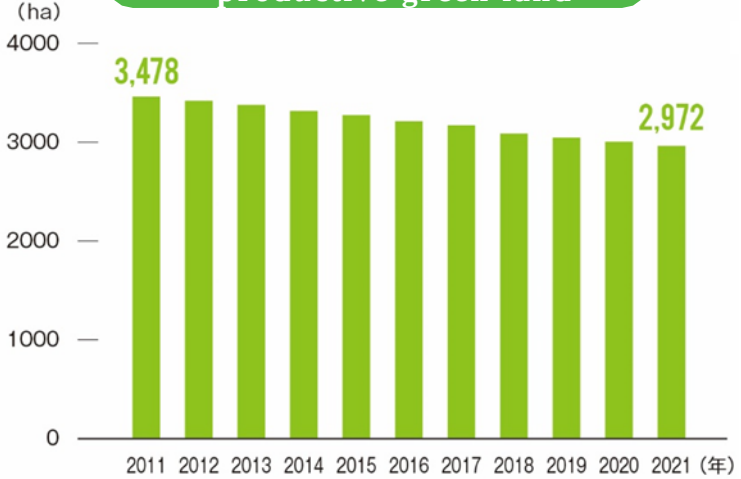



### ▶ Specified productive green land

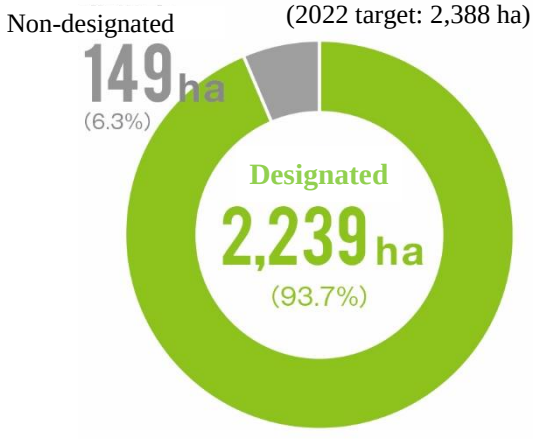
Agricultural land in urbanization promotion areas that is designated as productive green land is subject to tax relief, but the designation also obligates cultivation of the land for a period of 30 years, after which the special tax measure no longer applies.

Because much of the productive green land in the city was designated in 1992, Tokyo, in cooperation with municipalities, agriculture commissions, the Tokyo Agriculture Commission, and agriculture cooperatives, has been encouraging farmers to transition their property to a Specified Productive Green Land designation under which the special tax measure can be extended for 10 years. As a result, approximately 94% of productive green land is now designated as Specified Productive Green Land.

**Changes in the area of productive green land**




**Designation status of specified productive green land**




(As of November 30, 2022)

# Future Initiatives

## ▶ Promoting matching and long term farmland leasing

Expand the support for owners of agricultural land who lease it for long periods to include agricultural promotion areas in addition to productive green land, while also establishing a liaison desk to provide matching services for productive green land over wider areas than individual municipalities.

**Use of farmland utilizing leasing programs for productive green land**

New farmers engaged in greenhouse tomato cultivation

Learning cultivation techniques in a class run by an expert Farming course for senior citizens

(Source) March 2023, Bureau of Industrial and Labor Affairs, Tokyo Agricultural Promotion Plan

## ▶ Revitalization of agricultural promotion areas

We will strengthen support for the revitalization of agricultural promotion areas, including reviewing municipal development plans and subsidizing facility development.

[Agricultural Promotion Areas]
Designated by the TMG as an area for the comprehensive promotion of agriculture.

Agricultural promotion areas

## ▶ Promoting designation of Agricultural Scenic Development Districts

We are engaged in outreach through symposiums and workshops and exchanges of opinions with stakeholders to promote the preservation and development of agricultural scenery under the program to designate Agricultural Scenic Development Districts.

[Agricultural Scenic Development District program]
This is an initiative to designate districts where agricultural land and estate woodlands are relatively consolidated in order to combine the distributed farmland into urban planning parks, conserve the farmland in the form of open spaces, and pass on agricultural scenery to future generations.

Agricultural Scenic Development Districts

Protect

# Preserving Areas with Rich Natural Environments

## Overview

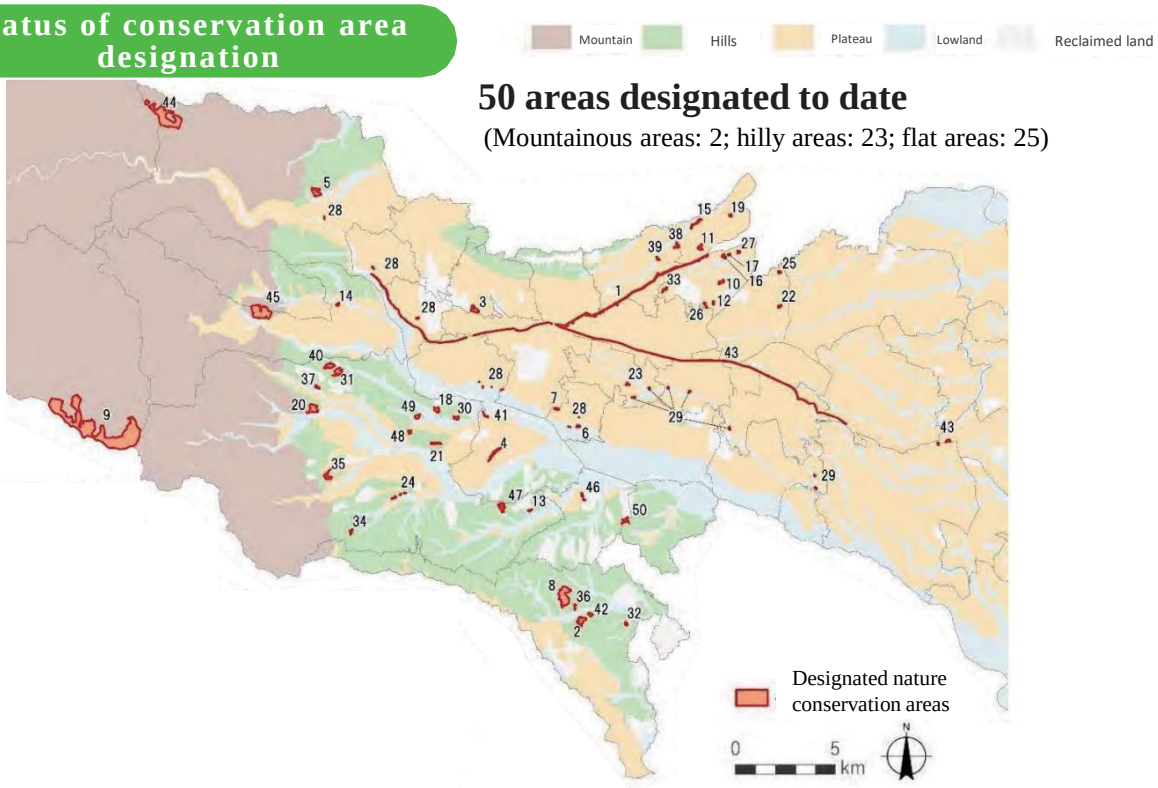
The appropriate conservation of areas in the city with abundant nature is important from the standpoint of biodiversity, and challenges such as the decline of natural areas and the emergence of invasive specie must be dealt with.

## Main initiatives

The TMG has currently designated a total of approximately 760 hectares of conservation areas, of which roughly 85% are public lands.

[Conservation Areas]
These are designated for the preservation and conservation of nature, unlike areas such as parks which are intended to be entered by people. Strict restrictions on use are applied to designated areas.

**Status of conservation area designation**





Historic environmental conservation area

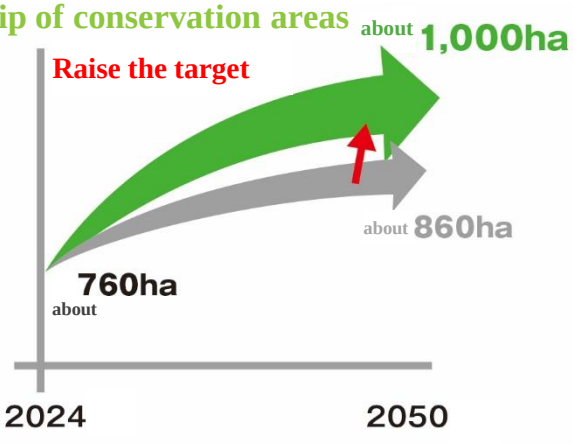

Green space conservation area


Satoyama (woodland area near populated area) conservation area

# Future Initiatives

## ▶ Expanded designation and public ownership of conservation areas

The goal for public ownership and designation of conservation areas will be raised to approximately 1,000 hectares in total by 2050, and new designations and public ownership will be accelerated.
Meanwhile, a new system to strengthen the conservation of green areas with valuable waterside environments, such as wetlands, will be established to conserve a more diverse array of green areas.




## ▶ Maintain and improve the quality of conservation areas

In order to maintain young forests where light reaches the forest floor, we will engage in concentrated restoration and reforestation of conservation areas. We will also work to conserve endangered local species in each area and take action against invasive species.



Thinning and maintenance of weakened and aging trees ▶ Forest is younger with light reaching the forest floor

## ▶ Strengthen initiatives, including from the standpoint of biodiversity

We will establish a new organization, the Biodiversity Promotion Center (tentative name) via with the city will take the lead in biodiversity management to strengthen research on biodiversity, including research on conservation of endangered species.

Endangered species: golden orchard

The Biodiversity Promotion Center (tentative) will work with numerous stakeholders to implement effective management.

<Contact information>

- City residents, municipalities
- Volunteers
- NPOs, civic organizations
- Conservation area supporters

⇒ **Conserve valuable species in the city**

Protect

# Introducing a New Scheme to Protect Trees

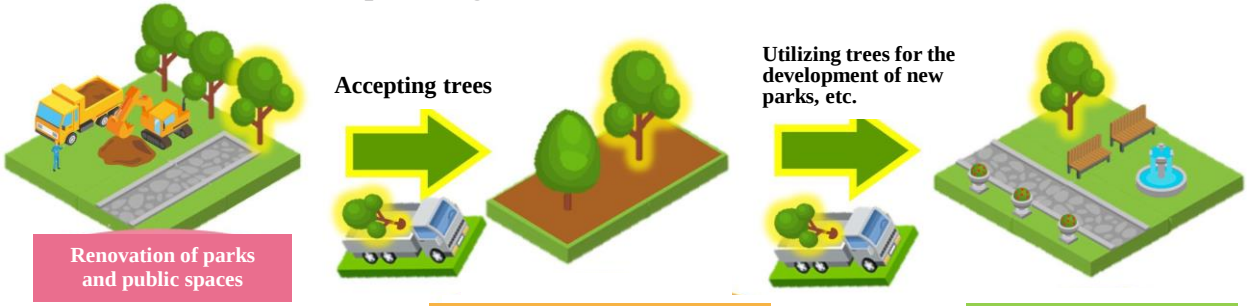
## Overview

Establish a “Tree Bank” as a new system to preserve trees by taking in and storing transplanted trees for use in new parks. The trees will be passed down to future generations by transplanting them to new locations after being grown and cared for in parks.

## Future Initiatives

Utilize the trees for updating functionality of city parks, such as removing barriers, preparing maritime parks, and rebuilding city housing, and consider utilizing trees from the Tree Bank in projects to which various city development policies apply.

Note that, when necessary, the advice of arborists and other experts will be considered when transplanting trees.




### Tree Bank utilization flow

Also consider trees when planning facility updates, such as removing barriers.

**Plan, design**

When barriers cannot be avoided

**Consider transplantation in light of the conditions of each project or tree.**
**(If necessary, obtain the opinions of an arborist or other expert)**

When transplantation is possible

**Transplant near the site (on the grounds, nearby)**

If a transplant location cannot be secured on the site

**Tree Bank utilization**

**Use to create new parks etc.**

### Example of tree conservation when rebuilding city housing

Kamisunamachi, Tachikawa City

Kasugacho, Nerima City

Protect

# Conserving and Managing Forests That Protect Water Sources

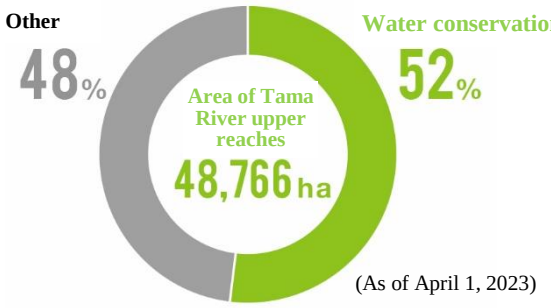
## Overview

In order to provide the people living in Tokyo with a clean, stable water supply, it is important to properly manage the water conservation forests, comprising approximately half of the Tama River upper reaches area, that serve as the city's water supply source, and develop the forests so that they can exercise all of their functionality to the fullest.

**Functions of water conservation forests as a water source**

| | |
|---|---|
| Water source irrigation function | Store water |
| Sediment runoff prevention function | Prevent soil runoff |
| Water purification function | Purify the water |

**Area of water conservation forests in the Tama River upper reaches**




(As of April 1, 2023)

## Main initiatives

We work to improve the water source irrigation function by taking adequate care of the forest, including thinning, to promote the growth of underbrush.
We also take measures against damage from animals and pests and prepare walking paths.


Thinning (the selective removal of stunted trees and others)

### About the Tokyo Waterworks - Company Forest (naming rights)

- We have established naming rights for a portion of the water conservation forests serving as the source for the Tokyo water supply as part of our collaboration on forest development with diverse stakeholders.
- Participating companies are allowed to name their area of activity and engage in forest preservation workshops.

Tree-planting work

Thinning work

## Future Initiatives

We will continue to appropriately conserve these water conservation forests. We will also integrate outreach about the water conservation forests with other greenery initiatives.

(Source) Setagaya City website

# Protect Promoting a Sustainable Forest Cycle

## Overview

Approximately 40% of the total area of Tokyo is forested. Forest exercise numerous functions. In addition to providing lumber, they also generate abundant water sources and protect city residents from disasters, such as by limiting sediment runoff.

It is important to establish a cycle for forests involving logging, utilization, planting, and nursery cultivation in order to maintain Tokyo's abundant forests and make them sustainable.

### Breakdown of forests by area in Tokyo

Unit: hectare

| Category | Private forest area | | | National forest | Total |
|---|---|---|---|---|---|
| | Planted forest | VIrgin forest | Unforested land etc. | | |
| Tama | 30,710 | 20,301 | 659 | 1,182 | 52,853 |
| Islands | 3,274 | 14,754 | 1,143 | 6,521 | 25,692 |
| Total | 33,984 | 35,055 | 15 | 7,704 | (*) 78,545 |

● The total may not appear correct due to rounding.

(*) Approximately 40% of the area of Tokyo (219,400 hectares)

(Source) Tokyo Forests and Forestry 2022 Edition (Bureau of Industrial and Labor Affairs, Tokyo Metropolitan Government)

## Main initiatives

In order to pass forests on to future generations as a shared asset of the citizens, Tokyo is working to establish a sustainable forest cycle and strengthen the management of forestry.

By establishing a stable supply of Tama wood and expanding the use thereof, involving the harvesting and transport of Sugi and Hinoki evergreens that have reached maturity via Primary Logging, the volume of Tama wood being used has been steadily increasing, comprising approximately 80% of wood harvested via City projects.

### Overall flow of the primary logging project

Sugi/hinoki evergreens harvested, transported

Transported to timber market for purchase by sawmills etc.

Logged land replanted with low pollen Sugi evergreens and cultivated

(Source) Forestation Promotion Plan, Bureau of Industrial and Labor Affairs, June 2021

# Future Initiatives

## ▶ Promoting the Forest Cycle

In addition to reviewing our logging plan and implementing a new plan from FY2024, we will proceed with the harvesting of mature sugi and hinoki evergreens and replanting with low pollen sugi while optimizing our surveys on tree coverage using drones. We will also call on the national government to strengthen measures against pollen sources.

Harvesting of sugi/hinoki evergreens

Drone transporting materials for protective fencing

(Source) Forestation Promotion Plan, Bureau of Industrial and Labor Affairs, June 2021

## ▶ Securing forestry labor and improving productivity

We will provide lumber related companies with diverse support, including onsite training and management assessments, to help train forestry workers.
We will provide support for acquiring forestry equipment featuring the latest technology, and subsidies for tree thinning and logging roads.

Cutting edge forestry machinery

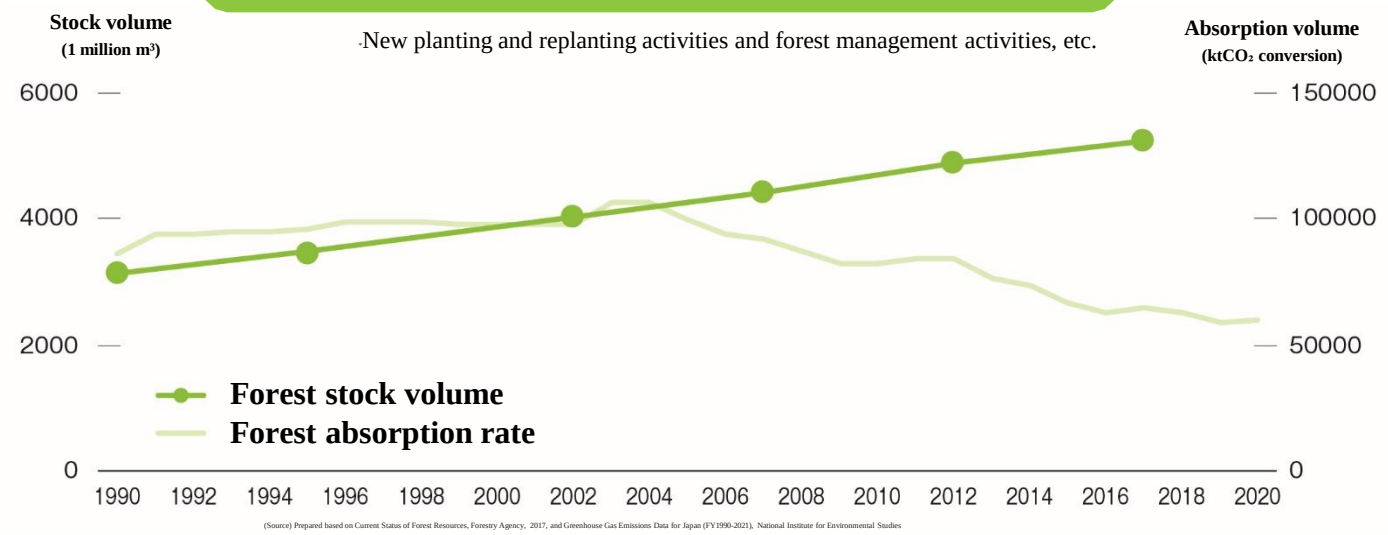
Column

# Forests and Decarbonization

In recent years, the area of Japan's forests has remained more-or-less stable, the growing stock, or the total volume of tree trunks comprising the forests, continues to increase.
On the other hand, there is a tendency for forests' greenhouse gas absorption volume to decrease with the aging of planted forests.
To ensure forests' absorption, we are promoting a forestry cycle of "fell, use, plant, grow." Additionally, revisions were made to the J-Credit Scheme in August 2022* to facilitate the steady creation of young forests.

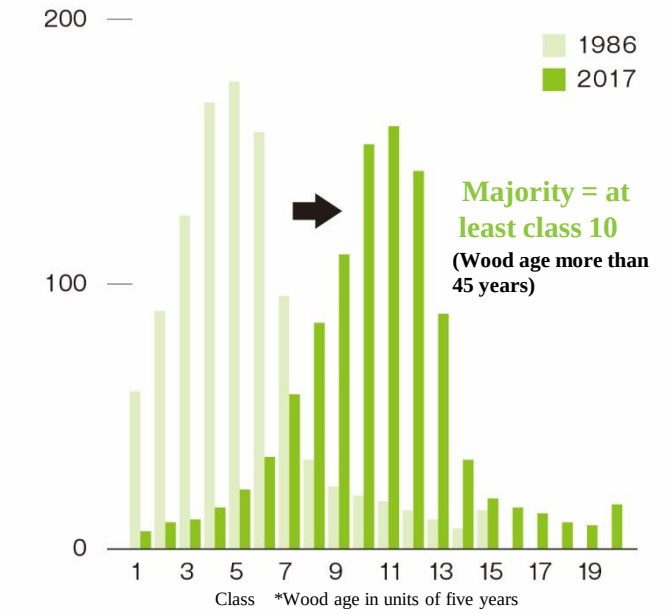
*For details see the J-Credit Scheme website (https://japancredit.go.jp/about/revision/)

## Changes in forest stock volume and forest absorption volume due to carbon sink measures*



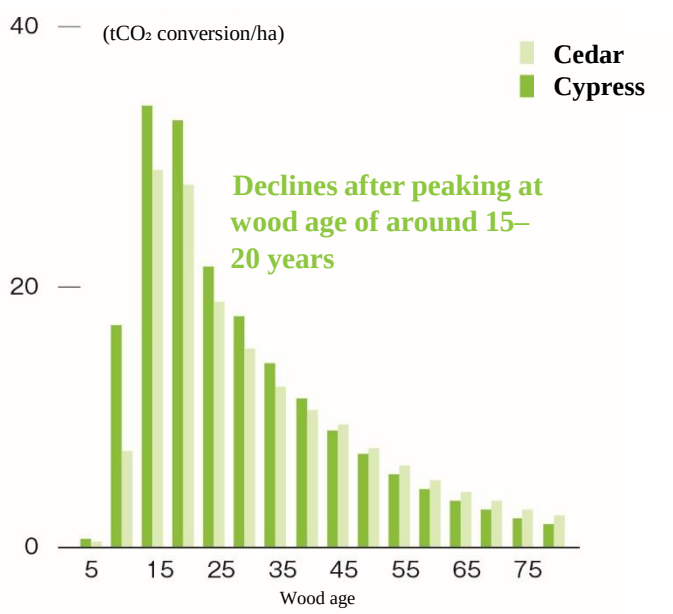

(Source) Prepared based on Current Status of Forest Resources, Forestry Agency, 2017, and Greenhouse Gas Emissions Data for Japan (FY1990-2021), National Institute for Environmental Studies

## Changes in area by class of planted forest




(Source) Created based on documents from the Forestry Agency's First Forestry Subcommittee

## CO2 absorption volume by type and age of wood




(Source) Created based on Nagano Prefecture's "'Project to Promote Forest Fostering' $CO_2$ absorption calculation standards"

# Efforts to Nurture greenery

- **Nurturing Greenery Together through the Tokyo Green Biz Movement**
- **Creating Greenery in Line with Urban Development**
- **Creating Lush Greenery and Open Spaces**
- **Forming Networks of Greenery and Water**
- **Developing Verdant Green Spaces as Symbols of Communities**

Nurture

# Nurturing greenery together through the Tokyo Green Biz Movement

## Creation of a Platform for Greenery

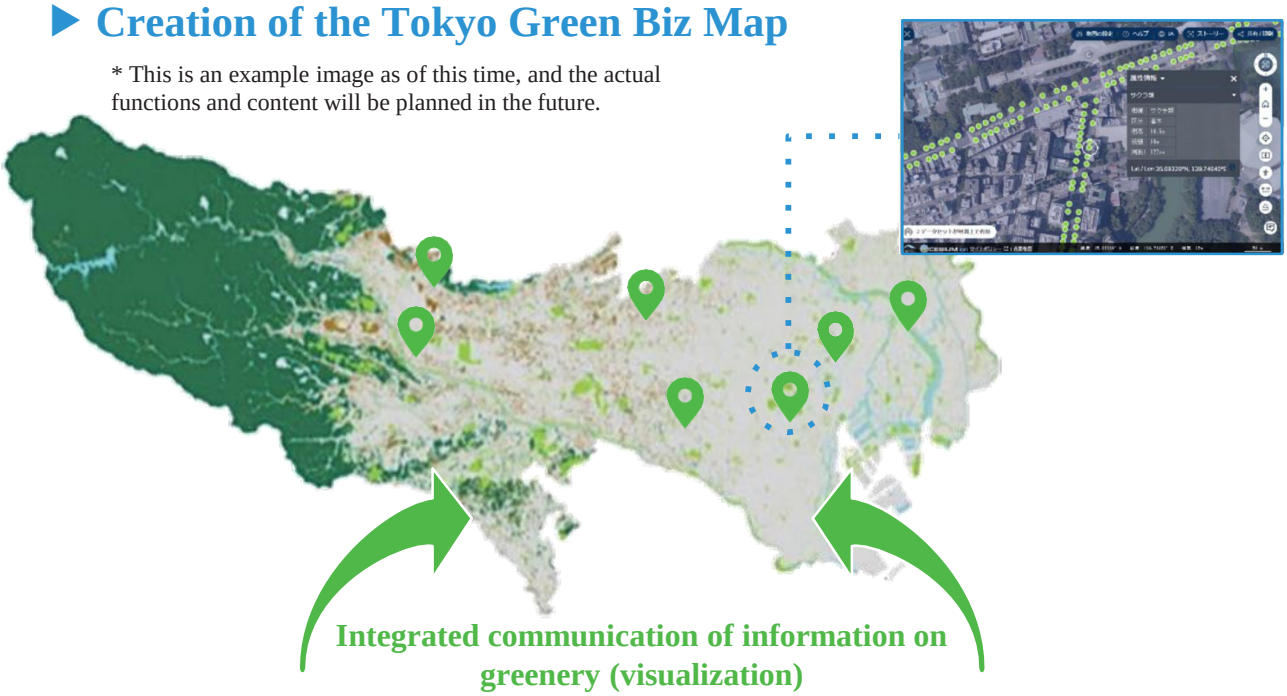
## Overview

We will communicate information on greenery in an integrated manner. We will promote participation in initiatives to nurture all manner of greenery using a map that lists event information for public participation.

## Future Initiatives

### ▶ Creation of the Tokyo Green Biz Map

* This is an example image as of this time, and the actual functions and content will be planned in the future.



**Integrated communication of information on greenery (visualization)**

**TMG, companies, etc.**

**[Open information disclosure]**

- Introduction of greenery related facilities, such as parks
- Display of information on roadside tree information on the map
- Display seasonal flower viewing spots and locations of green infrastructure
- Display of participatory/experiential initiatives such as tree planting and community greenery development

**Tokyo residents etc.**

**[Promotion of participation]**

- Obtain information on spots with abundant greenery in the city
  (Such as parks, roadside trees, temples and shrines, private facilities)
- Register favorite tree areas, post photographs
  (Tokyo Street Tree (tentative name))
- Participation in greenery related events

### ▶ Open data on the current state of Tokyo greenery

We will create GIS data from city parks, greenery, and citizen green spaces to analyze the current state of Tokyo greenery, while making it available as open data.

## ▶ Fostering the Tokyo Green Biz Movement

We will work with diverse stakeholders (such as private companies), rather than only within Tokyo, to ensure a smooth, continuous movement so that people can grow more familiar with greenery.

- **Hosting of symposiums**
- **Participation in greenery related events, such as producing green spaces or planting trees**
- **Creation of promotional videos and booklets on greenery initiatives, etc.**

### Hosting of symposiums

### Participation in events


### Communication about Tokyo Green Biz

**[Media tie-ups]**


**[Utilization of own media]**


**[Website and online ads]**

Nurture

# Nurturing Greenery Together through the Tokyo Green Biz Movement

## Participatory Initiatives

## Overview

The TMG is promoting initiatives that will utilize and foster greenery to be passed down to the next generation in sympathy and cooperation with Tokyo residents, to create a restful environment in which anyone can be close to greenery in Tokyo.
These initiatives will also contribute to the revitalization of local communities, multi-generational exchanges, and environmental education for children.

## Main initiatives

Holding events such as forestry maintenance, rice planting, rice harvesting, nature observation, and craft experience programs to maintain environments in which diverse living things coexist.

With the participation of Tokyo residents, approximately 240,000 saplings were planted on a garbage heap 30 m high, transforming it into a beautiful forest.

Bureau of Environment “Satoyama!” website


Umi-no-mori Park

## Future Initiatives

### ▶ Promotion of forest maintenance using the Forest Environment Donation Tax

We are promoting an initiative to deepen the understanding of the use of wood as a material, including developing and preserving the Tama-no-mori forest, through cooperation among Tokyo municipalities We will also expand the number of municipalities signed on to the agreement by leveraging the Tama-no-mori Revitalization Project Promotion Council.

### Tama-no-mori Revitalization Project Promotion Council

Agreement on City Partnership Related to the Forest Environment Donation Tax concluded on July 31, 2023.

## ▶ Use parks to generate diverse opportunities to participate

Major festivals

The Uminomori Park is used to host major festivals, nature observation programs, the recruitment and training of child rangers, and environmental studies at the visitor's center.

Development and maintenance in cooperation with city residents

Events include participation in tree assessment, the design of playground equipment and flowerbeds, nature observation, and craft classes using materials found in the park.

Tree planting at Uminomori Park

Tree planting events are held with city resident participation at city parks, maritime parks, and private development projects.

## ▶ Creation of places to enjoy greenery at city housing

Building a flowerbed at city housing

We develop flowerbeds and flower gardens for the local community with the help of residents in the housing complexes and local community.

## ▶ Events for city resident participation and planting management

We carry out open garden initiatives, including support for adding greenery to street corners and gardening contests (including the Tokyo Park Garden Award and the Hibiya Park Garden Contest).
We also support the development of pleasant road environments with the help of volunteer organizations through the Tokyo Fureai Road Program. (Partial subsidies for the purchase of cleaning materials, flower seeds and seedlings, and the installation of adoption signs).

Nurture

# Creating Greenery in Line with Urban Development

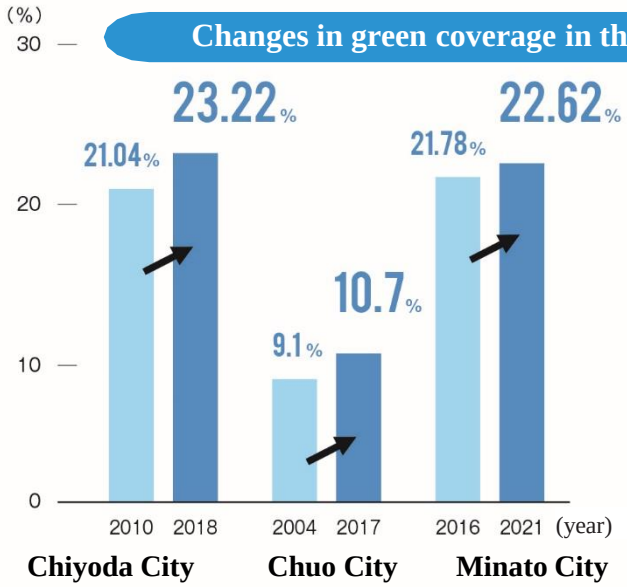
## Creation of urban greenery coinciding with urban development

## Overview

The TMG uses a program to evaluate initiatives to create and preserve greenery through development to promote the creation of greenery through private development, which leads to new greenery in the city.

## Main initiatives

The percentage of green coverage is rising in three central cities where development is progressing. A total of 60,000 square meters of new greenery has been created in recent major private development projects in Takeshiba, Azabudai, and Otemachi.




(Source) Report on the Chiyoda City Greenery Survey and Heat Distribution Survey
Chuo City Greenery Survey (5th) Report
Minato City Greenery Survey (10th) Report

Green spaces leveraging local topography and greenery on low rooftops (Azabudai Hills)

## Future Initiatives

### ▶ Encourage the creation of greenery through urban development policy revision

We will improve vertical greenery as relaxing spaces for people in the Bay area. We will also encourage the development of contiguous greenery, connecting new developments with existing greenery, to create abundant green spaces.

# Example greenery creation from private development


## Green spaces leveraging local topography and greenery on low rooftops (Azabudai Hills)

- Approximately 24,000 square meters of green spaces secured, including a Central Plaza of approximately 6,000 square meters, despite the location within an established urban area in the city center (according to the Minato City Greening Plan).
- 320 species that present different aspects throughout the seasons
- The water that flows throughout the overall site, taking advantage of differences in elevation, gathers in the Central Plaza, forming ecotones between aquatic plants, grassland, and shrubbery.


## Greenery as a place of coexistence for users and the community (Tokyo Port City Takeshiba)

- 1,700 square meters of skip terraces reaching from the ground to the 6th floor.
- Takeshiba Shinhakkei is an open space where facility users can relax and interact.
- In addition to the greenery, the project includes urban beekeeping and vegetable gardening, as well as rice planting and harvesting in rice paddy of approximately 150 square meters. Rice cake pounding (mochi-tsuki) is also held with participation by local nursery school children and facility residents. Contributes to creating bustle in the community through a variety of environment education


## Lush green space within a business district (Otemachi Forest)

- Developed a natural forest as a public space under a concept of regenerating nature while regenerating the city.
- A urban renewal model that achieves reduction of the heat island effect and the formation of a ecological network while updating urban functions.
- The unprecedented project required the establishment of a mockup forest with the same conditions in Kimitsu, Chiba Prefecture to test management methods using the “Preforest” method.


## Wall greenery (Kyobashi-no-Oka) (Tokyo Square Garden)

- This project formed green spaces totaling approximately 3,000 square meters and 30 meters in height continuing vertically from the basement to the 5th floor in Kyobashi in the city center.
- Visitors are given a sense of the changing seasons by the roughly 140 species of trees, and the building is decorated by the abundant greenery over the passage of time.
- A space to enjoy greenery and experience its comfort, with benches placed in the shade of greenery.


## Rooftop Garden (Mitsui Sumitomo Insurance Surugadai Bldg.)

- The rooftop garden was originally installed when the building was constructed in 1984, and then renovated in 2001 to implement green space management that reflects biodiversity.
- It was then renewed in 2012 after renovations to take biodiversity into consideration even more. Deciduous trees and fruit trees were added to the primarily evergreen trees, and a birdbath was installed to allow wild birds to bathe. A rice paddy was also installed to attract insects that live along the water edge.


## Biotope (Green Springs)

- Five species of creatures living around the Tama River were released in this biotope to help conserve endangered aquatic plants.
- Approximately 350 species are planted year round in the planting zone, including replanting.
- Local lumber from Tama was used for the eaves (totaling 5,200 square meters), pergola fence, and benches.

Nurture

# Creating Greenery in Line with Urban Development

## Maintenance of roadside trees

## Overview

Roadside greenery plays a variety of roles, such as improving the urban environment and creating beautiful urban views in addition to contributing to the enrichment and peace of the people. We develop the greenery along roads to maximize the effects of those roles.

## Main initiatives

As of April 1, 2023, there are approximately one million trees planted along roads in Tokyo, of which the TMG manages approximately 650,000. Pruning is carried out appropriately to ensure the safety and comfort of pedestrians and vehicles. Furthermore, pruning is carried out in a planned fashion to expand the canopy and create shade as a measure against summer heat.

**Roadside trees along Tokyo roads**

| Type | Managed trees |
|---|---|
| General roads | 24,234 |
| TMG roads | 645,875 |
| City roads | 206,451 |
| Municipality roads | 123,986 |
| Total | 1,000,546 |

Green roads (Uchibori street in Chiyoda City)

Central divider (Route 153 in Tachikawa)

**Top five roadside tree areas (no. trees per type)**

| 1st | 2nd | 3rd | 4th | 5th | Other | Total |
|---|---|---|---|---|---|---|
| Flowering dogwood | Ginkgo | Cherry blossom | Acer buergerianum | Japanese zelkova | 773,366 | 1,000,546 |
| 60,848 | 58,858 | 42,971 | 35,630 | 28,873 | | |

Ogawayama Tanashi Line (Kodaira City) Flowering dogwood

Gyoko Street (Chiyoda City) Ginkgo

Nakano-dori Ave (Nakano City) Yoshino Cherry

## ▶ Appropriate maintenance and management

If greenery is left untended, it can weaken and branches can grow too long, impacting our safety and security in daily life, such as preventing stop lights and signs from being seen, and causing hazards from falling trees during storms.

| | |
|---|---|
| **Basic pruning** (Winter pruning) | This is carried out primarily for deciduous trees to help the overall tree develop its structure. |
| **Light pruning** (Summer pruning) | Light pruning is carried out to adjust the concentration of sprouting branches, organize the canopy, prevent the trees from falling down during strong winds due to typhoons, and to prevent disease and insect infestation. |

Roadside trees <Omotesando, Shibuya City>


Secure shade by expanding the canopy

### Potential issues when the tree is not managed properly through pruning

When trees are not properly managed through pruning and replanting, they can cause issues such as lowering stoplight visibility, cause traffic accidents from falling trees, or cause falling accidents when roots rise up out of the ground.

Lowered stoplight visibility

Fallen tree

Uneven sidewalks due to roots rising out of the ground

(Source) Construction Bureau, 2021 Manual for Roadside Tree Diagnosis

# Future Initiatives

We will continue to maintain and manage roadside trees appropriately, securing the safety and security of pedestrians and vehicles through appropriate pruning (under the Roadside Tree Maintenance and Management Plan). We will also expand the number of roads subject to securing shade by expanding the canopy of roadside trees as a measure against summer heat.

Nurture

# Creating Lush Greenery and Open Spaces

## Development of urban parks

### Overview

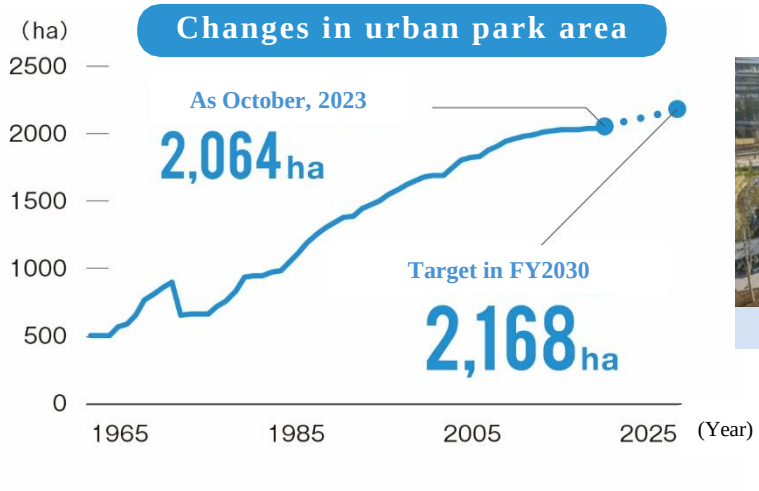
Greenery in parks and green spaces serve to instill the city with enrichment and character, provide a place for relaxation and recreation, improve the urban environment, and in times of disasters such as fires, prevent the spread of fire and serve as evacuation sites. The TMG has designated priority projects among the parks and green spaces stipulated under urban development plans in order to develop urban parks systematically and efficiently.

### Main initiatives

The TMG is developing urban parks to serve as hubs in a network of greenery, and has completed a total of 84 locations covering 2,064 hectares to date.

### Future Initiatives

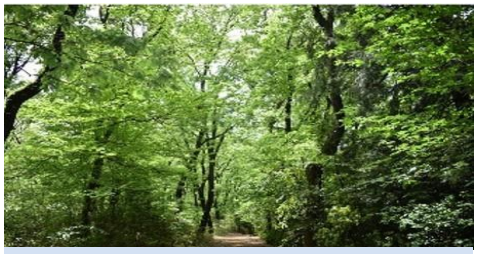
We will continue to expand and develop new urban parks while supporting the development of parks by municipalities. We are continuing to develop towards a goal of 2,168 hectares of urban parks by FY2030.




Urban park (Meiji Park)

#### ▶ Accelerate park land acquisition and development

We will proceed with the development of hillside parks comprising wooded areas, and the Rishi-no-Mori Park. We will also strengthen our approach to acquiring land for urban parks.



Hillside park (Noyamakita-Rokudoyama Park)

# Development of marine parks

## Overview

We are development the reclaimed land of Tokyo to create marine parks as a place to interact with the ocean and nature and as a place for recreation such as sports and bird watching.

## Main initiatives

To date, the TMG has developed parks in 40 locations totaling 878 hectares in area, such as the Odaiba Marine Park.

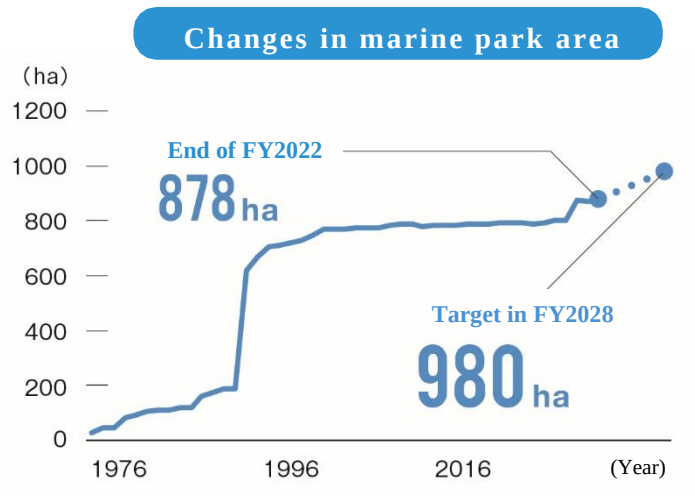
Odaiba Marine Park

Harumi Port Park © Tokyo Port Terminal Corporation

## Future Initiatives

### ▶ Accelerate park land acquisition and development

Our goal is to develop a total of 980 hectares of marine parks by FY2028. The grand opening of the forest development area of the Uminomori Park (60 hectares) is scheduled for the end of 2024.




*Information prior to FY2021 in the graph is as of April 1, and for FY2022 is as of the end of the year.

Uminomori Park

Ariake Seaside Park

Nurture

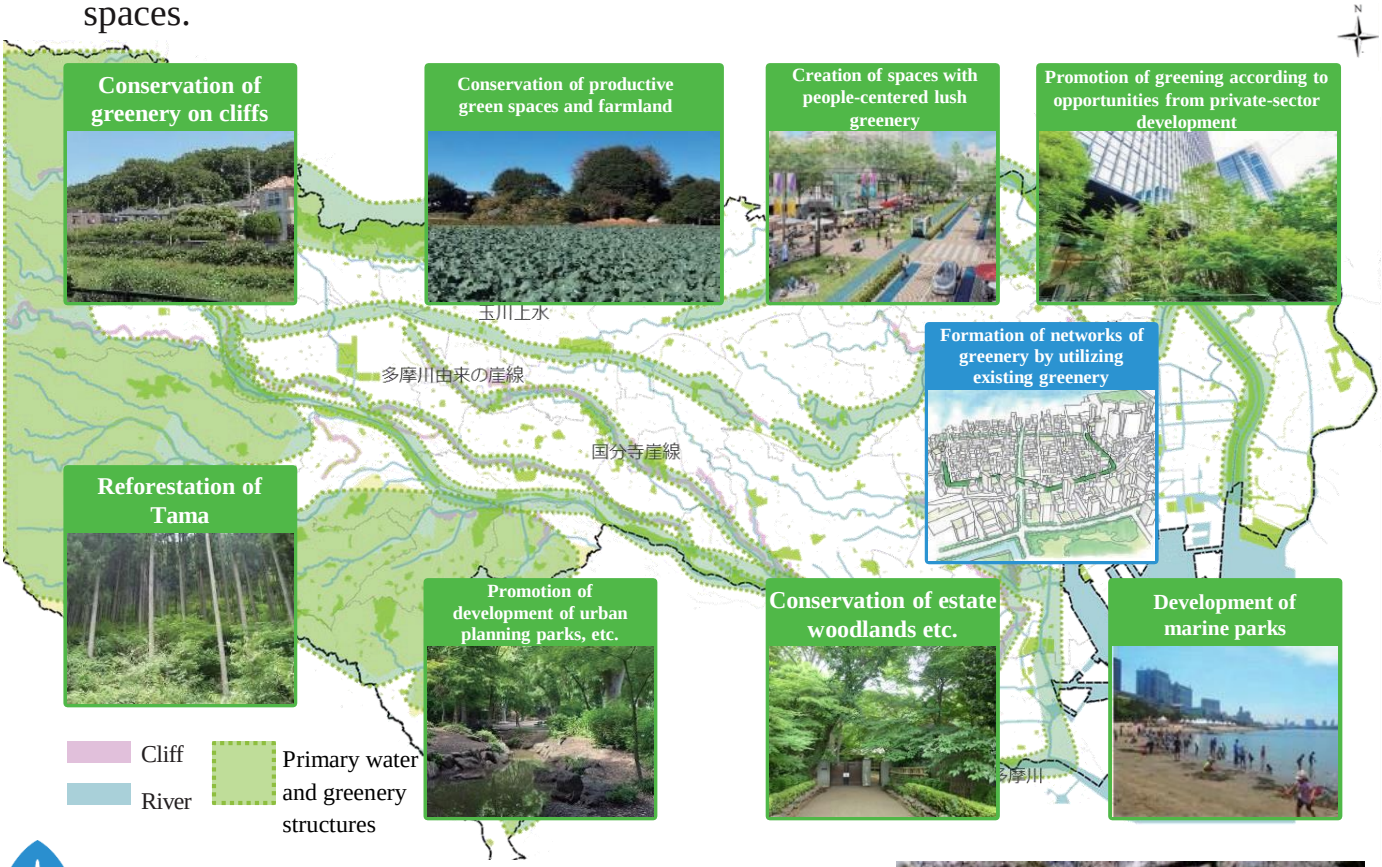
# Forming Networks of Greenery and Water

## Overview

We are promoting initiatives to realize a Tokyo filled with water and greenery by developing parks and green spaces, and also by forming networks that make the most of roads and watersides.

## Main initiatives

We are forming a network of greenery and water by leveraging public and other spaces.




## Future Initiatives

### ▶Restoring the water of the outer moat using the Tamagawa Josui Aqueduct

We are promoting improved water quality in the outer moat, which is a historic property, working to provide a rejuvenating area for people working in the heart of the city and to create elegant scenery. We are running study session for children focusing on the outer moat and Tamagawa Josui Aqueduct so we can drive the purification of the moat and leave behind spaces with water and greenery in the future.

Outer moat

Tamagawa Josui Aqueduct

## ▶ Renewal of the Tokyo Expressway (KK route)

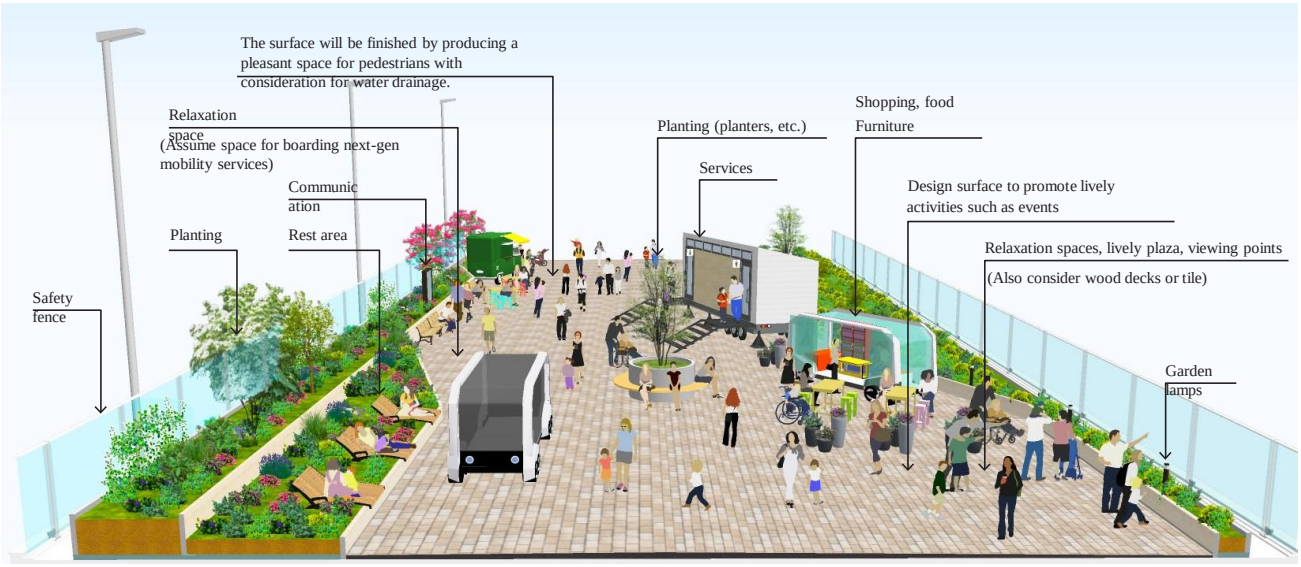
The TMG has established goals for the renewal and utilization of the Tokyo Expressway (KK route), a future vision, and development and guidance policy in order to create new value and appeal for Tokyo by redeveloping the space over the KK line as the Tokyo Sky Corridor, an elevated corridor surrounded in greenery. This will form a new network of greenery in Tokyo and a space to experience greenery and relaxation.

### Location


### Example developments

Areas of 16 meters width or more

● Perform structural review after reviewing the load. Also consider the use of movable planting baskets.



Nurture

# Developing Verdant Green Spaces as Symbols of Communities

## Overview

We are working on an initiative to reorganize public spaces, such as roads and plazas, to become urban spaces of abundant greenery where people can relax and enjoy walks.

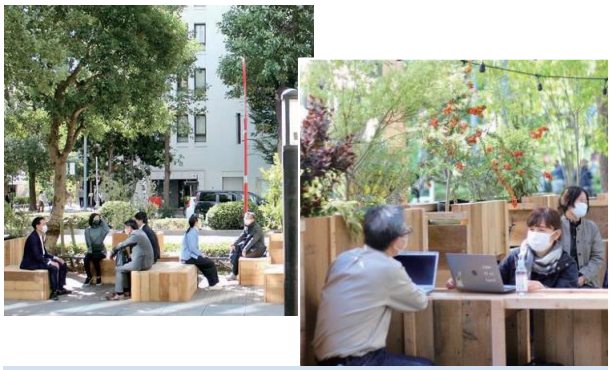
## Main initiatives

We work with local organizations, local government, and private companies to expand our initiatives to generate bustle in public spaces using greenery and carry out social experiments.

**Marunouchi Street Park 2023 Summer (Marunouchi Nakadori Avenue)**

This social experiment was launched to examine the state of Marunouchi Nakadori Avenue and how to use the outdoor spaces.

This project contributes to developing a walkable community in collaboration with local community development associations and developers, testing methods for installing artificial turf, highly durable fixtures for permanent installation, and collaborating with events that fit the social climate.



**Ikebukuro Living Loop (Green-Odori)**

Private companies, organizations, schools, and government institutions are working together on the Urban Living Project to create a community as comfortable as a living room.

Redevelopment is being carried out to make the bustle along Green-Odori avenue more permanent (including lighting, replanting of trees, and installing circular benches).

**Fun More Time Shinjuku (Shinjuku No. 4 Street, No. 12 Street, etc.)**

This social experiment leverages public open spaces and road spaces to encourage people to spend time and interact, primarily around the Chuo-Dori Avenue area.

The TMG and Shinjuku City prepared the Nishi-Shinjuku Redevelopment Policy under which it is possible to experience the future of Nishi-Shinjuku virtually, such as through the formation of walkable urban spaces.

**Type 1 Urban Redevelopment Project for the West District of Harumi 5-chome**

We are working to promote a mature urban lifestyle providing relaxation and peace in appealing spaces that harmonize urban and natural elements, facing the ocean and surrounded in greenery, as part of a new community development initiative in preparation for and following the end of the Tokyo 2020 Olympics and Paralympics.

# Future Initiatives

## ▶ Creating walkable spaces that combine roads, parks, and city blocks

We will reorganize the Nishi-Shinjuku district to be people-centered in coordination with the development of the Shinjuku Grand Terminal. The TMG is leading community development for Nishi-Shinjuku and generating spaces for relaxation and bustle by promoting the reorganization of spaces around the Tokyo Metropolitan Government Building.

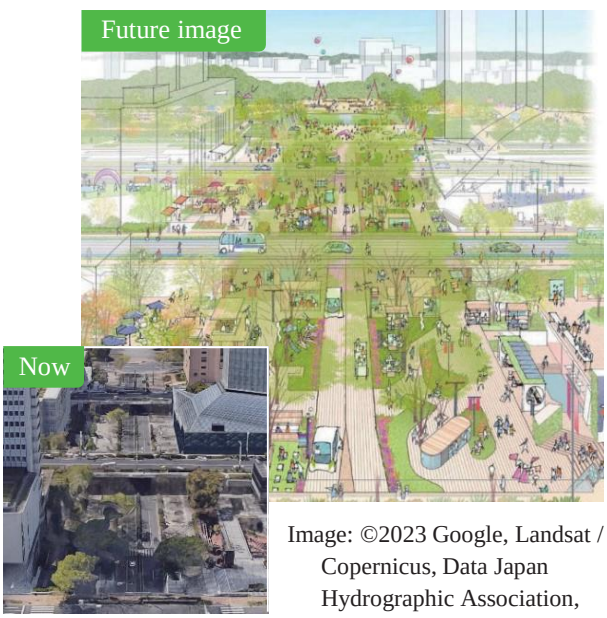
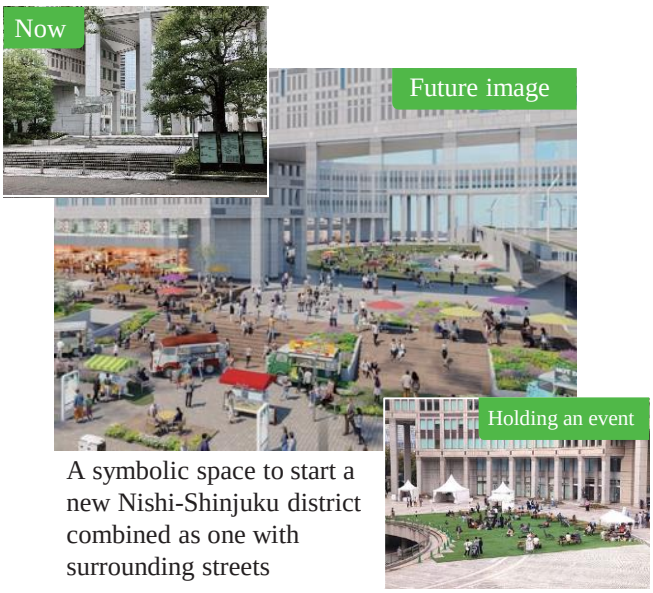



Image: ©2023 Google, Landsat / Copernicus, Data Japan Hydrographic Association, Data SIO, NOAA, U.S. Navy, NGA, GEBCO、
Map data: ©2023 Google 20m




A symbolic space to start a new Nishi-Shinjuku district combined as one with surrounding streets




## ▶ Tokyo Floral Passage (One of the largest flower corridors in Japan)

We will generate a large scale, consolidated location famous for its flowers with appeal and bustle by leveraging the extension and contiguous qualities of green paths and parks along the waterfront area.
We will also encourage the connection new and existing greenery to form vertical and contiguous walkable spaces in collaboration with the private sector.

**Image of the Flower Corridor**

Column

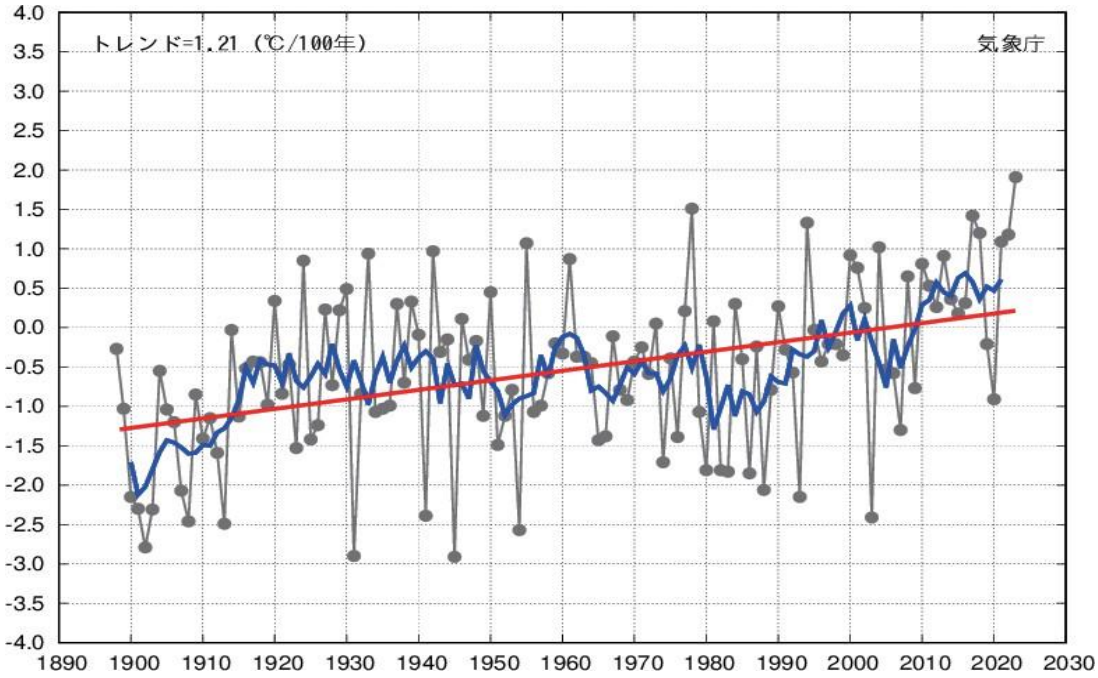
# Rising global temperatures

**The age of global warming has ended, and the age of global boiling has arrived.**

## Rising Temperatures in Japan

The greatest average temperature in history was recorded in July 2023.

### Average temperature deviation for July in Japan

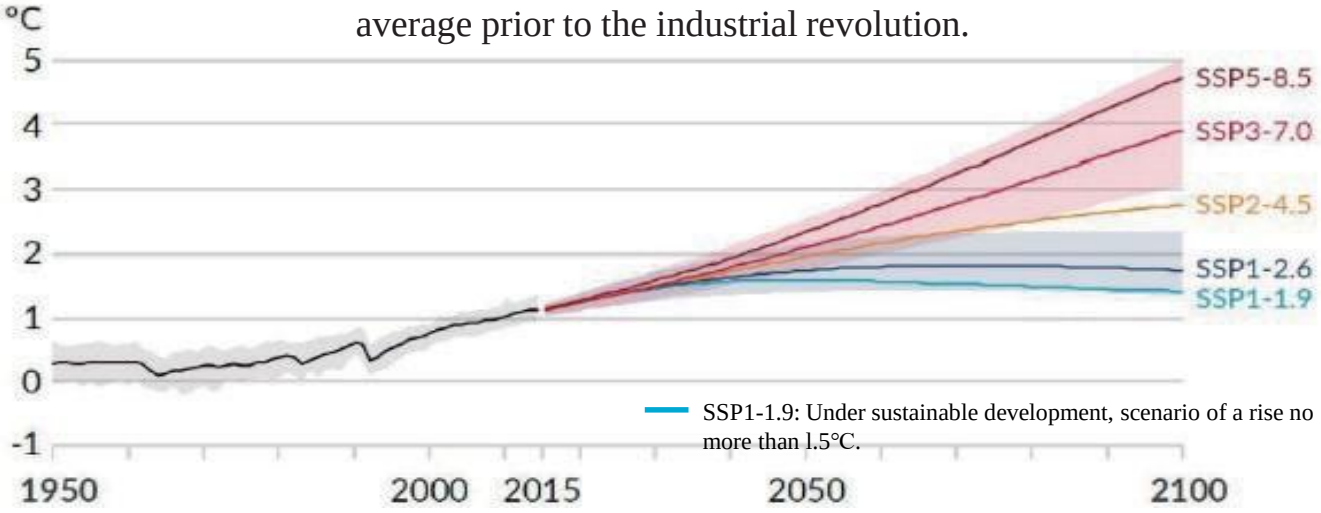



Thin line (black): Deviations from standard average temperature values each year Thick line (blue:) 5-year running average for deviations Straight line (red): Trend of long-term change Standard values: Average values over the 30 years between 1991 and 2020

(Source) Japan Meteorological Agency website

## Projected future temperature increase

The world is striving to limit the rise in temperature to 1.5°C over the global average prior to the industrial revolution.




SSP1-1.9: Under sustainable development, scenario of a rise no more than 1.5°C.

(Source) Created based on the IPCC Sixth Assessment Report Working Group I report

# Efforts to Utilize Greenery

- **Building Green Infrastructure that Leverages the Functions of Greenery and Nature**
- **Making Parks the Face of the City by Enhancing Their Appeal**
- **Leveraging Greenery as Local Landmarks**
- **Promoting the Appeal of Rich Natural Environments**
- **Harnessing the Diverse Values of Greenery**

Utilize

# Building Green Infrastructure that Leverages the Functions of Greenery and Nature

## Overview

There is a need for city facilities and private facilities to adopt green infrastructure in order to leverage the functions provided by nature to solve social issues such as heavy rains and extreme heat.

[Green Infrastructure]
Hardware/software initiatives for developing social capital and leveraging land for the sustainable and appealing development of the nation, cities, and communities by using the diverse functions of the natural environment.

(Source) Green Infrastructure Promotion Strategy 2023, Ministry of Land, Infrastructure, Transport and Tourism

### Urban Image

Parks, green spaces

Creation of parks, green spaces as cooler spots
Swale installation
Creation of habitats for living things (biotopes etc.)
Management, maintenance, and use in collaboration with residents

Urban areas | Parks, green spaces
Rivers | Harbors

Creation/maintenance/utilization of parks, plazas, and waterside spaces through public/private collaboration

Harbors

Installation of revetments for biodiversity

Harbors

Revitalization of lagoons, seaweed beds

Urban areas

Greening of development sites, roofs, walls
Installation of swales, rooftop greening retention
Creation of habitats for living things (biotopes etc.)

Parks, green spaces

Greening of slopes, conservation of cliff-side greenery

Urban areas | Parks, green spaces | Urban areas

Greening with trees
Roadside tree cultivation, management
Swale installation
Utilization of green spaces, maintenance through collaboration with residents
Form continuous shade with greenery using roadside trees and roadside private property

Sewer system

Revitalization of closed off waterways, streams

Rivers

Fluvial lagoon revitalization environmental studies

### Rural image

Forests

Development, conservation, and management of forests

Agricultural land

Conservation and restoration of rice terraces

Village

Develop farms, community gardens, and play areas using underutilized and vacant land

Fishing *harbo*

Development of breakwaters that encourage seagrass growth
Develop maritime exchange facilities
Form seaweed beds

Overall area

Development of ecotourism
Environmental learning and education

Forests | Rivers

Conservation of biological habitats

Agriculture

Use of reservoirs for flood control
Rice paddy retention
Cultivation of organic/low pesticide produce and produce branding

Coast

Development of tide protection forests
Restoration and maintenance of beaches

(Source)
Green Infrastructure Practice Guide
Ministry of Land, Infrastructure, Transport and Tourism

# Future Initiatives

## ▶ Prior projects

Green infrastructure has been implemented on public lands to help control stormwater runoff for the purpose of promoting and testing the effectiveness of green infrastructure.

## ▶ Expanded support for municipal initiatives

We are expanding our support for the development of stormwater runoff control facilities and rain gardens, communicating about example initiatives, and providing support for building momentum.

**Rain garden**

Installation in parks, plazas, and roads, has combined functions of

- Storage and infiltration function for rainwater
- Scenery improvement function through greenery, etc.

to comprehensively improve the urban environment.

## ▶ Adoption for rivers and parks etc.

Other initiatives we are carrying out include adding greenery to riversides, old riverbeds, and regulating pond areas, and the utilization of natural environments such as positive water circulation (water permeable surfacing for existing access roads.)

We are also adding stormwater runoff control facilities and rain gardens to parks, roads, and city and public housing.

**Example of adding greenery to an old riverbed**


Development of green road on an old riverbed

- Rainwater infiltration function
- Heat Island countermeasures
- Scenery preservation

## ▶ Promotion of vertical greenery

We are promoting vertical greenery to expand the greenery in the city center by utilizing building roofs, walls, and temporary construction fencing.

Rooftop greenery

Wall greenery

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# Making Parks the Face of the City by Enhancing Their Appeal

## Overview

We are carrying out initiatives aimed at creating parks to serve as the face of Tokyo, proposing new ways to enjoy greenery, and to leverage abundant greenery, in order to further increase the appeal of parks and contribute to the revitalization Tokyo.

## Future Initiatives

### ▶ Creating appeals for parks leveraging flowers and water scenery

We are working to develop appealing parks, such as by creating scenery with flowers (City Park Refresh Project), improving the appeal of scenic water facilities, and adding color through seasonal flowers, light, and art.

**Creating appeal for city parks**

Creation of floral scenery (image)
(City Park Refresh Project)
(Koganei Park)

Improving the appeal of scenic water facilities
(Yoyogi Park)

Decoration through flowers and light
(Kasai Rinkai Park)

### ▶ Creating places where people can spend time surrounded in greenery

We will install decks etc. for taking breaks in wooded areas of parks.

Example deck installation

### ▶ Projection mapping based in parks

We will hold events to add new nighttime appeal to parks.

Example of creating nighttime appeal.

### ▶ Utilization of the waterfront scenery of marine parks

We will introduce cafes that leverage the waterfront scenery.

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# Leveraging Greenery as Local Landmarks

## Overview

There is a need to revitalize tourism for famous places to experience greenery, and to create new famous places of greenery, in order to propose new ways to enjoy greenery.

## Future Initiatives

### ▶ Discovering and communicating about famous places of greenery in Tokyo

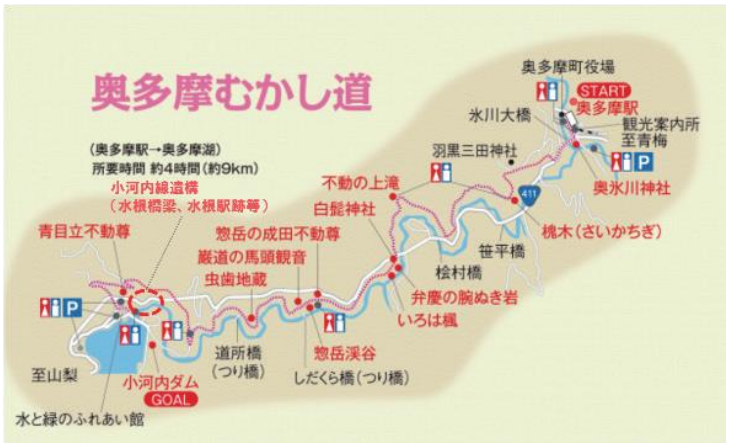
In addition to identifying and introducing tourism resources with rich greenery in the city, we will create opportunities to experience and enjoy greenery while touring historic and cultural facilities by introducing walking routes.

We will also support municipalities engaged in creating and conserving famous places of greenery that consider biodiversity, such as the conservation or expansion of historic roadside trees, and the revival of historic indigenous trees of the region.

**(Example walking route: Okutama Mukashi Michi (Okutama))**

■ Former Ogouchi Line (Site of the Mizune Freight Line)

■ Lake Okutama




■ Japanese maple

■ Sogake Valley

(Source) Prepared based on the Okutama municipal website

**Other places of interest**

Goshiki-zakura (five-color cherry blossoms) on the Arakawa River bank

Koganei Cherry Blossoms from the Meiji Era

(Source) Koganei City website

Utilize

# Promoting the Appeal of Rich Natural Environments

## Overview

There is a need to carry out initiatives such as conservation activities that contribute to biodiversity and improve familiarity with greenery, and increase opportunities for exchange between people, by learning more about and experiencing the greenery of Tokyo again.

## Main initiatives

Nature parks are parks designated for preserving excellent and beautiful natural scenery where visitors can interact with nature and enjoy outdoor recreation. We are designating various areas irrespective of land ownership, including private land in addition to national and city owned land.

[Nature Park designation]
Denotes national parks, quasi-national parks, and prefectural natural parks. Designated under Article 2, Paragraph 1 of the Natural Parks Act. There are currently 10 locations in Tokyo covering 79,888 hectares (or approximately 36% of the area of Tokyo).

## Future Initiatives

### ▶ Utilization of nature parks

We will utilize Tokyo's nature parks to implement participatory programs for elementary school students to learn about the diverse nature of Tokyo, to plan the construction of a museum that communicates about the appeals of nature using digital technology, and to secure the usage environment of nature parks and conservation areas (such as tree maintenance and management).

**Participatory programs for elementary school students**

Rice harvesting workshop

Thinning workshop

**Digital content about nature**


360° underwater video

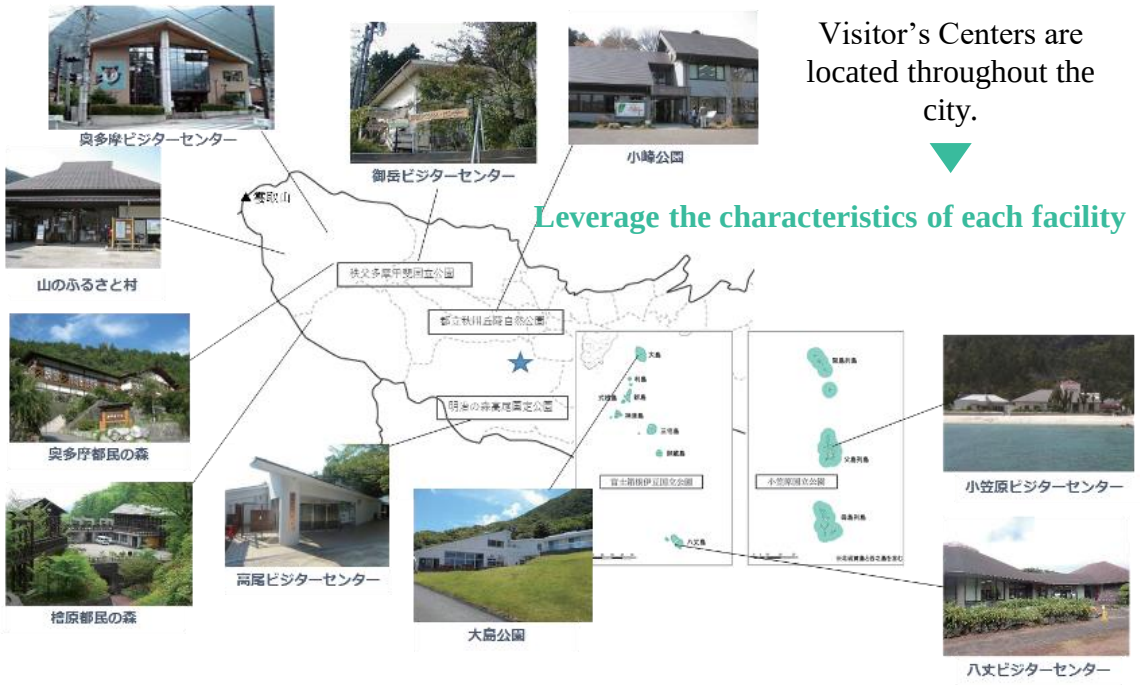

Augmented reality (AR) content

## ▶ Hosting of the 8th National Mountain Day Convention

We will communicate widely about the abundant biodiversity of Tokyo and the diverse functions of mountains at the hosting of the National Mountain Day Convention.

### Events using facilities such as the Visitor's Centers.

Hosted on themes such as biodiversity, disaster prevention, and culture.




Visitor's Centers are located throughout the city.

▼

**Leverage the characteristics of each facility**

### Related events such as nature observation and hiking

Work with municipalities to implement Tokyo-wide nature observation and hiking events.

Hiking events

### Ceremonies and events to promote biodiversity

Communicate in an easy to understand manner about biodiversity using video based on digital technology.

Hosting festivals

## ▶ Utilization of tidal flats

A Visitor's Center will be built in Kasai Marine Park to serve as a hub for conservation, communications, and exchange.

Utilize

# Harnessing the Diverse Values of Greenery

## Overview

There is a need to raise the awareness of and interest in the abundant functions of greenery in Tokyo by communicating about its diverse values, and lead that awareness and interest to greenery related initiatives such as funds, fundraising, and sustainable finance.

## Main initiatives

### ▶ Utilization of funds and fundraising

We will promote the development of greenery by utilizing funds accumulated through donations and fundraising from city residents and companies.

**[Primary funds and example utilization]**

**Tokyo Metropolitan Urban Greenery Fund**

Project to support street corner greening (BRANCH Chofu)

Project to support street corner greening (Tokyo Shoken Building Inc.)

Project to support flowerbed and garden creation activities (Shiba Park, Minato City)

**Metropolitan Parks Supporters Fund**

Project to conserve and promulgate cherry trees (Ueno Park)

Replenishing an herb garden (Higashimurayama Central Park)

**Tokyo Flower and Greenery Fund**

Project to conserve greenery rich in biodiversity

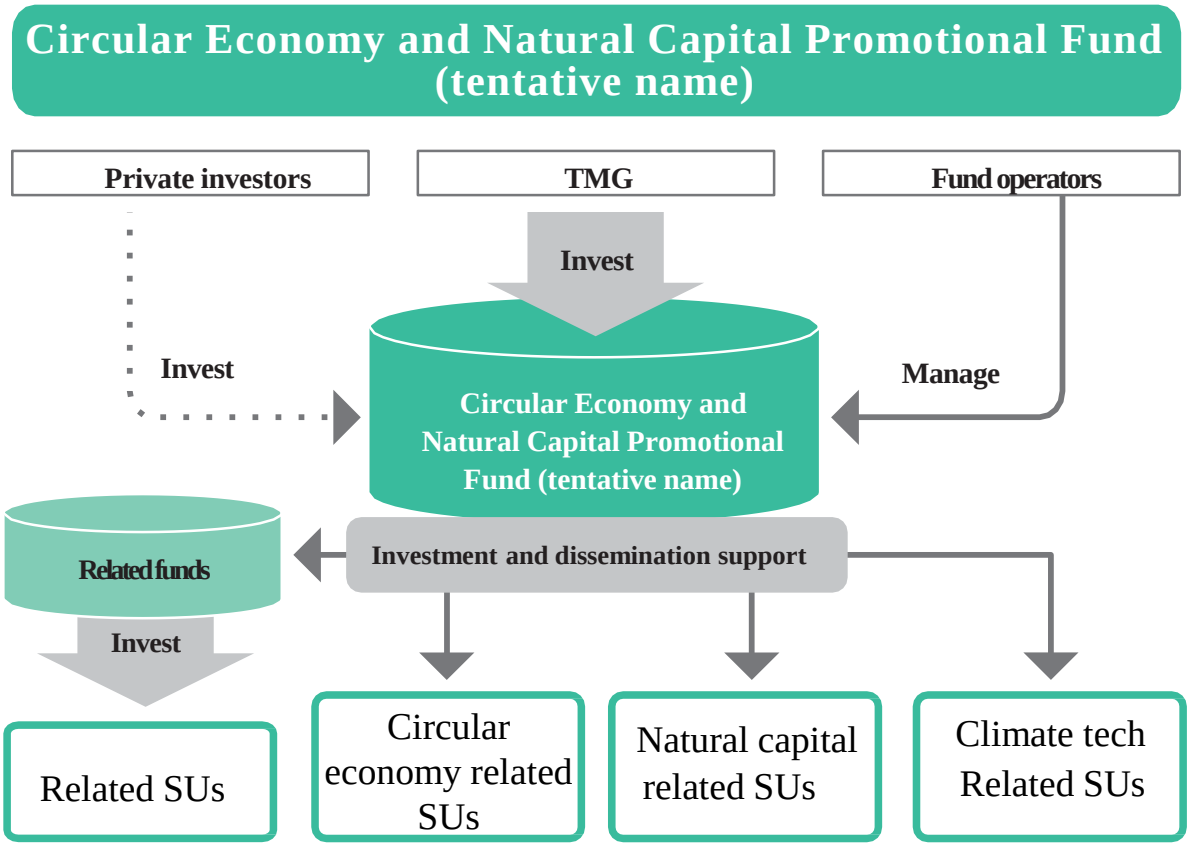
Afforestation project with little pollen

* The Tokyo Metropolitan Urban Greenery Fund accepts donations via the donation box at the service desks of city parks and via bank wire transfer.
* The Supporter Fund accepts donations via the donation box at the service desks of city parks and via bank wire transfer.
* The Tokyo Flower and Greenery Fund accepts donations by wire transfer to the Japan Post Bank.

# Future Initiatives

## ▶ Circular Economy and Natural Capital Promotional Fund (tentative name)

We will establish the Circular Economy and Natural Capital Promotional Fund (tentative name) to revitalize sustainable finance. Funds will be formed for decarbonization, transition to a cyclical economy, and conserve and recover biodiversity, to further increase GX support.




## ▶ Utilization of Tama lumber

We will carry out promotional activities using video and other methods to increase interest in Tama lumber. We will also carry out promotional activities to increase the awareness of the Tokyo-no-ki brand.

**Examples of use of Tama timber**

WITH HARAJUKU (Shibuya City)

Keio Asobi no Mori HUGHUG (Hino City)

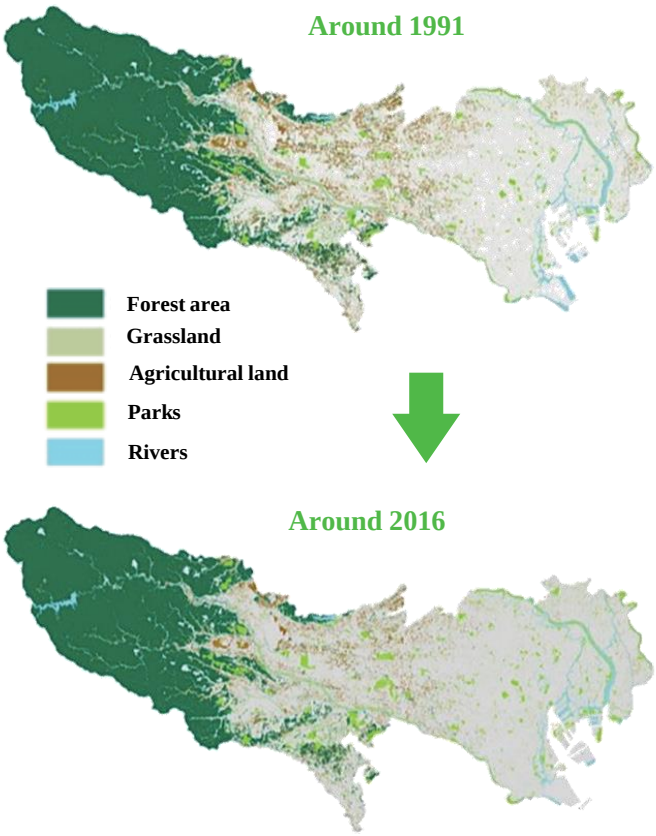
**Hub to communicate the appeal of Tama timber**

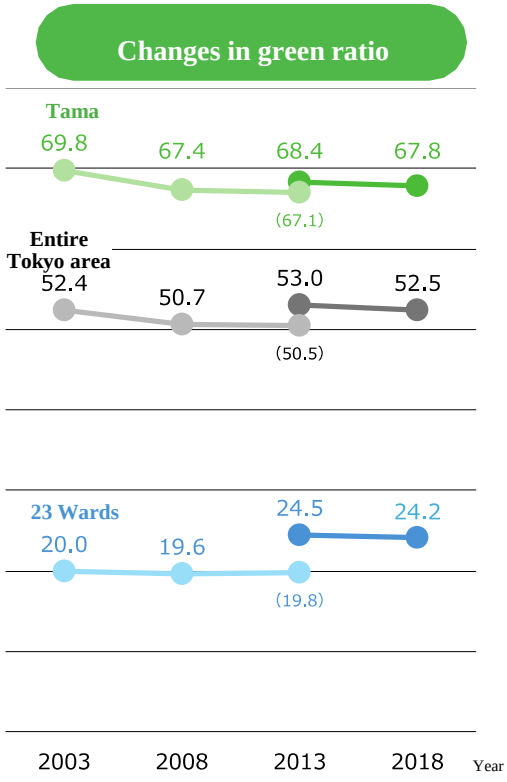
TOKYO MOKUNAVI

# Reference Changes in circumstances surrounding greenery in recent years

## Status of greenery

Although there was a tendency for it to decrease, in recent years Tokyo's greenery has stabilized thanks to the development of parks, conservation of productive green spaces, and the creation of greenery with any given opportunity.

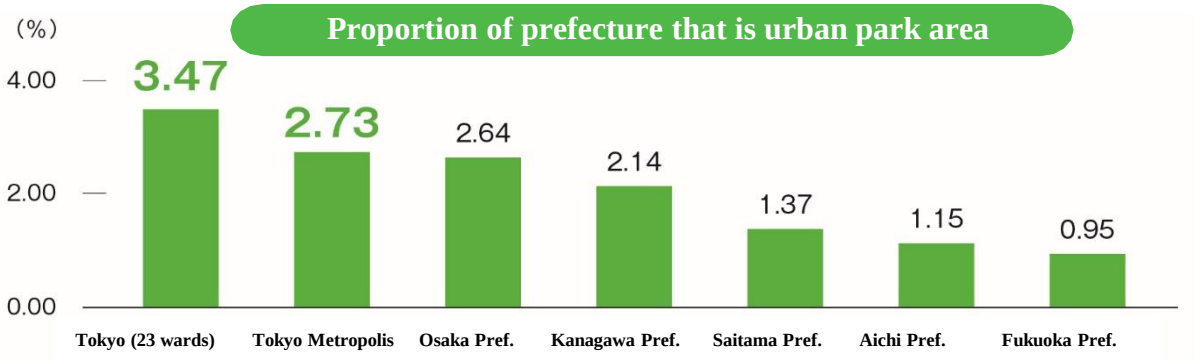



【Green ratio】 The proportion (%) of the total area of the region that consists of ground covered by greenery and park/water areas.

## Park Area

The proportion of the area of the prefecture occupied by urban parks is larger in Tokyo than in any other prefecture



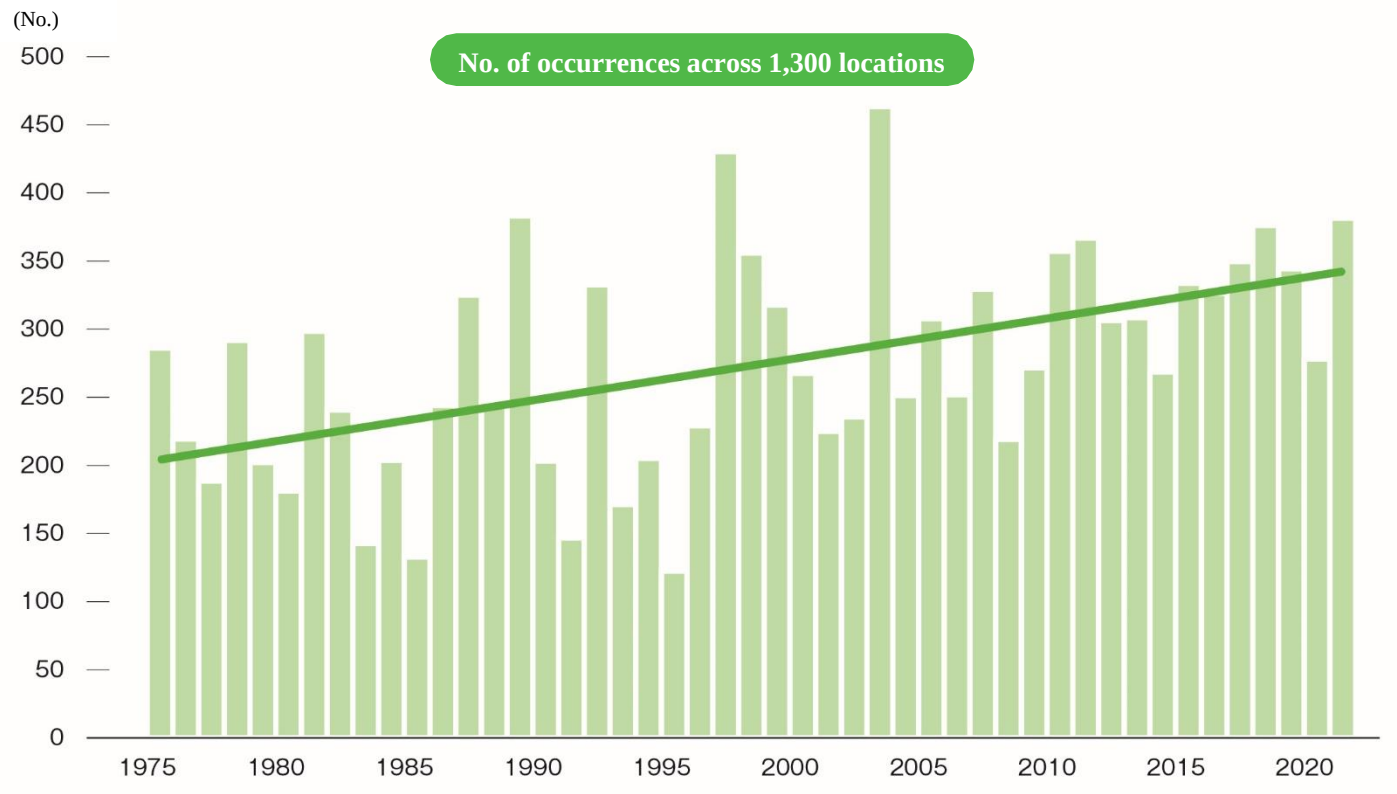

(Source) Created based on Ministry of Internal Affairs and Communications documents

# Increasingly severe natural disasters

Due to climate change, increased rainfall is expected, and there will be increasingly frequent and severe damage from wind and rain.

## Changes in no. of occurrences of heavy rain

There is a tendency for an increased occurrence of heavy rain (of at least 50 mm in an hour) in a year.

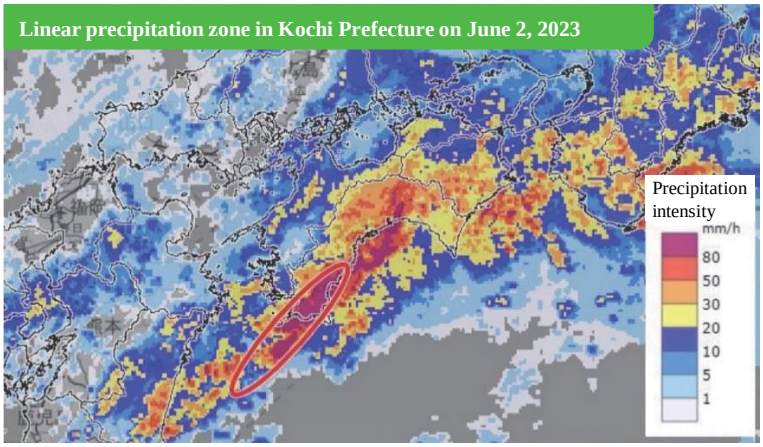



(Source) Created based on the IPCC Sixth Assessment Report Working Group I report

## Concentrated heavy rain due to linear precipitation zones

Once again, this year has seen record heavy rain due to linear precipitation zones across the entire country, and there has been significant damage.

**Linear precipitation zone in Kochi Prefecture on June 2, 2023**




(Source) Created based on the IPCC Sixth Assessment Report Working Group I report

| Examples of heavy, concentrated rain from linear precipitation zones, etc. | Damage |
|---|---|
| July 14–19<br>Iwate Pref., Akita Pref., etc. | Fatalities: 1; Destroyed: 2 buildings; Inundation above floor level: 824 buildings |
| July 11–13<br>Iwate Pref., Toyama Pref., etc. | Fatalities: 13; Destroyed: 16 buildings<br>Inundation above floor level: 768 buildings |
| July 7–10<br>Fukuoka Pref., Saga Pref., etc. | |
| June 28 – July 6<br>Yamaguchi Pref., Kumamoto Pref., etc. | |
| June 1-3<br>Kochi Pref., Wakayama Pref. | Fatalities: 5; Destroyed: 13 buildings<br>Inundation above floor level: 2,149 buildings |

# Changes in people's values and behavior with the global pandemic

As globalization has advanced in recent years, human behavior has changed, including ensuring social distancing and avoiding crowds in the COVID-19 pandemic, in which there is a growing risk of infectious disease from around the world spreading in Tokyo.

## Repeatedly occurring infectious disease

New diseases are repeatedly occurring around the world, and spreading across national borders.

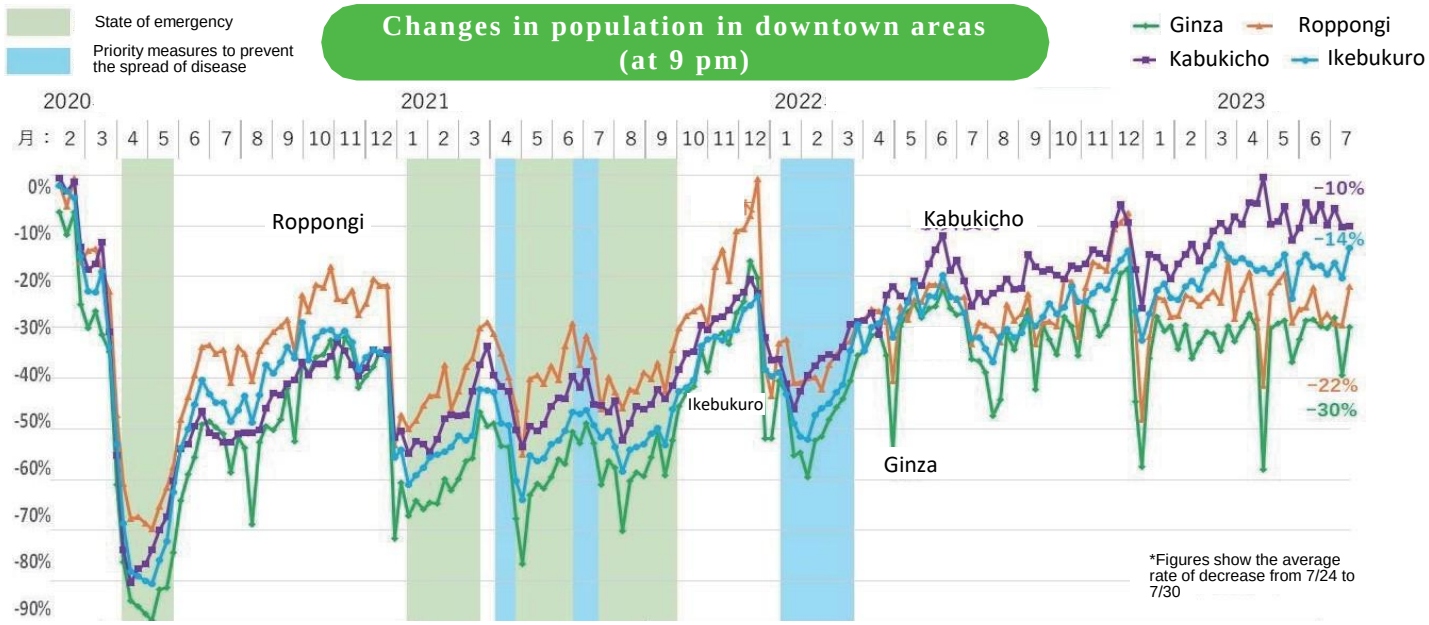
**History of infectious diseases around the world**

| Years | Disease |
|---|---|
| B.C.E onwards | Smallpox |
| 14th century onwards | Bubonic plague (epidemic in Europe) |
| 1918 onwards | Spanish flu |
| 1981 onwards | AIDS (Acquired Immune Deficiency Syndrome) |
| 2002 onwards | Severe acute respiratory syndrome (SARS) |
| 2009 onwards | New strain of influenza (H1N1) |
| 2012 onwards | Middle East respiratory syndrome (MERS) |
| 2014 onwards | Ebola hemorrhagic fever (African epidemic) |
| 2020 onwards | Coronavirus disease (COVID-19) |

(Source) Created based on Health, Labour, and Welfare white papers, National Hepatitis Institute website, etc.

## Status of congestion in downtown areas

During the period of the declaration of a state of emergency and key measures to prevent the spread, the population of people spending time in downtown areas significantly decreased.




● Created by TMG by processing data (*within a radius of 500 m from stations in Roppongi and Ikebukuro) from Agoop's "Population movement analysis tool Papilio" (preliminary values, may be corrected in the future) ● Weekly rate of decrease calculated using January 2020 (Jan 6 – 31) as a standard (Source) Created based on TMG's Office of the Governor for Policy Planning website

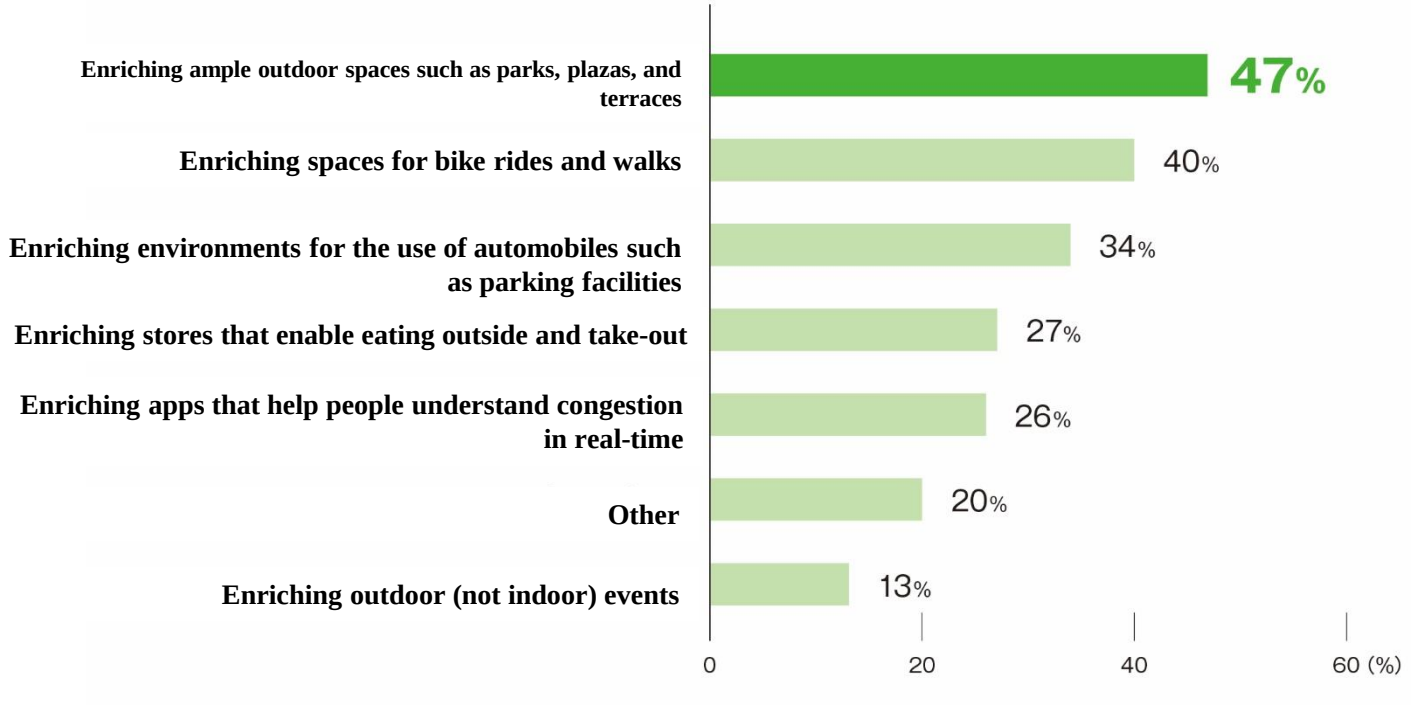
# Responding to a need for ample spaces

The role required of cities and people's values changed with the COVID-19 pandemic, including an increased need for ample spaces such as parks and plazas

## Awareness of urban spaces and nature

When it comes to initiatives required of cities, there is a lot of interest in enriching outdoor spaces.

**Enrichment initiatives in urban centers and city centers**




(Source) Created based on the Ministry of Land, Infrastructure, Transport and Tourism "Daily behavior survey under the effects of COVID-19 (no. 3)" (May 2023)

## Example of an open green space overseas

The development of open green spaces is progressing in cities overseas.

**New York**

A lively park in which communities and private business operators work together

(Source) Bryant Park website

# Realization of the global goal “nature positive”

To contribute to the global goal “nature positive realization” we must stive to conserve biodiversity

## COP15 and national trends

**October 2021**

**COP15**

**Part 1 held**

Kunming Declaration “putting biodiversity on a path to recovery”

**December 2022**

**COP15**

**Part 2 held**

Kunming-Montreal Global Biodiversity Framework adopted

**March 2023**

**National Biodiversity Strategy of Japan**

for 2023－2030 formulated

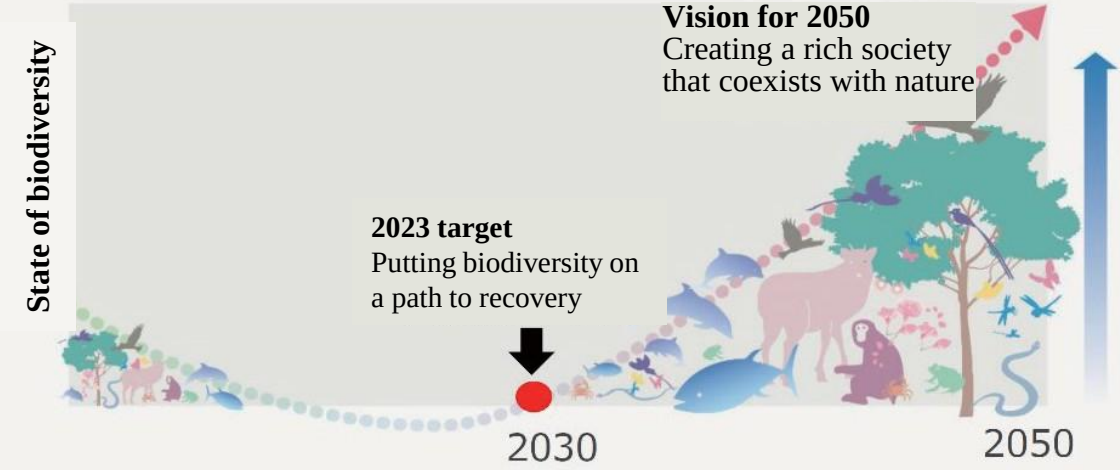
## Kunming-Montreal Global Biodiversity Framework

**2030 mission**

**“Nature Positive”**

Urgent behavior to stop and reverse the loss of biodiversity to put nature on a path to recovery.

**Image of the realization of “nature positive”**




(Source) Bureau of Environment “TMG Biodiversity Area Strategy”

# Forest cycles to maintain healthy forests

## Image of forest cycle

To maintain healthy forests, we create a cycle of planting, growing, and use when we utilize wood.


(Source) Forestry Agency website

## Increasing demand for wood as a sustainable material

New wooden facilities are being built around the world


Grand Palais Éphémère (Paris)

Helsinki Central Library Oodi (Helsinki)

New headquarters building for Tokio Marine Nichido (Completion scheduled FY2028)

(Source) City of Helsinki website

# Multiple functions of forests

## Multiple functions of forests

### Public functions

**Water source replenishment**
Reduced flooding, storing water resources
adjusting water volume, water purification

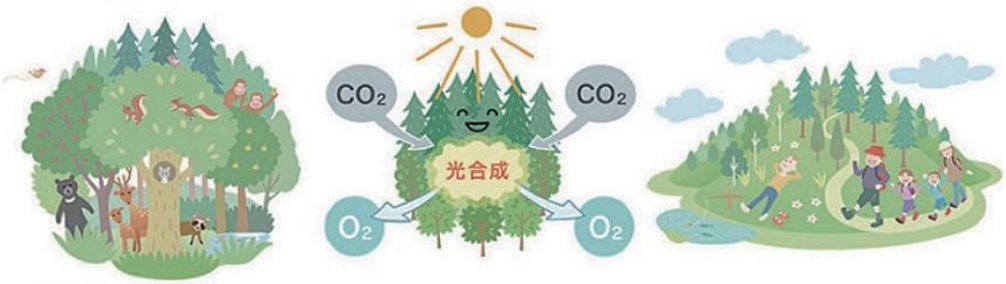
**Soil conservation/prevention of landslides**
Prevent surface erosion and collapse, prevent other landslide damages, prevent snow damage,
wind and snow resistance

**Comfortable environment formation**
Mitigate climate, purify air, comfortable daily life environment formation (loud noise prevention)


**Preserving biodiversity**
Preserve genetics, conserve species,
preserve ecosystem

**Global environment protection**
Mitigate global warming, stable global environment

**Health and recreation**
Health treatment and maintenance, recreation, sports

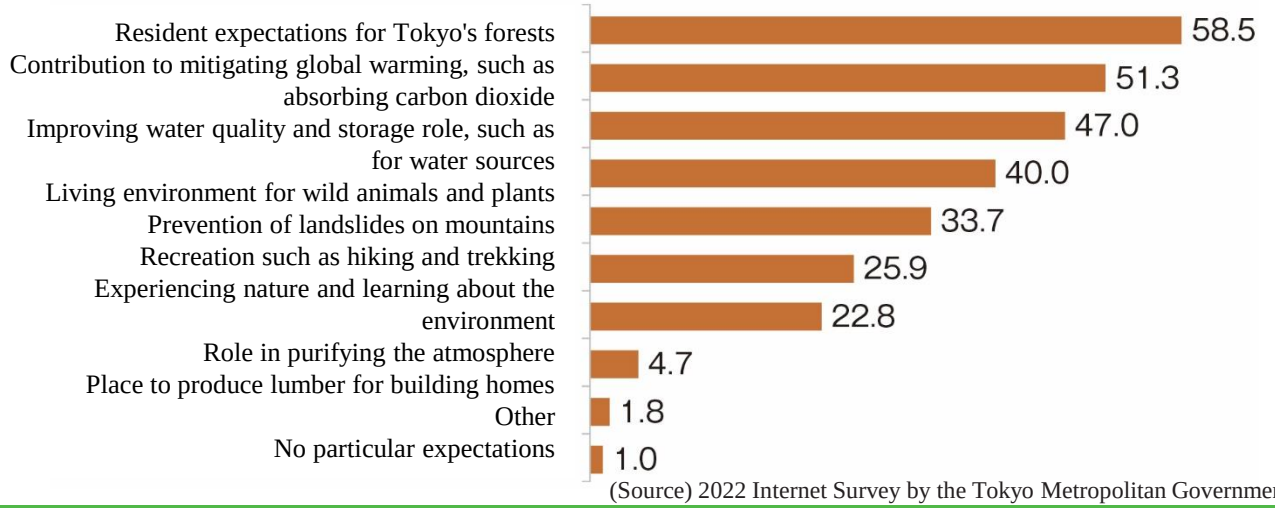



**Culture**
Scenery, views, learning & education, arts, religion, festivals, traditional culture, maintaining local character

**Material production**
Lumber, food (such as mushrooms),
industrial materials, craft material

(Source) Forestation Promotion Plan, Bureau of Industrial and Labor Affairs, June 2021

## Expectations of Tokyo residents for Tokyo's forests



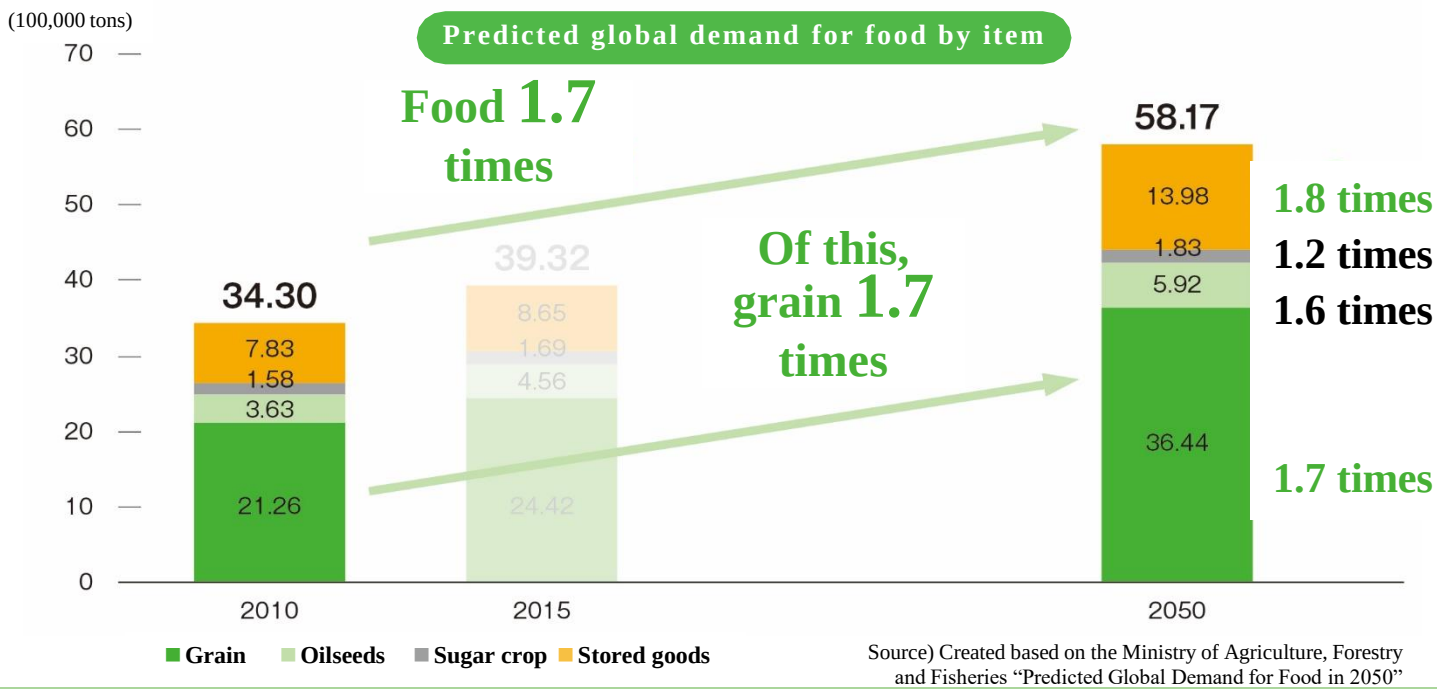

(Source) 2022 Internet Survey by the Tokyo Metropolitan Government

# Increasing global demand for food
# Effective use of resources

With population growth, food production is a global issue.
We need to make effective use of our limited resources.

## Predicted global demand for food

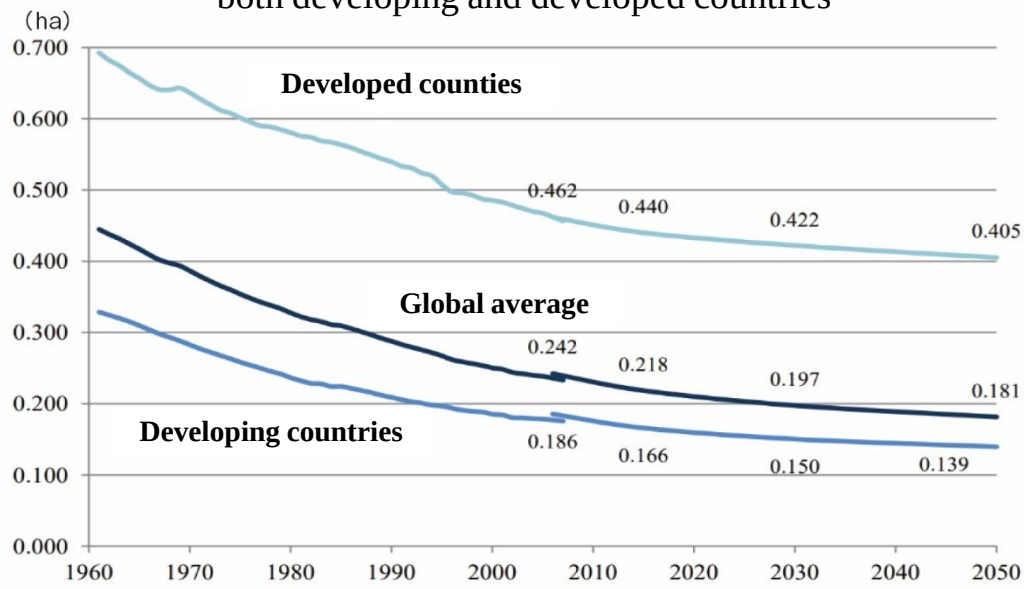
Due to population growth and economic development, the global demand for food in 2050 is expected to increase by a factor of around 1.7 compared to 2010.




Source) Created based on the Ministry of Agriculture, Forestry and Fisheries "Predicted Global Demand for Food in 2050"

## Predicted cultivation area per person

It is predicted that the cultivation area per person will decrease in both developing and developed countries




(Source) FAO, World Agriculture Towards 2030/2050

# Sustainable, multi-purpose agriculture

It is vital that we develop sustainable agriculture and protect the key agricultural industries in Tokyo with a variety of functions

## Primary functions of urban agricultural land

### Fresh produce supply

Meet consumer demand for fresh produce, provide information of food and agriculture

### Disaster prevention

Serves as an open space in the city to prevent fire spread, prevent/control flooding, and for evacuation during disasters

### Education

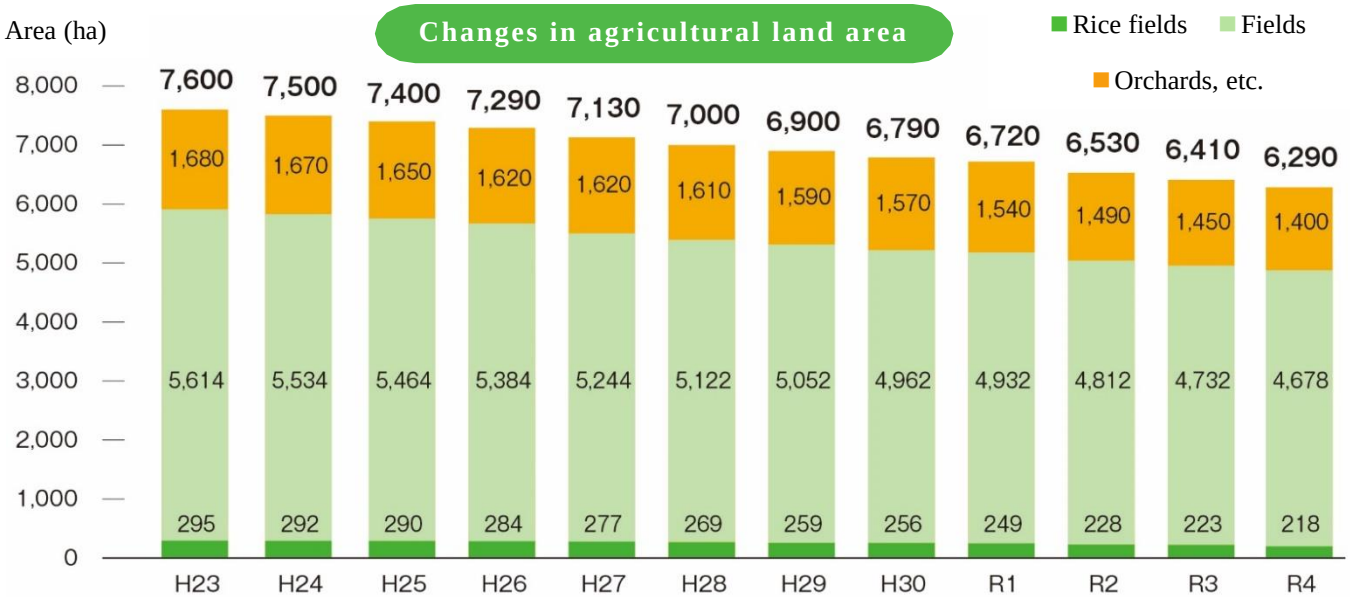
Provide opportunities to learn the importance of food and a healthy food lifestyle through accessible urban agriculture

### Accessible farming workshops/exchange

Exchange between producers and consumers through agriculture workshops/exchange for city residents, children, and farmer markets

## Changes in farmland area

Farmland in Tokyo has decreased by 1,310 ha over ten years (2011–2022)
(decrease ratio: 17.3%)




(Source) Created based on the Ministry of Agriculture, Forestry and Fisheries "Cultivated Land and Crop Area Statistics" *The totals may not add up due to rounding.

# Glossary of terms

# Glossary

| Term | Meaning |
|---|---|
| **Alpha-numeric** | |
| **A** | |
| Aging class | Aging forests. Age of forests is expressed as the “aging class” in units of 5 years. |
| Agricultural experience plantation | A plantation in which people can experience farming with detailed guidance from farmers.. |
| Agricultural promotion areas | Designated by the TMG as an area for the comprehensive promotion of agriculture. |
| Agricultural Scenic Development Districts | This is an initiative to designate districts where agricultural land and estate woodlands are relatively consolidated in order to combine the distributed farmland into urban planning parks, conserve the farmland in the form of open spaces, and pass on agricultural scenery to future generations. |
| **C** | |
| Citizen Green Space Contract program | A program that enables local governments to enter into contracts with private land owners to establish and manage citizen green spaces under the Urban Green Space Law. |
| Conservation area | An area designated by the TMG based on an ordinance with the aim of protecting and restoring nature. |
| **F** | |
| Forest cycle | A cycle by which profits from the use of lumber is returned to forestry production activities so that planted forests are harvested, replanted, and cultivated. |
| **G** | |
| Green coverage ratio | The proportion of area covered by greenery as seen from above, including woodland, grassland, and greenery on roofs. |
| Green infrastructure | Hardware/software initiatives for developing social capital and leveraging land for the sustainable and appealing development of the nation, cities, and communities by using the diverse functions of the natural environment. |
| Green roads | A road on which road greenery and the greenery of surrounding public facilities is developed together. |
| Green space conservation areas | A suburban region in the city in which a natural environment such as trees or a waterside has formed independently or together; an area that needs to be protected for its favorable natural environment. One type of conservation area designated by the TMG. |
| **H** | |
| Historic environment conservation areas | A region with nature that also has historical heritage; an area of land that that needs to be protected for its favorable natural environment in addition to its historical heritage.<br>One type of conservation area designated by the TMG. |
| **J** | |
| J-Credit Scheme | National certification scheme that gives “credits” for greenhouse gas (e.g. CO2) emission reductions and absorption through initiatives such as introducing energy-saving equipment and forestry management. |
| **K** | |
| KK Expressway | A public space for pedestrians being developed through the regeneration/use of the space above the Tokyo Expressway (KK Expressway), currently used as a road for automobiles. |
| **M** | |
| Marine Park | Parks that make the most of the characteristics of coastal areas established on reclaimed land in Tokyo; these parks are developed and managed by the Port Authority according to a different regulatory system to Metropolitan parks (the Tokyo Metropolitan Marine Park Ordinance), based on the Urban Parks Act.<br>There are three types: seaside parks, wharf parks, and green road parks. |
| **P** | |
| Productive green land | A mechanism for the systematic conservation of agricultural land in the city. |
| Public open space | Open spaces and land that are open to the general public among sites with buildings. Events can be held here using the urban development organization registration system. |

# Glossary

| Term | Meaning |
|---|---|
| **R** | |
| estate woodlands | An area of trees created to surround a residence. These are decreasing due to inheritance reasons, etc. As of 2020, there were around 800 examples of estate woodlands in the city. (TMG Bureau of Urban Development July 2020 “Comprehensive Policy for Securing Greenery” ) |
| Specified productive green land | Mechanism for designated productive green land areas over 30 years old to extend the potential purchase offer period by 10 years. |
| **S** | |
| Satoyama conservation areas | A region in which mixed tree groves, farmland, and springs come together and diverse creatures live, or a hillside region acknowledged to have potential for a favorable natural environment for life and regions consisting of the flat land around this; areas of land whose natural environments must be restored and protected. One type of conservation area designated by the TMG. |
| Special green space conservation area | System based on the Urban Green Space Conservation Act that serves as a mechanism to designate green spaces where favorable natural environments are forming in the city. |
| Specified productive green land | Mechanism for designated productive green land areas over 30 years old to extend the potential purchase offer period by 10 years. |
| **T** | |
| Tama River upper reaches area | The Tama River watershed upriver of Hamura Intake Weir. The Tama River, the original water source for Tokyo, runs from Yamanashi Prefecture through Tokyo and into Tokyo Bay. |
| Thinning | The process of harvesting a portion of the trees in a forest according to forest growth, thereby adjusting excessive tree density. Thinning allows light to reach the forest floor, promotes the growth of ground cover, and enhances the multifaceted functions of the forest. |
| TNFD | Abbreviation of Taskforce on Nature-related Financial Disclosures, an international organization established build a framework for corporate risk management and disclosure regarding natural capital. |
| Tokyo Metropolitan park | Parks established and managed by the TMG Bureau of Construction based on the Urban Parks Act and Urban Parks Ordinance |
| Tokyo Sky Corridor | A public space for pedestrians being developed through the regeneration/use of the space above the Tokyo Expressway (KK Expressway), currently used as a road for automobiles. |
| **U** | |
| Urban Development Program | A program where regulations under the Building Standards Law such as floor-area ratio or sloping restrictions are relaxed for construction projects which will contribute to the securing of public spaces and the public good in order to attract beneficial urban development that contributes to improving the urban environment. |
| Urbanization Control Area | Where urbanization should be controlled. The construction of structures other than those for agriculture and fisheries and above a certain size are prohibited within Urbanization Control Areas. |
| Urbanization Promotion Area | Urbanized areas and areas where urbanization within 10 years is prioritized. |
| Urban planning park | One type of urban planning facility set out in the City Planning Act. Mainly public spaces that aim to provide recreation such as rest, viewing, walks, games, and sport in a natural environment, and facilitate evacuation, etc. during disasters such as earthquakes and fires. |
| **W** | |
| Water conservation forest | A forest located in the upper reaches of a river where there are particular expectations of functions such as the retention of water resources, mitigation of flooding, and purification of water quality. |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