Chapter 4　Making our future (Measures for realization)

(Specific measures for the implementation)

In order to achieve the goal of our future set in this plan, that is, “A Town Where Songs of Wild Birds Are Heard”, we will lay the foundation through the basic initiatives complying with the three goals of this plan. At the same time, we will also actively promote the policies through cooperation and collaboration with various stakeholders, to preserve nature at the footholds in each area, to nurture nature by zoning of the area, to form ecological network, to encourage active engagement by the individual, and so forth.

Tree planting in the park

Chapter 4 deals with the specific activities to achieve the goal set in this plan, and presents the methods to check and confirm the rate of progress of the plan.

4-1 Laying the foundation (basic measures and policies)

In order to accomplish the features of our future set in this plan, that is, “A town where songs of wild birds are heard”, it is necessary that, not only a resident as an individual steadily engage in the activities, but also various organizations including schools, businesses and shops participate in the activities to conserve biodiversity. So, as the footholds for these activities, we will develop and reorganize the parks throughout the city, and according to the basic activities for the realization of the targets, we will also promote and expand the activities based at the parks scattered throughout the city, by preserving trees, greening of the privately owned sites, while attaching a great importance to nearby nature.

(1) Basic activities and initiatives to create the diversified environment wild birds can inhabit

・Protect ・Restore ・Create ・Connect ・Nurture・

“PROTECT” : We will protect the environment for living things and human beings

- We protect eight "landscape of Meguro" (P.14, 15)
- We protect the environment threatened wildlife species can inhabit
- We promote the conservation of trees by designating as conservation trees
- We protect local living things by designating as biodiversity conservation forests the forests of universities and other public facilities
- We preserve the soil that contains organic matter by conserving topsoil when we make parks and other public facilities
- We preserve and utilize the seeds of the species of indigenous strain contained in the soil
- We preserve farmlands
- We preserve springs
- We preserve and transmit to the future the landscape of cherry blossoms by making efficient use of “Sakura Funds”
- We protect the environment for habitats of native plants such as violets by managing copse
- We preserve the soil and grounds where living things can live by minimizing the paved areas of parks and public facilities
- We conduct research on biodiversity in order to grasp present situations and changes of living things
- We periodically renew “residents’ registration for living things” in order to use as basic materials for the activities of conserving local environment

“RESTORE” : We will restore the environment living things can inhabit.

- We promote to improve the environment wild birds can inhabit by planning, developing, management, and planting of the parks and green spaces, etc.
- We change the forest floor with bare ground caused by excessive cleaning, etc. into the floor covered with fallen leaves that could be humus
- We promote planting of native species with due consideration for indigenous strain
- We restore the environment of soil where living things can live by returning fallen leaves (deposited at “Ochi-Bank”) into the soil
- We restore living things by making “eco stack”(stack of wood and branches) in the

trees of parks, etc.

- We restore the environment of waterside by developing and managing the ponds of biotope where dragonflies, etc. can live
- We restore clear limpid streams of Meguro River and Nomikawa River by preserving maintenance water (Campaign for the restoration of clear wate)
- We restore fish going upstream from Tokyo Bay by improving the environment of Meguro River
- We make rain water permeate the soil by minimizing the pavement

"CREATE" : We will create the environment living things can inhabit.

- We promote developing town full of green by utilizing merits of plants (landscape, disaster prevention, richness, tourism, purification of environment, etc.)
- We develop parks that could be bases for various activities
- We develop base green spaces in accordance with the purpose of living things, contact with other people, and blessings of nature, etc.
- We create green at construction sites by applying "Green Planning of Construction Sites"
- We promote greening at private owned sites by subsidizing greening along the roads, greening on rooftop, walls, and verandas
- We create green at the public facilities that could be the local model of greening
- We create woods at schools by promoting the activities of "eco school"
- We promote greening of whole of building, by publicity and education campaigns aimed at greening of roofs with grass, greening on the verandas, and their methods and materials
- We create vegetable gardens and paddy rice fields on rooftop and in the parks
- We promote planting of the plants that bear flowers and fruits, and make us feel the four seasons
- We plant honey-sucking plants that invite butterflies and bees carrying pollens
- We plant trees that bear fruits and nuts, and could be wild birds' habitats
- We create places and opportunities for making children contact with soil
- We create the environment that invites wild birds and insects by putting planters and water basins on the verandas
- We realize foreign species and other living things hazardous to human beings in order to make green environment

”CONNECT” : We will connect each environment where living things live.

- We make other plans and policies take into account the concept of conserving biodiversity
- We connect interspersed green spaces by planting roadside trees and developing green belts of roads
- We connect parks by developing Nature Path
- We connect parks by renewing and managing lines of cherry blossom trees on both side of Meguro River

”NURTURE” : We will nurture the environment in which living things can live, and will help citizens to understand living things

- We promote nurturing the environment where living things live by supporting residents’ activities in “Conservatory Forest of Biodiversity”
- We nurture the environment of Satoyama (managed woodlands and grasslands near human settlements), by supporting residents’ renewal management of copse
- We nurture the forest living creatures can inhabit by supporting residents’ activities to make forests that bear acorns
- We explain the connection between living things by using “Media Board” (a type of bulletin board in the parks that explain living things and nature, etc.9
- We promote citizens’ understanding of living things by continuing research on living things by residents (e.g. Komabano Nature Club, Children’s expedition to discover nature in the city, monitoring of bird box, etc.)

“Ochi-bank”, depository or bank of fallen leaves for making compost

Examples of “Media Board” in the parks
“This is a concert hall for singing insects”

Ecostack：Making homes for little animal by stacking up fallen leaves and branches (Komabano Park)

Children's expedition of living things in Meguro River

Fig.4-1　Hints to familiarize with nature (From the book "Twelve months of nature of Meguro City", published by Meguro City)

Eco Mark for promoting environment-friendly lifestyles through the choice of eco-friendly products (Japan Environment Association)

Rain Forest Alliance provides worldwide agriculture and forestry with independent certification to promote conserving global biodiversity

Mark for promoting the use of timber from forest-thinning (Japan Forestry Association)

Marine ecolabel for promoting sustainable fisheries and fishing industry (Marine Stewardship Council)

Fig.4-2　Examples of ecolabels

(2) Basic activities and efforts to nurture rich minds based on living in harmony with nature

・Familiarize ・Notice ・Change ・Enjoy ・Learn ・Continue・

"FAMILIARIZE" : We will provide residents with the places and system to be familiar with nature

- We have contact with green through volunteer activities such as activities in the parks and Green Club activities
- We familiarize ourselves with nature through listening to chirpings of wild birds and insects, smelling the flowers in bloom
- We continue reporting the situations of flowering on the city's web page
- We familiarize ourselves with trees by selecting a symbol tree of the area, and making a guidebook
- We familiarize ourselves with nature by consulting a leaflet of "Our choices of creatures of Meguro" and an illustrated book on animals and plants
- We familiarize ourselves with nearby nature and the history of the town by reading printed matters such as information leaflets such as Takanoko Town
- We participate in the events to have contact with nature held at Children's Hall (Jidokan), e.g. the event to transmit the plays of old days to the future generation , which were played in nature
- We register as Nature Correspondent, and familiarize ourselves with living things through observation and taking notes
- We familiarize ourselves with nature of the season, by utilizing observation notes of the Observatory of living things
- We have contact with ponies and little animals in Children's Animal Square of Himonya Park
- We enjoy atmosphere of Musashino by promoting campaigns and education Japanese bush clover, a flower of Meguro City, by distributing them to citizens and planting in the parks
- We familiarize ourselves with new green landscape seen from rooftop gardens and parks (Meguro Sky Garden and Meguro Tohgo-tei)

"NOTICE" : We provide residents with the places and the system to notice the necessity of the importance of creatures and the consideration of them

- We notice the importance of connection with nature by implementing “Check list of efforts by individuals”
- We notice the importance of all living things through children’s archetypal experience at Komabano Nature Club, etc.
- We notice lives of nearby living things by participating in the Children’s Expedition into Nature
- We notice the importance of nearby nature through lectures, events, exhibitions, printed matters, public information services, etc.

”CHANGE” : We will establish the system to change our behavior to pay attention to living things

- We change grass fields at schools, etc. into weed gardens, in order to learn the mechanism of nature
- We change our present life styles that consume excessive water and foods, taking into consideration the concept of “mottai-nai”, or “What a waste!”
- We change our life styles taking into account biodiversity by learning the life styles of Satoyama at Nature Observatory in Komabano Park
- We control excessive propagation of crows by paying heed to garbage placement for collection

”ENJOY” : We will provide residents with the places for enjoying living things

- We enjoy viewing of flower blossoms and colored leaves in the parks, at Meguro River, etc.
- We enjoy nature in the town and nearby history, while walking on Nature Paths
- We enjoy the sounds of rustling of leaves under our feet, and also enjoy the feeling of lying on the fallen leaves
- We enjoy nature through experiences at the events to listen to chirping of insects, to observe stars, and to make “haiku”, a Japanese traditional short poem
- We enjoy making albums of living things by using cameras and recorders
- We provide the city office with the information of living things so that the city can grasp the situations of nature and living things
- We enjoy foods in season and seasonal events such as Meguro Sun Festival (eating pacific saury), festivals of cherry blossoms viewing, etc.
- We enjoy harvesting by using allotment for citizens
- We enjoy growing vegetables at various places

- We enjoy harvest events such as sweet potatoes, grapes and competitive show of agricultural products
- We enjoy walking on the slopes in the city
- We hold events for enjoying seasons at home and schools
- We enjoy new green such as rooftop greening, wall greening
- We enjoy products of Kesennuma City of Miyagi Prefecture, a friendship city of Meguro, by fraternizing with the city

"LEARN" : We will provide residents with the places and the system to lead to learn living things.

- We learn biodiversity through various opportunities
- We learn eco-gardening, role of soil, etc. at Nature Learning Center in Nakameguro Park
- We learn changes of nature by examining the information of Observatory for living things
- We experience the seasonal events of old days in old Japanese-style house in Suzume-no Oyado Ryokuchi Park
- We continue Children's culture school for learning traditional culture of Japan
- We learn the importance of nature by promoting eco-school
- We learn the connections among all living things by engaging in the activities of managing biotope in schools
- We learn the importance of life through nurturing plants at the flowerbeds and vegetable gardens of schools
- We promote the education of environment by developing Observatory Rooms in the parks
- We learn nearby biodiversity through nature observation meetings and waling meetings in the town
- We take up biodiversity as a theme of social educational lectures
- We place books on biodiversity on the bookshelves of home and schoos
- We make video recordings of biodiversity and take full advantage of them in the education on environment
- We learn the blessings of nature and the importance of the concept of "locally produced and consumed" through food education, and learn the connection among living things such as pollen and living things that carry them
- We learn the fact that the abandoned pets might affect nature by preying upon wild life

- We promote campaigns and education on the concept about foreign species, that is, “Don’t bring in, don’t abandon, don’t expand”

”CONTINUE” : We will support the system for residents to continue the activities with due consideration for living things.

- We conduct publicity and education campaign aimed at increasing public awareness of “A Cycle of Lives Supporting One Another : Plan for Developing A Town Wild Birds Can Inhabit”
- We promote eco-label products
- We support the efforts to continue by individuals, homes, schools, shops, NPOs, businesses, communities
- We increase the collection of insects specimen, and make use of them
- We promote increasing of citizen’s understanding of biodiversity through city’s official bulletin and homepage of the city
- We introduce the parks an the activities in the parks through “Megurou”, a town information paper for students of junior high schools and high schools
- We continue to renew the homepage in which observation records on living things are available to read
- We continue to consume eco-friendly so that we can support the producers and businesses that take biodiversity into consideration
- We continue to observe nearby nature in order to grasp the changes of environment for living things

(3) Basic activities and efforts to expand “A Cycle of Lives Supporting One Another”

･Know ･Consider ･Participate ･Expand ･Make a circle･

”KNOW” : We provide residents with the opportunities to know living things in our neighborhood, and the history of these living things and our community

- We participate in the events for ecology
- We try to know history, culture, and landscape of Meguro through waling on Green Paths for Walking, and participating in observation tour of cultural assets in Meguro
- We try to know eco-friendly Edo (Tokyo of the Edo period, 1603-1868), by visiting

noted places of Edo and large trees, etc.

- We try to know nearby living creatures through participating in nature observation meetings and children's expedition into wild life of Meguro
- We try to know the importance of biodiversity by reading official bulletin of Meguro
- We try to know the activities of other groups by participating in the events for the environment
- We try to know nearby nature by applying for the monitor of a bird box for a great tit, a bird of Meguro

"CONSIDER" : We will help residents to learn the importance of paying attention to living things

- We take into consideration the environment of the places of production such as foods and other various materials
- We act taking into consideration biodiversity, as individual, businesses, schools, etc.
- We make the most use of "Check list of efforts by individuals", "21 Proposition", and logo mark of biodiversity
- We promote campaign and education on the activities of the private corporations taking into account biodiversity

"PARTICIPATE" : We will support the activities of residents and organizations

- We participate in the activities of the registered activity group in the parks
- We try to share the information of the activities of groups and NPOs
- We participate in the certification of the "Gardens for living things"

"EXPAND" : We will provides residents with the places and the system to expand their activities with regard to living things

- We promote Basic Plan on Green of Meguro City
- We make communities, schools, parks, etc. into the place of right of common where living things can live, through the activities
- We make the forests by raising seedlings that are grown from acorn by the residents
- We support such events as viewing of blossoms, colored leaves

- We rear the leaders of conservation of biodiversity, and make use of them, by running the training courses for environmental navigator, and the volunteer of managing the copses of the parks
- We promote the activities by private corporations making use of corporate social responsibility of the businesses
- We support and encourage the features on biodiversity by newspapers, magazines, public relations magazines, web pages, and expand fellowship of the activities for biodiversity
- We expand the place and opportunities for experiencing agriculture
- We make the "biodiversity stamps" that can be used for getting flower seeds, etc.
- We expand the area of activities for biodiversity by providing relevant information making use of Information and Communication Technology
- We publicize the information on nature in Meguro, making use of Observatory for living things
- We actively publicize the plans and policies of Meguro City

"MAKE A CIRCLE" : We will establish the system to connect each activity and to make a circle or a loop consisting of all of these activities

- We request the authorities of public facilities and owners of designated conservation forests to conserve and nurture green spaces
- We try to coordinate the local activities by making use of the information from universities and research institutions
- We participate in the activities of biodiversity
- We run the residents meeting for living things (including the reports and training course of the activity groups, members of nature correspondents)
- We provide residents with the opportunities of sharing information at the forums, etc.
- We run the events in which members of "School of living things", that is, citizens, businesses, NPOs, various administrations, etc. cooperate and collaborate
- We provide local residents with the places for the activities of "Environment Navigators"
- We nurture and promote "Park Communication" by making use of "Park Coordinators"
- We increase the number of leaders of nature watching and interpreters
- We support the collaboration among local residents, patrons of parks, and registered activity groups of the parks
- We cooperate with other local governments and friendship cities that are promoting

conserving biodiversity

- We try to create ecological network with neighboring municipalities through cooperation with adjacent local governments

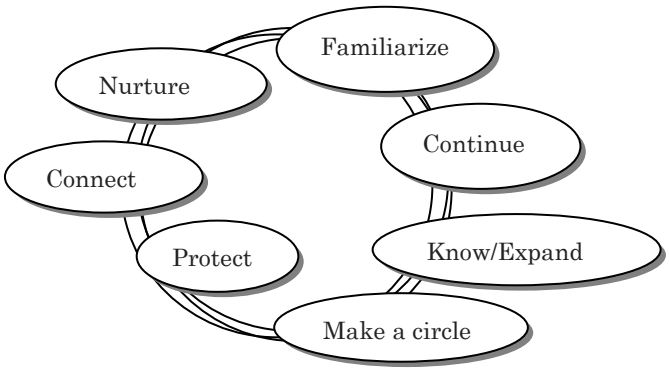


Fig.4-3　A Cycle of Lives Supporting One Another

Image of the collaboration of policies. A circle represents residents, businesses, city office, etc
※Samples from main basic activities

Harvest of sweet potatoes at the rooftop garden (Meguro Togo-tei)
on the Meguro City hall

Fig.4-4　Logo mark for conserving biodiversity promoted by United Natiosn and Japanese government.

4-2 Efforts by each area

(1) Formation of ecological network

In order to create spaces in Meguro where many and various animal and plant can live, it is important that we preserve green space as a foothold of each region, at the same time, develop the network of greens by connecting greens with pedestrian paths and roadside trees, thus making it possible for living things to move along the network. We call this kind of network consisting of greens as “ecological network”. The formation of ecological network in the urban areas will make the most effective use of functions of green spaces, regarding environment conservation, recreation, disaster damage prevention, and formation of good urban landscape, and will contribute to the promotion of the formation of the city filled with rich green, where people and nature coexist, and with less environmental load. As for the initiative in each area, we will strive to foster “Landscape of Meguro” in order to form ecological network through the cooperation and the collaboration among the activities of various organizations. As the constituent elements of ecological network, we set up four categories: “Forest of Meguro”, “Trees in town”, “Paths for living things” and “Gardens for living things”.

With the greens as footholds, and the network of green, the routes for moving or migration of wild birds and butterflies will be formed, and consequently will lead to the realization of the town where the environment for living things is restored, and many living things come to the places close to the residents via successive soil surface of grounds, thus making it possible each resident to interact with nature and life.

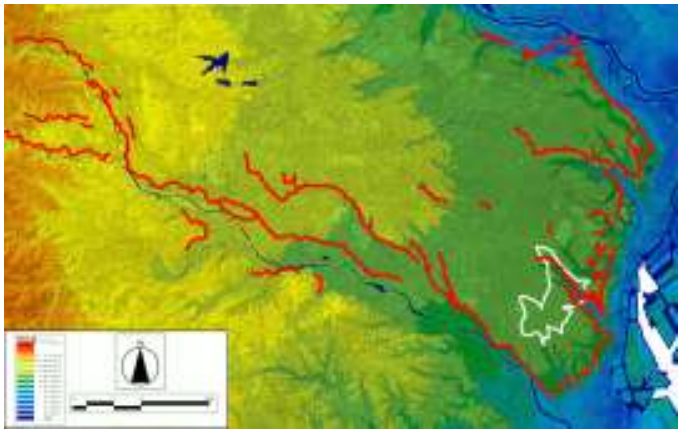


Fig.4-5 Wide area ecological network 1:

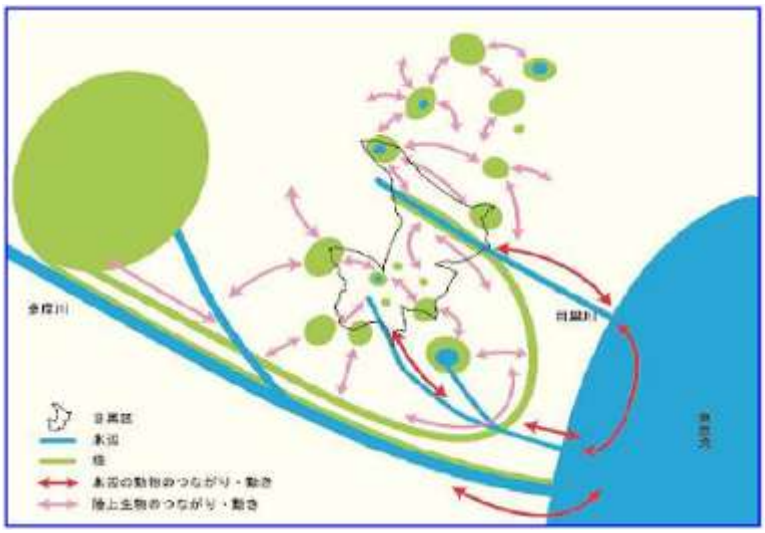


Fig.4-6 Wide-area ecological network 2: Meguro City is located at the edge of Musashino plateau, and is ecologically connected with Okutama and the mountain district at the periphery of Kanto Plain that are abundant in nature, through the remaining green spaces on the edges of cliff lines of Tama River. Around the city, there are large green spaces such as Institute of Nature Study (National Museum of Nature and Science, Tokyo), Yoyogi Metropolitan Park/Meiji Shrine (Shibuya City), Senzoku Park (Ota City), Setagaya Park (Setagaya City), etc. Living things move across boundaries between these cities. As for rivers in and around Meguro, they are ecologically connected with Bay of Tokyo.

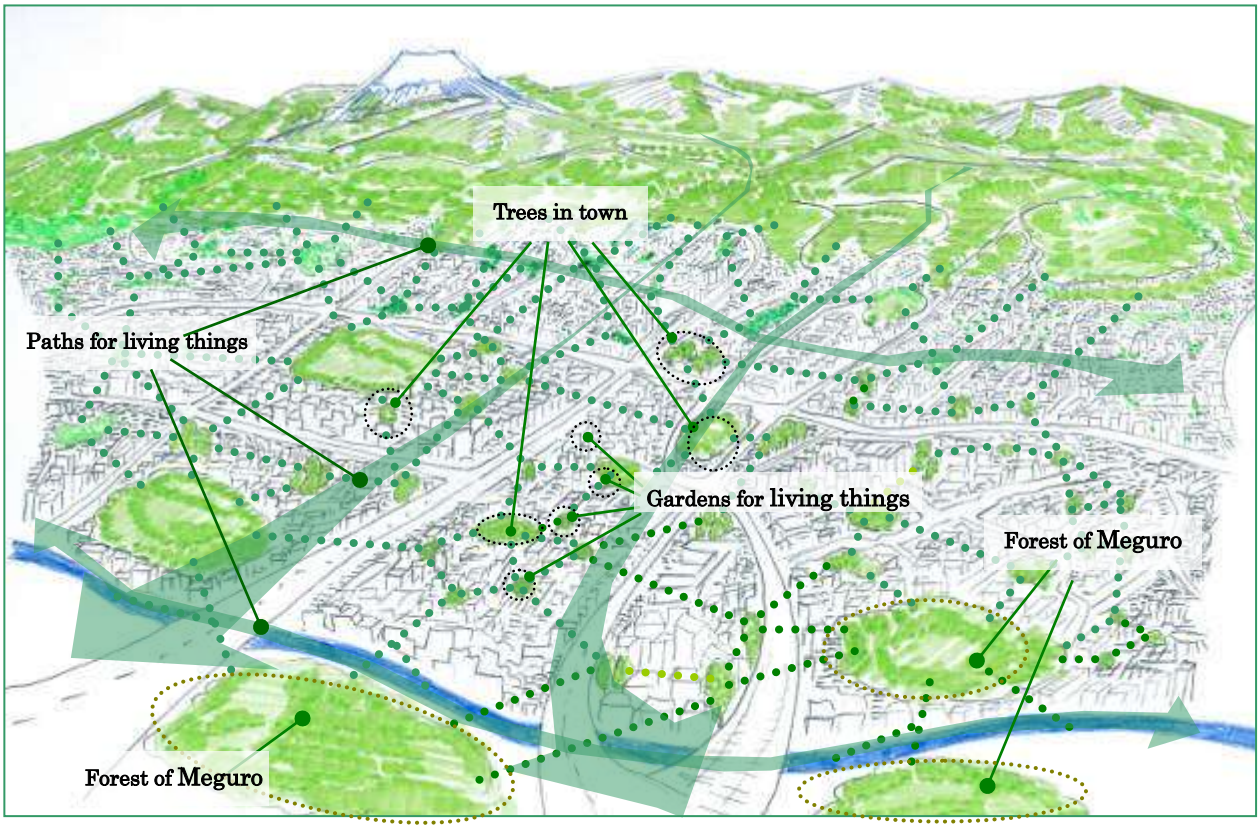


Fig.4-7 Ecological network and its components

Looking toward the direction of Okutama in the western part of Tokyo, from the sky above Nakamerugo Park and Meguro River that runs across Komazawa-dori Avenue

(2) Efforts for "Forest of Meguro"

1) Setting up “Forest of Meguro”

Forest of Meguro is the tract of green that can be a core or a foothold of the green in the region, and contributes as a source of the plant and animal species in the region, and also contributes to the introduction of living things of other areas into the city, and is the area for preservation and promotion of, mainly large existing greens, including “Forest of the city(foothold area)” and “Gardens for living things(buffer zone)”. This is equivalent to the core zone stipulated in reference materials of the guideline of Urban Green Space Conservation Act. “Forest of Meguro” includes highly permanent greens which have particularly excellent natural environment, such as parks and university campuses, etc., and is classified into eight areas.

2) Contents of initiatives

We will make “Forest of Meguro” as a source of living things, and the places for residents to interact with living things, by preservation and creation of various environment such as tree, forests, grasslands, farmlands, springs, watersides, fostering underground water, etc., and foster landscape of Meguro through various measures to conserve and create natural environment. Also we will designate the base forests or trees as Biodiversity Conservation Forest, and will continue to regularly conduct the monitoring surveys by residents or specialized institutions in order to grasp the changes of natural environment, and further promote the activities to realize the feature of the city’s future through cooperation and collaboration with residents. In doing these activities in each area, we will share information with the other areas, and will formulate effective ecological network covering whole area of the city.

(3)Efforts for "Forest of the city "

1) Setting up “Forest of the city”

“Forest of the city” is a green space spattered in the city that, as a foothold of green, contribute to the expansion of the distribution are of animals and plants, including the greens such as parks, trees in schools and other public facilities, forests of shrines and temples, and conservation forests. This is equivalent to the core district stipulated in reference materials of the guideline of Urban Green Space Conservation Act.

2) Contents of efforts

We will preserve the forests of shrines and temples, and public institutions, and foster the trees of schools. In the parks where the registered residents' groups are acting, we will share the park's future visions through drawing the "future map of the park" with the cooperation of the groups and residents, and will formulate the forests to be preserved and fostered with consideration for the relationship with local residents. We will strive to conserve and foster Forest of the city, especially in the areas where green spaces are insufficient, while taking into consideration the distance of migration and dispersion of living things.

(4) Efforts for "Passages for living things"

1) Setting up "Passages for living things"

"Passages for living things" are the linear tracts of green that connect "Forest of Meguro" and "Forest of the city". These passages include rivers, the trees on the edges of cliffs, green pedestrian paths, trees and green belt on the roadsides, and are equivalent to the "corridor district" stipulated in reference materials of the guideline of Urban Green Protection Act. Meguro City sets up the basic green axes and the branch green stemming from the basic axes, over whole area of the city, and consisting of roadside trees, hedges, rooftop and wall green, and the tracts of the ground surfaces in residential areas. We intend to form green networks in every community of the city. In addition, we set up and make use of "Courses of green promenade for walking" that consists of nine courses and connects parks, shrines, temples, and so on in the city.

We set up five green axes in the network, and in order to secure the connected green spaces, we secure the passages of migration or moving for living things, such as, continuous tracts of trees and herbaceous plants, ground surface without any artificial covering where plants can grow, various water surfaces, and the space in which flying animals such as wild birds and butterflies can fly.

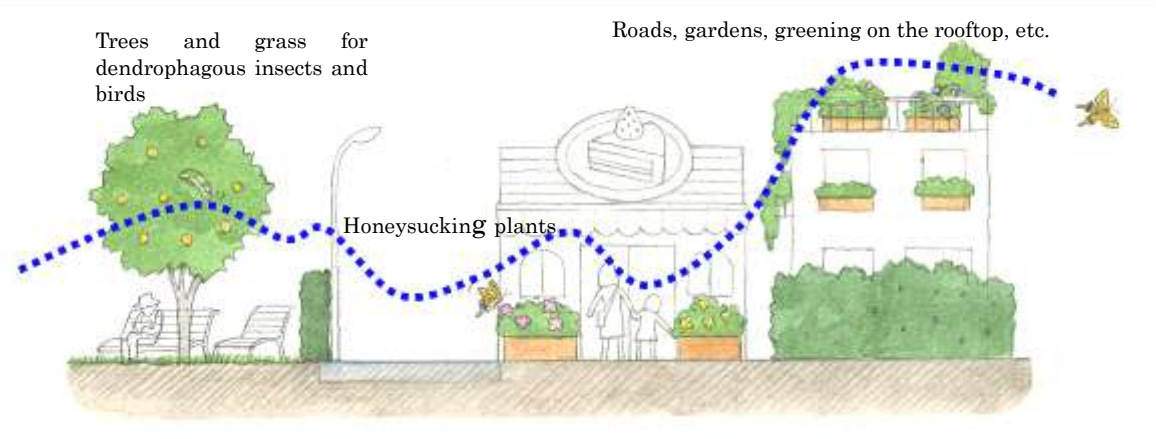


Fig. 4-8　An image of the formation of the passage for butterfly

2) Contents of efforts

We will strive to ensure the connectivity of green throughout the city by conserving forests and new planting. Besides, we will enhance the effectiveness of the continuity of green by removing obstacles, through establishing animal trails or other means. Near the water areas of Meguro River and Nomigawa River, we will restore the habitat that come upstream the rivers from Bay of Tokyo, through purification of water and conservation of space for these animals, by planting hygrophytes. As for the “Courses of green promenade for walking”, we will develop and make use of the courses as the axes of activities where people and living things meet and interact.

(5)Efforts for "Gardens for living things"

1) Setting up of "Gardens for living things"

Outside of “Forest of Meguro”, “Forest of the city” and “Passages for living things”, we will expand greens that are necessary for the stable connectivity of these areas, and make these areas better habitat. These greens are equivalent to buffer zones stipulated in the reference materials of the guidelines of Urban Green Space Conservation Act. Further, we will strive to realize the visions of future city where various environment of greens and soil grounds, such as trees, grasslands, flower beds, cultivated fields, ponds, rooftop greens, and so on, are expanding over whole area of the city, and where there are places for contact with nature.

2) Contents of efforts

We will strive to increase the amount of various green of the city, by promoting the system of green planning for the sites of construction, in which greening of the sites, conservation of existing trees, greening of oftops and walls of the newly planned buildings are necessary, and by developing and renovating the parks.

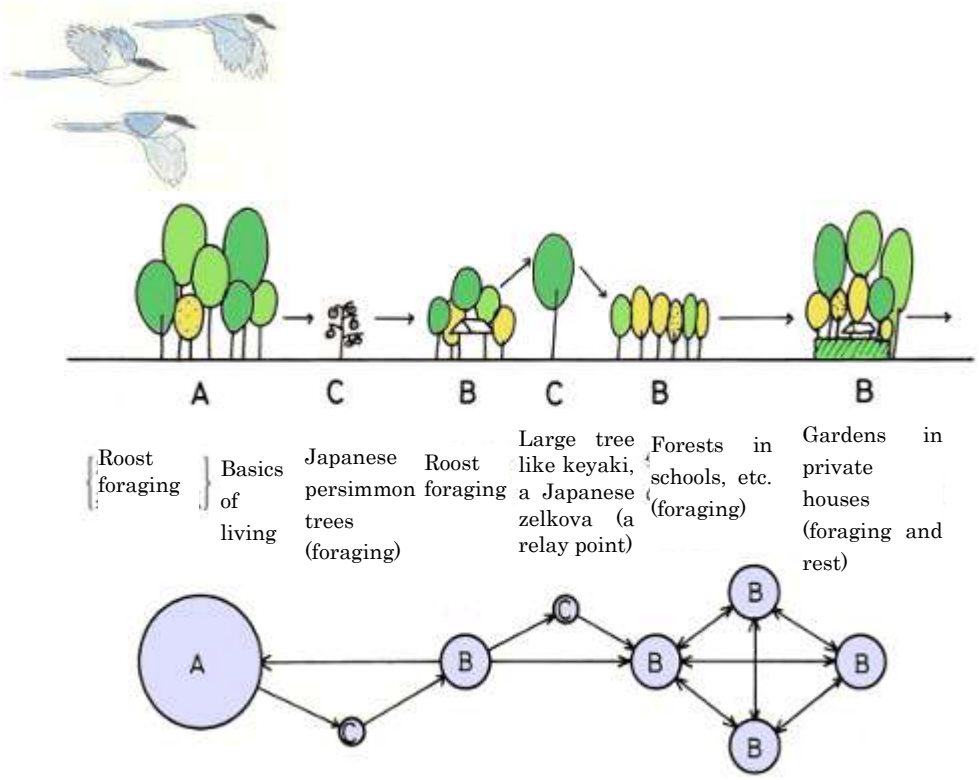
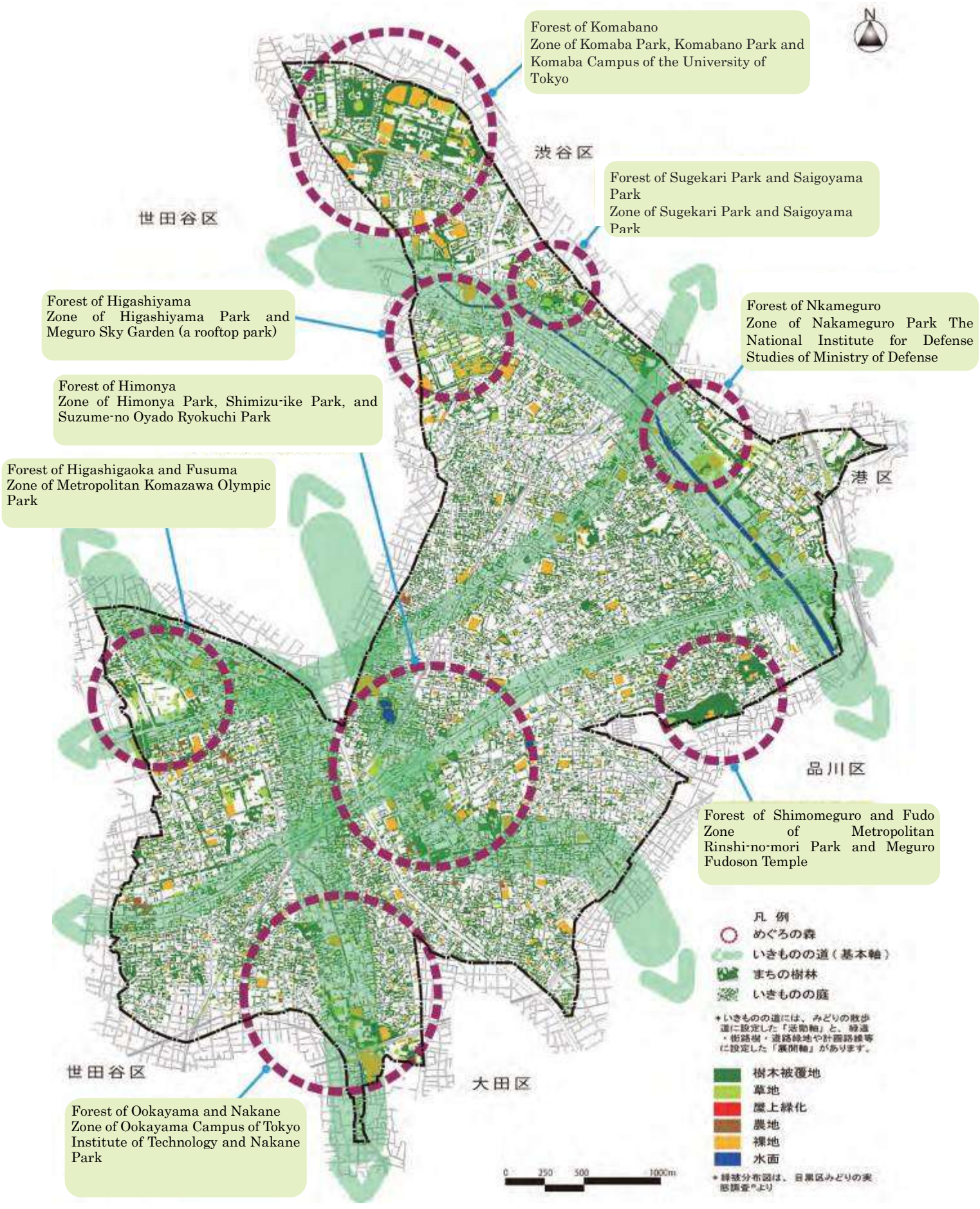


Fig.4-9 Pattern of azure-winged magpie's use of green spaces

Recent studies have revealed that azure-winged magpies inhabit large woods, and from there fly over the green spaces of various sizes to catch foods. Green spaces (A, B and C) that have various areas and flora, are equally important for azure-winged magpies.

（６）Map of Ecological Network (Fig. 4-10　Conceptual map of Ecological Network)



4-3 Our efforts for the implementation of the plan

In order to realize the plan of "Creating an environment in which wild birds can live", it is necessary that each of us pay attention to biodiversity in the activities of daily life. Our behavior with consideration for biodiversity in daily life, will lead to the efforts, not only of Meguro City, but also to those of the neighboring districts, Japan, and the world.

Check list of efforts by individuals to promote implementation of the Plan

Check item	Contents of the check	Checking
Green	Increasing nearby green by planting flowers, foliage plants, etc.	
Water	Making use of rain water for gardening, etc.	
	Observing various living things in Meguro River	
Food	Eating foods of local production, enjoy seasonal delicacies	
	Preparing only amount you can eat, and don't make remains of foods (food loss)	
Contact	Having contact with nature by making use of Green Passage for Walking to visit many places	
	Participating in residents' volunteer activities in Flower and Green Study Center in Nakameguro Park, Nature Observation Center in Komabano Park, Children's Animal Square in Himonya Park, etc.	
Enjoy	Enjoying traditional seasonal events such as cherry-blossom viewing (Ohanami), bathwater with iris petals (Syobuyu), the Star Festival (Tanabata), full moon viewing (Tsukimi),etc.	
Know	Knowing about regional history and culture by visiting Meguro History Museum, Nature and Science Museum in Komaba Campus of the University of Tokyo, etc.	
Convey and Transmit	Feeling wonder and splendor of nature, the changes of the four seasons, and trying to convey these things to others, and to transmit to later generations, through photographs, pictures and	

	writings.	
Protect	Participating it the activities to protect the “connection” between living things and nature, and people and culture.	
	Refraining use of agricultural chemicals, chemical fertilizer, herbicides, etc. that might have an influence upon ecosystem, to reduce the loads upon the habitation environment for living things.	
	Refraining from excessive use of insecticides and pesticides	
Select	Selecting and buying eco-friendly goods with Eco Labels	
	Knowing the place of production of goods in the store	
Review	Reviewing landscape around you while going out in town on foot and by bike.	
Living things	Taking care of your pets with affection and responsibility to the end of their lives	
	No feeding living things outdoors	
Activities	Increasing the level of understanding of importance of biodiversity, and trying to collaborate with other residents of the communities and local governments	
	Participating in “Meguro Green Action Program”	

4-4 Checking the progress of the plan

(1) Establishing a system with participation of all concerned

In order to promote "A Cycle Of Lives Supporting One Another – Plan for Developing A Town Wild Birds Can Inhabit”, it is important that each one of us play a role.

Meguro City will play an important role in laying foundations for promoting the implementation of the plan, through establishing a system necessary for cooperation and collaboration among members concerned, making opportunity for sharing and exchange of information, and for establishing support system for activities by residents.

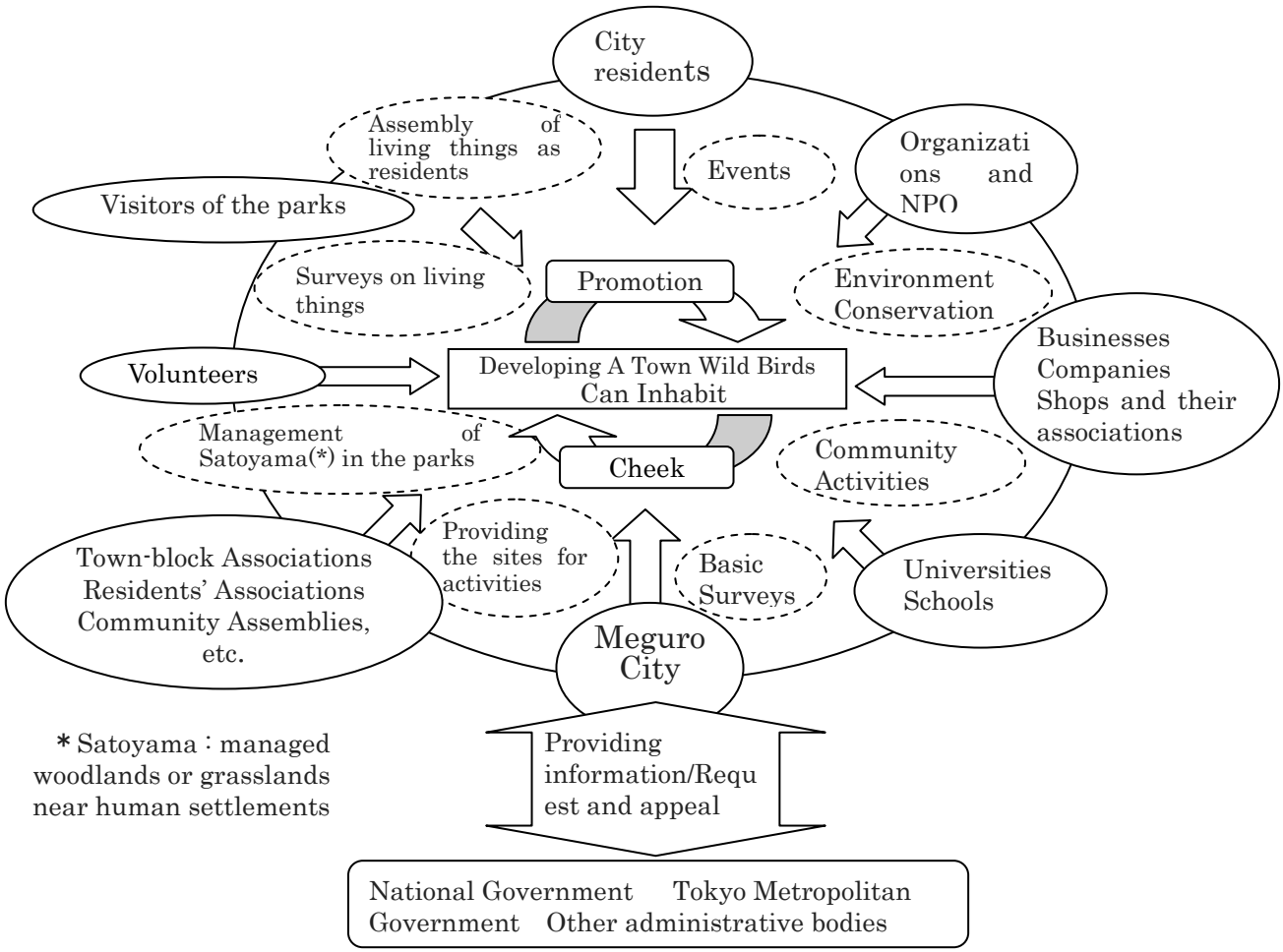


Fig.4-11 Image of the system to implement the plan by the efforts of all the members concerned

(2) How to check the progress of implementation of the plan

This plan has a very long implementation period. Therefore, we will check the progress of the policies of the plan, through confirming the progress of the short-term indicators of the plan.

Besides, we will review the contents of the plan, taking into consideration the changes of natural environment and social situations.

(3)Measures of publicity on the progress of the plan

We will compile the progress of the policies of the plan, the results of implementation, and the challenges to be addressed in the future, and will disclose these results in the style that is easy to understand for everyone.

(5) Relationship with Aichi Biodiversity Targets

Table 4-1

Aichi Targets (Individual target by 2020)				Relation with Meguro targets
Strategic Goal*1	National Targets*1	20 targets		
A Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	Achieving the "mainstreaming of biodiversity across society"	1	People are aware of the values of biodiversity and act with this awareness to conserve and use it sustainably	◎
		2	Both national and local governments develop each plan taking biodiversity into consideration	◎
		3	Systems and policies harmful to biodiversity should be eliminated, phased out or reformed	△
		4	Governments, business and all the parties concerned should take steps to achieve sustainable production and consumption	◎
B Reduce the direct pressures on biodiversity and promote sustainable use	Reduce the rate of loss of natural habitats, as well as their degradation and fragmentation	5	The rate of loss of all natural habitats, including forests, where living things live, should be at least halved and where feasible brought close to zero	◎
	Engage in agriculture, forestry, and fisheries that ensure the conservation of biodiversity in a sustainable manner	6	All fish and invertebrate stocks, including shells, should be managed and harvested sustainably, with no significant adverse impacts on ecosystems and biodiversity	—
		7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	△
	Improve the stage of contamination from nitrogen and phosphorous, conserve aquatic organisms and increase their productivity, and maintain water quality an habitats	8	Pollution buy chemicals are controlled to levels that are not detrimental to ecosystems and biodiversity	△
	Identify invasive alien species based upon the results of examinations of the enforcement status for the Invasive Alien Species Act, and lay out the order of priority for controlling these invasive alien species, etc.	9	Invasive alien species that are detrimental to environment are controlled and their pathways are controlled to prevent their introduction	◎
	Promote initiatives for minimizing human-induced pressures	10 ☆	Vulnerable ecosystems including coral reefs are protected	△
C To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	Appropriately conserve an manage 17% of inland areas and the like, and 10% of ocean areas and the like	11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, are conserved	△
	Prevent the extinction of threatened species, and maintain the genetic diversity of crops and livestock animals, etc.	12	The extinction of known threatened species is prevented and their conservation status are improved and sustained	◎
		13	The genetic diversity within a certain species is safeguarded	◎ —

D Enhance the benefits to all from biodiversity and ecosystem services	Strengthen the benefits received from biodiversity and ecosystem services through the conservation and restoration of ecosystems	14	Ecosystems are restored and safeguarded, taking into account the needs that the blessings of nature are shared with children and the poor	◎
	Restore at least 15% or greater of degraded ecosystems, thereby contributing to climate change mitigation and adaptation	15	Ecosystem resilience is enhanced, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	◎
	Ratify the Nagoya Protocol on ABS and implement domestic measures	16 ☆	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, without distinction of nations and areas	—
E Enhance implementation through participatory planning, knowledge management and capacity building	Promote policies base on the NBSAP	17 ☆	All the parties concerned are engaged in developing strategies and implementing action plans	◎
	Have traditional knowledge be accorded respect, strengthen scientific grounds as well as the connections between science and policy, and effectively and efficiently mobilize the funds needed to achieve the Aichi Biodiversity Targetes	18	The traditional knowledge concerning living things and nature is respected and safeguarded	◎
		19	Knowledge and technologies conducive to conserving biodiversity are improved and widely shared	◎
		20	The mobilization of financial resources for effectively implementing the strategic plan from all sources, is consolidated and enhanced	◎

Legend:

☆ : Individual target to be achieved by 2015 in Aichi Targets

◎ : (Relationship with the targets of this plan) Meguro City has already been promoting as its policy, and has incorporated as a plan in this regional strategy

△ : Though indirectly, Meguro City has incorporated as a plan in this regional strategy

— : Meguro City has not incorporated as a plan in this regional strategy

*1 : According to the targets of"Japan's National Targets for the Achievement of the Aichi Biodiversity Targets 2012-2030"

*2 : According to the targets of Nijyu-maru Project (Double 20 campaign) promoted by Japan committee for IUCN, International Union for Conservation of Nature and Natural Resources

Supplementary Materials 1:

"A Cycle of Lives Supporting One Another"

Basic Act on Biodiversity stipulates that prefectures and municipalities shall endeavor to set regional biodiversity strategy within their areas, and to promote policies in a well-planned manner. According to the Act, Meguro City decided to formulate its local biodiversity strategy based on the National Biodiversity Strategy.

Partly because of the fact that my laboratory in Komaba Campus of the University of Tokyo is located in Meguro City, I was appointed as the chairperson of Committee for Developing Meguro City Regional Biodiversity Strategy, which was my great honor.

Actually, Meguro City is a municipality with a long history in which, before biodiversity became the issues on the international agenda, it has been actively engaged in the activities such as the development of parks and biological research in the city area. Owing to this unique foundation, we have been able to discuss the issues from truly various points of view in the committee consisting of "diversified" members including local residents, volunteers, and academic experts who have great interest in nature and environment.

The biggest challenge in formulating the city's local strategy is that since Meguro City is one of the so-called 23 wards in central Tokyo, its strategy should be positioned as the one in urban areas. In general, in urban areas there remains almost no pristine nature, but much of nature there is artificially created. Therefore it might be inevitable that the local biodiversity strategies in urban areas are different from those of the regions richly endowed with nature. After the keen and enthusiastic deliberations in the committee, we, members of the committee, have reached the conclusion that the city's strategy should be constructed in order to propose that we, citizens of the city, have much familiarity with nature in the urban area, perceive its value, and continue to cherish it as before.

Another situation we had to take into consideration in the deliberations by the committee is that citizens' awareness of the meaning of the word, "biodiversity", was not so high. It is true that the word, biodiversity, was not coined long ago, and in addition, the term might be hard to understand because there is complex structure within genes, species, ecosystem, etc. For that reason, as for climate change and global warming, one of the two main themes concerning the global environment, whereas it has a yardstick easy to comprehend, that is, "average temperature", it is not so easy to really feel and grasp the significance of biodiversity.

Taking these circumstances into accounts, in this biodiversity strategy, we, members of the committee, dared to adopt the concept, "A Cycle of Lives Supporting One Another", as an alternative to biological diversity for the purpose of helping as many residents understand the meaning of the word as possible. Thanks to the serious discussions over a long period of time, on the many issues including an alternative mentioned above in the committee, I am confident and at the same time, proud that we have formulated the unique and

original regional biodiversity strategy in the typical urban area, which could be a model for other urban municipalities.

I sincerely hope that as many citizens as possible, taking advantage of an opportunity of this formulation of Meguro City Regional Biodiversity Strategy, will look back to the nearby nature, and become in contact with nature with a more friendly way. Besides, I would expect that all the people concerned at the various administrative levels should always keep in mind the concept of biodiversity when planning and implementing all policies.

Finally, I would like to extend my heartfelt thanks to all the members of the committee who devotedly and repeatedly have engaged themselves in discussions over long period of time, in order to formulate this strategy, and to all the many citizens who have actively participated in the discussions, and also to all those concerned who have helped and supported us to formulate this strategy.

March, 2014

Representing Committee for Developing Meguro City Regional Biodiversity Strategy

Motomi Ito
Chairperson of Committee

Supplementary Material 2:

List of members of Committee for Developing Meguro City Regional Biodiversity Strategy

	List of members	Titles and organizations
1	ISHIKAWA, Masako	Circle Garden Club, Registered residents' group of Nakameguro Park
2	ICHIDA, Atsuko	Nature Correspondent of Meguro City
3	ITO, Motomi (1)	Professor of Graduate School of Arts and Sciences, the University of Tokyo Director of Komaba Museum (Biodiversity), the University of Tokyo
4	UEDA, Eimon	Nature Correspondent of Meguro City
5	KURAMOTO, Noboru (2)	Professor of Faculty of Agriculture, Meiji University (Landscape architecture)
6	NISHIMURA, Yasuki	Director of Department of Publishing and Project, Jiyugaoka Shopping District Promotion Association Part-time Lecturer of Sanno University
7	HAYANO, Konomi	Environmental Counselor Advisor for consumer life (Field of Consumer Life)
8	YANO, Makoto	Scientist emeritus (Environmental education), Institute for Nature Study, National Museum of Nature and Science, Tokyo
9	WATASHIMA, Ikuhiro	Principal of Fudo Municipal Elementary School, Meguro City

(1): chairperson

(2): vice chairperson

*: As of April 1, 2013

Supplementary material 3: Explanation on biological diversity

(1) Basic Act on Biodiversity (Act No.58 of June 6, 2008)

Preamble

Since the creation of life, organisms have evolved adjusting themselves to various environments through a several billion-year history. There are now diversified organisms on the earth, and a diversified ecosystem has been formed through interaction with natural components of the environment surrounding organisms, including air, water, and soil.

Human beings are living through enjoying benefits from biodiversity. Biodiversity thus serves as a basis of the survival of human beings. In addition, biodiversity, as the particular assets of each region, also supports the diversity of unique regional culture.

On the other hand, biodiversity is facing serious crises, including extinction of species and destruction of ecosystems due to development and other activities by human beings, deterioration of satoyama (managed woodlands or grasslands near human settlements), etc. due to reduced human activities along with changes in socioeconomic conditions and disturbance of ecosystems, etc. by alien species, etc. In addition, climate changes, including global warming, which are recently rapidly advancing, have exceeded the speed at which species and ecosystem can adjust themselves, and are thus likely to have serious impacts, including extinction of many species. Therefore, it has become a major challenge, from the perspective of conservation of biodiversity, to make efforts to prevent global warming.

Seen from a global standpoint, biodiversity has been significantly damaged, including decrease and deterioration in forests and decrease in marine biological resources due to overexploitation. Taking into consideration that the Japanese economy and society are carried on in a close mutual dependence relation with other countries, it is important for Japan to play a leading role in the international community to ensure biodiversity.

We are responsible for ensuring biodiversity, which is a common property of all human beings, and for carrying it on to the next generation so that human beings can continue enjoying benefits therefrom in the future. Now is the time to mark a first step toward realizing a sustainable society, in which human beings can continue enjoying benefits from biodiversity in the future, while comprehensively promoting policies to ensure biodiversity and avoiding or minimizing impacts on biodiversity.

Photo Diversity of genes: Patterns on body differ among individuals of the same species (Example of Japanese common toad)

(2) Three types of biodiversity

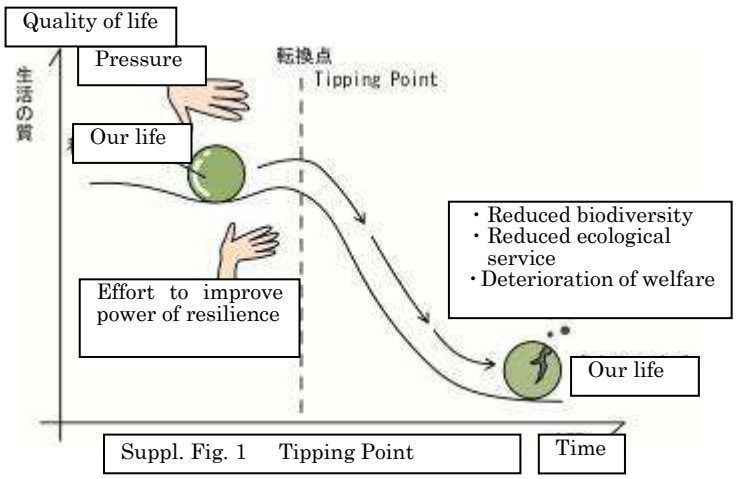
The Convention on Biological Diversity formulates a definition that considers biodiversity as existence of differences

among all living organisms. It provides that biodiversity is found at 3 levels, on ecosystem, among species, within species (on genes).

In respect of biodiversity on ecosystem, it relates to various types of ecosystems are formed in each region, including lagoons, coral reefs, forests, wetlands, rivers, etc. Diversity of species refers to the situation where various animals, plants, fungi, bacteria, and so forth, inhabit and breed. Biodiversity at gene level refers to the natural phenomenon that even within the same species there are differences at gene level among individuals and populations. So, it should be noted that in the natural world, as described above, a variety of differences are found at various levels. And it is of a particular significance that these differences should be preserved to comprehensively maintain the diversity of organisms that represent the results of inheritance in the long history of evolution. Therefore, in conserving biodiversity, it is of importance that we should conserve the differences of ecosystem and biota indigenous to each region.

(3) Tipping Point

As pressure on biodiversity increases, there will be a risk that some types of ecosystems shift to new, alternative states, and when these new states exceed Tipping Point, there will be serious effects on the well-being of mankind (rich life of human beings). It is difficult to determine exactly where this Tipping Point is, but when the ecosystem shifts to a new state once, it will be very difficult, if not impossible, to return to a previous state. (Source: Secretariat of the Convention on Biological Diversity)



Suppl. Fig. 1 Tipping Point

It is said that a variety of efforts to conserve biodiversity have been made in the world, but that the loss of biological diversity is still ongoing, therefore the actions to be taken in 10-20 years are very important.

Taking these things into consideration, in the 10th Conference of the Parties (COP10) of Convention on Biological Diversity, 20 individual targets (Aichi targets) were set as short-term goals to implement the effective and urgent actions in order to stop the loss of biodiversity by 2020 (relationship between Aichi Biodiversity Targets and targets of Meguro City is shown on P.59).

(4) Four crises of biodiversity

Biodiversity is on the verge of crisis all over the world. Four causes of the crisis of biodiversity in Japan are listed as follows: (summarized from the data of National Biodiversity Strategy of Japan)

<u>First crisis brought about by human activities and development</u>

The first crisis is the effects on biodiversity due to negative factors generated by human activities such as development and overexploitation. Specifically, wildlife habitat and environment for breeding have been decreased and disappeared due to such human activities as development of farmlands and waterways giving priority to economical efficiency, straightening/immobilization of rivers, reclamation of lagoons and wetlands, overexploitation of population of wildlife for ornamental use and commercial use, resulting in giving serious effects of biodiversity.

Second crisis brought about by reduced human activities

Second crisis brought about by reduced or discontinued human approaches to the nature

Secondary forests (fuelwood forests, farm forests, etc.) and secondary grasslands (meadows, etc.) in Satochi-Satoyama had been maintained as necessities for economic activities. Such human-made areas had grown a variety of living things specific to each environment. However, reduced human activities such as coppice regeneration and raking of fallen leaves in firewood forests, have greatly changed the environment there, resulting in the noticeable change of the kinds of living things there.

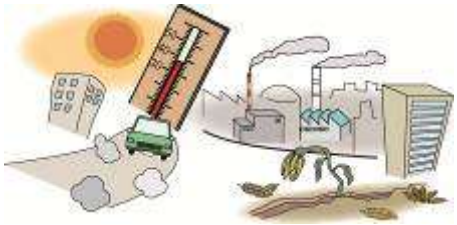
Third crisis brought about by artificially-introduced factors

Living things introduced from foreign countries or other areas in Japan, including alien species, have significantly changed the ecosystem, resulting in becoming a great threat to regionally-specific biota and ecosystems.

Besides, the use of a variety of chemical substances such as pesticides used for the purpose of modern and convenient human lives, might have a negative effects of living things other than targeted organism. Both of these things mentioned above are said to be one of the main factors significantly affecting biological diversity.

Fourth crisis brought about by the change of global environment

Fourth crisis is the effects on biodiversity caused by the change of the earth's environment, such as global warming. These effects include the change of phenology caused by global warming, climate change such as the change of precipitation caused by the increase of temperature, and subsequent possible changes of suitable place for food production and fishing ground. As a result, it is predicted that these changes might increase the risks of eliminating many living things on this planet, out mother earth.



Supplementary Material 4:

Checklist for birds observed in Meguro City (as of December 2013)

Family name	Scientific name	English name	Japanese name	Migration	Check
Anatidae	*Aix galericulata*	Mandarin duck	Oshidori	VI	☐
	Anas acuta	Pintail	Onaga-gamo	VI	☐
	Anas penelope	Eurasian wigeon	Hidori-gamo	VI	☐
	Anas platyrhynchos	Mallard	Ma-gamo	VI	☐
	Anas poecilorhyncha	Spot-billed duck	Karu-gamo	I	☐
	Anas crecca	Greeen-winged teal	Ko-gamo	VI	☐
	Aythya ferina	Pochard	Hoshi-hajiro	VI	☐
	Aythya fuligula	Tufted duck	Kinkuro-hajiro	VI	☐
Podicipedidae	*Podiceps ruficollis*	Little grebe	Kaitsuburi	VI	☐
Columbidae	*Streptopelia orientalis*	Rufous turtle dove	Kijibato	I	☐
	Sphenurus sieboldii	Japanese green-pigeon	Ao-bato	IV	☐
Phalacrocoracidae	*Phalacrocorax carbo*	Great cormorant	Kawa-u	I	☐
Ardeidae	*Ixobrychus sinensis*	Chinese little bittern	Yoshi-goi	VII	☐
	Gorsachius goisagi	Japanese night heron	Mizo-goi	IV	☐
	Nycticorax nycticorax	Black-crowned night heron	Goi-sagi	I	☐
	Butorides striatus	Green-backed heron	Sasa-goi	VII	☐
	Bubulcus ibis	Cattle egret	Ama-sagi	VII	☐
	Ardea cinerea	Gray heron	Ao-sagi	I	☐
	Egretta alba	Great egret	Dai-sagi	I	☐
	Egretta intermedia	Intermediate egret	Chusagi	VI	☐
	Egretta garzetta	Little egret	Ko-sagi	I	☐
Rallidae	*Rallus aquaticus*	Water rail	Kuina	VII	☐
	Gallicrex cinerea	Watercock	Tsuru-kuina	V	☐
	Fulica atra	(European) coot	O-ban	VII	☐
Cuculidae	*Cuculus poliocephalus*	Lesser cuckoo	Hototogisu	IV	☐
	Cuculus saturatus	Oriental cuckoo	Tsutsudori	IV	☐
	Cuculus canorus	Common cuckoo	Kakko	IV	☐
Caprimulgidae	*Caprimulgus indicus*	Jungle nightjar	Yotaka	VII	☐
Apodidae	*Chaetura caudacuta*	White-throated needle-tail swift	Hario-amatsubame	IV	☐
	Apus pacificus	White-rumped swift	Amatsubame	IV	☐
	Apus affinis	House swift	Himeamatsubame	I	☐
Charadriidae	*Charadrius dubius*	Little ringed plover	Ko-chidori	VII	☐

Scolopacidae	*Scolopax rusticola*	(European) woodcock	Yama-shigi	IV	☐
	Gallinago hardwickii	Latham's snipe	Oji-shigi	VII	☐
	Gallinago gallinago	Common snipe	Ta-shigi	VII	☐
	Tringa brevipes	Gray-tailed tattler	Kiashi-shigi	IV	☐
	Tringa hypoleucos	Common sandpiper	Iso-shigi	I	☐
	Phalaropus lobatus	Northern phalarope	Akaeri-hireashi-shigi	VII	☐
Laridae	*Larus ridibundus*	Black-headed gull	Yuri-kamome	VI	☐
	Larus crassirostris	Black-tailed gull	Umineko	VI	☐
	Larus argentatus	Herring gull	Seguro-kamome	VI	☐
	Sterna albifrons	Little tern	Ko-ajisashi	III	☐
	Sterna hirundo	Common tern	Ajisashi	VII	☐
Accipitridae	*Milvus migrans*	Black kite	Tobi	I	☐
	Circus spilonotus	Marsh harrier	Chuhi	VII	☐
	Accipiter gularis	Japanese lesser sparrow hawk	Tsumi	I	☐
	Accipiter nisusu	Sparrow hawk	Hai-taka	VI	☐
	Accipiter gentilis	(Northern) goshawk	O-taka	VI	☐
	Bustastur indicus	Gray-faced buzzard-eagle	Sashiba	IV	☐
	Buteo buteo	Common buzzard	Nosuri	VI	☐
	Otus bakkamoena	Collared scops owl	O-konoha-zuku	VII	☐
Strigidae	*Strix uralensis*	Ural owl	Fukuro	VII	☐
	Ninox scutulata	Brown hawk-owl	Aoba-zuku	III	☐
Alcedinidae	*Halcyon coromanda*	Ruddy kingfisher	Aka-shobin	VII	☐
	Alcedo atthis	Common kingfisher	Kawasemi	I	☐
Picidae	*Jynx torquilla*	Wryneck	Arisui	VII	☐
	Dendrocopos kuzuki	Japanese pygmy woodpecker	Ko-gera	I	☐
	Dendrocopos major	Great spotted woodpecker	Akagera	VII	☐
	Picus awokera	Japanese green woodpecker	Aogera	I	☐
Falconidae	*Falco tinnunculus*	(Eurasian) kestrel	Chogenbo	VI	☐
	Falco columbarius	Merlin	Kochogenbo	VII	☐
	Falco subbuteo	Hobby	Chigohayabusa	VII	☐
	Falco peregrinus	Peregrine falcon	Hayabusa	VI	☐
Campephagidae	*Pericrocotus divaricatus*	Ashy minivet	Sanshokui	IV	☐
Monarchidae	*Terpsiphone atrocaudata*	Black paradise flycatcher	Sankocho	IV	☐
Laniidae	*Lanius tigrinus*	Thick-billed shrike	Chigomozu	VII	☐
	Lanius bucephalus	Bull-headed shrike	Mozu	I	☐

	Lanius cristatus	Brown shrike	Akamozu	VII	☐
Corvidae	*Garrulus glandarius*	Jay	Kakesu	IV	☐
	Cyanopica cyana	Azure-winged magpie	Onaga	I	☐
	Corvus corone	Carrion crow	Hashiboso-garasu	I	☐
	Corvus macrorhynchos	Jungle crow	Hashibuto-garasu	I	☐
Regulus	*Regulus regulus*	Goldcrest	Kikuitadaki	VI	☐
Paridae	*Parus montanus*	Willow tit	Ko-gara	VI	☐
	Parus varius	Varied tit	Yamagara	VI	☐
	Parus ater	Coal tit	Higara	VI	☐
	Parus major	Great tit	Shiju-kara	I	☐
Alaudidae	*Alauda arvensis*	Skylark	Hibari	IV	☐
Hirundinidae	*Riparia riparia*	Bank swallow	Shodo-tsubame	IV	☐
	Hirundo rustica	Barn swallow	Tsubame	III	☐
	Delichon urbica	House martin	Iwa-tsubame	VI	☐
Pycnonotidae	*Hypsipetes amaurotis*	Brown-eared bubul	Hiyodori	I	☐
Cettiidae	*Cettia diphone*	Bush warbler	Uguisu	VI	☐
Aegithalidae	*Aegithalos caudatus*	Long-tailed tit	Enaga	VI	☐
Phylloscopidae	*Phylloscopus borealis*	Arctic warbler	Meboso-mushikui	VI	☐
	Phylloscopus tenellipes	Pale-legged willow warbler	Ezo-mushikui	VI	☐
	Phylloscopus coronatus	Crowned willow warbler	Sendai-mushikui	VI	☐
Zosteropidae	*Zosterops japonica*	Japanese white-eye	Mejiro	I	☐
Acrocephalidae	*Acrocephalus arundinaceus*	Great reed warbler	O-yoshikiri	IV	☐
	Acrocephalus bistrigiceps	Black-browed reed warbler	Koyoshikiri	IV	☐
Cisticolidae	*Cisticola juncidis*	Fan-tailed warbler	Sekka	IV	☐
Bombycillidae	*Bombycilla garrulus*	Bohemian waxwing	Ki-renjaku	VI	☐
	Bombycilla japonica	Japanese waxwing	Hi-renjaku	VI	☐
Troglodytidae	*Troglodytes troglodytes*	Winter wren	Misosazai	VII	☐
Sturnidae	*Sturnus cineraceus*	Gray starling	Mukudori	I	☐
	Sturnus philippensis	Red-cheeked myna	Ko-mukudori	IV	☐
Turdidae	*Zoothera sibiricus*	Siberian thrush	Mamiziro	IV	☐
	Turudus dauma	White's ground thrush	Tora-tsugumi	VI	☐
	Turdus cardis	Gray thrush	Kuro-tsugumi	IV	☐
	Turdus obscurus	Eye-browed thrush	Mamichajinai	IV	☐
	Turudus pallidus	Pale thrush	Shirohara	VI	☐
	Turdus chrysolaus	Brown thrush	Akahara	VI	☐

	Turdus naumanni	Dusky thrush	Tsugumi	VI	☐
	Erithacus calliope	Siberian rubythroat	No-goma	IV	☐
	Erithacus cyane	Siberian blue robin	Ko-ruri	IV	☐
	Tarsiger cyanurus	Siberian bluechat	Ruri-bitaki	VI	☐
	Phoenicurus auroreus	Daurian redstart	Jo-bitaki	VI	☐
	Monticola solitarius	Blue rockthrush	Iso-hiyodori	I	☐
	Muscicapa griseisticta	Gray-spotted flycatcher	Ezo-bitaki	IV	☐
	Muscicapa sibirica	Sooty flycatcher	Same-bitaki	IV	☐
	Muscicapa latirostris	Brown flycatcher	Ko-same-bitaki	IV	☐
	Ficedula narcissina	Narcissus flycatcher	Ki-bitaki	IV	☐
	Ficedula mugimaki	Mugimaki flycatcher	Mugimaki	V	☐
	Cyanoptila cyanomelana	Blue-and-white flycatcher	O-ruri	IV	☐
Passerinae	*Passer montanus*	Tree sparrow	Suzume	I	☐
Motacillidae	*Motacilla cinerea*	Gray wagtail	Ki-sekirei	I	☐
	Motacilla alba	White wagtail	Haku-sekirei	I	☐
	Motacilla grandis	Japanese wagtail	Seguro-sekirei	I	☐
	Anthus hodgsoni	Indian tree pipit	Binzui	VI	☐
	Anthus spinoletta	Water pipit	Tahibari	VI	☐
Fringillidae	*Fringilla montifringilla*	Brambling	Atori	VI	☐
	Carduelis sinica	Oriental greenfinch	Kawara-hiwa	I	☐
	Carduelis spinus	Siskin	Ma-hiwa	VI	☐
	Acanthis flammea	Common redpoll	Beni-hiwa	VII	☐
	Uragus sibiricus	Long-tailed rose finch	Beni-mashiko	VII	☐
	Pyrrhula pyrrhula	Bullfinch	Uso	VI	☐
	Coccothraustes coccothrautes	Hawfinch	Shime	VI	☐
	Eophona migratoria	Chinese grosbeak	Ko-ikaru	V	☐
	Eophona personata	Japanese grosbeak	Ikaru	VII	☐
	Emberiza cioides	Siberian meadow bunting	Hojiro	VI	☐
	Embeziza rustica	Rustic bunting	Kashiradaka	VI	☐
	Embeziza elegans	Yellow-throated bunting	Miyama-hojiro	VII	☐
	Embeziza sulphurata	Japanese yellow bunting	Nojiko	VII	☐
	Embeziza spodocephala	Black-faced bunting	Aoji	VI	☐
	Embeziza variabilis	Gray bunting	Kuroji	VI	☐

Foreign species

Family name	Scientific name	English name	Japanese name	Migration	Check
	Bambusicola thoracicus	Chinese bamboo partridge	Kojukei		☐
	Cygnus olor	Mute swan	Kobuhakucho		☐
	Geopelia striata	Zebra dove	Choshobato		
	Agapornis roseicollis	Peach-faced lovebird	Kozakurainko		☐
	Amazona oratrix	Yellow-headed amazon	Ookiboshiinko		☐
	Myiopsitta monachus	Monk parakeet	Okinainko		☐
	Psittacula k.krameri		Senegaruhonseiinnko		☐
	Psittacula krameri manillensis	Indian rose-necked parakeet	Wakakehonseiinko		☐
	Nymphicus hollandicus	Cockatiel	Okameinko		☐
	Melopsittacus undulatus	Budgerigar	Sekiseiinko		☐
	Vidua macroura	Pin-tailed whydah	Tennincho		☐
	Cardinalis cardinalis	Northern cardinal	Shojokokancho		☐
	Paroaria coronata	Red-crested cardinal	Kokancho		☐
	Estrilda melpoda	Orange-cheeked waxbill	Hokocho		☐
	Garrulax canorus	Melodius laughing thrush	Gabicho		☐
	Leiothrix lutea	Red-billed mesia	Soshicho		☐
	Padda oryzivora	Java sparrow	Buncho		☐
	Sturnus pagodarum	Brahminy starling	Zuguromukudori		☐
	Acridotheres cristatellus	Crested myna	Hakkacho		☐
	Amandava amandava	Red avadavat	Benisuzume		☐
	Lonchura malacca	Tricolored mannikin	Ginbara		☐
	Vidua chalybeata	Village indigobird	Shikoncho		☐
	Uraeginthus cyanocephalus	Blue-capped cordon-blue	Rurigashiraseikicho		☐
	Euplectes orix	Orange bishop	Kinrancho		☐
	Gracula religiosa	Common hill myna	Kyukancho		☐

Raised birds

Family name	Scientific name	English name	Japanese name	Migration	Check
	Coturnix japonica	Japanese quail	Uzura		☐
	Phasianus versicolor	Green pheasant	Kiji		☐
	Phasianus colchicus	Common phesant	Kouraikiji		☐
	Pica pica	Eurasian magpie	Kasasagi		☐

Domestic fowl

Family name	Scientific name	English name	Japanese name	Migration	Check
	Chrysolophus pictus	Golden pheasant	Kinkei		☐
	Anas platyrhynchos var.domesticus	Domestic duck	Ahiru		☐
	Anser cygnoides	Chinese goose	Gacho(Shinagacho)		☐
	Gallus gallus domesticus	Chicken	Niwatori		☐
	Streptopelia risoria	Ringneck dove	Juzukakebato		☐
	Columba livia	Rock dove	Dobato		☐
	Serinus canaria	Domestic canary	Kanaria		☐
	Lonchura striata var. *domestica*	Bengalese finch	Jushimatsu		☐

Types of migration, season, and other characteritics:

I **Resident**: Birds that are observed all year around in a certain area

II **Wandering birds**: Birds that migrate in Japan according to season. When we see Japan as one area, these birds could be classified as resident birds of Japan.

III **Summer visitor**: Birds that fly to Japan in summer from the areas to the south of Japan, in order to breed there, and return to the original areas in autumn.

IV **Migrant**: Birds that are observed in spring and autumn as they are just passing through en route to their final destinations.

V **Vagrant**: Birds that happen to stray to Japan from their original distribution areas.

VI **Winter visitor**: Birds that breed in the areas to the north of Japan in spring and summer, fly to Japan to overwinter, and fly back to the north.

VII **Rare**: Birds that are rarely observed in Meguro City, and therefore are difficult to be classified as winter birds or wandering birds.

VIII **Domestic fowl**: Birds such as chicken and canary that have been made artificially by breeding, and are observed living outdoors.

IX **Foreign species**: Wild birds that are native in foreign countries, and have been imported to Japan as pets, and so on, and are observed living outdoors after they escaped or were abandoned.

X **Raised birds**: Birds that have been raised and are observed living outdoors after they escaped or were abandoned.

Supplementary Material 5：

Glossary (alphabetical order)

Term	Definition	Reference
Aichi Biodiversity Targets or Aichi Targets	Adopted at 10th Conference of the Parties to the Convention on Biological Diversity (COP10) held in Nagoya, Aichi Prefecture, in October 2010, as new global targets of and after 2011, along with "Biodiversity Strategic Plan 2011-2020". In this "Biodiversity Strategic Plan 2011-2020", short-term targets were set to take effective and urgent actions in order to prevent biodiversity loss by 2020. In addition, 20 individual targets called "Aichi Biodiversity Targets" were set in order to achieve these short-term targets.	
Archetypal experience	The experience one had at a tender age, and will remain at the bottom of the memory. It is said that this experience will continue to influence even when one becomes an adult.	
Basic Act on Biodiversity	Enacted in June, 2008, the Act established the basic principles for the conservation and sustainable use of biological diversity, and clarified the responsibilities of national and local governments, businesses, other private and public organizations, and at the same time, stipulated basic measures for conservation and sustainable use of biological diversity.	
Biodiversity Conservation Forest	Policy of Meguro City regarding green, nature and biodiversity. The city designates the forest that is permanent and of above certain size, such as the parks and public institutions, as Biodiversity Conservation Forest, so that the forest becomes habitat for living things.	
Biodiversity Crisis	Biodiversity is on the verge worldwide crisis. In Japan, as the cause of the degradation of biodiversity, four factors are mentioned as follows. 1. Crisis caused by human activities such as development---crisis caused by the influence of human's overfishing and development 2. Crisis caused by the reduction of human activities with regard to nature Change of environment changed by the reduction of human activities on nature 3. Crisis caused by things and living things brought by human being Influence of alien species, etc. brought from other regions by humans 4. Crisis due to changes in the global environment	

	Impact on biodiversity due to changes in the global environment, such as global warming	
Biotope	Habitat for living things. In nearby places, since little ecosystem formed by various living things is also considered as biotope, in recent years, in primary schools, etc. biotopes have been developed and widely used as educational materials about environment in the integrated study,	
Children's expedition into life in Meguro	Meguro City's events to survey familiar living things in the community with resident participation. In these events, children observe various living things, learn the importance of nature, and think about how we can restore nature in Meguro.	
Convention on Biological Diversity	Convention for the purpose of conservation of biological diversity, the fair and equitable sharing of the benefits arising from the utilization of genetic resources and sustainable use of its components	
CSR	Short for Corporate Social Responsibility	
Eco-gardening	Refers to gardening that is considerate to natural environment, and that grows flowers from seed organically without agricultural chemicals.	
Eco-label	Also referred to as environmental label. Environmental labels provide consumers with information concerning the environmental aspects of the products, and are classified into such types as follows. 1) "Eco Mark" and the like, that are given to the products certified by the independent institutions, which will contribute to the environmental protection on the basis of certain criteria; 2) Environmental information provided by businesses that produced the products; 3) Environmental label that displays quantitatively the environmental information of the products based on the life cycle assessment.	
Eco-stack	Making the habitats of small animals by placing fallen leaves and branches in the forest floor .	
Endangered species in Meguro	Of the species confirmed in Meguro City, species that correspond to endangered species designated in the Red List of Tokyo and that of Japan, are counted.	
Food loss	Foods that are discarded and wasted. In Japan, food loss is estimated at 5-8 million tons a year. This is about equal to 8.13 million tons of rice production in Japan.	
Foreign species (alien or non-native	Living things brought into the area from outside by human beings, and cannot be found in nature of the area. These are	

species)	brought not only from abroad, but also brought in from other parts of Japan, and some seeds are unintentionally carried into the area on the soles of shoes. These foreign species adversely affect nature in the area in particular where the primeval nature should be preserved. In this plan, definitions of foreign species, and so on, are subject to the Invasive Alien Species Act. In addition, planted seeds are classified into planting, and bred animal species are classified into breeding.	
Forest floor	Flora or environment at floor under the tree in forest, forming unique ecosystem made up of grass, shrubs, small animals and fungi, depending on the kinds of wood and trees.	
Green Club	Meguro City's policy concerning of greening. Residents volunteer organization that maintain flower beds on roadsides and in the parks. Meguro City provides Green Clubs with seeds, bulbs and seedlings, and so on.	
Green Paths for Walking	Meguro City set up 9 pedestrian courses for walking as Green Paths for Walking. These paths connect parks, shrines, temples, and so on.	
Heat Island phenomenon	Phenomenon that temperature in the midtown area is higher than that in the suburbs, and is called so because the contour line of temperature of the area looks like an island. It is believed that the phenomenon is caused by the increase of waste heat (air conditioning, automobiles, etc.) and reduction of natural land (soil, water, green space, etc.).	
Local production for local consumption	Food such as vegetables, fruits, meat, fish, dairy products, and so on, that are locally produced and locally consumed. Close cooperation and collaboration between local producers and local consumers could be formed, will help form a community, thereby contributing to the development of culture of their own.	
National Biodiversity Strategy	Stipulated by the provisions of Article 11 of the Basic Act on Biodiversity and Article 6 of Convention on Biological Diversity, is the basic plan of national government on the conservation and sustainable use of biological diversity.	
Nature Correspondents	Meguro City's policy on green and nature. Resident volunteer, in response to the call of the city office, observes nature and life in the neighborhood, and reports to the city office. Meguro City makes use of these materials to compile chronological change of living things in Meguro.	
New Development Plan for Greenery Policy	Regional Biodiversity Strategy of Tokyo Metropolitan Government stipulated by Basic Act on Biodiversity	

Ratio of green coverage	Ratio expressed as percentage of the area covered with green, such as canopy of trees and grass, when viewed from the sky in a certain region.	
Red List	List of names of endangered wildlife made by Ministry of Environment and prefectures. These lists are based on the periodical survey on the status quo of nature and living things. Red is used as a color symbolizing danger or crisis.	
Regional Biodiversity Strategy	Based on Article 13 of Basic Act on Biodiversity, the basic plan on the conservation and sustainable use of biodiversity by prefectures and municipalities	
Registered residents' groups for the activities in the parks	Residents' volunteer group registered by Meguro City engage in such activities in the parks as cleaning of the parks, maintaining flower beds in the parks, planning and managing events aimed at local residents, and so on. Meguro City supports the activities by these groups in one way or another.	
Satoyama	Managed woodlands of grasslands near human settlements.	
United Nations Framework Convention on Climate Change	Adopted in 1992 in order to carry out coordinated international efforts on the preventive measures against global warming, and came into effect in 1994. This is known as the Twin Treaties along with Convention on Biological Diversity. Japan ratified this convention in 1993.	

Supplementary Material 6:

Summary

Daily life of each of us all in Meguro City is supported by biological diversity on a global scale. And yet, it is said that in recent years as worldwide biodiversity loss has been progressing, the loss might cause grave havoc on the ecosystem of the earth. Given this critical situation of biodiversity, Japan ratified Convention on Biological Diversity in 1993, and consequently enacted Basic Act on Biodiversity in 2008. Based on the Act, Meguro City has formulated this plan, “A Cycle Of Lives Supporting One Another: Plan For Developing A Town Wild Birds Can Inhabit”, that is, Meguro City Regional Biodiversity Strategy. In the process of formulating the plan, the city set up the committee for developing its biodiversity strategy consisting of citizens and academic experts, which has ardenty deliberated the issues of the plan. At the same time, the city has provided as many opportunities for hearing citizen’s opinions as possible, and has incorporated those opinions into the plan, if appropriate.

Although Meguro City, whole area of which has been urbanized, has recently seen the decline of the number of the trees in residential areas, local residents there are enjoying nature close to their daily lives, for example, in their gardens and the nearby schools. In the parks which local residents use as their base for their volunteer activities, they are actively participating in the management and conservation of the trees, and are tending the flowerbeds in the parks. Considering the characteristics of the city and its residents, this strategy regards and adopts wild birds as the symbol of familiar nature and affluent biodiversity. As for specific targets of the strategy, we have proposed “A Town Where Songs of Wild Birds Are Heard” as a future vision of the city, along with the three separate targets, i.e., “Creating diversified environment”, “Living in harmony with nature”, and “Working with the cooperation of all stakeholders”. In this strategy, we have decided to continue to expand the measures for the conservation and sustainable use of biological diversity.

Short-term target year and target period of this plan is 2020 and 2032 respectively. Besides, it has been decided that we will confirm every year the progress indicator of short-term goal, in order to review the plan in response to the changes in socioeconomic conditions and natural environment.

Meguro City Regional Biodiversity Strategy “A Town of Lives Supporting One Another: Plan for Developing a Town Wild Birds Can Inhabit”

March 25, 2014

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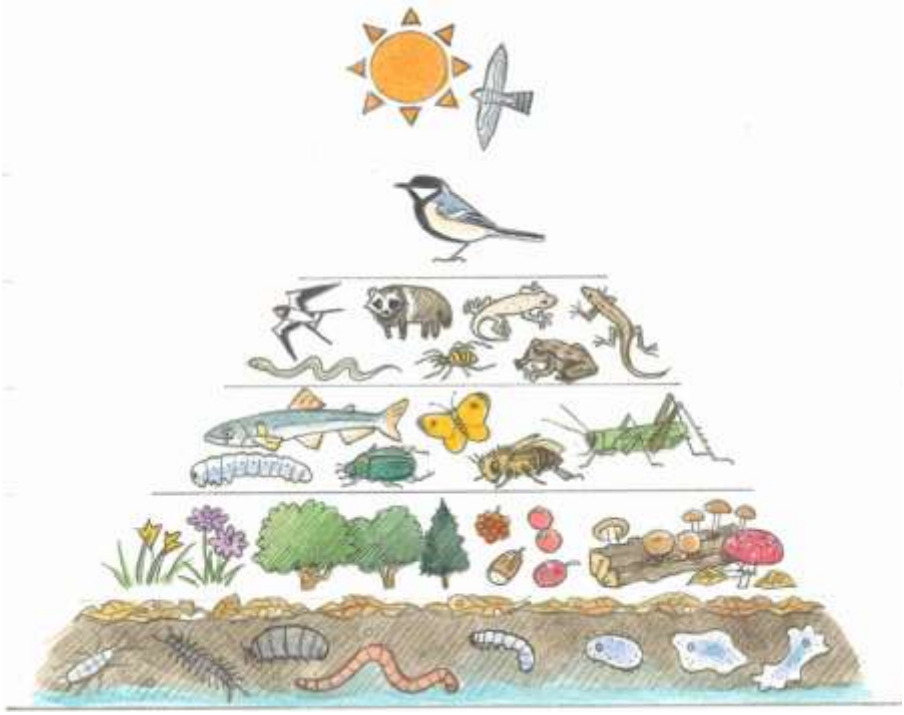
URL of this strategy in website of Meguro City:

http://www.city.meguro.tokyo.jp/gyosei/keikaku/keikaku/kankyo_hozen/tayosei/chiikisenryaku.html

(downloadable as a pdf file)



United Nations Decade on Biodiversity