# **The National Biodiversity Strategy** and Action Plan of Japan 2023-2030





The Roadmap to Realizing Nature-Positive by 2030

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### Irreplaceable Biodiversity

Since the birth of the earliest forms, life on Earth has adapted to diverse environments and evolved into myriad species. Estimates of the total number of current species, including those not yet discovered by science, range as high as 30 million. Each life is interconnected with others, and over the years these connections have created an intricate tapestry of life and today's global environment. Not only are we humans part of this global dynamic ecosystem, but our lives and livelihoods depend on it.

However, we have destroyed ecosystems all over the world, and driven numerous species to extinction. Today, species are disappearing much faster than when the dinosaurs died out. Once lost, humans cannot create life. Bearing in mind that all lives on Earth, including humans, are interconnected and dependent on one another, we must always act humbly and considerately.



Rhododendron kiusianum on Mt. Hiiji-dake in the Kuju mountain range and the Bogatsuru wetland in Aso-Kuju National Park in spring



- Biodiversity that supports life and livelihoods

Our lives are supported by the benefits we obtain from ecosystems, which involve a diverse array of living organisms that contribute to our food and water, and to climate stability. These benefits are known as "ecosystem services".

#### Atmosphere and Water Produced by Organisms

#### - Supporting Services

The oxygen that we breathe has been produced through photosynthesis activity of various plants and blue-green algae over several billions of years. Fertile soil is produced from the decomposition of dead animals and leaves by soil microbes. Rainwater is filtered through forest soil, becoming enriched with nutrients, and flows into rivers and seas. The circulation of water and the regulation of temperature and humidity are deeply linked with evapotranspiration from leaves and the capacity of forest to retain water. Biodiversity is thus fundamental to the existence of all life, including humans.

The Basis of Our Lives - Provisioning Services The rice, vegetables, fish, and meat that we eat, the timber used for housing, and the cotton and hemp used for clothing are all provided from paddy fields, farms, forests, and the sea through agriculture, forestry, and fisheries in Japan. Many agricultural crops are pollinated by insects and birds that visit flowers. The genetic information, shapes, and functions of living organisms provide clues for the improvement of selective breeding, the development of medicines, and technological innovations. In this way, biodiversity supports our way of life.

The Diversity of Nature and Culture - Cultural Services In the face of the rich but sometimes violent natural environment, the Japanese people have cultivated diverse cultures, including characteristic arts which use the beauties of nature as motifs for example, and have formed views that we value life in harmony with nature. The integration of nature and culture has nurtured unique local food cultures, crafts, and performing arts. Contacting with and learning from rich nature is indispensable for the healthy growth of children. Biodiversity is thus a source of the rich culture that supports our spirit.

Our Life Secured by Nature - Regulating Services Rich forests contribute to preventing mountain disasters and soil run-off and ensuring safe drinking water. Coral reefs protect coasts from high waves caused by typhoons. Forests and the oceans play an important role in climate regulation by absorbing greenhouse gases. Agriculture based on reduced use of pesticides and artificial fertilizers protects native species that are the natural enemies of pests and diseases and soil microorganisms, and ensures food safety. A healthy and rich biodiversity guarantees the security of our daily lives into the future.

#### Living in Harmony with Nature

It is important that we live in accordance with the principles of nature, treating nature's gifts and its potential threats with a spirit of gratitude and awe. We also need to work toward a sustainable economy considering nature as an asset to be passed on to future generations. By expanding the relationship between people and nature in this way, we can build a genuinely prosperous society based on the system of nature.

# The Source of Life, The Foundation of Living



**Oirase Stream** 



Bombus hypnorum koropokkrus



Children experiencing nature observation



Old beech tree, Fagus crenata



Stork, Ciconia boyciana, in a paddy field Photo: Toyooka City, Hyogo Prefecture

# **Current State of Biodiversity**

## -Status of Japan's Biodiversity and Ecosystem Services

#### Islands Full of Life – Japan

Japan's long north-south extent, diverse topography, and four distinct seasons have created a diverse environment. As a result, it is estimated that more than 90,000 known species, and up to 300,000 species including those vet to be discovered, inhabit a land area of approximately 380,000 km<sup>2</sup>. Habitats that have been modified by humans, such as *satochi-satoyama*, support species that prefer secondary environments. Migratory birds and sea turtles that migrate over wide areas across national borders for breeding and stopover.

In Japan, about 40% of terrestrial mammals, 80% of amphibians and reptiles, and 50% of vascular plants are endemic. These rates of endemism are outstandingly high when compared, for example, with other countries with large-scale economies.



#### Endemism rates in the top 10 GDP countries

Created based on Biodiversity of Japan: A Harmonious Coexistence between Nature and Humankind by Biodiversity Center, Nature Conservation Bureau, the Ministry of the Environment and World Resources 2000-2001 edited by World Resources Institute (WRI) and others



## Continuing Loss of Biodiversity and Ecosystem Services

Biodiversity loss has been continuing in Japan. Although the rate of loss has been slowing down for some ecosystem types, the overall declining trend is still continuing. For example, in satochi-satoyama, the habitat quality is declining owing to a lack of labor to manage farmlands, canals/reservoirs, and forests. Biodiversity loss is also continuing in shallow coastal waters such as tidal flats, and in inland waters such as rivers and lakes. Moreover, while our life has become wealthier in the aspect of materials by enjoying various benefits from nature, the ecosystem services have been in a degrading trend. For instance, the amount of agricultural, forestry, and fishery products has decreased due to increased imports from overseas. In addition, the capacity of forests to absorb greenhouse gases and purify water has been declining, and the culture and traditional knowledge associated with local nature is being lost.





Provisioning	g service	es	Regulati
Agricultural crops	•	Underuse	Climat
Non-timber forest products	•	Underuse	Air qual
Seafood	\$	Overuse	Wate
Freshwater	⇒	Overuse	Soil
Timber	▶	Underuse	Disaster miti
Raw materials	\$	Underuse	Biological c

Overuse: excessive utilization of resources. Underuse: insufficient utilization of resources.

Disservices	
Damage caused by wildlife	➡
Risk to human health	_

As overall ecosystem services continue to decline, harms that arise from ecosystems (disservices), such as wildlife damage, are becoming prominent.

Assessment of the status of ecosystem services from 2001 to 2021 in JBO3 (2021)

satochi-satoyama, and agricultural ecosystems have been on a decreasing trend.

g services	
	•
/	-
	Ι
atiton	
ntrol	

Cultural services	
Religeon and festivals	\$
Education	•
Landscape	
Traditional arts and crafts	
Tourism and recreation	

	Result of
Legend	Quantitative
	Assessment
Increasing	t
Slightly increasing	▶
Stable	→
Slightly decreasing	\$
Decreasing	ţ

- -: No assessment in JBO3
- : Cases where the information used for the quantitative assessment is insufficient

# **Threats to Richness**

# -Four Crises that Biodiversity is Faced

Four crises with different factors are affecting biodiversity in Japan.



Tanakia tanago, a freshwater fish that inhabits spring-fed waterways and ponds. Its distribution area reduced due to the development of rivers, agricultural lands, and residential areas. It is now found only in a small part of the Kanto Plain.

#### First Crisis : Caused by human activities including development

This is the impact on biodiversity due to negative factors caused by human activities. Habitat loss and degradation due to development, and population decline due to overexploitation and illegal collection, remain problems. Climate change mitigation measures such as solar and wind power generation may also have negative effects on ecosystems, depending on how they are introduced.

Freshwater fishes such as rice fish, Oryzias latipes, and aquatic insects such as predatory diving beetles, Cybister tripunctatus lateralis, used to be familiar, but in recent years they have declined rapidly owing to the loss of rice paddies and reservoirs.

#### Second Crisis: Caused by reduced human activities with nature

Contrary to the first crisis, this is the impact caused by negative impacts on biodiversity due to reduction of human activities with nature. In *satochi-satoyama*, the reduced use and management of farmland, canals/reservoirs, and forests has led to a decline in the numbers of creatures that live there. Furthermore, the decrease in hunters and the consequent expansion of the distribution of sika deer and wild boar have led to increased damage to agriculture, forestry, and ecosystems.

#### Third Crisis : Caused by artificially introduced factors

This refers to the negative impact on ecosystems caused by things brought in by humans, such as alien species and chemical substances. Alien species introduced into a new area can threaten local endemic ecosystems by preying on native species, taking over their habitats and food sources, and causing genetic disturbances through hybridization. In recent years, there has also been concern about the impact of marine plastic litter, including microplastics, on ecosystems.



#### Fourth Crisis : Caused by changes in global environment

This is the impact on biodiversity due to climate change, such as rising temperatures, changes in precipitation, an increase in the frequency of strong typhoons, and ocean acidification. In Japan, the northward expansion of bamboo species and southern species of butterflies and coral bleaching due to rising sea temperatures have been observed. It is considered unavoidable that various ecosystems, including islands, coastal areas, and subalpine and alpine zones, will continue to be affected.



nutrition.

## -Background to the crisis

#### Socio-economic changes and societal values

Various socio-economic changes lie behind the biodiversity crisis. For example, reduction in agriculture and forestry due to changes in industrial structures and the shift in energy sources from wood and coal to fossil fuels have led to the abandonment of farmland and satoyama forests. In addition, globalization has led to a decline in self-sufficiency in food, timber, and other resources, as well as conflicts with alien species.

The state of society, and the values and behaviors of the Japanese people that have brought about these socio-economic changes, and each citizens' lack of awareness of the importance of biodiversity are fundamental factors in the biodiversity loss.

### Global biodiversity loss and background

Biodiversity and ecosystem services are deteriorating globally. Human activities, such as land-use change and direct extraction of resources, are the cause of the deterioration, which in turn are driven by social, economic, and institutional factors, as well as by people's values and behaviors. These global conditions influence our daily lives: Japan relies on imports for much of its food, energy, and other resources, leading to a loss of biodiversity in the countries that supply these resources.





Red imported fire ant, Solenopsis Invicta The red imported fire ant entered Japan mainly in cargo from overseas. In addition to affecting ecosystems and displacing native ants, it endangers human health with its venomous sting. Efforts are being made to prevent its establishment through border measures and monitoring.

Photo: Biodiversity Center, the Ministry of the Environment Algae known as zooxanthellae live symbiotically inside corals. If the water temperature becomes too high, the zooxanthellae may leave or die. As a result, the corals turn whitish in color and deteriorate due to insufficient

services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

-Kunming-Montreal Global Biodiversity Framework

### Nature-Positive by 2030

At the 15th meeting of the Conference of the Parties (COP15) to the Convention on Biological Diversity (CBD) in 2022, the "Kunming-Montreal Global Biodiversity Framework" was adopted as a global framework following the Aichi Targets. To realize a world in harmony with nature by 2050, it sets out the "Nature-Positive by 2030" mission of "taking urgent action to halt and reverse biodiversity loss to put nature on a path to recovery." Nature-positive cannot be achieved through conservation efforts alone and additionally requires collaboration across various fields, including climate actions, sustainable production of food, and reduction of consumption and waste.



A portfolio of actions to reduce loss and restore biodiversity Modified based on the GBO5

### The Aichi Biodiversity Targets and Their Achievement Status

At COP10 in Nagoya, Aichi Prefecture, in 2010, the global "Strategic Plan for Biodiversity 2011-2020" was adopted. It set out the 2050 goal of "living in harmony with nature", the 2020 mission of "taking effective and urgent action to halt the loss of biodiversity", and 20 targets (the Aichi Biodiversity Targets) to achieve this. Unfortunately, we have not yet been able to halt the loss of biodiversity. According to the 2020 report by the Secretariat of the CBD, although some progress has been made toward the Aichi Biodiversity Targets, no targets have been fully achieved.



Adoption of the Aichi Biodiversity Targets

Of the 60 specific elements in the Aichi Targets, 7 have been achieved, 38 show progress, 13 show no progress or regression, and 2 are unclear.

Achievement Status of the Aichi Biodiversity Targets

3%

22%

63%

Some progress but insufficient

Unknowr

### Features of the Kunming-Montreal Global Biodiversity Framework

The framework sets out four global goals that depict the desired state by 2050 and 23 global targets to be achieved by 2030. The global targets include reducing threats to biodiversity, such as the "30by30 target" and measures against alien species, and meeting people's needs through ecosystem services to achieve naturepositive of 2030 mission in the framework. In addition, it sets global targets that call for efforts not only by governments but also by the whole of society, including businesses and individuals, toward tools and solutions for implementation and mainstreaming.

The Kunming-Montreal Global Biodiversity Framework incorporates eight numerical targets, more targets than the Aichi Biodiversity Targets, and establishes indicators to measure the progress toward the global goals and targets. It also introduces a mechanism to monitor and review progress across the framework.

Structure of the Kunming-Montreal Global Biodiversity Framework and the 23 Global Targets for 2030

2050 Vision	2050 Goals								
A world of living in harmony with	Goal A Protect and Restore		Goal B Prosper with Nature						
nature	Goal C Share Benefits Fairly		Goal D Invest and Collaborate						
2030 Mission	2030 Targets								
Taking urgent action to halt and reverse biodiversity loss to put nature on a path to recovery	Reducing threats to biodiversity Targets 1-8	Meeting peo through sust and benefi Targets	ple's needs ainable use it-sharing 9-13	Tools and solutions for implementation and mainstreaming Targets 14-23					

1. Reducing threats to biodiversity	3
1 : Plan and Manage All Areas to Reduce Biodiversity Loss	14
2 : Restore 30% of All Degraded Ecosystems	15
3 : Conserve 30% of Land, Waters and Seas	16
4 : Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts	17
5 : Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species	18
6 : Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact	19
7 : Reduce Pollution to Levels That Are Not Harmful to Biodiversity	20
8 : Minimize the Impacts of Climate Change on Biodiversity and Build Resilience	21
2. Meeting people's needs	22
9 : Manage Wild Species Sustainably To Benefit People	23
10 : Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry	
11 : Restore, Maintain and Enhance Nature's Contributions to People	
12 : Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity	
13 : Increase the Sharing of Benefits from Genetic Resources, Digital	

#### Tools and solutions

- Integrate Biodiversity in Decision-Making at Every Level
- Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts
- Enable Sustainable Consumption Choices to Reduce Waste and Overconsumption
- Strengthen Biosafety and Distribute the Benefits of Biotechnology
- Reduce Harmful Incentives by at least \$500 Billion per Year, and Scale Up Positive Incentives for Biodiversity
- Mobilize \$200 Billion per Year for Biodiversity from All Sources, Including \$30 Billion through International Finance
- Strengthen Capacity-Building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity
- Ensure That Knowledge Is Available and Accessible to Guide **Biodiversity Action**
- Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for All
- Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action

# **Toward Realizing Nature-Positive**

## —Aim of National Biodiversity Strategy and Action Plan (NBSAP) of Japan

With new global framework now established, we must rely on our past experiences and lessons in creating a genuinely prosperous society based on the system of nature. To guide this path, the "National Biodiversity Strategy and Action Plan of Japan 2023-2030" was established in March 2023. The NBSAP aims to "halt and reverse the loss of biodiversity to put nature on a path to recovery" (referred as "nature-positive" in the NBSAP) by 2030.



Nature-Positive Image Character DAIDARAPOSIE The image character was created based on the giant "Daidarabocchi", who is said to have created mountains, lakes and rivers in Japan. He watches over the positive future of the Earth.

### -Five Basic Strategies

With only a few years left until 2030, it is not enough to continue with the same efforts to halt and reverse the long-standing loss of biodiversity; we need transformative changes. Furthermore, it is important to simultaneously address other issues such as net-zero greenhouse gas emissions and the circular economy. Keeping this in mind, the NBSAP sets out five directions to work toward.



The path to achieving nature-positive can be likened to the action of a powerful waterwheel that nurtures small buds into full growth. The Basic Strategies 1 to 4 work together, while Basic Strategy 5 serves as the axis supporting these efforts.

# **Basic Strategy 1 Restoration to Healthy Ecosystems**

The biodiversity loss in Japan has moderated owing to efforts so far, but there is no change in the fact that we still face a crisis. If the ecosystem is not kept healthy, the diverse functions that support our life will deteriorate. Therefore, we must work to restore to healthy ecosystems.

### Conservation, Restoration, and Networking of Sites

To achieve the 30by30 target, effectively conserving at least 30% of the land and sea by 2030, the government of Japan will not only work to conserve and restore protected areas such as national parks but also pursue other effective area-based conservation measures (OECMs). In addition, the government will ensure the connectivity of forests, the countryside, rivers, and the seas by networking them and improving the quality of ecosystems.

### Reduction of Burden Arising from Use of Ecosystems

In each ecosystem, such as forests, agricultural land, cities, rivers, lakes, wetlands, coastal areas and oceans, the government will reduce the burden on biodiversity and improve its quality when using and managing agriculture, forestry, fisheries, and infrastructure development.

### Wildlife Conservation

The government will conserve species, including common species, and rebuild an appropriate relationship between humans and wildlife through measures against wildlife damage, *in-situ* conservation of endangered wildlife including species found in secondary nature, and measures against alien species.

#### Conservation of Diverse Sites Including Neighboring Familiar Nature -The 30by30 Target and Nationally Certified Sustainably Managed Natural Sites

To continue to receive the benefits of nature, it is necessary to conserve sites that serve as habitats and breeding grounds for living creatures, including even common species that are not currently endangered. The 30by30 target aims to conserve at least 30% of land and sea by 2030, and increasing OECMs is considered key to achieving this target. In Japan, the certification of "Nationally Certified Sustainably Managed Natural Sites" began in FY2023 to promote the establishment of OECMs. The Minister of the Environment certifies these sites as areas where biodiversity is being conserved through private initiatives, such as *satochi-satoyama*, corporate forests, and urban green spaces. Various sites have been certified with the cooperation of the "30by30 Alliance for Biodiversity", a voluntary coalition of businesses, NPOs, local governments, and others. In April 2024, the Act on the Promoting Activities to Enhance Regional Biodiversity was formulated. In addition to activities in places with rich biodiversity, such as Nationally Certified Sustainably Managed Natural Sites, this Act further promotes voluntary activities by the private sector to restore or create ecosystems on abandoned land and other degraded lands.



















#### **Application of Nature-based Solutions (NbS) to** Basic Strategy 2 **Address Social Challenges**

Japan faces social challenges such as population decline, aging, and climate change. At the same time, satochi-satoyama is degraded and wildlife damage is caused owing to the reduced use and management of nature. With this in mind, the government will undertake initiatives that use the benefits of nature to resolve various social issues, including local economic revitalization and climate change mitigation and adaptation.

#### Regional Development by Making Use of Nature

The government will promote enhancement of the attractiveness of local areas and local economic activities based on nature. The government will also increase linkages and exchanges expand connections between cities and rural districts and promote *workations* (work-vacation) and multi habitations that make the most of nature.

#### Compatibility with Climate Actions

The government will conserve CO<sub>2</sub> sinks such as forests, seaweed beds, tidal flats, and wetlands, and implement natural disaster measures by making use of the functions of nature. The government will also minimize the negative impact of climate actions on biodiversity by preventing adverse effects on biodiversity caused by the inappropriate installation of renewable energy power generation facilities.

#### Wildlife Measures

The government will advance the separation of humans and wildlife by utilizing natural resources and zoning satochi-satoyama areas, ensure the availability of individuals responsible for wildlife capture and utilization, and train specialists. The government will also conduct research and monitoring to control the impact of infectious diseases related to wildlife on biodiversity.

#### Nature-based Solutions (NbS)

Climate change, such as temperature rise and extreme weather events, is an urgent global issue, and many countries, including Japan, are working on measures with the goal of achieving carbon neutrality by 2050. At the same time, the biodiversity loss is also a critical issue affecting the sustainability of the global environment. Since climate change and biodiversity loss affect each other, it is necessary to resolve them simultaneously without conflict.

Against this backdrop, Nature-based Solutions (NbS) have gained attention in recent years. NbS is an approach that aims to resolve multiple social challenges by leveraging the multifunctional qualities of nature. For example, healthy management and conservation of forests can support CO<sub>2</sub> sinks, and forests' water retention function can mitigate floods, while conserving forest ecosystems. NbS promise multiple benefits in addition to their main objective of solving issues and are thus anticipated to be a cost-effective approach.



Conceptual diagram of NbS by IUCN Guidance for using the IUCN Global Standard for Nature-based Solutions



measures through NbS



Businesses, through the provision of products and services, utilize nature in some form and simultaneously influence biodiversity both domestically and internationally. Business activities that consider biodiversity are essential for socioeconomic transformation and represent opportunities for sustainable business. Therefore, the government will undertake initiatives aimed at realizing nature positive economies to support this.

#### Nature-Positive Management

The government will collaborate with businesses to accumulate and disseminate knowledge on assessing impacts on biodiversity, analyzing risks and opportunities in management, and devising methods for setting targets and disclosing information, so that they can incorporate biodiversity considerations into their management strategies.

## ESG Finance

The government will advise financial institutions on information disclosure based on the Taskforce on Nature-related Financial Disclosures (TNFD) and other frameworks to promote ESG finance. The government will also encourage the use of private funding methods such as green bonds by implementing green infrastructure technologies in society and ecosystem conservation and restoration effort.

### Sustainable Agriculture, Forestry, and Fisheries

The government will expand sustainable agriculture, forestry, and fisheries by promoting organic agriculture as stated in MIDORI Strategy for Sustainable Food Systems and encouraging sustainable forest management and timber use.

## Transition to Nature Positive Economies

The transition to nature positive economies is an urgent issue and is hoped to lead to the creation of large-scale employment and business opportunities, in which international momentum growing. In 2023, the TNFD presented a framework for information disclosure, and the G7 Nature-Positive Economy Alliance was established at the G7 Sapporo Climate, Energy, and Environment Ministers' Meeting as a platform for sharing knowledge and building information networks.

In Japan, the government published the Guidelines for Private Sector Participation in Biodiversity, Version 3 in April 2023, which describe methods and examples of information disclosure to the TNFD and other issues. In March 2024, establishment of the "Transition Strategies toward Nature Positive Economies" clarified where companies should focus when implementing nature-positive initiatives and gave specific examples of new business opportunities that will be created. The scale of business opportunities created by the transition to nature positive economies in Japan is estimated at approximately 47 trillion yen in 2030. The government will promote the transition with support from national policies.





## **Realization of Nature Positive Economies**



d 47 JPY pan to global)	
d 25 n JPY	Circular economy : cars/home appliances/buildings, promoting renewable energy, dam improvement, and others
d 10 n JPY	Home sharing, energy efficiency – buildings, waste management, recycling wastewater, green-roofs, and others
d 13 n JPY	Ecotourism, organic food/beverages, sustainable pesticides/fertilizers, sustainable forest management, fishery management, utilization of food loss/waste, and others
ind extract	ive activities
cture and	construction environment system

Food, land, and marine use

Estimated value of business opportunities of 2030 nature-

### **Basic Strategy 4**

#### **Recognition of the Value of and Actions for Biodiversity in Daily Life and Consumption Activities** (Changing Individual Behavior)

The lack of awareness of the importance of biodiversity among people lies at the root of the biodiversity crisis. This is due in part to the diminishing connection between our daily lives and nature. The government will reconnect daily life and consumer activities with biodiversity in a modern context and encourage specific actions by individuals.

#### Improving Understanding and Developing Human Resources for **Biodiversity**

The government will disseminate information and provide data on the importance of biodiversity in everyone's daily life. The government will also promote environmental education and learning about biodiversity in homes, schools, workplaces, communities, and various other places.

## Consideration in Consumption Activities

The government will advance efforts to increase biodiversity-conscious options and measures to disseminate and raise awareness of such options in daily life, such as encouraging local production for local consumption, reducing food loss and waste, prioritizing the purchases of products made from renewable resources, and selecting biodiversity-conscious products with environmental labels and certified products.

### Inheritance of Culture and Interaction with Nature

The government will advance the inheritance of traditional culture rooted in local nature, such as food, and the views on coexistence between people and nature. The government will also ensure green spaces, farmlands, and satoyama forests in and around urban areas so that urban residents can interact with nature, and promote exchanges with rural districts.

### Consumption Activities and Biodiversity

The "mass production, mass consumption, mass disposal" lifestyle leads not only to climate change and depletion of natural resources but also to the degradation of ecosystems. Therefore, realizing a circular economy is important as a biodiversity conservation effort. For example, it is estimated that about 4.72 million tons of food loss and waste were generated in FY2022 in Japan. Households can reduce wastage through careful shopping, ordering, storage, and donations to food drives. It is also important when buying to consider the environmental impact, not just price and quality. Environmental labels indicate sustainable products, as well as recycled and renewable products, and are useful when choosing products and services.



Estimated amount of food loss and waste in 2022 Food loss and waste portable site, Ministry of the Environment

Examples of environmental labels

\*The environmental labels introduced here are implemented under the responsibility of businesses and do not cover all environmental labels. The Ministry of the Environment is not responsible for guaranteeing the content of the information provided by these environmental labels

# **Basic Strategy 5**

### **Development of a Base that Underpins Activities for Biodiversity Conservation and Promotion of International Coordination**

Biodiversity conservation is supported by the efforts of various entities, including local government and the private sector. Given Japan's dependence on foreign resources and the impact of international logistics, cross-border cooperation is necessary. The government will develop foundations to support domestic initiatives and promote contributions to the conservation of global biodiversity and its sustainable use.

### **Development of Information Base**

The government will gather and consolidate fundamental information and data about biodiversity, and will develop information infrastructure that facilitates data use, such as open data and API collaboration. The government will also provide assistance for the development of digital technologies for monitoring using satellite images and drones.

### Legislative Measures and Regional Plans

In addition to revising relevant laws and securing budgets, the government will work on expanding the cost sharing mechanisms and financial support to local governments and private sectors. The government will also ensure that spatial plans that gives consideration to biodiversity is formulated for each region, including local biodiversity strategies and action plans (LBSAPs), and that integrated initiatives across various fields is implemented.

### International Collaborations

The government will promote international cooperation by making use of Japan's knowledge and experiences, such as supporting the projects on the sustainable use of secondary nature based on the Satoyama Initiative, the formulation of national biodiversity strategies that incorporate the concept of the landscape approach, and the capacity-building in developing countries.

## The Satoyama Initiative and Landscape Approach

Secondary natural environments such as satochi-satoyama, which have been maintained and conserved through human intervention, are characteristic of Japan's natural environment. The Satoyama Initiative, proposed by the Ministry of the Environment and the United Nations University Institute for the Advanced Study of Sustainability at COP10, aims to realize a society in harmony with nature by promoting the conservation of biodiversity and its sustainable use in secondary natural environments internationally.

In recent years, the "landscape approach" has gained attention as an effective method for advancing the conservation and sustainable use of biodiversity, as in the Satoyama Initiative. It involves comprehensively understanding the natural and social conditions of a region and deriving appropriate land and spatial uses, which is also considered useful in advancing NbS.



General Assembly of the International Partnership for the Satoyama Initiative (IPSI)











Mosaic land use in satochi-satoyama in Shikanoshima, Fukuoka Prefecture

# **Nature-Positive by 2030**



# **Working Together**

-Expected Roles of Each Entity and Cooperation

To achieve nature-positive, all entities of society need to collaborate.

For example, while national and local governments provide the broader framework and direction for initiatives through the NBSAP and LBSAPs, the insights gained from research institutes through basic research and monitoring are indispensable.

Educational institutions such as schools and museums need to raise public interest and understanding through education and natural experiences, and private organizations need to provide opportunities to participate and cooperate in biodiversity conservation.

Businesses need to present choices in products and services that contribute to biodiversity.

In light of the need for such social and economic changes, it is important for citizens to recognize the benefits of nature, consider the effects of their daily life, and embrace sustainable lifestyle.



#### Creating Attractive and Sustainable Regional Development— Local Biodiversity Strategies and Action Plans (LBSAPs)

LBSAPs are frameworks set by local government in line with the NBSAP, tailored to the nature and society of each region. While the formulation of LBSAPs is progressing nationwide, further enhancement, in particular at the municipal level, is needed. Moreover, for the realization of nature-positive, it is important to formulate and review strategies from the perspective not only of conservation but also of regional development by making use of nature. The Guidelines for the formulation of LBSAPs (revised edition 2023) presents ideas and information for creating attractive and sustainable regional development, taking into account the NBSAP.



### Japan Conference for 2030 Global Biodiversity Framework (J-GBF)

The J-GBF is a collaborative platform from industry, government, academia, and the private sector, with the Ministry of the Environment acting as secretariat. It is chaired by chairman of the Japan Business Federation, and has about 40 member organizations, including economic groups, local government networks, NGOs, youth groups and relevant ministries and agencies that influence various sectors and levels. It promotes multi-stakeholder participation, and voluntary initiatives and partnerships in Japan to achieve 2030 mission of the NBSAP in response to the Kunming-Montreal Global Biodiversity Framework global. It organizes symposia, business matching events, and calls for the Nature-Positive Declaration.





Logo of J-GBF

The 2<sup>nd</sup> business forum of J-GBF and the symposium of Keidanren Nature Conservation Council



### **Towards Achieving the Kunming-Montreal Global Biodiversity Framework**

#### Mechanisms to Drive the NBSAP

The NBSAP sets out "state-oriented targets" indicating the status to be achieved by 2030 and "action-oriented targets" indicating the actions to be implemented to achieve the stateoriented targets under each of the five basic strategies. These national targets are set in response to the Kunming-Montreal Global Biodiversity Framework. For each national targets, indicators to identify the progress and related measures are established. These are checked once every two years and evaluated in accordance with the international reporting and evaluation processes. Based on the results of evaluation, review and revisions will be made as necessary to achieve national targets and global framework.

Correspondence between the National Biodiversity Strategy and Action Plan of Japan 2023-2030 and the Kunming-Montreal Global Biodiversity Framework

Kunming-Montreal						2030 Targets																						
Global	Biodiversity Framework	2	2050	Goal	s	1. Reducing threats to biodiversity 2. Meeting people's needs 3. Tools and solutions																						
NBSAP of Japan 2023-2030		А	В	С	D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S-target 1-1	~				~	~	~			~	~	~															
	S-target 1-2	~				~	~		~	V	~	V	~															
	S-target 1-3	~							~													•						
Basic Strategy 1:	A-target 1-1	~						~																				
Restoration to Healthy	A-target 1-2	~				~	~																					
Ecosystems	A-target 1-3	~									V	V																
	A-target 1-4	~											~															
	A-target 1-5	~							~	V																		
	A-target 1-6	~							~													~						
	S-target 2-1		~											~		~	~											
	S-target 2-2		~										~			~								~				
Basic Strategy 2:	S-target 2-3		V						V	V				~														
Application of Nature-based	A-target 2-1		~													~												
Solutions (NbS) to Address	A-target 2-2		V											V		V	~											
Social Challenges	A-target 2-3		~										~			~								~				
	A-target 2-4		V										~															
	A-target 2-5		V						~	V				~														
	S-target 3-1				~															~				~				
	S-target 3-2		V																	~				~	V			
Basic Strategy 3	S-target 3-3		V							V		V		V	V													
Realization of Nature Positive	A-target 3-1				~															~				~				
Economies	A-target 3-2		V																	~					V			
	A-target 3-3			~														~		~		~						
	A-target 3-4		V							V		V		~	~													
	S-target 4-1		V														~				~					~		
Basic Strategy 4:	S-target 4-2		V																		V		V					
Recognition of the Value of	S-target 4-3		V					~																~		~	~	
and Actions for Biodiversity	A-target 4-1		V																							V		
in Daily Life and	A-target 4-2		V														~											
(Changing Individual	A-target 4-3		V																		V							
Behavior)	A-target 4-4		V																		V		~					
	A-target 4-4		V					V																V		~	~	
	S-target 5-1		-		V	V											~		V						~	<b>v</b>	V	~
	S-target 5-2				2														•				~	~	2	-		
Basic Strategy 5: Development of a Base that	S-target 5-3				V																		-	-	V			
Underpins Activities for	A-target 5-1				V														~						V	~		
Biodiversity Conservation	A-target 5-2				V														V						V	V	V	
and Promotion of	A-target 5-3				V	~											V		~								V	~
International Coordination	A-target 5-4				V																		V	~			-	
	A-target 5-5				V																				V			

\* "S-Target" denotes "State-oriented Target". "A-Target" denotes "Action-oriented Target".

See page 9 for the 2050 Goals and the 2030 Targets of the Kunming-Montreal Global Biodiversity Framework.

#### National Biodiversity Strategy and Action Plan of Japan 2023-2030 List of national targets

	5
Basic St	rategy 1: Restoration to Healthy Ecosystem
S-Target 1-1	Healthy ecosystems are being restored with overall ecosystem so
S-Target 1-2	Extinction risk is reduced at the species level
S-Target 1-3	Genetic diversity is maintained
A-Target 1-1	Conserve at least 30% of land and sea as protected areas and Oth the effectiveness of the management of these areas
A-Target 1-2	Prevent degradation of ecosystems by reducing the impacts on b
A-Target 1-3	Reduce pollution (control emissions with the objective of reducin carrying capacity) and, implement measures contributing to prev reduce the rate of establishment of invasive alien species by 50%
A-Target 1-4	Minimize adverse impacts of climate change on biodiversity
A-Target 1-5	current status of wildlife
A-Target 1-6	Implement measures taking into account conservation of genetic
Basic St	rategy 2: Application of Nature-based Solu
S-Target 2-1	Ecosystem services are improved beyond current levels, allowing culture to demonstrate their vitality
S-Target 2-2	Ecosystem impacts of climate change measures are controlled, sy
C Target 2 2	services are built, and trade-offs between them are mitigated
S-Target Z-S	Appropriate distance with wildlife is maintained, damages caused
A-Target 2-1	Promote visualization of ecosystem functions and their further ut
A-Target 2-2	and the seas, and the preservation of local traditional culture
A-Target 2-3	Promote nature restoration that will also contribute to climate ch ecosystems beyond current levels as measures for carbon sink an
A-Target 2-4 A-Target 2-5	Promote the consideration of biodiversity in introduction of rene Enhance efforts to mitigate human-wildlife conflicts
A Tanget 2 o	
Basic St	rategy 3: Realization of Nature Positive Eco
S-Target 3-1	ESG finance that contributes to biodiversity conservation is prom contribute to biodiversity conservation
S-Target 3-2	Steady progress is being made in reducing the negative impact of biodiversity-related risks for businesses and financial institutions,
S-Target 3-3	Sustainable agriculture, forestry, and fisheries are expanding
A-Target 3-1	Promote quantitative assessment of dependence and impact on a information disclosure, by businesses, develop a foundation for p investors, and promote activities to conserve and restore biodive
A-Target 3-2	Support technologies and services contributing to biodiversity co
A-Target 3-A	Enhance sustainable, environmentally friendly agriculture, forest
A larget 5 4	pesticides and chemical fertilizer use, and promotion of organic f
Basic Sti	rategy 4: Recognition of the value of and A
Consum	lption Activities (Changing Individual Beha
	Values that place importance on biodiversity and the connection
S-Target 4-1	awareness
S-Target 4-2	Biodiversity is taken into account in consumption behavior
S-Target 4-3	Active participation of people in activities to conserve and restore
A-Target 4-1	Promote environmental education on biodiversity in schools
A-Target 4-2	Through providing opportunities for people to interact with naturation awareness-raising on matters, including nature's blessings and ho
A-Target 4-3	and raise awareness on ideas on appropriate relationships betwe Encourage people to actively change their behavior on a voluntar
A-Target 4-4	Raise awareness on options considering biodiversity, increase op
A-Target 4-5	Promote local activities to conserve and restore natural environm
Pacie St	ratory E: Dovelonment of a Race that Und
	rategy 5. Development of a base that ond
and Pro	motion of International Coordination
S-Target 5-1	Information infrastructures for biodiversity are developed, surver sectors, and collaboration between various entities is promoted consideration
S-Target 5-2	Funding for biodiversity conservation is secured to improve the f
S-Target 5-3	Japan's supports to developing countries in capacity building is pr country to promote biodiversity conservation
A-Target 5-1	Promote academic research in biodiversity-related fields includin natural capital into national economic statistics, and implement le
A-Target 5-2	Develop human resources and provide tools for dissemination an conservation, facilitate appropriate policy-making and decision-m activities
A-Target 5-3	Strengthen support for planning, including local biodiversity strat

A-Target 5-4 Implement efforts to enhance resource mobilization, including identifying and reviewing incentives that are harmful to biodiversity A-Target 5-5 Promote international cooperation utilizing Japan's knowledge and expertise

#### ms

ale increased and its quality improved

her Effective area-based Conservation Measures (OECMs) , and enhance

viodiversity from use of terrestrial and marine areas, promote restoration es that contribute to the development of ecological networks ng the impact on biodiversity to an appropriate level taking into account enting and reducing the negative impacts of invasive alien species (e.g.,

or rare species of wild fauna and flora, and promote efforts to improve the

diversity

#### itions (NbS) to Address Social Challenges

people and communities to utilize their local natural resources and

nergies between climate change measures, biodiversity, and ecosystem

d by wildlife are mitigated

tilization

nile respecting the connection between forests, the countryside, rivers,

nange mitigation and adaptation, and promote conservation and use of id reduction of greenhouse gas emissions ewable energy

#### onomies

noted and resources are appropriately allocated to measures that

business activities on biodiversity, increasing positive impacts, reducing and promoting actions to ensure sustainable production systems

biodiversity, analysis of current status, science-based target-setting, and promoting investments and financing by financial institutions and ersity from perspective of investment and financing nservation

try, and fisheries, including reduction in risk-weighted use of chemical farming, as stated in the MIDORI Strategy for Sustainable Food Systems

#### Actions for Biodiversity in Daily Life and vior)

between people and nature are established through education and public

#### e the natural environment is taking place

ire in their daily life, ensure acquirement of various knowledge and ow people interact with nature, and development into a mature person, een people and animals

rv hasis

pportunities for selecting, and other incentives, in order to promote g food loss and waste , and reducing disposal of other materials nent, utilizing traditional culture and local and traditional knowledges

#### lerpins Activities for Biodiversity Conservation

y and research results and provided data and tools are utilized in various at various spatial scales under spatial plans that take biodiversity into

unding gaps for global biodiversity conservation rogressed, and the results are reflected in the measures taken in each

g integration of biodiversity and social economy and integration of ong-term survey and monitoring building on a strong system d utilization of the data, to promote effective and efficient biodiversity naking, and encourage public participation in biodiversity conservation

tegy and action plans (LBSAPs), to promote integrated efforts with

### **National Biodiversity Strategy and Action Plan of Japan** 2023-2030 – Development process



**Development of the NBSAP of Japan 2023-2030** (Cabinet decision, Mar. 2023)

### **Overall Structure of National Biodiversity Strategy and** Action Plan of Japan 2023-2030



Photo Credit for page 3 Old beech tree, page 6 rice fish, predatory diving beetles, page 7 Red imported fire ant: Japan Wildlife Research Center Illustration for cover page, upper spaces in page 11~15, and p. page 16~17: ©Ichinichi-isshu, and for lower space in page 10: Shumpousha. Co., Ltd.