

# Biodiversity Strategy of Okinawa

## (Excerpt)

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(Omitted)

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(Omitted)

### **Section 1 Basic Approach**

#### **1. Intent behind the Enactment of Regional Strategies**

In light of the challenges concerning biodiversity in Okinawa Prefecture, the prefecture has enacted the Biodiversity Strategy of Okinawa to serve as its basic plan for achieving a society in harmony with the natural environment. Such a society will be capable of conserving, maintaining, and restoring biodiversity, as well as passing it down to future generations, and will also be capable of enjoying our connections with nature and the blessings from it in a sustainable manner.

#### **2. Positioning of the Regional Strategy**

##### **(1) Basic Act on Biodiversity**

Laws and ordinances related to the conservation of biodiversity and its sustainable use span a wide range. Under the Basic Act on Biodiversity, it is important to have mutual coordination between these legal schemes so that they are applied effectively. The national strategy plays the role of indicating the basic policies for this.

The Biodiversity Strategy of Okinawa was enacted on the basis of the National Biodiversity Strategy of Japan, and has been positioned as the basic plan for Okinawa Prefecture concerning the conservation and sustainable use of biodiversity pursuant to Article 13 of the Basic Act on Biodiversity.

##### **(2) Okinawa 21st Century Vision and Basic Plan for 21st Century Vision of Okinawa (Okinawa Promotion Plan)**

The Okinawa 21st Century Vision is a basic plan that describes an ideal vision for Okinawa in the future (roughly around the year 2030) and clarifies the orientation of initiatives and the roles of the prefectural residents and government with a view towards achieving this on the basis of the participation and cooperation of the residents.

The Basic Plan for 21st Century Vision of Okinawa clearly lays out things like the “Basic policies” and “Basic measures” in the Basic Plan for 21st Century Vision of Okinawa in order to maximize the welfare of Okinawa based on things like the orientation of initiatives for achieving the future vision expressed in the Okinawa 21st Century Vision.

The Biodiversity Strategy of Okinawa was enacted in accordance with the Basic Plan for 21st Century Vision of Okinawa. Its role is to serve as a plan for promoting the Okinawa 21st Century Vision and the Basic Plan for 21st Century Vision of Okinawa in the interest of working towards the conservation and sustainable use of biodiversity.

### **(3) Second Okinawa Prefecture Basic Plan for the Environment**

The Second Okinawa Prefecture Basic Plan for the Environment is a plan that is based on the provisions of Article 8 of the Okinawa Prefecture Basic Environment Ordinance. It is a basic plan aimed at promoting measures related to environmental conservation within the prefecture in a comprehensive and systematic manner.

The Biodiversity Strategy of Okinawa has been positioned as a plan needed in order to achieve the “Development of a pleasant region where humans and nature coexist,” which is one of the objectives of the Second Okinawa Prefecture Basic Plan for the Environment.

### **(4) Appropriate Responses to Roles concerning International Initiatives**

The United Nations has established the ten years from 2011 to 2020 as the United Nations Decade on Biodiversity, and stipulated that all of the actors among the international community are to come together to address issues with biodiversity for the achievement of the Aichi Targets during this. When it comes to such social trends, having local government continue to promote measures related to biodiversity according to the natural and social conditions of the region plays an extremely important role in conserving Japan’s biodiversity and promoting its sustainable use.

Therefore, the enactment of the Biodiversity Strategy of Okinawa as a basic plan in aiming for the conservation and sustainable use of biodiversity in the prefecture fulfills one of the roles of the local government for this.

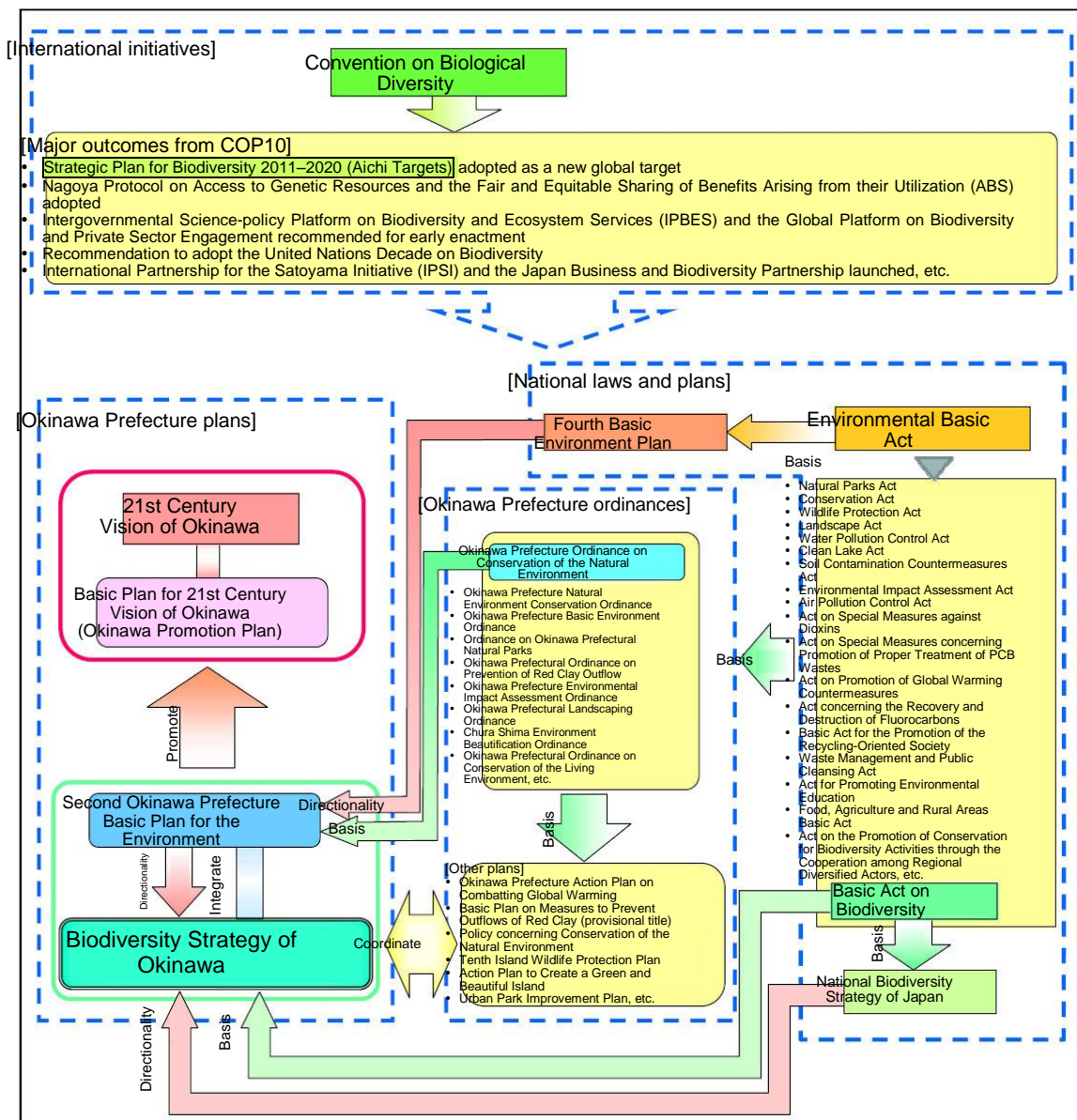


Fig. Connection between the Biodiversity Strategy of Okinawa and other laws and ordinances

In the above diagram, “Basis” indicates the law, ordinance, or so forth that serves as the basis on which something was formulated. “Directionality” indicates the directionality from higher-level plans to lower-level plans, while “Integrate” shows efforts to integrate the contents between plans that exist within a hierarchical relationship. “Coordinate” indicates the fact that measures and the like are promoted by working for coordination between plans that exist within a concurrent relationship, while “Promote” indicates that a plan has been promoted and developed from a lower-level plan to a higher-level one.

### **3. Area Subject to the Regional Strategy**

The area subject to this regional strategy consists of the entirety of Okinawa Prefecture.

### **4. Reappraisal of the Strategy**

The decision has been made to reappraise the Biodiversity Strategy of Okinawa, with the fifth year following its formulation set as the target year for this. However, it may be reappraised as needed in the event that drastic changes come about in regards to the natural environment, social conditions, and so forth.

Moreover, individual target years will be set for those matters for which it would be appropriate to set targets over a short time span.

## **Section 2 Grand Design**

(Omitted)

### **2. Aspirational Future Vision for the Region**

(Omitted)

#### **(1) Northern Region**

“A region that values a connection between the forests and sea where human activities and the workings of nature coexist”
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- For the Yambaru forests, Yambaru-style Forestry has been established. This considers zoning and forest management plans that are function-specific, and combines a sustainable, recycling-oriented forestry and forest products industry with activities for experiencing nature in harmony with the environment.
- For ecotours, forethought is given to the environmental carrying capacity in order to avoid and mitigate the impact on the environment and overuse. Being a guide is becoming a popular occupation.
- Progress is being made with river improvements that give forethought to biodiversity, and fish such as the Ryukyu sweetfish have established themselves in rivers where ecosystems native to Okinawa have been restored.
- Work is being done to restore coral communities of a certain size. In addition, efforts are being made to achieve balanced conservation and use for said communities by classifying important ocean areas with coral reefs and tidal flatlands as conservation districts, as well as coordinating between national and prefectural conservation measures and the self-management of the local region. The thinking that forests and oceans form a single, cohesive unit is shared throughout the local region, and land-based impacts from

things like contamination by red clay is being reduced through a number of countermeasures. What is more, deserted arable land that has no possibility of being restored as farmland will be used to regenerate forests and wetlands and contribute to the conservation of coral reefs.

- Environmentally-friendly agriculture contributes to maintaining both the local lifestyle and the natural environment.
- Mongooses and feral cats and dogs are being completely eliminated from the northern part of Okinawa Island, and the area of distribution for endangered species like the Okinawa rail is being restored. What is more, laws and ordinances that protect endangered species are functioning effectively, and are preventing the collection and trade of rare insects and plants.
- The number of roadkill incidents involving endangered wild fauna such as the Okinawa rail and the Ryukyu long-haired rat is falling as a result of cooperation on the part of the concerned parties. In addition, all of the prefectural residents understand the importance of the nature up north and things like the recycling of garbage is common knowledge among them, so illegal dumping is no longer seen there. What is more, etiquette among dog and cat owners is thoroughly enforced, and so stray dogs and cats are no longer seen.
- As a region with an abundance of nature that has been registered as a Natural World Heritage Site and a global geopark, the area is visited by a large number of tourists from within Japan and overseas. This is bringing about a certain richness for the local people in both a physical and spiritual sense. What is more, the tourism industry takes responsibility in working to conserve natural resources, while simultaneously proactively emphasizing and spreading the word that the area is a tourist region that coexists with nature.
- Dugongs and their habitats are being conserved, and so now people can catch glimpses of dugongs out for a swim. Furthermore, the sandy beaches where sea turtles lay their eggs are being conserved.
- Traditional rituals, the natural environments involved in the rituals, and the natural systems surrounding mountains are being carefully maintained and conserved.
- The former site of the US Army's training ground up north that was returned to Japan is being carefully maintained and conserved as an asset of the prefectural residents.

(Omitted)

##### **(5) Yaeyama Region**

Islands where the living creatures that live in the abundant coral reefs and primeval forests are reared on human kindness, and that are prized by a great many people
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- This has been zoned into areas that should be conserved and areas that can be used, and tourism whereby people experience things like ecotourism and stay the night is being carried out.

- Ecotours are being carried out at major rivers like Iriomote Island's Nakama River and Urauchi River by taking their environmental carrying capacity into consideration. What is more, the tourists that visit the rivers and mountain streams have an understanding of and attachment to the natural environment, and enjoy recreational activities while being conscientious of the ecosystem.
- Efforts are being made to achieve balanced conservation and use by classifying important ocean areas with coral reefs and tidal flatlands as conservation districts, as well as coordinating between national and prefectural conservation measures and the self-management of the local region. In addition, progress is being made on elucidating the mechanism by which mass outbreaks of crown-of-thorns starfish occur, and it is now possible to observe this. In regions that have been positioned as especially important coral reefs, coral communities are being protected by means of continuous and concentrated control measures.
- The thinking that the land and oceans form a single, cohesive unit is shared throughout the local region, and land-based impacts from things like contamination by red clay is being reduced through a number of countermeasures.
- Environmentally-friendly agriculture contributes to maintaining both the island lifestyle and natural environment.
- Ordinances that protect endangered species are functioning effectively, and are preventing the collection and trade of rare insects and plants.
- The number of roadkill incidents involving endangered wild fauna such as the Iriomote cat and the crested serpent eagle is falling as a result of cooperation on the part of the concerned parties. What is more, the tourism industry, for which the island's nature is the greatest source of attraction for tourists, takes responsibility in working to conserve natural resources, while simultaneously proactively emphasizing and spreading the word that the area is a tourist region that coexists with the environment.
- As a region with an abundance of nature that has been registered as a Natural World Heritage Site, the area is visited by a large number of tourists from within Japan and overseas. This is bringing about a certain richness for the local people in both a physical and spiritual sense. It is creating a unique tourism style that uses a variety of different resources, including the historical and cultural resources; subtropical fruit trees and other agricultural, forestry, and fisheries products; and the hospitality of the residents found in the local region.
- Traditional rituals, the natural environments involved in the rituals, and the natural ecosystems surrounding mountains are being carefully maintained and conserved.
- On Uotsuri Island countermeasures are being promoted to stop goats from turning feral and vegetation is being restored. Species like the Senkaku mole, short-tailed albatross, masked booby, and common tern are breeding there as well.

(Omitted)

## Chapter 5 Action Plans

(Omitted)

### Section 2 Priority Measures and Initiatives

#### 1. Priority Measures for the Whole Prefecture

Priority measure 1-1	Promote registration as a Natural World Heritage Site
Initiatives	<p>Aim to register the area as an important regional Natural World Heritage Site in its capacity as a home to a diverse natural environment and habitat for endemic and endangered species in order to conserve Okinawa's invaluable nature for the world and pass it down to future generations as the treasure of Umanchu.</p> <p>To do so, make progress on establishing ordinances aimed at expanding Iriomote-Ishigaki National Park and converting the Yambaru region to a national park.</p> <p>In addition, promote initiatives such as for the protection of endangered species, and promote the use of local resources befitting a Natural World Heritage nominated property.</p>
Division(s) in charge	Nature Conservation Division
Projects/initiatives for each related measure	1-(2)-a. Expand protection and security measures 1-(2)-b. Promote countermeasures against alien species 1-(2)-c. Promote initiatives in cooperation with local residents



<p>Priority measure 1-2</p>	<p>Conserve and restore the coral reef ecosystem</p>
<p>Initiatives</p>	<p>The coral reef ecosystem that characterizes the seas of Okinawa is being significantly affected by problems like the bleaching of coral, mass outbreaks of crown-of-thorns starfish, and the impact from red clay that flows out from the land. These are giving rise to dangers to biodiversity. Therefore, formulate a Comprehensive Coastal Management Plan that treats onshore and ocean regions as a single, cohesive unit, and have the concerned parties work together to conserve and restore the coral reefs. In addition, elucidate the mechanism by which mass outbreaks of crown-of-thorns starfish occur and take drastic countermeasures against this. Moreover, promote systematic surveys and countermeasures against outflows of red clay based on the Basic Plan on Measures to Prevent Outflows of Red Clay (provisional title), and verify the restoration of coral communities that extend throughout the entire region. Also, support coral reef conservation activities being implemented by a diverse array of entities, such as fishermen and diving business operators.</p>
<p>Division(s) in charge</p>	<p>Nature Conservation Division, Environmental Policy Division, Fisheries Division, Environmental Conservation Division, Farming Support Division, Forest Development and Planning Division, Agricultural Irrigation Division</p>
<p>Projects/initiatives for each related measure</p>	<p>2-(2)-a. Formulate the Basic Plan on Measures to Prevent Outflows of Red Clay (provisional title)  2-(2)-b. Have local residents prevent outflows  2-(2)-c. Strengthen and support countermeasures against outflows, and properly maintain and manage existing facilities for combatting this  2-(2)-d. Study and research techniques for preventing outflows  2-(5)-a. Conserve and restore coral reefs  2-(5)-c. Study and research techniques for restoration  5-(1)-a. Promote and support activities by companies, producers, organizations, and more</p>

Priority measure 1-3	Create tourist attractions that coexist with the environment
Initiatives	<p>To ensure that the tourism industry, which utilizes the rich natural environment of Okinawa, can continue to develop sustainably on into the future, it will be necessary to promote a tourism industry that coexists with nature by reducing its environmental impact and taking responsibility in working to conserve natural resources.</p> <p>To do this, promote the creation of tourist attractions and ecotourism that coexist with nature by giving consideration to the conservation of the natural environment. In addition, promote tourism that uses the cultural resources borne from the nature of Okinawa.</p>
Division(s) in charge	Tourism Promotion Division, Nature Conservation Division
Projects/initiatives for each related measure	3-(2)-a. Promote the creation of tourist attractions that coexist with the environment

Priority measure 1-4	Establish the Okinawa Prefecture Biodiversity Plaza (provisional title)
Initiatives	<p>In order to boost the visibility of biodiversity and promote initiatives geared towards conservation, network-style hubs linking various entities will be needed. These will be necessary for carrying out initiatives like deepening the awareness of prefectural residents and visitors when it comes to Okinawa's biodiversity and fostering activities to conserve biodiversity.</p> <p>To do this, establish the Okinawa Prefecture Biodiversity Plaza (provisional title), which will have the following functions.</p> <p>(1) Collect and disseminate information</p> <p>&lt;Major initiatives&gt;</p> <ul style="list-style-type: none"> <li>• Disseminate information using a homepage, agency bulletin, and diverse media sources</li> <li>• Collect and organize information, create databases with it, and</li> </ul>

	<p>provide it</p> <ul style="list-style-type: none"> <li>• Hold events like traveling exhibitions at municipalities, museums, and schools, etc.</li> </ul> <p>(2) Functions to support activities and human resource development &lt;Major initiatives&gt;</p> <ul style="list-style-type: none"> <li>• Support the holding of activities carried out in the local region</li> <li>• Develop expert human resources through lectures and inspection trips to advanced regions</li> <li>• Expand learning opportunities via traveling classes held at schools, children’s welfare facilities, etc.</li> <li>• Expand nature classes through travel programs</li> <li>• Respond to consultations regarding the aforementioned activities, etc.</li> </ul> <p>(3) Functions for establishing networks &lt;Major initiatives&gt;</p> <ul style="list-style-type: none"> <li>• Foster activities sponsored by companies via matching with Corporate Social Responsibility (CSR)</li> <li>• Develop study sessions and hands-on activities with the potential to be viable businesses</li> </ul>
Division(s) in charge	Nature Conservation Division
Projects/initiatives for each related measure	4-(1)-d. Establish the Okinawa Prefecture Biodiversity Plaza (provisional title)

## 2. Priority Measures by Region

### (1) Northern Okinawa Island

Based on the current status of and challenges for biodiversity on Northern Okinawa Island, preference will be given to promoting the following three items as priority measures.

Priority measure 2-(1)-1	Coexist with nature via zoning
Initiatives	<p>In the Yambaru region, which is rich in biodiversity, there are some areas where forestry has been carried out since long ago. It is necessary to continue to promote the conservation and sustainable use of the natural environment in a well-balanced manner.</p> <p>To do this, coordinate with the concerned parties to consider modalities for forest conservation that strikes a balance between conservation and use, such as zoning districts into those where the natural environment should be conserved and those that can be used. In addition, aim to develop Yambaru-style Forestry that combines sustainable, recycling-oriented forestry and forest products industry with activities for experiencing nature in harmony with the environment.</p>
Division(s) in charge	Nature Conservation Division, Tourism Promotion Division, Forest and Green Area Division
Projects/initiatives for each related measure	<p>1-(2)-a. Expand protection and security measures</p> <p>1-(2)-b. Promote countermeasures against alien species</p> <p>1-(2)-c. Promote initiatives in cooperation with local residents</p> <p>3-(1)-c. Conserve biodiversity for forests, forestry, and greening</p> <p>3-(2)-a. Promote the creation of tourist attractions that coexist with the environment</p>

Priority measure 2-(1)-2	Protect endangered species
Initiatives	<p>When it comes to endangered species, such species are crucial components that make up ecosystems. We must be conscious of the fact that there are species that are only found inhabiting the Northern part of the island from anywhere throughout Japan or the world, and must work to protect them.</p> <p>To do this, enact the Okinawa Prefectural Ordinance on the Protection of</p>

	Endangered Species (provisional title) and work to protect endangered species in cooperation with the local region, while also promoting the protection of natural monuments.  What is more, take measures to combat roadkill, such as by installing crossing boxes by giving consideration to small animals, and take measures to eliminate alien species that threaten endangered species.
Division(s) in charge	Nature Conservation Division, Roads and Street Division, Roadway Management Division
Projects/initiatives for each related measure	1-(2)-a. Expand protection and security measures 1-(3)-b. Protect endangered species 1-(3)-c. Promote countermeasures against alien species 1-(3)-d. Protect and raise awareness of natural monuments

Priority measure 2-(1)-3	Promote nature-oriented river works (river improvements that give consideration to biodiversity)
Initiatives	To date, river improvements in the form of building dams and disaster prevention measures have been taken for the rivers of Northern Okinawa Island. These have shrunk or eliminated living creatures' habitats and split up migratory routes. As such, it will be necessary to mitigate these problems and restore these.  To do this, give consideration to achieving harmony between the natural environment running the entire length of rivers, local lifestyles, and their history and culture. In addition, perform river management via "nature-oriented river works" that conserve, restore, and create habitats and breeding environments for living creatures and diverse river environments.
Division(s) in charge	River Division
Projects/initiatives for each related measure	2-(1)-c. Conserve and restore river environments 2-(3)-a. Adopt construction methods that give consideration to wildlife habitats

(Omitted)

## (5) Yaeyama Region

Based on the current status of and challenges for biodiversity in the Yaeyama Region, preference will be given to promoting the following two items as priority measures.

Priority measure 2-(5)-1	Protect endangered species
Initiatives	<p>When it comes to endangered species, such species are crucial components that make up ecosystems. We must be conscious of the fact that there are species that are only found inhabiting the Yaeyama Region from anywhere throughout Japan or the world, and must work to protect them.</p> <p>To do this, enact the Okinawa Prefectural Ordinance on the Protection of Endangered Species (provisional title) and work to protect endangered species in cooperation with the local region, while also promoting the protection of natural monuments.</p> <p>What is more, take measures to eliminate alien species that threaten endangered species and take measures to combat roadkill, such as by installing crossing boxes by giving consideration to small animals.</p>
Division(s) in charge	Nature Conservation Division, Roads and Street Division, Roadway Management Division
Projects/initiatives for each related measure	1-(2)-a. Expand protection and security measures 1-(3)-b. Protect endangered species 1-(3)-c. Promote countermeasures against alien species 1-(3)-d. Protect and raise awareness of natural monuments

Priority measure 2-(5)-2	Promote agriculture that coexists with nature
Initiatives	<p>The Yaeyama Region contains cultivated ecosystems that consist of agricultural land (paddy fields and regular fields) and their surrounding forests and ground, as well as the other flora and fauna that inhabit these areas. For these, it is necessary to conserve a diverse array of environmental elements, including the surrounding forests, in the interest of maintaining biodiversity.</p> <p>To do this, work to eradicate and prevent the incursion of specific disease-carrying insects, while also making efforts to promote countermeasures against such insects that are environmentally-conscious and to take countermeasures against outflows of red clay. In addition, work to promote soil cultivation and agriculture that conserves the environment, while also promoting systems for reusing resources by means of using biomass from livestock manure and the like.</p> <p>The Yaeyama water regions in particular have the highest rates of coral coverage of those found anywhere throughout Okinawa Prefecture. Therefore, recognize that cultivated ecosystems are connected to coastal and ocean ecosystems through river basins, and promote measures to prevent outflows of red clay from farmland.</p>
Division(s) in charge	Farming Support Division, Forest and Green Area Division
Projects/initiatives for each related measure	<p>3-(1)-a. Promote agriculture that coexists with the environment</p> <p>3-(1)-c. Conserve biodiversity for forests, forestry, and greening</p>

(Omitted hereafter)