

Preamble

## Living in harmony with nature, building vibrant communities

In the Jomon Era, the Japanese Archipelago was covered with virgin forests and wetlands, where people's lives were integrated with hunting and fishing. With the introduction of agricultural civilization, they converted the wetlands into paddies and built ditches and irrigation ponds. Harvested for firewood, charcoal and fertilizer, the dark primeval forests were transformed into open, light-filled woodlands. Grasslands and fields were created through grazing and grass harvesting. Over 3,000 years of such human-nature relationships, Satochi-satoyama areas have been formed and maintained, where people have enjoyed the blessings of nature in a sustainable manner, with cyclic use of natural resources around the villages.

Satochi-satoyama, created by such human activities, have played a role in enriching the biological environment of the archipelago. In the Japanese Archipelago, a number of flora and fauna inhabit not only in remnants of wilderness in deep mountains but also around human settlements. Among these species, while the global warming after the last glacier period had shifted deciduous broadleaf forests to evergreen broadleaf forests, some species had found their safe sites in man-made open habitats in Satochi-satoyama woodlands and survived there.

Such plant and animal species of Satochi-satoyama, represented by the Gifu butterfly and the Japanese faun lily, have been found around people and used as the motifs for *haiku* poetry and traditional drawing since ancient times. As described in some school songs, such as "*Furusato*" and "*Haru-no-ogawa*", the classic Satochi-satoyama landscape symbolizes the image of the indigenous landscape that can be shared among the Japanese people and gives the basis of their spirit and culture.

The natural environments of Satochi-satoyama, inherited from generation to generation in people's living since recorded history, is currently going through a crisis. Owing to changes in socio-economic conditions, Satochi-satoyama areas have been used less and less in farming, forestry and other daily activities, which has increased abandoned farmlands and forests with insufficient care. Thickets and bamboo forest have expanded, and ditches and irrigation ponds have been increasingly devastated. As a result, numerous plants and animals inhabiting Satochi-satoyama environments are now disappearing. Thus, it has been a crucial issue to conserve Satochi-satoyama for the conservation of biodiversity in Japan.

When considering "food" as the basis of the Japanese lives, there are emerging concerns, such as safety issues and dependency on imports, as well as unbalanced nutrition, obesity and increasing lifestyle-related diseases. Moreover, the Japanese "food", filled with regional diversity, lush flavor and cultural atmosphere, which has been enriched by the ancestors in the bountiful natural environment, is endangered.

In this situation, there are hopes for vitalizing the rural societies; succeeding and expanding the rich food culture; enhancing food production and consumption in harmony with the natural environments; and increasing the food self-efficiency ratio, all of which will be contributed by establishing a reliable relationship between consumers and producers through promotion of coexistence and exchanges between cities and rural villages.

Restoring human-nature relationships is the key to the conservation and sustainable use of Satochi-satoyama. However, for farmers and local communities who have engaged in maintaining Satochi-satoyama, it is becoming difficult to continue their roles due to falling population and aging in their communities. On the other hand, mainly near cities and the suburbs, public awareness of values of Satochi-satoyama and conservation efforts have been activated by new entities such as private groups and enterprises, from the views of association and hands-on experiences with nature and landscape conservation. Therefore, the challenge is to implement the conservation and sustainable use of Satochi-satoyama within a framework of various participating and collaborating bodies of such newly dedicated groups as well as governments and experts.

At the Tenth Meeting of the Conference of the Parties (COP 10), to be held in Nagoya City, Aichi, in October 2010, Japan will put forward the *Satoyama* Initiative, which promotes sustainable use and management of natural resources at human-influenced natural environments. As the proponent, we should take the lead to stimulate the conservation and sustainable use of Satochi-satoyama in Japan.

In that context, in accordance with the basic strategies and policies prescribed in the National Biodiversity Strategy of Japan 2010, this action plan was formulated as a practical action plan for each of the cross-sectional approaches. The purpose of this plan is to initiate a nationwide movement by presenting the key principles and direction of the national policies and measures for the conservation and sustainable use of Satochi-satoyama to various entities who engage in local efforts. This would involve such participants as farmers and foresters, local communities, private organizations, enterprises, governments and experts.

In formulating this action plan, we held meetings on the review of Satochi-satoyama conservation and sustainable use and consulted with experts in the fields of biodiversity, landscape, rural environments, nongovernmental activity, etc. At the same time, we interviewed with regional governments, private organizations and researchers. We also held public comment to hear citizens' opinions and reflected the opinions in the action plan as needed. Furthermore, we gained cooperation of related agencies, and we will secure collaboration among the agencies for implementation of this plan.

We expect that this action plan will be actively used as a common ground for implementing measures by the national and regional governments as well as promoting local efforts of conservation and sustainable use of Satochi-satoyama around the country.

◇ Process towards the formulation of the Action Plan

- Discussions by the Committee for the Conservation and Sustainable Use of Satochi-satoyama

FY 2009

December 2, 2009	1 <sup>st</sup> meeting	Discussed about the basic concept of the Action Plan
February 1, 2010	2 <sup>nd</sup> meeting	Discussed about a draft of the Action Plan outline
March 8, 2010	3 <sup>rd</sup> meeting	Discussed about the first draft of the Action Plan

FY 2010

July 21, 2010	1 <sup>st</sup> meeting	Discussed about a draft of the Plan
July 26, 2010 to August 23, 2010	Sought public comment	(75 opinions from 18 entities)
September 14, 2010	2 <sup>nd</sup> meeting	Will finalize the Action Plan

- Decision of the Action Plan      September 15, 2010

◇ Committee members

Name	Affiliation
Anne McDonald	Director, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for Advanced Studies
Minoru Ishii	Professor, Graduate Schools of Osaka Prefecture University
Kunio Iwatsuki	Director, Museum of Nature and Human Activities, Hyogo
Isoya Shinji	Emeritus Professor, Tokyo University of Agriculture
Junichi Takeda	Researcher, Tokyo University of Agriculture/Chief, Satochi Network
Nobukazu Nakagoshi	Professor, Graduate School for International Development and Cooperation, Hiroshima University
Junichi Hirota	Professor, Iwate University
Shigeyuki Miyabayashi	Professor, Faculty of Regional Environmental Studies, Tokyo University of Agriculture
Yukihiro Morimoto	Professor, Graduate School of Global Environmental Studies, Kyoto University
Izumi Washitani	Professor, Graduate School of Agricultural and Life Sciences, Faculty of Agriculture, the University of Tokyo

## Table of Contents

### Preamble

1. Background .....	1
(1) Definition and characteristics of Satochi-satoyama.....	1
(2) Current status of Satochi-satoyama.....	1
(3) Importance of Satochi-satoyama.....	2
2. Objectives of the Action Plan and its relation to other policies and measures .....	5
3. Vision of Satochi-satoyama conservation and sustainable use.....	7
4. Direction of Satochi-satoyama conservation and sustainable use.....	8
(1) Promotion of nationwide movement.....	8
(2) National-level biodiversity conservation through the conservation and sustainable use of locally typical Satochi-satoyama.....	9
(3) Enhancement of various ecosystem services and revitalization of regional societies .....	9
5. Principles of Satochi-satoyama conservation and sustainable use.....	10
(1) Role assignment among implementing bodies .....	10
(2) Promotion of collaboration and cooperation among participating entities.....	13
(3) Actions in accordance with regional characteristics .....	14
(4) Reflection of biodiversity perspectives on Satochi-satoyama conservation and sustainable use.....	15
6. Procedure for Satochi-satoyama conservation and sustainable use.....	16
(1) Establishing a basis for nationwide activities.....	16
(2) Introducing economic instruments to Satochi-satoyama conservation and sustainable use.....	19
(3) Preserving traditional technologies for sustainable resource use and developing new technologies to promote cyclic use .....	20
(4) Understanding the current status of Satochi-satoyama and promoting monitoring study ...	21
(5) Characterizing Satochi-satoyama and implementing its conservation and sustainable use based on the characteristics.....	22
(6) Preparing a regional-level basis for implementing Satochi-satoyama conservation and sustainable use.....	23
7. National measures for Satochi-satoyama conservation and sustainable use .....	28
(1) Raising interests and awareness of the citizens in Satochi-satoyama .....	30
(2) Developing a scientific basis for understanding and evaluating biodiversity .....	31
(3) Preserving wildlife species, protected areas and other designated areas .....	32
(4) Conservation and sustainable use through sustaining and stimulating agricultural and forestry activities and rural villages .....	35
(5) Revitalizing landscape, tradition and culture through conservation and community exchange .....	39
(6) Re-evaluating traditional technologies and sustainable use of Satochi-satoyama as new resources.....	40
(7) Utilizing Satochi-satoyama as places for environmental experience and education .....	41
(8) Promoting and assisting locally-based efforts by engagement and cooperation of diverse groups.....	42

# 1. Background

## (1) Definition and characteristics of Satochi-satoyama

Satochi-satoyama refers to an area consisting of farmlands, irrigation ponds, secondary forest, plantation forest, and grasslands around human settlements. It is located between more natural, deep mountainous areas and urban areas of intensive human activities. The environments of Satochi-satoyama have been formed through various human interventions over a

long history. People in Satochi-satoyama areas have practiced land use in a dynamic mosaic-like pattern and cyclic resource use, developing ecosystems and biota therein unique to the secondary environments as well as creating the rich culture of life in which the people live in harmony with the environments while enjoying various ecosystem services.

## (2) Current status of Satochi-satoyama

The total Satochi-satoyama area accounts for about 40% of the national land<sup>1</sup>. However, along with modernization of lifestyles and agriculture since the 1950s, secondary forests have not been managed nor utilized and left abandoned in some cases. Secondary grasslands have substantially decreased, and since around the 1970s cultivated lands have been increasingly abandoned.

The National Biodiversity Strategy of Japan pointed out the crises of the whole country's biodiversity: "Crisis 1" due to development and other human activities; "Crisis 2" due to reduced management in Satochi-satoyama and others; "Crisis 3" caused by introduced species such as alien species; and "Crisis caused by global warming". Also in Satochi-satoyama areas, it should be recognized that habitat loss or deterioration due to development activities, ecosystem disturbances by alien species and others are the critical issues for the conservation of biodiversity.

Based upon this recognition, the Action Plan focuses on "Crisis 2" due to changes in human interventions in Satochi-satoyama, which have been sustained by human activities. As described in the following ① to ⑤, the conditions of being left unmanaged and hidden from the public have caused various problems in Satochi-satoyama across the country: such as degraded quality of plant and animal habitats, conflicts between humans and wild animals,

illegal dumping, and reduced functions of Satochi-satoyama in conserving landscapes and the national land.

### ① Degradation of habitat quality

In unmanaged *Satoyama* woodlands, vegetation succession has been advancing: bamboo species are invading into the woodlands; thickets and climbing plants are becoming dense; and tall trees are growing into large diameters. This vegetation alteration has been changing the forest environment, from light-filled space, where the sunlight easily reaches the floor, to dark one. Diversity of riparian conditions around rice paddies are vanishing because of increased abandoned cultivated lands and lack of management of ditches and irrigation ponds. Also in grasslands, with reducing harvest and grazing activities, invasion and overgrowth of shrub trees have been advanced.

These environmental changes indicate degradation or loss of habitat for flora and fauna that have depended upon Satochi-satoyama environments. Therefore, the status of these inhabiting species has been damaged or reduced.

### ② Serious conflicts between humans and wild animals

Human activities have reduced in Satochi-satoyama forest, as suggested by declining population, aging, increasing abandoned cultivated lands and neglect of unharvested crops in the fields. Moreover, lower hunting pressure due to decreased hunters and aging among them has resulted in a trend of expanding distribution of medium to large sized

---

<sup>1</sup> Satochi-satoyama was designated as the area where the total area of secondary forest, farmland and secondary grassland occupies nearly 50% within a 1-km cell and has at least two of these land use types in a respective cell.

Source: Report for Selection of Important Satochi-satoyama Areas and Other Commissioned Tasks—March 2009

mammals, such as deer, boars and monkeys. Impacts of these animals on rural agriculture and lives are becoming serious. Along with expanding deer distribution, the land leech has been more widely distributed, disturbing human activities in the forest.

### ③ Illegal dumping

In Satochi-satoyama near urban areas, it has been noticeable that woodlands that are left unmanaged and hidden from the public can be turned to sites for illegal dumping of oversized trash and industrial waste.

### ④ Degradation of landscapes and functions of the national land conservation

In Satochi-satoyama around the country, abandoned croplands and insufficiently cared for forests have become more visible. The traditional rural landscape blending human activities and the natural environments are vanishing. Furthermore, it is concerned that functions of Satochi-satoyama in conserving the national land, such as headwater conservation and soil erosion control, have been

impaired by expanding bamboo forest and decreasing rice paddies, and other land use alterations. Unmanaged Satochi-satoyama is also faced with problems in disaster prevention in this way.

### ⑤ Reduction in viability of management workforces

Satochi-satoyama environments have been maintained by which local people, such as farmers and foresters, have used them for agricultural production and daily lives. Through such resource use activities, multi-dimensional values of Satochi-satoyama have been created and emerged.

It is, however, considered that ongoing devastation of Satochi-satoyama is mainly caused by a reduced use of forests and farmlands due to socio-economic change, such as the fuel revolution and shifts in farming style, as well as by deteriorated livelihood of agriculture, forestry and village communities along with falling population and aging. In such circumstances, it is becoming difficult that only traditional land users, such as farmers, foresters and local communities, bear responsibility of Satochi-satoyama conservation and sustainable use.

## (3) Importance of Satochi-satoyama

The environments characterizing Satochi-satoyama -farmlands, such as rice paddies and crop fields; irrigation ponds and ditches; cedar and other plantation forests; and community managed woodlands and grasslands, harvested for wood fuel and grass - have been created and managed through which agriculture, forestry and other human activities have been repeated in a sustainable and stable manner aligned with local natural conditions, by using knowledge and technologies that have been developed in the rural communities.

It is first important to maintain and utilize such Satochi-satoyama environments as a place for agriculture and forestry practices and daily lives. Especially in recent years, while it has been focused to fulfill the multi-dimensional functions of agriculture and forestry, the importance of Satochi-satoyama has increased as a place of coexisting with living organisms.

Satochi-satoyama areas possess not only conventional roles of agricultural and forestry production but also the following various implications and functions.

### 1) Conservation of biodiversity

Satochi-satoyama has been created and maintained over about 3000 years<sup>2</sup> by people who have settled in the Japanese Archipelago, through their influences on the natural environments in practices of agriculture and forestry: woodlands and grasslands were periodically cut and mowed; ditches around the rice paddies and irrigation ponds were managed for irrigation. These activities have created habitats for a variety of living organisms, developing unique species that have favored the Satochi-satoyama environments. Among these species, a number of remnant and endemic species have survived in deciduous broad leaved forests and grasslands during a period of postglacial warming<sup>3</sup>.

---

<sup>2</sup> It has been considered that the formation of the Satochi-satoyama environment began in the beginning of the Yayoi Period (about A.D. 1,000) when agricultural civilization was initiated. In the Kinki District, the vegetation of Satochi-satoyama areas have been changing from secondary evergreen broadleaf forest, secondary deciduous broadleaf forest, to red pine forest. Source: Hattori (unpublished)

<sup>3</sup> Examples of remnant species from the last glacier period that inhabit Satochi-satoyama - Oriental hairstreak (*Favonius orientalis*); Gifu butterfly (*Luehdorfia japonica*); Star magnolia

Such Satochi-satoyama environments are vital for sustaining our country's biodiversity as well as intact nature that has remained in deep, high mountains. Flora and fauna of Satochi-satoyama, such as butterflies and herbs in the woodlands and grasslands, and freshwater fish in the paddy fields, were once found near human settlements. However, these species have been reduced since the 1950s, and many are now threatened<sup>4</sup>. Among areas where a high concentration of endangered species occurs, 50% or more are distributed within Satochi-satoyama (Figure 1). Biodiversity in Satochi-satoyama is a product of harmonized human-nature relationships over many years, thereby requiring its proper conservation and sustainable use.

## 2) Value as a new form of natural resource

Owing to the development of biomass technologies, we can expect woody materials of planted or secondary trees and grass and other herbaceous materials, which are stored in Satochi-satoyama, to be used as new economic resources. For example, woody biomass, produced by thinning in plantation forest and community woodlands, has been used as pellet and other forms of fuel by local communities. Such biomass use and proper use of Satochi-satoyama can contribute to biodiversity conservation of these areas.

## 3) Sustenance of landscapes and traditional living culture

Landscape of Satochi-satoyama, combining villages, paddies, woodlands, creeks and irrigation ponds, varies in localities depending on their natural and social conditions. Each landscape can be the 'indigenous landscape' representing the image of hometown, where local residents feel their emotional

---

(*Magnolia stellata*); Hanashinobu (*Polemonium kiushianum*); Japanese faun lily (*Erythronium japonicum*); Watasuge (*Carex oxyandra*), etc

Examples of Japanese endemic species - Northern bitterling (*Acheilognathus melanogaster*); Deep-bodied bitterling (*Acheilognathus longipinnis*); Golden-ringed dragonfly (*Anotogaster sieboldii*); Hikage butterfly (*Lethe sicelis*); Gifu butterfly (*Luehdorfia japonica*); "Hana-no-ki" (*Acer pycnanthum*); Japanese pink lily (*Lilium japonicum*); cobra lily Urashima (*Arisaema urashima*), etc

<sup>4</sup> Examples of endangered species that inhabit Satochi-satoyama environments - Medaka ricefish (*Oryzias latipes*); Giant water bug (*Lethocerus deyrollei*); Hokuriku salamander (*Hynobius takedai*); Naked threespines stickleback (*Gasterosteus microcephalus*); Suwon rosy bitterling (*Rhodeus atremius suigensis*); Kuroshijimi butterfly (*Niphanda fusca*); Oouraginhyomon butterfly (*Fabriciana nerippe*); Bekko butterfly (*Libellula angelina* Selys); Hanashinobu (*Polemonium kiushianum*); Atsumorisou orchid (*Cypripedium macranthum* var. *speciosum*); Denjisou (*Marsilea quadrifolia*), etc

attachment. Native foods, traditional arts and festivals, and other cultural lifestyles that have been nurtured through a long period of human-nature relationships in Satochi-satoyama are handed down in the local communities.

Today, tourists are increasingly seeking for experiencing a rural life and interacting with local communities. Such emotional and cultural aspects of Satochi-satoyama are then becoming attractive as targets of ecotourism and green tourism, raising the value of Satochi-satoyama as a new resource for revitalizing communities of rural regions.

As a fundamental of landscape and culture of traditional lifestyles, we should exert effort for the proper conservation of Satochi-satoyama.

## 4) Opportunities for environmental education and experiences

Whereas urbanization has generally advanced across the country, opportunities to experience the natural world have reduced. Of particular concern is the tenuous relationship between children and the natural environments. For healthy psychological and physical development of children, it is indispensable for them to experience and interact with rich natural environments and creatures in their daily playing and lives. Satochi-satoyama is located in the vicinity of residential areas and nurtures a variety of organisms, sceneries and cultural lifestyles. It can, therefore, be used as a place for nature observation and other environmental education and learning, and various hands-on experiences and activities, such as agriculture and forestry works. In fact, such efforts have been actively practiced in every region of the country.

In addition, interests in maintenance and other works in Satochi-satoyama has been increasing mainly among middle and older aged generations for their social contributions. Satochi-satoyama should be properly conserved and utilized to afford these people with opportunities for education and hands-on experiences.

## 5) Prevention of global warming

Each of the national and regional governments, enterprises and citizens is required to take efforts to prevent global warming. As part of such efforts, it is expected to stimulate CO2 absorption and emission reduction by using forest resources.

By practicing proper forest management such as

thinning, we can enhance the function of forest as a source of CO<sub>2</sub> absorption. Taking advantage of woody and herbaceous biomass, produced through proper management and agricultural operations, can also contribute to reducing CO<sub>2</sub> emission. The national government and some regional governments have established systems for verifying the amount of absorption and emission reduction as credit<sup>5</sup>. While using such credit verification mechanism, we can take

efforts in practicing proper forest management and use of woody and herbaceous biomass, thereby attaining a significant role of Satochi-satoyama in contribution to global warming prevention.

-----  
<sup>5</sup> As a national verification scheme, "Offsetting Scheme (J-VER Scheme)", has been launched in November 2008. This scheme verifies the amount of CO<sub>2</sub> absorption and emission reduction through proper forest management as Carbon Offset credit.

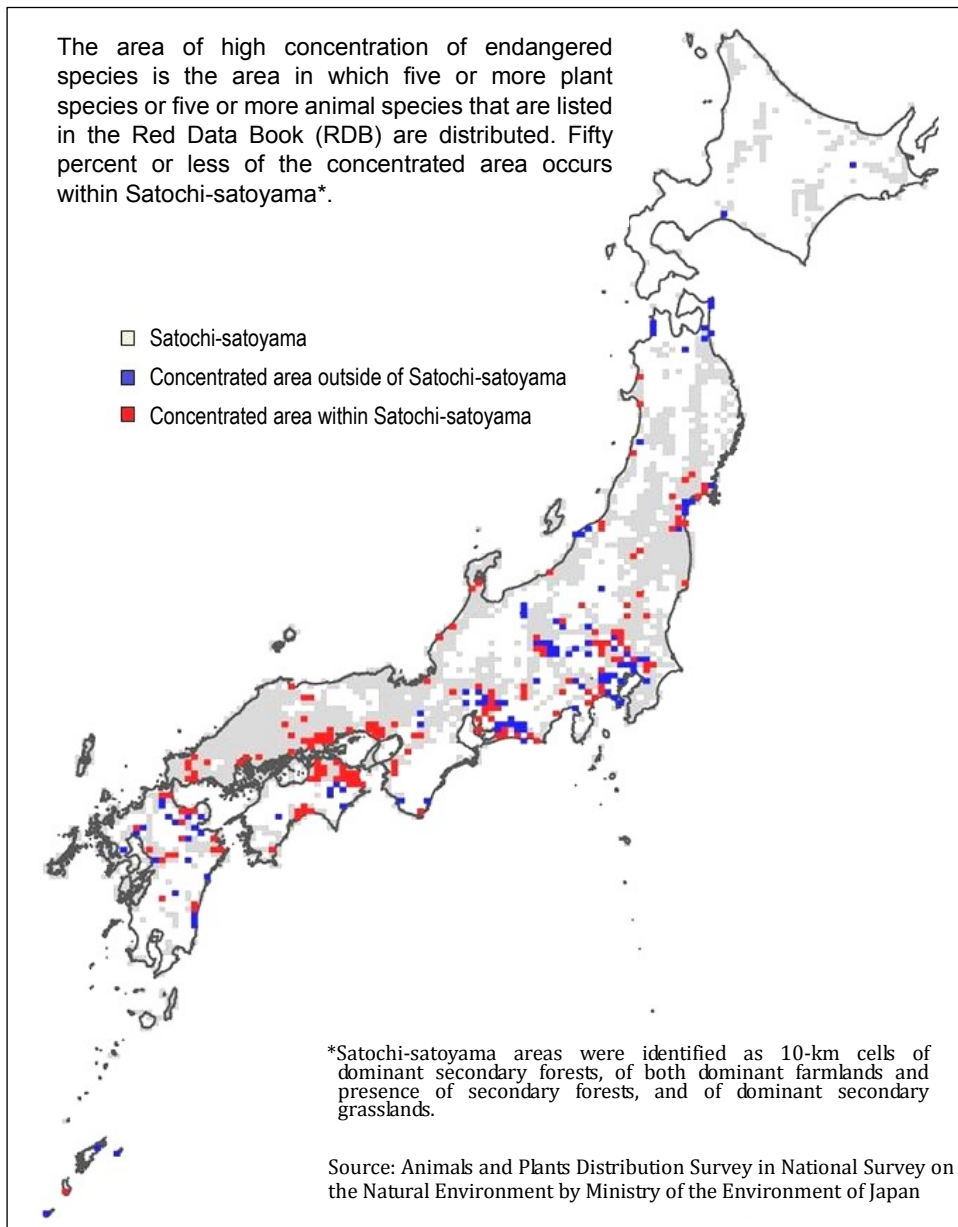


Figure 1 Distribution of the area where high concentration of nationally listed endangered species occurs

## 2. Objectives of the Action Plan and its relation to other policies and measures

### (1) Objectives

The objectives of the Action Plan for Conservation and Sustainable use of Satochi-satoyama (hereinafter referred to as the 'Plan') are: to present the importance of Satochi-satoyama areas, the vision, direction, principles and procedures of their conservation and sustainable use to a variety of stakeholders, such as the national and regional governments, enterprises, NPOs, and agricultural and forestry sectors; and to specify the national measures for Satochi-satoyama conservation and sustainable use, in order to stimulate public understanding in the significance of

Satochi-satoyama and to expand efforts by various entities to nationwide movement.

As described in the beginning of 1 (3), although conservation and sustainable use of Satochi-satoyama should be implemented through activities of agriculture, forestry and local daily living, the Plan precludes measures with purposes of stimulating primary industries and revitalizing rural lifestyles. Instead, the Plan focuses on the conservation of biodiversity and better relationships between humans and the natural world.

### (2) Relation to other policies and measures

The Plan is based upon the recognition of the second crisis determined in the National Biodiversity Strategy of Japan 2010 and on the matters regarding Satochi-satoyama and countryside areas stated in the Grand Design of the National Land. We positioned the Plan as an implementation plan to put forth concrete actions concerning Satochi-satoyama as called for in the National Biodiversity Strategy of Japan 2010.

When regional governments carry out planning and implementation of Satochi-satoyama conservation and sustainable use, the Plan will play a role as a guideline to stimulate and assist these efforts. We also expect the Plan to be translated into a regional biodiversity strategy that is formulated by individual regional governments in accordance with characteristics of their localities (Figure 2).



By presenting the importance of Satochi-satoyama, vision, direction, principles and procedures of Satochi-satoyama conservation and sustainable use to various stakeholders, as well as by specifying the related national measures,

- Stimulate the public understanding in the significance of Satochi-satoyama and
- Expand regional efforts of conservation and sustainable use by various entities to nationwide movement.

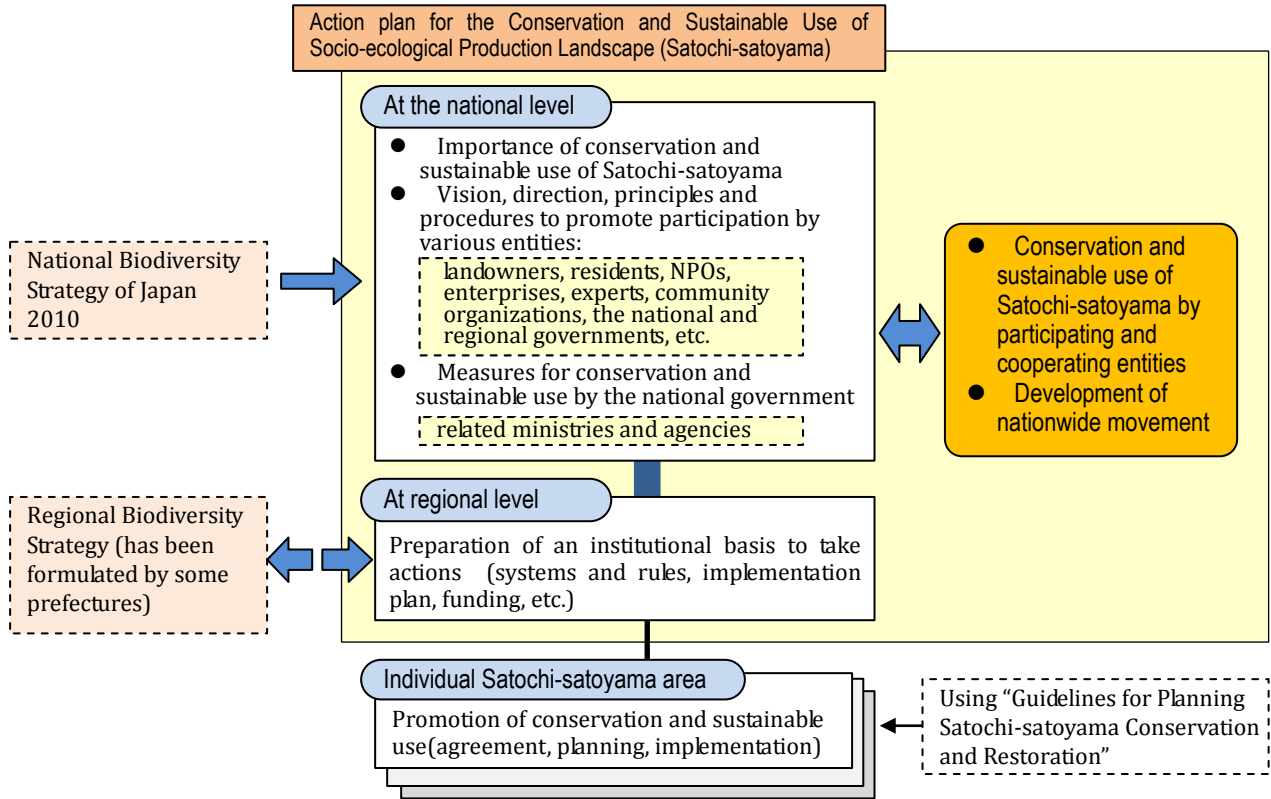


Figure 2 Objectives of the Action Plan and its relations with related policies and measures

### 3. Vision of Satochi-satoyama conservation and sustainable use

Satochi-satoyama areas are important in conserving the biodiversity of Japan. They also serve as a basis of citizen's livelihood and spiritual culture, providing foods, water and natural disaster prevention, and preserving living conditions, landscapes and cultures. At the same time, they are important as a place for learning, experiencing and continuing the lifestyles of Japanese who have harmonized with the natural environments.

For the stable sustenance of ecosystems of Satochi-satoyama, which offer such various functions, we will

promote management compatible with environmental capacity and resilience, and cyclic use of natural resources. Such efforts should be pursued based on scientific knowledge while learning from traditional wisdom.

Moreover, we strive for Satochi-satoyama, having the multi-dimensional values, to be sustained through participation and cooperation of the citizens of every position as a common natural resource shared by them (i.e., new "commons"), and will be handed down to the future.

## 4. Direction of Satochi-satoyama conservation and sustainable use

“The Grand Design of the National Land from the perspective of biodiversity”, stated in Part 1, Chapter 3, Section 2 of National Biodiversity Strategy of Japan 2010, illustrates images of the national land to be pursued in 100 years ahead for each of the land categories, such as natural mountain area, urban area, and coastal area. The image of Satochi-satoyama area or countryside is described as follows:

- In areas filled with agricultural land, many people are engaged in agriculture with a production method that uses natural cycles and focused more on the conservation of biodiversity. When the agricultural base is improved, ecological linkages between rice paddies and streams are secured, so that animals and plants that have been maintained with the operation of agriculture are living closely with people.
- Expansion of agricultural practices that are oriented for environmental conservation activates domestic agriculture, and farmlands are managed in a sustainable manner.
- In secondary forests, although the extent is limited, forests targeted for active management are maintained to be light-filled and accessible, creating sceneries rich in seasonal change. Greatly extended bamboo groves are restored partly to natural or secondary forests. In planted forests, the problem of delayed thinning has been solved. Biodiversity conservation function is enhanced by converting them to broadleaf forests, extending the thinning period and by other management methods, depending on local site characteristics.
- Secondary grasslands are continuously managed for biomass use of the herbaceous resource or for other purposes, where rare species of plant and animal can be commonly found.
- Various types of ecosystems are mixed in Satochi-satoyama, which is restored through diverse use of land and resources.
- In addition to the habitat improvement through active restoration of diverse types of forest, preventive measures and wildlife population control keep bears, deer, and other medium to large mammals from appearing frequently near human settlements.
- Scenery is beautifully maintained, and the number of urban residents who have moved in and foreign sightseers is on the increase. Vibrant local community is realized owing to the penetration of eco-tourism into the society.
- The values of Satochi-satoyama are widely recognized by the public, and the maintenance and management are conducted partly by governmental or private funding and by volunteers.
- Traditional knowledge and technologies utilizing biodiversity in respective regions are handed down through generations, indicating that specific climate linked with regional culture is valued.

In accordance with these long-term goals of the National Biodiversity Strategy of Japan 2010, we hereby set the following three basic directions for the next 10 years that are to be pursued by all measures and implementations conducted by various bodies. The period targeted by the Plan is about 10 years from now to 2020.

### (1) Promotion of nationwide movement

While a wide range of the public increasingly understand the values of Satochi-satoyama, we strive for farmers, foresters and local communities as well as various people at different positions to voluntarily participate and cooperate in efforts of Satochi-satoyama conservation and sustainable use, feeling

Satochi-satoyama as their common resources. Namely, a large number of people including urban residents receive natural benefits from Satochi-satoyama, and at the same time, part of the management cost is supported by public and private funding and volunteer works. Through these collaborative efforts,

relationships among the people of the region will be enriched, sustaining the efforts for Satochi-satoyama

conservation and sustainable use.

## **(2) National-level biodiversity conservation through the conservation and sustainable use of locally typical Satochi-satoyama**

Considering the large extent of Satochi-satoyama in the national land (approx. 40%), implementation of Satochi-satoyama conservation and sustainable use should be focused on some areas selected at a regional scale (e.g., prefecture). We aim for ensuring that Satochi-satoyama targeted for conservation activities represents socio-ecological features of each region of the country. The regional scale conservation and sustainable use will be undertaken with consideration of a larger-scale ecosystem network, to realize the conservation of Satochi-satoyama biodiversity at the entire country level.

Considering the multi-dimensional values of Satochi-satoyama, aspects and criteria for selecting a

representative Satochi-satoyama of a given region should be determined by the regional governments (e.g., prefecture government). Examples of representative Satochi-satoyama might be those of particularly rich biodiversity, active engagement of agriculture and forestry in harmony with wild creatures, or of traditional living culture and landscape symbolizing the image of hometown. Satochi-satoyama particularly important for biodiversity may be the areas of high concentration of endangered species that depend on Satochi-satoyama environments or of providing major habitats for nationally listed or endemic species.

## **(3) Enhancement of various ecosystem services and revitalization of regional societies**

Through diversified utilization of land and resources, we will ensure that a mixture of various types of ecosystems is sustained in Satochi-satoyama in a given region. We then aim for the fulfillment of multi-dimensional benefits of Satochi-satoyama (i.e., ecosystem services), such as provision of water, foods, fuel and other various resources needed for living (supplying service); habitat provision for wildlife, soil

erosion control, headwater conservation and carbon assimilation (regulatory service); provision of social, cultural, religious and spiritual basis (cultural service); and others.

Through these actions, we strive for contributing to revitalizing the livelihood and economy of the regional society.

# 5. Principles of Satochi-satoyama conservation and sustainable use

## (1) Role assignment among implementing bodies

Satochi-satoyama has been created and maintained by local communities including farmers, foresters and village people. It is, therefore, an artifact of natural and social conditions, history and culture of each locality. Therefore, the fundamentals of Satochi-satoyama conservation and sustainable use are voluntary efforts by local communities.

As described in the section 1. (3), however, Satochi-satoyama management only by local sectors has been difficult while benefits of the natural resources extend over a wider area of the locality because of the diverse values and functions of Satochi-satoyama.

The conservation and sustainable use of Satochi-satoyama therefore requires support from a broader range of the public or from the entire country. For this purpose, the national government itself needs to conduct initiative projects in collaboration among related ministries and agencies, which stimulates regional efforts and then develops them into nationwide movement.

Each sector of the national and regional governments, enterprises, farmers and foresters, local communities, citizens or NPOs, experts and researchers is required to play roles as follows (Figure3).

### 1) National government

The national government proceeds with the *Satoyama* Initiative to promote sustainable resource use around the world. At the same time, the government will carry out the following measures with attention to effective implementation by coordinating measures of different ministries and agencies.

#### ① Building a national level basis for nationwide activities

As the basis for a wide range of stakeholders to work on Satochi-satoyama conservation and sustainable use together, the national government will undertake dissemination of the importance of Satochi-satoyama among citizens, promotion of the Plan, and development of rules and systems concerning Satochi-satoyama conservation and sustainable use.

#### ② Supporting efforts of individual regions (e.g., prefectures)

To promote activities for Satochi-satoyama conservation and sustainable use in a given region, the national government will encourage local implementing bodies to use the “Guidelines for Satochi-satoyama Conservation and Restoration Planning”, introduce ongoing unique projects, and provide training workshops for learning procedure of conservation and sustainable use, and management techniques and methods. The national government will also provide financial support to the local bodies, from the perspective of biodiversity conservation.

## 2) Regional governments

The expected roles of regional governments are described below. Some leading regional governments have already taken measures for Satochi-satoyama conservation and sustainable use, such as establishing ordinances and subsidy programs to support conservation activities by various groups, preparing plans for promoting conservation and sustainable use, and providing volunteer training and technical workshops. Thus, each regional government has been playing important roles in promoting the Satochi-satoyama conservation and sustainable use of the respective region.

#### ① Establishing a regional basis for implementation

Regional governments will build a basis for a regional-scale activity beyond the area where individual Satochi-satoyama is located, such as enhancing the residents’ understanding in the significance of Satochi-satoyama, preparing rules and systems for promoting coordination and cooperation by diverse participating entities, and formulating promotion plan and policies at prefecture levels.

#### ② Supporting individual projects at a community level

The regional governments will provide subsidies

for expenses and materials to activities in each Satochi-satoyama area, foster leaders and volunteers, provide workshops for management techniques and methods, and prepare implementation manuals and other documents.

To expand these regional activities to the entire country scale, the national government will take measures for promotion, by establishing places and providing opportunities to enable information sharing, such as training courses provided by the cooperation of ministries and agencies and consulting service for people seeking support resources.

### 3) Enterprises

While corporate social activities have been increasing, the role of enterprises as new partners in engaging Satochi-satoyama conservation and sustainable use has been drawing attention. For biodiversity conservation and prevention of global warming, business sectors are expected to foster financial resources. They can also play roles as implementing bodies in partnership with NPOs, administrative bodies and other parties (Reference 1). Particularly, companies with their main offices in local communities of Satochi-satoyama areas, chambers of commerce, and Japan Agricultural Cooperatives may engage in developing special products made from local natural resources and could be highly interested in Satochi-satoyama conservation. Participation of such local business sectors is expected to enhance

community-based efforts of Satochi-satoyama conservation.

### 4) Farmers, foresters and local communities

Farmers, foresters and local communities of Satochi-satoyama areas are expected to take roles as locally-based entities, in cooperation with outside supporters and administrative bodies.

### 5) Citizens and NPOs

It is anticipated for citizens and NPOs to cultivate their interests and understanding in Satochi-satoyama conservation and sustainable use and to participate in the conservation activities and monitoring survey on biodiversity. They can also indirectly support the activities through purchasing products of Satochi-satoyama and offering donation.

### 6) Experts and researchers

Experts and researchers are expected to participate in Satochi-satoyama activity based on their expertise. They can facilitate understanding of residents and others in the significance of Satochi-satoyama, lead biological survey and monitoring, and give directions of activities from the perspective of biodiversity. We can also expect experts and researchers to play roles in coordinating among involved local parties. Moreover, there are many cases that university students participate in groundwork activities. Such students can be new workforces in the fields of conservation activities.

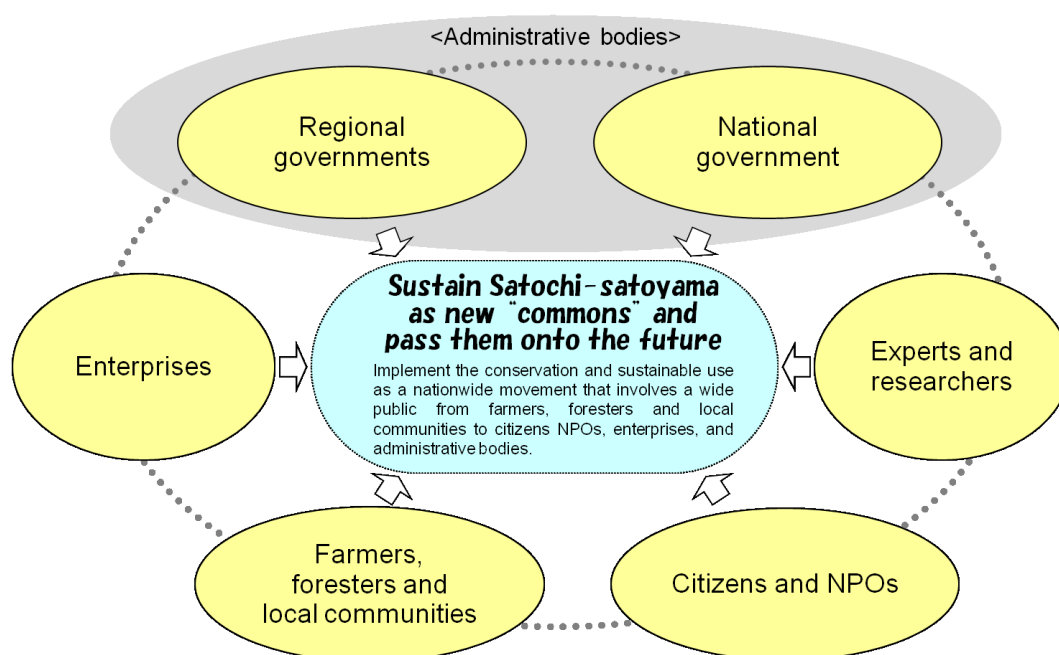


Figure 3 Role assignments among involved parties

**<Abstract of Declaration of Biodiversity by Nippon Keidanren>****1. Appreciate nature's gifts and aim for corporate activities in harmony with the natural environment**

Appreciate that we depend upon nature's gifts (ecosystem services) which are derived from biodiversity. Aim for corporate activities which are in harmony with functions of natural cycles containing atmosphere, water, soil, and biota, which have been evolving since the birth of the earth.

**3. Act voluntarily and steadily to contribute to biodiversity**

Be aware of one's own social responsibility. Act voluntarily and steadily to reduce impacts on biodiversity, and to promote socially responsible activities that will substantially benefit biodiversity. In implementing actions, individual companies endeavor to use their own managerial resources and apply their creativity according to their management contexts and ideas.

**6. Collaborate with relevant international and national organizations**

Collaborate, both in international and national contexts, with stakeholders to develop a better awareness and recognition of the importance of biodiversity and actively promote collaboration and cooperation in order to make the engagement and activities for biodiversity effective.

**7. Spearhead activities to build a society that will nurture biodiversity**

Based on a deep understanding of biodiversity, contribute to a sustainable global society by spearheading activities which address social responsibility for biodiversity.

**Action Policy****3. Act voluntarily and steadily to contribute to biodiversity**

3-3 As part of social responsibility activities, engage in biodiversity issues even if they are not directly linked to the operations of the company.

**7. Spearhead activities to build a society that will nurture biodiversity**

7-1 Actively carry out environmental education activities for employees in collaboration with local communities, NGOs and other organizations.

7-2 Raise societal awareness of the need to nurture biodiversity.

Extracted from "Declaration of Biodiversity by Nippon Keidanren" by Nippon Keidanren on March 17, 2009.

## (2) Promotion of collaboration and cooperation among participating entities

While it is becoming difficult to manage Satochi-satoyama only by traditional workforces, such as local farmers, foresters and village communities, it is required to ensure sustainable labor and financial resources in order to carry on the maintenance and management of Satochi-satoyama. Therefore, it becomes important to promote activities with collaboration and cooperation among diversified entities, from urban residents, NPOs, enterprises, universities, and other new partners, to administrative bodies.

To this end, it is required to develop a platform at a local scale of Satochi-satoyama area for stakeholders to work together on establishing councils and forming agreements and so on. While making the best use of existing systems and frameworks, rules and coordinator organizations (Reference 2) will be developed as

the basis of collaborative activities, in accordance with socio-ecological characteristics of the locality. When considering the efforts of Satochi-satoyama conservation and sustainable use as a larger-scale collaborative work beyond the locality, it is also important to gain support from enterprises and each of the Japanese citizens.

Thus, we will promote the development and take advantage of the use of organizations, funding and other frameworks to gain volunteers and financial supports from a wide range of enterprises and the Japanese citizens (Figure 4).

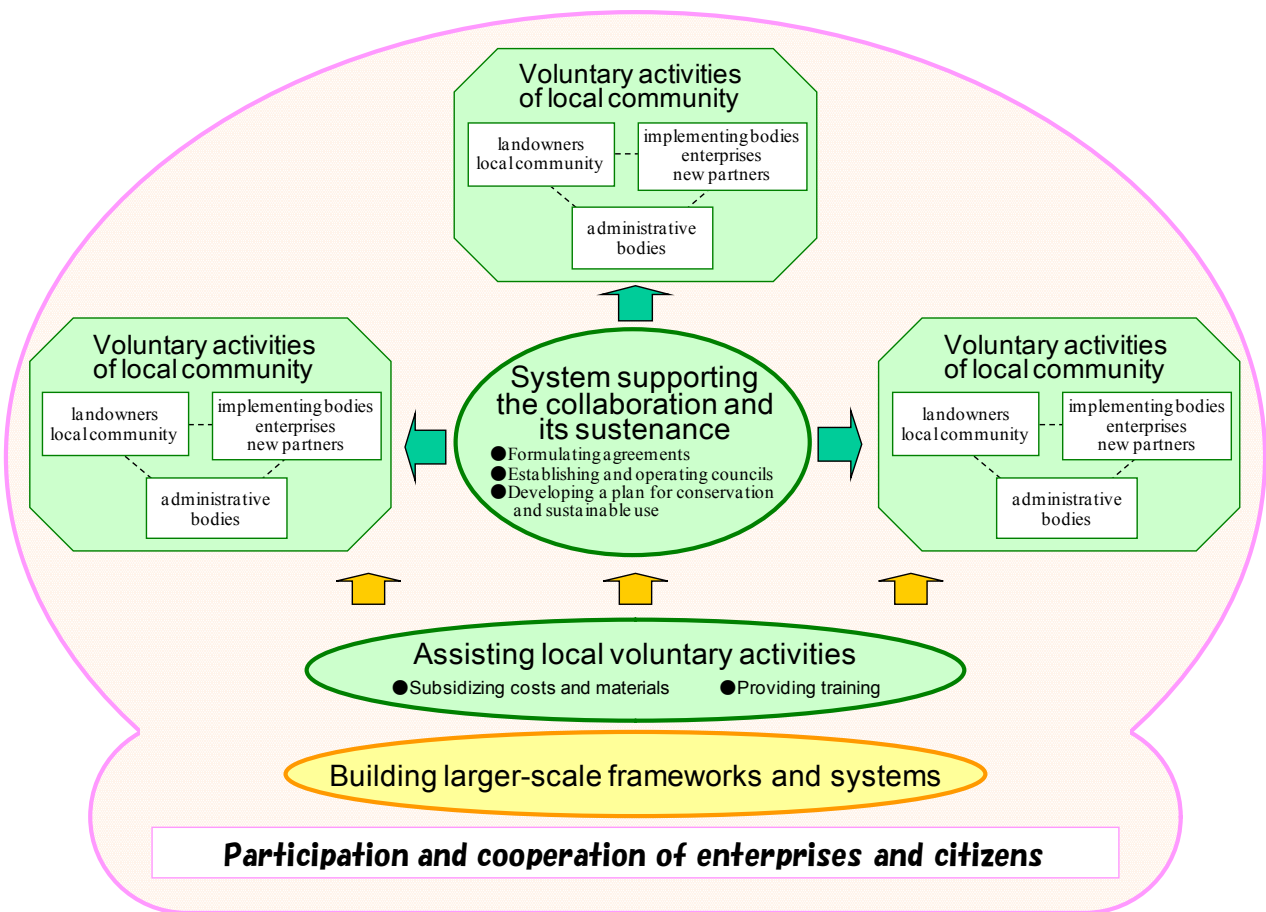


Figure 4 Promotion of collaboration and cooperation



### (3) Actions in accordance with regional characteristics

Because Satochi-satoyama areas vary in its socio-ecological conditions for different regions, it is necessary to pay attention to determining a strategy of conservation and sustainable use depending upon the conditions of a given region.

For the conservation and sustainable use near urban areas, it is effective to promote collaborations with entities outside of the Satochi-satoyama community. New partners can be found outside of the community, such as NPOs, enterprises and schools, who wish to engage in volunteer works and environmental learning and experiencing.

In semi-mountainous regions, local farmers and foresters are the main implementing bodies. Stability of their conservation activities may be assured by focusing on local business activities using ecotourism and local products, and on other activities that are linked to the development of the region.

In coastal regions, Satochi-satoyama areas and the ocean are not distant. Considering the regional continuity and integrity of the two areas, the conservation and sustainable use will be effective in

cooperation between two communities.

For these types of Satochi-satoyama activities, the national government will implement the conservation and sustainable use of typical Satochi-satoyama area that is selected for each of the ecologically and socially distinctive regions. Building on leading efforts at the scale of a selected area, the conservation and sustainable use of Satochi-satoyama will be promoted throughout the region.

Satochi-satoyama areas in semi-mountainous regions contain forests near deep mountains. In addition, because of declined population and aging, human resources in the communities are becoming limited. Therefore, while some woodland areas should be managed partly as secondary or artificial forests, others will be properly managed depending on local socio-ecological conditions. For the others located close to deep mountains and that are normally transformed to natural forest without human care, the basic approach will be to leave them for natural succession. In these cases, vegetation restoration may be carried out where necessary (Figure5).

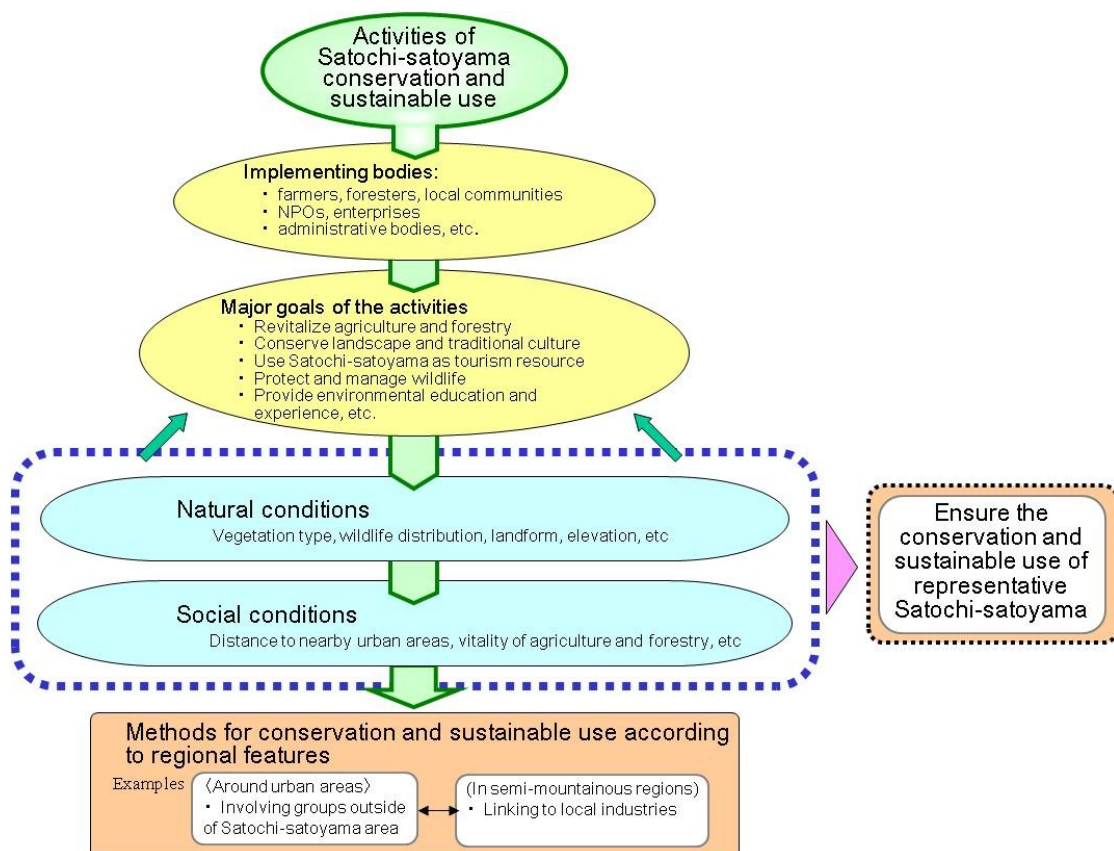


Figure 5 Satochi-satoyama conservation and sustainable use corresponding to the characteristics of a given region

#### **(4) Reflection of biodiversity perspectives on Satochi-satoyama conservation and sustainable use**

Activities of Satochi-satoyama conservation and sustainable use may be implemented by various entities and for various purposes, reflecting the multi-dimensional values of Satochi-satoyama. These activities should also be effective in terms of conservation of biodiversity. For this purpose, it is important to inventory on basic ecological information, including distribution of wildlife that depend on the habitat of Satochi-satoyama. Based on such basic information, the conservation and sustainable use

efforts should be prioritized on the areas of high importance for the conservation of biodiversity. It is also vital to apply adaptive management, in which we can flexibly revise actions and expected outcomes in light of new data obtained from continuous monitoring. To ensure understanding of the biological information, setting proper goals, and implementing management that translates the ecological responses, we will promote participation by experts who have knowledge in the field of biodiversity.

## 6. Procedure for Satochi-satoyama conservation and sustainable use

This section, in accordance with sections 4 and 5, describes the procedure of Satochi-satoyama conservation and sustainable use, addressing cross-sectional tasks that are common to all measures and efforts implemented by diverse entities, from the national and regional governments, private organizations, enterprises, to universities, with various purposes.

### (1) Establishing a basis for nationwide activities

We will expand and carry on the direction, principles and other elements presented in the Plan, in order to promote the conservation and sustainable use of Satochi-satoyama that are common resources shared by all citizens, with involvement of a wide range of implementing bodies.

We will also develop mechanisms to encourage nationwide engagement, such as funds to receive donations and partnership funding from citizens, enterprises and other sponsors (Reference 2); programs to give award or certification to activities of proper conservation and sustainable use (Reference 3); and programs of recommending agricultural products that benefit biodiversity conservation (Reference 4).

Aiming at promotion of understanding in the values and importance of Satochi-satoyama and calling for cooperation at all sectors of the public, we will actively undertake provision of information on

biodiversity, landscape and culture of Satochi-satoyama and selection of high-quality Satochi-satoyama.

We will increase opportunities for citizens to directly come in contact with the nature of Satochi-satoyama and to learn about its beauty, such as hands-on nature experience and volunteer work.

Furthermore, to realize the national movement of Satochi-satoyama conservation and sustainable use, we will create opportunities of national-level collaboration, where a wide range of citizens of any generation and gender can participate in the activities of Satochi-satoyama conservation and sustainable use. Networking between regional governments and local activist groups dedicated to Satochi-satoyama conservation and sustainable are will also be promoted.

### Activities of Kyoto Model Forest supporting the cooperation among stakeholders, by Kyoto Prefecture

- Kyoto Prefecture proposed the Model Forest Activities to implement forest management involving the prefecture citizens. This effort, with a purpose of creating a sustainable community focusing on forests in Kyoto, protect and nurture the forests and promote cyclic use of wood, through participation by urban residents, volunteers, NPOs, enterprises and other beneficiaries of multi-dimensional functions of the forests.
- Kyoto Model Forest Association was launched as an organization to promote such activities in November 2006, in order to strengthen participation, support and use of local materials. The Association helps find sites for forest improvement activities, collects donations and manages them, and provides other supports to management activities.
- Establishment of the Association has accelerated improvement activities by business sectors. Currently, 28 groups in the prefecture are working on improvement projects at 26 sites (as of March 2010). The Association also plays a central role in coordinating stakeholders. The Association helps companies find sites for their activities and also serves as the base of receiving donations from them. To landowners and local municipalities, the Association introduces companies who are willing to be partners and facilitates as mediator among involved parties. The other crucial functions are to approve CO2 absorption to forest improvement activities by business sectors, and to support improvement activities, using donations from businesses and others.
- The Association takes a role in expanding resources for forest improvement activities, such as public participation and donations through a wide range of their promotion and education activities. The Association participates in events to make presentations on the Model Forest activities as the efforts involving the Kyoto citizens. They also publicize about the Model Forest on reports and their website, as well as host tours for nature experience in forests.

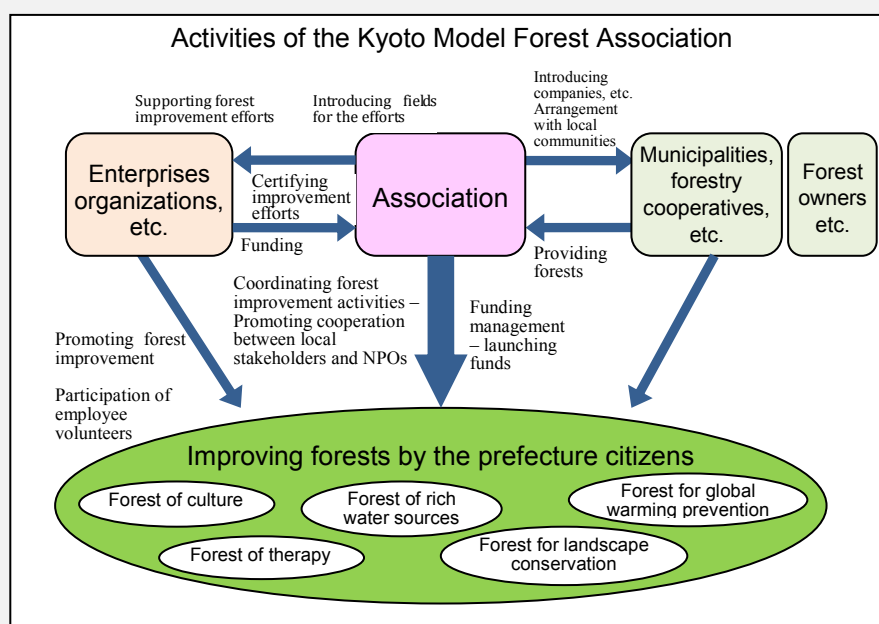


Figure 6 The roles of the Kyoto Model Forest Association linking diverse stakeholders

Source: Kyoto Model Forest Association website

**Reference 3**

Example of award and certificate programs related to Satochi-satoyama conservation and sustainable use

**Certificate program for “We all save the nature”, by Mie Prefecture**

Mie Prefecture certifies conservation activities by local group, such as field observation workshops and wildlife survey, as “We all save the nature”. Corresponding to application by individual groups, attached with project outline and the rules and others about the groups, the mayor of the prefecture provides a certificate.

The criteria for certification are as follows:

- The project should contribute to natural environmental conservation.
- The project should be ongoing and will be continued.
- If involving wildlife conservation, the project should pay attention to the whole ecosystem of the project’s site.
- The project should be in agreement with landowners and other stakeholders.
- The project and its target site have not been approved as yet under the Action Plan for the Conservation of Satochi-satoyama\*.

The Prefecture issues a certificate board posting the group’s message on it, introduces their activities on the prefecture website, and supports the group by providing information related to their activities and advices, on the basis of their request.

So far, the Prefecture has certified some groups, including a NPO, which has contributed to children’s environmental education. This NPO provided *Satoyama* woodlands mainly of oak species to nearby elementary schools and child support groups.

\*A program to subsidize expenses for purchasing equipment and seedlings to groups working on Satochi-satoyama management. Corresponding to application, the mayor certifies the action plan of each activity. This program is based on the Ordinance of Mie Prefecture Environmental Conservation.

Source: Mie Prefecture website

**Reference 4**

Example of a program to recommend agriculture and forestry products

**“Flying Stork” Certification System, by Toyooka City, Hyogo**

Toyooka City has implemented various environmental measures aiming for a balance between human livelihood and the rich environment, using the recovery of wild oriental stork as a symbol. They have launched a certification program for agricultural products, “Flying Stork” Certification System in March 2004.

Among the farming groups that produce “Hyogo Reliable Brand”, which is certified by Hyogo Prefecture, those practicing more environmentally friendly farming can be certified by the City under this program.

The certified products can be sold with a certification sticker as “Flying Stork” products.

Adopting to this program, “JA Tajima” has worked on abandoning or reducing chemical pesticides and fertilizers in rice paddies and on promoting cultivation method that nurtures organisms (e.g., practicing winter flooding and installing fish ways in paddies), to create paddies providing feeding habitat to oriental storks. The rice produced in these paddies can be sold as “Rice that nurtures oriental storks”.



Source: Toyooka City website

## (2) Introducing economic instruments to Satochi-satoyama conservation and sustainable use

To secure the financial sources by promoting labeling and adding values to local products, the applicability of economic instruments will be considered, such as the financial mechanism that has been adopted as a measure against global warming.

### ① Creating incentives by evaluation and certification of multi-dimensional functions of Satochi-satoyama forest

Wood may be labeled as local products or products of forests that are managed for Satochi-satoyama conservation and sustainable use. Labeling creates added values, which gives an incentive to forest owners for enhancing forest management. Certification of amount of CO<sub>2</sub> emission reduction or

absorption by the national and regional governments (Reference5) will also increase incentives of forest owners', etc. to promote thinning and other proper management.

### ② Evaluating ecosystem services of Satochi-satoyama

In accordance with the development of "Sub-global Assessment of *Satoyama* and *Satoumi* in Japan (*Satoyama-satoumi* SGA<sup>6</sup>)", which is under discussion in an international framework, we will study methods for evaluating ecosystem services of Satochi-satoyama that have been formed through human activities, such as agriculture and forestry.

#### Reference 5 Example of evaluation and certification of amount of CO<sub>2</sub> absorption by regional governments

##### Kyoto Prefecture Forest Absorption Certificate, by Kyoto Prefecture

The Kyoto Prefecture Global Warming Countermeasures Ordinance requires large-scale businesses to submit their emission reduction plans and releases these plans to the public, which promotes voluntary reduction by business sectors.

This ordinance stipulates "forest conservation and improvement" as a supplemental measure to achieve the target amount of reduction. The Prefecture has established their own certificate program, the "Kyoto Prefecture Forest Absorption Certificate".

The Kyoto Model Forest Association has been designated as the certifying body. The Association enumerates and certifies the amount of CO<sub>2</sub> absorption based on forest conservation and improvement activities by business operators (began in April 2009).

Certified by this program, the company can state their forest management activity as a global warming countermeasure on their emission reduction plan.

<sup>6</sup> Based on an appeal from Annan, the former UN Secretary-General, a first comprehensive global scale ecosystem assessment, the "United Nations' Millennium Ecosystem Assessment (MA)" was conducted by more than 1,360 world researchers from Year 2001 to 2005. The *Satoyama-satoumi* SGA was launched in 2007 to apply the framework of MA in order to assess the ecosystem services derived from *satoyama* and *satoumi* and to provide the scientific base for taking actions toward the conservation, sustainable use and management of *satoyama* and *satoumi*. The United Nations University has served as the SGA's secretariat. The SGA carried out assessments at the scale of five regions (clusters) that classify assessment sites across Japan and a comprehensive assessment at the national level, with participation of more than 200 authors and other stakeholders. The findings have contributed to provision of a scientific base of the *Satoyama* Initiative, which has been promoted in collaboration of Ministry of the Environment, Japan and the United Nations University - Institute of Advanced Studies.

### (3) Preserving traditional technologies for sustainable resource use and developing new technologies to promote cyclic use

Traditional knowledge and technologies for using the resources of Satochi-satoyama, such as mosaic pattern land use and cyclic use, are compatible with natural conditions of the locality. They constitute precious heritage not only in terms of biodiversity but also for the local community. The elder people likely take on the central role in maintaining such heritage. Therefore, it is an immediate issue to succeed the knowledge and technologies to the next generation. In a normal situation, this would be achieved by training human resources as the successors. However, because the traditional knowledge and technologies are already at the last moment of being lost, it is crucial to begin

documentation of the knowledge by interviews and taking videos parallel to training programs. The recorded data should be preserved all together and kept accessible when needed. By combining traditional knowledge with modern science, a new dimension of the conservation and sustainable use of Satochi-satoyama can be pursued in the local societies.

Furthermore, we will promote developing new technologies and market, such as biomass energy use, as well as building on a resource cycle system linking the demand and supply of natural resources in Satochi-satoyama (Reference6).

**Reference 6** Example of re-evaluation of traditional technology for resource use and integration of traditional and modern technologies

#### Recycling-based Satochi-satoyama utilization with a core of introduction of new technologies by private companies

A private company, Amita Corporation, has been conducting recycling-based resource use, by operating the biogas power generation as the core of their activities in Kyotango City.

By the same company, food wastes in this region undergo methane fermentation. The produced biogas is burnt for power generation, and the residuals after the fermentation process are used as compost or liquid fertilizer for organic farming to grow rice. The rice paddies are cultivated without chemicals and maintain harmony with abundant organisms. The rice is named “Shinrin-no-okome”, rice from the forest, and is labeled the system of regional resource recycling. Thus, this recycling-based resource use enables recycling the regional organic wastes and contributes to restoring degraded farmlands.

The company introduced “forest dairy farming”, which releases dairy cows in the forest behind their biofuel facility for grazing. Cows graze on the forest undergrowth, making forest management easier and improving the natural environments of the secondary forest that has been degraded. The factory adjacent to this forest produces and sells high-quality natural pasturing milk and ice cream, creating opportunities of employment in the rural region.

Source: Amita Corp. website

## (4) Understanding the current status of Satochi-satoyama and promoting monitoring study

Natural and social characteristics of Satochi-satoyama differ in each locality. Therefore, while consulting local traditional knowledge to harmonize with the natural environment, the conservation and sustainable use of Satochi-satoyama should be implemented based on scientific identification of the local biodiversity.

Currently, information on wildlife distribution to be a basis of such local efforts is insufficient. The current status of Satochi-satoyama environments should be identified by proceeding data collection, analyses, and evaluation across the country. Adaptive management based on monitoring will be applied at the local level to refine expected outcomes and activities.

### ① Monitoring and evaluation of Satochi-satoyama across the country

To obtain fundamental data for implementing Satochi-satoyama conservation and sustainable use, the national government will promote monitoring on wildlife distribution associated with Satochi-satoyama environments across the country, with cooperation of local communities, citizens and NPOs, etc (Reference 7). Based on these accumulated data, a target Satochi-satoyama important for conservation will be selected in each region of distinctive socio-ecological features.

#### Reference 7 Example of identification of the current status of Satochi-satoyama and monitoring

### An overview of Monitoring Sites 1000 — Satochi-satoyama Site

Adapted from the Nature Conservation Society of Japan website and the pamphlet, *Moni 1000 Satochi Survey*, issued in January 2010.

#### <Overview>

Ministry of the environment of Japan (MOE) has been undertaking the nationwide monitoring program on various ecosystem types, “Monitoring Sites 1000”. Of these ecosystem types, Satochi-satoyama ecosystems are monitored under the project “Monitoring Sites 1000 – *Satochi Survey*”, operated by the Nature Conservation Society of Japan. This project aims to detect country-scale alterations of complex Satochi-satoyama ecosystems, by conducting comprehensive habitat survey on biota, indicator species, and aquatic habitat in a standardized protocol over numerous sites across the country. The project also strives to realize locally-based conservation of Satochi-satoyama biodiversity, by which local citizens participate in the monitoring survey as an implementing party.

#### <Monitoring sites and participants>

As of January 2010, 196 sites consisting of two site types, core and satellite, have been established across the country (Figure 7).

About 1500 people participated in the survey over the country (estimated from the number of applicants). Various organizations are involved – from local NPOs, nature conservation groups, landowners, universities (Tokyo University of Agriculture, Kanazawa University and Nippon University), enterprises (ex., Toyota Motor Corporation, Koikai Farm Ltd.), regional government (Nagaokakyo City, Kyoto), to museums (Iida City Museum and Japan Monkey Centre).

Site Type	Objectives and the approach to establishing monitoring sites
Core site	<ul style="list-style-type: none"> <li>Representing various climate zones</li> <li>Monitoring multiple inventories for the long term (i.e., 100 years)</li> <li>Conducting preliminary survey, to improve the survey protocol, develop a methodology for data analysis and application of the results.</li> </ul>
Satellite site	<ul style="list-style-type: none"> <li>Monitoring more than one inventory for at least five years.</li> <li>Establishing a number of sites across the country to understand the country-scale ecosystem alterations occurring in Satochi-satoyama.</li> </ul>

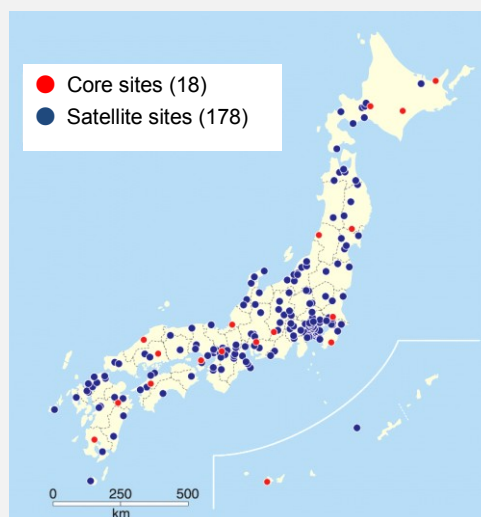


Figure 7 Monitoring Sites 1000 – *Satochi Survey* Study (as of January 2010)



## ② Strengthening monitoring and other stages of conservation and sustainable use

The national government will study approaches and specific methods for establishing indicators of Satochi-satoyama environments as the basis for setting goals and evaluating monitoring data. Because it is necessary to identify a final goal as a reference to be used during monitoring assessment, the govern-

ment will examine the approach and methods for setting a final goal.

At regional levels, proper goals and methods, continuous monitoring, evaluation of outcomes, and revision of actions will be carried out in cooperation with experts, in order to enhance the effectiveness of the actions in terms of biodiversity.

## (5) Characterizing Satochi-satoyama and implementing its conservation and sustainable use based on the characteristics

Considering the large extent of Satochi-satoyama in the country with its total area of about 40% of the land, it is necessary to sort out Satochi-satoyama sites targeted for implementation, such that each site typifies the socio-ecological characteristics of a given area.

For this purpose, a geographical unit should first be designated across the country, based on natural and social characteristics. A target site will then be selected in a unit with consideration of biodiversity and social conditions of the unit. This selection process also considers a larger-scale ecosystem

network linking different sites.

Regional governments take a role in identifying target sites according to the conditions of the unit where the sites are located (Reference8). The national government will provide information necessary for field survey, planning, and other processes to assist the regional governments.

Considering that the public functions of forest and Satochi-satoyama should be sustained and fulfilled, the national government will also carry on discussion on the approach to forest management and identification of a management unit.

### Reference 8

Example of selection of target Satochi-satoyama by regional governments in the context of their measures for conservation and sustainable use

### Development of a conservation and sustainable use project based on “Fukui Satochi-satoyama 30”, by Fukui Prefecture

Based on the biological survey for Satochi-satoyama in Fukui Prefecture, the Prefecture has selected 30 sites as “Fukui Satochi-satoyama 30” in the FY2004. At 10 of all sites, Satochi-satoyama conservation and sustainable use have been promoted, addressing monitoring of rare species, management of their habitat, and patrols to prevent illegal harvesting in cooperation with farmers, village communities, local municipalities, experts, etc. (for five years from FY2008 to 2012).

This measure requires implementing bodies to prepare a plan for conservation and sustainable use that prescribes the project goal and specific activities by participation and cooperation of stakeholders. The measure also requires that three parties, residents’ association and activist group; local municipalities; and the Prefecture need to sign an agreement, as well as that the Prefecture and the municipalities subsidize activity expenses (for three years).

The Fukui Nature Conservation Center is in charge of coordination. Currently, the first project, aiming at the recovery of a town of oriental storks, was established in the Sakaguchi – Shirayama District, Echizen City. The plan has been carried out in accordance with its three-party agreement.

#### 【Approach to selecting target Satochi-satoyama sites】

- The Fukui Satochi-satoyama 30 sites were selected because of their high biodiversity, that is, where a number of species are listed on the prefecture red data book.
- Ten sites were selected based on the urgency need to be protected from development pressure and also in consideration with the willingness of communities as well as the feasibility of the project.

Source: Fukui Prefecture website

## (6) Preparing a regional-level basis for implementing Satochi-satoyama conservation and sustainable use

Voluntary activity by local communities is fundamental to the conservation and sustainable use of Satochi-satoyama. Therefore, the national government will provide supports necessary for regional governments and other local entities, with taking advantage of existing systems, to prepare the basis of Satochi-satoyama conservation and sustainable use, so that voluntary activities through participation and cooperation of various bodies will be attained.

### 1) Building a framework and system for securing cooperative efforts and their sustenance.

- ① Promoting agreement among stakeholders - secure reliable relationships between historical land users and new partners and the sustenance of their activities.

In implementing specific activities at individual Satochi-satoyama areas, it is effective to ensure reliable relationships among stakeholders and the sustenance of the activities, by building a framework for cooperative activities (Reference 9), such as an agreement between two parties - “landowners and local community” and “activist organizations and enterprises, etc.”, or between three parties including administrative bodies. The national government will

promote establishing such framework.

- ② Preparing opportunities of collaboration between diverse stakeholders, such as council and others.

To carry out Satochi-satoyama conservation and sustainable use by engagement and collaboration of diverse stakeholders, it is necessary to create opportunities for discussion for developing goals and plans, and collaboration and coordination among parties. Therefore, the national government will carry on establishing conferences or other opportunities.

- ③ Preparing a plan prescribing a goal and method of Satochi-satoyama conservation and sustainable use

To promote smooth activities involving diverse bodies, it is necessary to clarify and share the conservation goal and roles of participating bodies. For this purpose, it is necessary to develop a plan, also for securing the sustenance of the activities and using the plan as a ground to seek outside support. The national government thus stimulates plan preparation by involving a wide range of stakeholders.

#### Reference 9

Example of developing a framework for securing cooperation and continuous effort

#### Activity agreement, regional strategy, council meetings, etc. for cooperation of various stakeholders, by Hadano City and Kanagawa Prefecture

Under “Conservation and Use of Satochi-satoyama Model Projects”(conducted from FY2004 to 2007) by MOE, Hadano City formulated a “regional strategy”, which prescribes the goal of the activities involving diverse stakeholders and their responsibilities in March 2006. At the same time, “Hadano Council for the *Satoyama* Conservation and Restoration” was organized by participation of local residents, private groups dedicated to Satochi-satoyama conservation, and forestry cooperatives, etc. The Council is working on the project in coordination with involved parties.

Since FY2007, the city formed a three-party agreement among landowners, volunteer groups and the city to promote and assist Satochi-Satoyama management by the citizens and to support activity expenses of the volunteer groups.

In 2009, two Satochi-satoyama sites in the city were selected for “Kanagawa Prefecture Satochi-satoyama conservation area” based on the “Ordinance Regarding Conservation, Restoration and Utilization of Satochi-satoyama in Kanagawa (effective since April 2008)”. The “Agreement for Satochi-satoyama Activities”, agreement between the private group of Satochi-satoyama conservation and landowners, etc on management activities and biological survey, was approved by the Prefecture. The Prefecture assists financial resources such as providing subsidy to the conservation and other activities based on the agreement by the two participating bodies.

Source: Kanagawa Prefecture website

## 2) Reinforcing support systems that promote voluntary engagement of local communities

### ① Financial support for expenses and equipment

The cost of labor and expenses is high at the time of launching a project especially for locally self-reliant efforts; several processes are taken place in parallel, such as establishing a council, developing a plan, agreement contract and other basis for stakeholder cooperation, and preparing documents and equipment. Therefore, the national and regional governments will take financial measures necessary for building a basis necessary at the time of starting a new project (Reference 10).

### ② Finding, attracting and developing human resources

Leaders and coordinators are important for launching a project involving diverse stakeholders. Human resources who can be local leaders or

coordinators should be developed through learning from the leading projects and training workshops. Furthermore, while taking advantage of existing systems, we need to attract enthusiastic persons and to develop a mechanism such that the persons can play a role in place as a coordinator who finds local attractions and leads conservation and sustainable use activities that involve various stakeholders (tentative name: Satochi-satoyama Ranger).

Satochi-satoyama conservation and sustainable use also needs a person with sufficient ability in field activities for improvement works, environmental education and biological monitoring, such as a person who masters how to use equipment and has knowledge of wildlife plants and animals. To cultivate such human power, consulting, training and other learning programs by fully experienced practitioners and experts should be implemented (Reference 11).

**Reference 10** Example of regional government measures to support Satochi-satoyama conservation and sustainable use – subsidize expenses and equipment

### “Grant for Promotion of Aichi Forest Greenbelt Environmental Activity and Education”, by Aichi Prefecture

Aichi Prefecture has established “Grant for Promotion of Aichi Forest Greenbelt Environmental Activity and Education” since FY2009. This grant provides financial support, in an open application system, to voluntary conservation of forest and green tracts and environmental education that fosters a movement of supporting forest and green tracts by the entire society. In FY2009, the grant was given to 45 out of 78 applicants.

The target activities related to Satochi-satoyama include preparation of a plan to initiate *Satoyama* improvement, technical consultation and leader training for *Satoyama* conservation, tree planting, and conservation of wildlife and their habitat. The grant for one group (including local municipalities) does not exceed 1-million Yen and with the ratio of 10 to 10.

The source of this subsidy program is the “Aichi Forest Greenbelt Tax” in accordance with the “Ordinance for Aichi Forest Greenbelt (effective since April 2009)”.

Source: Aichi Prefecture website

### Development of “*Satoyama* managing adviser”, by Hiroshima City

Responding to the increase of citizen activities for restoration and maintenance of *Satoyama* in their neighborhood, the Hiroshima City has implemented a program since FY2005 to develop forest managers, “*Satoyama* managing adviser”, who will be leaders of restoration and maintenance works of *Satoyama* forest.

Eligible applicants for the program should have more than three-years practice in forest restoration and maintenance in volunteer organizations and should be recommended by the organizations. After completing a two-years training course, the person is given a certificate as “Hiroshima City *Satoyama* managing adviser” by the City mayor.

In the 1<sup>st</sup> year of this program, the trainees are provided with in-class and on-site training to learn basics: such as the current status of the city’s *Satoyama*; legal systems concerning *Satoyama*; property rights; field survey, vegetation survey, maintenance work for *Satoyama* woodlands and trails. In the 2<sup>nd</sup> year, they develop a restoration and improvement plan for targeted *Satoyama* located in the city, and carry out the maintenance according to their plan.

As of the end of FY2009, 20 managers have been certified. The City will offer a certificate to five persons a year, and 50 in total in the next 10 years by FY2015. *Satoyama* managing advisers play a leading role in their organizations, as well as will be sent to other organizations in the city and instruct forest maintenance there.

Dispatching *Satoyama* managing advisers to instruct forest maintenance is approved as a measure under the “Hiroshima Ordinance for Forest Improvement Tax” by Hiroshima Prefecture and is subject to the subsidy.

Source: Interview with the Forestry Section, Hiroshima City, and Hiroshima City Agriculture, Forestry and Fisheries Promotion Center.

### 3) Developing a larger-scale framework for Satochi-satoyama conservation and sustainable use

To promote local-scale activities for Satochi-satoyama conservation and sustainable use, it is necessary to develop a platform at larger scale beyond Satochi-satoyama area in addition to the above mentioned support measures.

#### ① Formulating systems and plans as a basis of conservation and sustainable use

The national and regional governments will develop ordinances and institutional systems that prescribe the need for agreement between stakeholders, planning and subsidy (Reference 12), to facilitate cooperative activities of Satochi-satoyama conservation and sustainable use.

Furthermore, the national government will promote measures taken by a wide range of bodies at a larger scale outside of individual Satochi-satoyama area. Such measures include that larger-scale bodies, such as prefectures, devise a promotion plan that prescribes the goals and principles of Satochi-satoyama conservation and sustainable use (Reference 12) and formulate a regional biodiversity strategy incorporating the promotion plan (see Appendix).

When undertaking specific on-the-ground activities, landowners may not agree with the activities because of unclear property lines and rights. In such cases, rules and systems concerning the conservation of both Satochi-satoyama and biodiversity conservation will be discussed, and some actions may be taken based on the results of such discussion.

#### ② Ensuring stable funding for supporting Satochi-satoyama conservation and sustainable use

The national and regional governments will consider measures for securing stable funding sources to support local activities.

The potential measures include partly using tax intended for forest improvement and other purposes that have been adopted by several prefectures (Reference 13) and building a system for receiving donations from a wide range of individuals and businesses.

#### ③ Developing organizations for coordination

Administrative bodies have limitations in responding to various needs for enhancing local activities of Satochi-satoyama conservation and sustainable use, such as making arrangement between activist groups, enterprises and property owners, providing technical training and workshops to activist groups, receiving

financial resources from businesses, and providing subsidy. Therefore, the national government will promote establishing and operating coordinator organizations that can provide comprehensively such

services and functions, taking on the central role in the conservation and sustainable use activities at the large scale. (Reference 14).

**Reference 12** Example of ordinances and plans serving as a framework for Satoyama conservation and sustainable use

**“Satoyama Ordinance” and “Satoyama Basic Plan”, by Chiba Prefecture**

●“Chiba Prefecture Ordinance Concerning the Promotion of Conservation, Improvement and Utilization of *Satoyama*” (*Satoyama* Ordinance)

Given natural and social characteristics, Chiba Prefecture has formulated the “*Satoyama* Ordinance” that aims at raising awareness of prefecture residents in multi-dimensional values of *Satoyama* environments, taking actions for conservation, improvement and utilization of *Satoyama* environments, which involves every one of the residents, in order to pass down the wealth of *Satoyama* to next generations (enacted in May 2003).

Under this ordinance, the Prefecture has established a system of approving agreements between landowners and organizations working for *Satoyama* maintenance and sustainable use, to facilitate that both parties can work together in a reliable relationship (i.e., *Satoyama* Activity Agreement). The agreements are approved by the mayor of the prefecture. Approved activities are provided various supports from the prefecture. To encourage contracting agreements, the Prefecture offers necessary information and support to landowners and organizations working for *Satoyama* improvement.

●“Chiba Prefecture *Satoyama* Basic Plan”

In accordance with the above ordinance, the Prefecture devised the “*Satoyama* Basic Plan” concerning the conservation, maintenance and sustainable use of *Satoyama*, to define the basic principles and direction of the measures for improving *Satoyama* environments in the prefecture. This plan prescribes various measures, such as 1) promoting “*Satoyama* Activity Agreement”; 2) increasing participation of prefecture residents; 3) coordinating with *Satoyama* conservation projects by business sectors; 4) developing groups working on *Satoyama* conservation; 5) increasing maintenance and sustainable use of *Satoyama*; 6) enhancing public relations and education; 7) increasing field survey and research. These measures are conducted in corporation with “Chiba *Satoyama* Center”, established by organizations dedicated to *Satoyama* activity and local municipalities.

The first plan between FY2005 and 2009 achieved the approval of “*Satoyama* Activity Agreement” for 112 sites (as of March 2010), and the second “*Satoyama* Basic Plan” was formulated in April 2010.

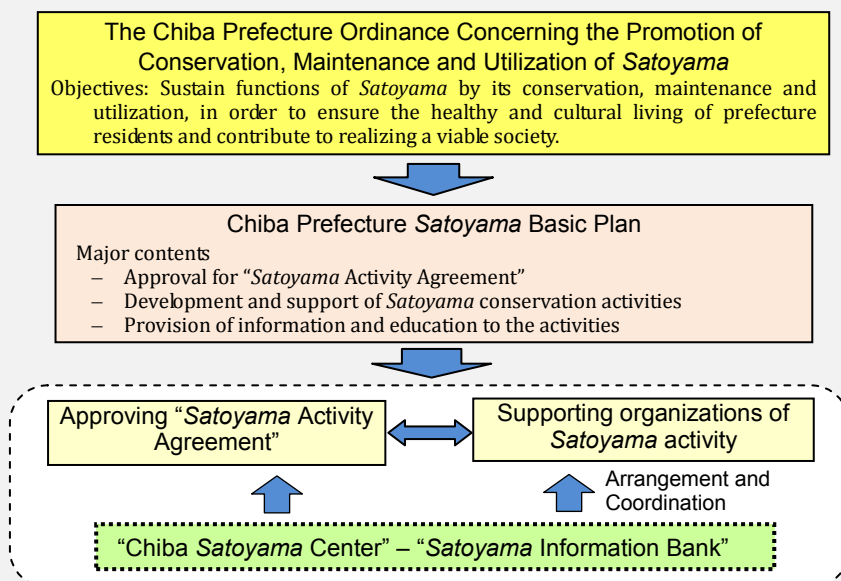


Figure 8 Activities of “Chiba *Satoyama* Center”, coordinating with “*Satoyama* Activity Agreement”

Adapted from the materials provided from the prefecture.

**Reference 13** Example of securing stable funding for supporting Satochi-satoyama conservation and sustainable use

### Maintenance of *Satoyama* woodlands using “Tax for Water and Green Forest Improvement”, by Toyama Prefecture

Toyama Prefecture has established “Toyama Prefecture Ordinance for Forest Improvement”, which specifies basic measures regarding forest improvement, and “Tax for Water and Green Forest Improvement” to be financial sources for provisional measures (enacted in 2006).

“Toyama Forest Improvement Plan” that was formulated based on this ordinance prescribes that the revenue from the Tax for Water and Green Forest Improvement will be used for improving *Satoyama* woodlands and mixed coniferous-deciduous forests, so as to increase the forest functions of public interest, such as soil and water conservation and biodiversity conservation.

The plan stipulates that restoration and improvement of *Satoyama* woodlands should be undertaken in collaboration with prefecture residents, and prescribes the types of forest targeted for such activities. With the condition of landowner’s making an agreement with local municipalities and the prefecture, the prefecture provides supports to the activities, such as formulating plans for *Satoyama* management and utilization, maintenance of *Satoyama* woodlands, and maintenance works by local residents. In FY2008 such activities were carried out in 84 sites in 14 cities and towns.

Source: Toyama Prefecture website

**Reference 14** Example of establishing organizations for coordination

### Launching one-stop service by the NPO “Chiba *Satoyama* Center”, by Chiba Prefecture

Enacting the “Chiba *Satoyama* Ordinance” has led to the launch of a private organization in 2004, acting for liaison and collaboration between private bodies who work on Satochi-satoyama conservation in the prefecture. This private organization in April 2010 was authorized as “Specified Nonprofit Corporation, Chiba *Satoyama* Center”.

This center provides various supports to activist groups in the prefecture and business operators, such as informing about their conservation sites and related programs; making arrangement between landowners, and private groups and enterprises in accordance with “*Satoyama* Activity Agreement”; and providing workshops, etc. The center offers various supports: operating “*Satoyama* Information Bank” to post information on candidate fields for potential *Satoyama* activity and on activist groups; and hosting bus tours for enterprises (Figure 8).

The center has contributed to expand *Satoyama* activity across the prefecture, by playing a role as the basis of comprehensively offering various services to support the activities of various stakeholders.

Source: Interview with the Center

## 7. National measures for Satochi-satoyama conservation and sustainable use

The sections of 3 to 6 described the vision, direction and basic principles for Satochi-satoyama conservation and sustainable use carried out with coordination and collaboration of various bodies, such as the national and local governments, enterprises, agriculture and forestry operators, citizens and private organizations. Based on the vision, direction and principles, this section clarifies the policies in implementing the measures particularly by the ministries and agencies.

### Direction of measures concerning Satochi-satoyama in the upper level policies

As described in section 1, Satochi-satoyama, accounting for about 40% of the national land, is a place of the primary industries and the living of local residents, as well as a multi-dimensional space that has diverse functions and values, including biodiversity conservation. Therefore, a variety of measures have been undertaken by a number of ministries and agencies and regional governments.

A comprehensive upper level policy and plan related to Satochi-satoyama is the “National Biodiversity Strategy of Japan 2010”, which was decided by the cabinet in March 2010. For the perspectives of the conservation and sustainable use of biodiversity, the Strategy stipulates the direction to be pursued for Satochi-satoyama areas as “realize better harmony between humans and the nature focused on biodiversity through the activation of sustainable agriculture and forestry”; “promote compartmentalization between humans and wildlife”; “positive use of natural resources in the area effectively through eco-tours, biomass, etc.”; and “promote the creation of a system to be supported by the whole community” (Part 1, Chapter 3, Section2, 3. Grand design in accordance with national land characteristics).

“National Spatial Plan” (devised in July 2008), which specifies the national land development to be pursued, prescribes “strive for the conservation and improvement of Satochi-satoyama by revitalizing agriculture and forestry in harmony with the environments, as well as undertake comprehensive

conservation by developing a system for collaborating between administrative bodies, experts, local residents, NPOs and so forth” (Part 2, Chapter 7, Section2, (2) Conservation, restoration of Satochi -satoyama and sustainable use).

The “ Basic Plan for Food, Agriculture and Rural Areas” (formulated in March 2010) states that, in order to preserve rural areas and Satochi-satoyama, which have been created by sustainable agricultural practices and provided habitat for abundant organisms, regional governments should take measures for balancing between agricultural production activities, such as sustenance of production and management of production bases, and the conservation of biodiversity. Furthermore, the “Forest and Forestry Basic Plan” prescribes that various ways of resource use activities will be promoted in corporation with volunteers, NPOs, etc., with efforts to conserve habitat for a variety of organisms while stimulating forestry operation in *Satoyama* woodlands.

The national measures for Satochi-satoyama conservation and sustainable use will be implemented in corporation with related ministries and agencies, based upon the above mentioned upper level policies and plans and with an effective use of ongoing efforts supported by the existing systems and programs.

### Promotion of *Satoyama* Initiative

Taking advantage of the Tenth Meeting of the Conference of the Parties to the Convention on Biodiversity (COP 10), Japan set up a vision that is to realize a society in harmony with nature for the sustainable use and management of natural resources. To this end, Japan will propose the *Satoyama* Initiative to the international world and strive for international cooperation. The Initiative intends to promote sustainable use and management of natural resources, based on the three-fold approach: consolidating wisdom on securing diverse ecosystem service and values; integrating traditional ecological knowledge and modern science to promote innovations in production landscapes; exploring a new form of co-management systems or an evolving framework of “commons” while respecting traditional communal

land tenure.

Within the country, we will strive for conservation and creation of Satochi-satoyama, which can be a source of pride in the world, based on the long-term vision and action policies of the Initiative, as well as making the best use of the practices for sustainable use and management of natural resources and overseas case studies that were collected and organized as part of the activities of the Initiative.

### The role of the national government in promoting the conservation and sustainable use in collaboration of various bodies

When considering natural and social conditions of Satochi-satoyama, it is becoming difficult to conserve and utilize Satochi-satoyama only by farmers, foresters and local communities of the traditional workforce. Therefore, it is necessary to develop a new management system in which various entities involving urban residents and enterprises engage in the management and sustainable use, by considering Satochi-satoyama as common resources shared among them (i.e., new “commons”). Viewing Satochi-satoyama as a “new public,” its conservation and sustainable use should be implemented as a nationwide effort in corporation with a wide variety of entities.

In such a new management system, voluntary local efforts are the basis of conservation and sustainable use. The national government should take the lead of implementing related measures, as well as regional governments develop their own measures and provide supports for involving diverse entities.

### Collaboration among measures

The provisional related measures by the national government may be categorized into the following matters. Because of mutual relationships between these measures, it is important to implement them in an integrated, comprehensive manner. They should also be carried out, based on the above mentioned upper level strategies and plans, with particular attention to linking these measures.

- (1) Raising interests and awareness of the citizens in Satochi-satoyama
- (2) Developing a scientific basis for understanding and evaluating biodiversity
- (3) Preserving wildlife species, protected areas and other designated areas
- (4) Conservation and sustainable use sustaining and stimulating agricultural and forestry activities and rural villages
- (5) Revitalizing landscape, tradition and culture through conservation and community exchange
- (6) Re-evaluating traditional technologies and sustainable use of Satochi-satoyama as a new resources
- (7) Utilizing Satochi-satoyama as places for environmental experience and education
- (8) Promoting and assistance to locally-based efforts by engagement and cooperation of diverse groups

The following describes the current status and issues to be addressed by national measures and implementing policies of measures taken by related ministries and agencies for each above category.



## (1) Raising interests and awareness of the citizens in Satochi-satoyama

### Current status and issues

With increasing public interest in Satochi-satoyama recently, the citizens have engaged in various activities in Satochi-satoyama in each locality of the country. Accordingly, the public value of Satochi-satoyama has been diversified. With this background, in order to undertake Satochi-satoyama conservation and sustainable use as a national effort, it is necessary to expand the interests and awareness not only of local communities and citizen groups but also of a wider range of citizens, so as to raise a climate in which more citizens actively engage in conservation activities.

For these purposes, public campaign and dissemination will be carried out to simply appeal to the attractions and importance of Satochi-satoyama.

A broad range of groups are encouraged to participate in environmental learning, Satochi-satoyama maintenance work and farming experience, as opportunities for raising their interests in Satochi-satoyama.

### Measures to be taken

- ① Public campaign and dissemination focusing on Satochi-satoyama conservation and sustainable use will be implemented. – MOE
- ② To be used as references for activities of conservation and sustainable use across the country, unique activities are studied and analyzed. These activities are disseminated as Satochi-satoyama to be handed down to future generations through operating the MOE website. – MOE
- ③ As assistance to developing human resources for conservation activities, the website “*Satonabi*” has been operated. On this website, the national government will provide information on groups and places engaged in conservation activities and register and dispatch experts in the field of ecosystem management in Satochi-satoyama areas, and provide those experts with technical training. – MOE
- ④ A resolution, “enhancing biodiversity in rice paddies as wetland systems”, was cosponsored by the governments of Japan and Republic of Korea and adopted in the 10th Meeting of the Conference of the Contracting Parties to the Ramsar Convention. Based on this resolution, the national government will collect good examples of farming practice creating and sustaining rice paddy environments that are suitable to wildlife habitat. The government will then make efforts to promote and establish such farming practices, through dissemination of the collected case studies and the outline of the adopted resolution at international opportunities and to the general public. – MOE and Ministry of Agriculture, Forestry and Fisheries(MAFF)
- ⑤ Outstanding rural landscapes will be selected and disseminated to the public, using “Bi-no-sato-dukuri Contest” and “The Best 100 Selections of Terraced Rice Paddy Fields”, etc. – MAFF
- ⑥ “National Campaign on Fostering Beautiful Forests”, which comprehensively addresses various issues, such as public understanding in forest; proper forest improvement and conservation; domestic wood use; and development of workforce and local community. To expand and penetrate this campaign into the public sector, the national government has launched and supported the “Forest Supporters”, a platform for individuals to register as a supporter of the campaign. – MAFF

## (2) Developing a scientific basis for understanding and evaluating biodiversity

### Current status and issues

Plants and animals and their ecosystem in Satochi-satoyama are vital to the country's biodiversity.

From the view of biodiversity conservation, the current status and change in wildlife habitat and distribution will be investigated, to be used as a basic data for developing measures for Satochi-satoyama conservation and sustainable use. It is also necessary to continue the inventory of indicator species of biodiversity, such as those on the Red List.

It is not easy to identify all species in Satochi-satoyama because of its enormous number. However, we can study them by focusing on core species, such as threatened or endemic species, indicator species for good habitat, and the species conflicting with humans. Technique and information based on the survey results should be released to the public.

The national government also needs to examine the approach and method of selecting a typical Satochi-satoyama for a region and implementing its conservation and sustainable use in the context of a network of multiple Satochi-satoyama areas.

Furthermore, it is required to undertake monitoring by appropriated means in a given region, in order to continue adaptive management by assessing the effectiveness of conservation and sustainable use efforts in terms of biodiversity.

For this purpose, it is necessary to select indicator species and a methodology for the assessment.

Also in a view of promoting 'green innovation', it is important to carry out Satochi-satoyama conservation and sustainable use by presenting scientific knowledge about sustainable use of ecosystem services and developing new nature resource use technologies.

### Measure to be taken

- ① The National Survey on the Natural Environment will be continued to investigate the current status and monitor the trend of biodiversity of the country including Satochi-satoyama. – MOE
- ② Regarding the primary data of the vegetation map at a scale of 1/25,000, about 60% of the national land will be surveyed by March 2012. The country-scale plant and animal distribution, including those unique to Satochi-satoyama, will be continued for the study on biodiversity and others in the Survey. Data collection on wildlife distribution will be focused on deer, boars and monkeys, which cause large impacts on Satochi-satoyama ecosystems, agriculture and fisheries. Change in the distribution over years will be determined. – MOE
- ③ In cooperation with Global Taxonomy Initiative and other international projects, wildlife data and other inventories that are fundamental to understand the current status of biodiversity will be developed and disseminated. – MOE and Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT)
- ④ To enhance the knowledge of a relationship between plant and animal distribution and their habitat in Satochi-satoyama, natural environments and wildlife species in rural regions will be surveyed. – MAFF and MOE
- ⑤ To understand the trend of the country's forest biodiversity, systematic monitoring will be carried out at prescribed points using statistical approach. – MAFF
- ⑥ Monitoring Sites 1000 will be carried on by local NPOs and research institutes to continue monitoring on wildlife distribution that provides an indicator of habitat condition in Satochi-satoyama. – MOE
- ⑦ The List of Endangered and Threatened Species in Japan (Red List) will be revised by around 2012, such as changing the rank of species and deleting and adding species, through reviewing target species and examining new data on distribution, habitat condition and extinction rate of each target species. – MOE
- ⑧ For various ecosystems including farmland ecosystem, a method for comprehensive evaluation of biodiversity will be established. Applying this methodology, the current status and trend of biodiversity of Japan will be evaluated. – MOE
- ⑨ The national government will identify the roles of agriculture, forestry and fisheries in biodiversity, as well as promote measures of agriculture, forestry and fisheries with consideration of biodiversity. For these purposes, the government

will utilize the basic data obtained by a past survey, such as biological characteristics unique to the ecosystems that have been created through practices of agriculture, forestry and fisheries; and the methodology of the survey. The government will also develop an indicator based on scientific data for understanding influences of agriculture, forestry and fisheries on biodiversity; and a biodiversity indicator for effectively implementing agriculture, forestry, and fisheries related measures. – MAFF

⑩ Promoting competitive research funds including Environmental Research & Technology Development Fund, the national government will stimulate researches on regional scale preventative measures against invasive alien species; technologies for ecosystem conservation and restoration; development and application of biodiversity assessment and prediction models; and quantification of ecosystem services and so on. – MOE

### (3) Preserving wildlife species, protected areas and other designated areas

#### 1) Designation and management of protected areas, including natural parks and Green Conservation Area

##### Current status and issues

Satochi-satoyama provides habitat for organisms that are unique to secondary environments and is an important element of biodiversity of Japan. It is a space familiar to the country's citizens, as a beautiful landscape which has been formed through human and nature interactions, as well as where people can contact with nature.

Satochi-satoyama areas that are particularly important in these views may be effectively conserved and managed by being designated as conservation areas, such as natural parks and Green Conservation Areas. When taking this approach, the national government should pay attention to the proper conservation of Satochi-satoyama habitats that vary in each region of the country, in order to ensure the country-level conservation of Satochi-satoyama biodiversity.

Human interventions are vital to managing Satochi-satoyama areas that are protected in the designated areas. Active management is required for these Satochi-satoyama areas, incorporation of several stakeholders including local residents and citizen organizations. To this end, it is necessary to build a system for management and its operation.

##### Measures to be taken

① Considering the scenic value of Satochi-satoyama for the public, the national government will consider designating some of Satochi-satoyama areas as National or Quasi-national Park if they exhibit excellent quality in terms of natural landscape, wildlife abundance and provision of nature experience.

For those located in National or Quasi-national Parks, active landscape management, such as undergrowth cutting and prescribed burning, will be implemented in corporation with local stakeholders. Such active management may be undertaken with existing government programs, such as Landscape Conservation Agreement and Nature Restoration Projects, depending on local socio-ecological characteristics.

Within Prefectural Nature Parks and Prefectural Nature Conservation Areas, several Satochi-satoyama are protected as designated areas by the prefectures. The national government will discuss more on the potential roles of State Parks on the conservation and sustainable use of Satochi-satoyama. – MOE

② Wildlife habitat internationally or nationally important for wildlife conservation in Satochi-satoyama will be considered for designation as National Wildlife Protection Area. The national government will also fulfill the management of those already designated areas in accordance with the master plan prescribing the policies for conservation and management. – MOE

③ For wetlands in Satochi-satoyama, if they can

satisfy the “Criteria for Identifying Wetlands of International Importance”, the national government will make efforts to register them as new Ramsar sites. The already listed wetlands will be promoted for conservation and wise use. – MOE

- ④ The national government will promote proper

conservation and management of green spaces, by designating them as the “Green Conservation Area” or other prefecture programs. – Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

## 2) Designation of forests that exhibit high public functions for protection and improvement

### Current status and issues

Satochi-satoyama has various functions, fostering several benefits of the public, such as biodiversity conservation, water source conservation, erosion prevention, and climate mitigation.

However, due to a recent decline of profitability of forestry industry and viability of rural villages, thinning and other management activities are insufficient in planted forests of Satochi-satoyama. Therefore, it has been concerned that the public functions may be reduced there.

Given this situation, for Satochi-satoyama areas that are important in fulfilling the public benefits, it is necessary to designate them as areas for conservation and improvement.

### Measures to be taken

- ① Forests that are required to demonstrate functions of fostering water sources, erosion prevention, and other public interests will be designated as “protection forest”. In addition, based on the Forest Improvement and Conservation Works Master Plan, erosion control measures, such as installing erosion control facilities and improving forests with low functions, will be promoted in protected forests of which public functions are especially required. – MAFF
- ② To fulfill the forest public functions, measures for forest improvement will promote effective thinning and other works through consolidation of forestry practices and others. Among forests that are difficult to be properly managed by solitary efforts of landowners, those expected to fully function for public benefits and need sufficient management will be targeted for forest improvement measures by local authorities such as prefectures. In this case, planted forests may be converted to mixed coniferous and broadleaf forests depending on the site conditions. – MAFF
- ③ The national government will promote regional governments to devise a Master Plan for Parks and Open Spaces, that is, a comprehensive master plan concerning the promotion of conservation of open green spaces and afforestation in urban areas. Regional governments must prescribe the conservation of Satochi-satoyama in their master plans. – MLIT
- ④ We will carry out enhancing preventative measures along the front of expanding pine wilt damage, prioritizing pine forest for preservation, and taking measures against oak wilt. Development and promotion of pest resistant varieties will also be promoted. – MAFF

### 3) Conservation of wildlife species inhabiting human-influenced natural environments (conservation and management of wildlife and their habitat)

#### Current status and issues

As human and nature interactions, such as agriculture and forestry activities, became tenuous in Satochi-satoyama, the quality of the natural environments has been changing. Japanese crested ibis and other wildlife species that inhabited Satochi-satoyama have increasingly reduced, and more than half of the area where threatened species concentrate occurs in Satochi-satoyama. Moreover, rice paddies and other wetlands in Satochi-satoyama are vital for migratory birds as their stopover sites.

Thus, from the view of protecting habitat for threatened species and migratory birds, rice paddies and other rural environments will be proactively maintained and preserved. Such efforts will protect habitat for extremely rare species, such as the oriental stork and the Japanese crested ibis, as well as expand the space for a variety of species to live near human settlements, thereby contributing to the conservation of biodiversity in Japan.

In addition, wildlife including the oriental stork and the Japanese crested ibis can be symbols of rich Satochi-satoyama environments, which are easily understood by the public. Such symbolic image of plant and animal will be used actively in local efforts for Satochi-satoyama conservation.

#### Measures to be taken

- ① For the threatened species symbolizing the Satochi-satoyama environments such as the oriental stork and the Japanese crested ibis, a comprehensive measure will be implemented for conservation of their habitat, while seeking for participation of and cooperation with various bodies, such as regional governments, local residents, NPOs and experts. – MOE, MAFF, MLIT, and MEXT
- ② The national government will implement an intensive survey and measures for threatened endemic species inhabiting Satochi-satoyama. – MOE

### 4) Measures against conflicts between humans and wildlife and other issues

#### Current status and issues

A number of wildlife species inhabit Satochi-satoyama, with each species playing a vital role in the ecosystem to which the species belongs. Also closely related to human lives, these species have been used as natural resources necessary for humans. On the contrary, as symbolized by 'shishi-gaki', stone walls that were built by farmers to protect villages from animals, invasion of boars, deer, monkeys and other animals has caused agricultural damage since early times.

In recent years, such damage is becoming serious with a decline of human activities, increase in abandoned cultivated fields, and expansion of habitat suitable for these species due to a trend of the lessening of snowfall.

A comprehensive approach is necessary to prevent damage from wildlife, by promoting the segregation of habitat between human and wildlife, management of wildlife habitat, damage prevention, and control of their population.

In addition, raccoons and other alien species not only cause damage to agriculture, forestry and fisheries products but also threaten ecosystems of Satochi-satoyama areas, thereby requiring preventive measures to control these alien species.

#### Measures to be taken

- ① Scientific and systematic conservation and management will be applied for specific species such as deer, boars and monkeys, which have caused conflicts with humans and impacts on the ecosystems of Satochi-satoyama. The national government will implement population control, habitat management and specific preventive measures based on Specified Wildlife Conservation and Management Plan. – MOE
- ② The national government will promote forest

maintenance and conservation, such as bush cutting in the Satochi-satoyama areas close to farmlands; and converting plantation forests to mixed coniferous and broadleaf forests or to broadleaf forests. – MAFF

- ③ The national government will assist local municipalities to take comprehensive measures to prevent and deal with wildlife damage, based on the Act on Special Measures for the Prevention of Wildlife Damage. – MAFF
- ④ The national government will carry out a comprehensive measure in corporation with regional governments and NPOs to create a local community that allows coexistence between people and wildlife by segregating habitat in the

Satochi-satoyama. The comprehensive measures include field survey on wildlife distribution and the condition of damage in remote areas of national forests; habitat improvement; and population control. – MAFF

- ⑤ Programs for prevention and removal of alien species will be carried out mainly in the areas important for conservation of rare species, such as habitat for rare species, national parks and protected forests. Methods of removing various alien species, including raccoons and large-mouth bass, will be considered, which will be used by regional governments to remove the alien species. – MOE and MAFF

## **(4) Conservation and sustainable use through sustaining and stimulating agricultural and forestry activities and rural villages**

### **1) Promotion of the public's understanding of agriculture, forestry and fisheries with an emphasis on biodiversity**

#### **Current status and issues**

Satochi-satoyama has been formed through being deeply related to agriculture, forestry and fisheries activities. The multi-dimensional functions of Satochi-satoyama, such as the conservation of rich natural environments and biodiversity and the creation of good landscapes, are fulfilled through proper activities of agricultural production.

In order to promote Satochi-satoyama conservation and sustainable use in collaboration of a wide range of entities, from farmers, foresters and local communities to urban residents and enterprises, it is crucial to increase understanding of each spectrum of the citizens on the role of agricultural, forestry and fisheries industries in maintaining Satochi-satoyama functions.

#### **Measure to be taken**

- ① The national government will introduce to the public examples of conservation-oriented practice, including rice paddy cropping with a balance between food production and biodiversity conservation. The information on these examples includes conditions of wildlife growth and distribution, habitat conditions, and farming history. – MAFF
- ② Conservation-oriented products are labeled with “Ikimono Mark” and distributed to disseminate such producers’ efforts to consumers. With this, the public understanding in agricultural operations will be stimulated by promoting communications between producers and consumers through environmental education. – MAFF
- ③ The national government will collect case studies of agriculture and management that can create and sustain rice paddies suitable for wildlife habitat, which will be disseminated in and outside of the country. – MAFF
- ④ The government will enhance the “National Campaign on Fostering Beautiful Forests” to comprehensively promote various measures, such as proper forest improvement and conservation; domestic wood use; development of workforce and local community. In the meantime, the citizen’s understanding regarding forests will be deepened through education on forest environment, taking advantage of the healing function of forests, and the activities for conservation and sustainable use of nearby Satochi-satoyama. – MAFF <the same as in 7(1)>
- ⑤ The government will promote coexistence and exchange between urban areas and rural,

mountainous and fishery areas. The government strives for achieving a regional lifestyle of which people come and go between urban and rural areas, by activating the flow of 'people, goods and

information' between the two areas. – MAFF, MLIT, MOE, MEXT and other related ministries and agencies.

## 2) Sustenance and development of agriculture and forestry that can support biodiversity of Satochi-satoyama

### Current status and issues

Farmlands, irrigation ponds, secondary forest, planted forest and grasslands are natural environments that have been formed and maintained through human interventions, such as activities for agriculture and forestry production. The development of rural regions is vital to fulfilling the multi-functional roles of production activities, such as the conservation of rich natural environments and biodiversity and creation of good landscape.

However, functions of rural communities have been weakening as a result of a decline of population, an increase in the aged population and the increase in non-farmer residents. Accordingly, proper management of farmlands, forest and irrigated water and other resources has become difficult. It is of concern that the multi-dimensional functions of production activities could be damaged.

Therefore, it is necessary to proactively maintain agriculture and forestry activities in Satochi-satoyama and the communities of rural villages, considering these human influences as the basis for supporting biodiversity.

### Measures to be taken

- ① In semi- and mountainous and other regions having disadvantages in agricultural production, the national government will support the farmers based on the direct payments program for these areas. – MAFF
- ② The Measures to Conserve and Improve Land, Water, and Environment fosters the development of regional communities through the conservation of

healthy farmlands, water and the natural environment and quality improvement of these resources. For these purposes, the government will support region-wide, effective cooperative efforts of local residents as well as innovative farming practices involving agricultural industries, in an integrated and comprehensive manner. – MAFF

### 3) Promotion of improvement of agriculture and forestry and rural villages that foster biodiversity conservation

#### Current status and issues

In Satochi-satoyama areas, improper use of chemicals and fertilizers and infrastructure construction with an emphasis on economy and efficacy could adversely affect the biodiversity of the areas. In recent years, abandoned farmlands have increased due to a reduced use of *Satoyama* woodlands and lack of agricultural and forestry workforces. Inappropriate use of chemicals and fertilizers could have influences not only on the agricultural environments but also on biodiversity and fishery grounds. Deteriorated soil preparation combined with improper use of chemicals and fertilizers could result in degradation of soil quality and fertility. Furthermore, the regional ecosystem may be affected, including soil microorganisms and indigenous natural enemies, which may impede the sustainable production of the region.

Therefore, the national government should take measures on stimulating organic farming and other conservation-oriented farming practices, so as to promote agricultural production in harmony with living organisms of Satochi-satoyama.

Riparian environments in rural areas, including rice paddies, ditches and irrigation ponds, form organic networks of aquatic ecosystems. Various organisms utilize aquatic habitats according to their respective life development stage. Such aquatic ecosystem networks are conserved through human activities such as production, maintenance and management by farmers and local residents, which should be sustained and restored while gaining the regional residents' understanding and participation in such efforts.

#### Measures to be taken

- ① It is important to promote a proper use of agricultural production tools, such as chemicals and fertilizers. The national government will spread and establish a code of agricultural practice that stipulates the minimum requirements to be complied by each person engaged in agriculture for environmental conservation. – MAFF
- ② The national government will develop the following measures to motivate farmers to practice organic farming: building systematic techniques for organic farming; developing a system for spreading and consulting the technique; increasing consumers' understanding of and interest in organic farming. – MAFF
- ③ The national government will establish methodology to evaluate and manage the risk of chemicals on terrestrial ecosystems and biodiversity. – MOE
- ④ The national government will continue the promotion of Eco Farmer Certification and assistance to certified farmers. – MAFF
- ⑤ The Measures to Conserve and Improve Land, Water, and Environment fosters the development of regional communities through the conservation of healthy farmlands, water and the natural environment and quality improvement of these resources. For these purposes, the government will support region-wide, effective cooperative efforts of local residents as well as innovative farming practices involving agricultural industries, in an integrated and comprehensive manner. – MAFF <the same as in 7(4)2>
- ⑥ In order to fulfill forest's multi-functional roles, the national government will promote the appropriate operation of Forest Planning System as well as proper forest management including thinning. The cycle of cutting, planting and nursing will be smoothly sustained through proper utilization of wood, which promotes sustainable, healthy development of forestry. – MAFF
- ⑦ The national government will promote erosion control measures for the purposes of both securing the safety and peace of local communities as well as facilitating the conservation of biodiversity. In restoring devastated forest, the specific activities include tree planting with native species in the devastated site; improving riparian forest to foster habitat conservation for aquatic species and others; and installing erosion control facilities that allow aquatic species upstream and downstream migration in the stream. – MAFF
- ⑧ The national government will take measures to improve "water corridors" as an aquatic ecosystem network that not only links the forests and the ocean through rivers, but also continuously links rivers, rice paddies, ditches, reservoirs and villages. The government will



designate indigenous species to be conserved according to the status of local ecosystems, by looking at the entire areas of the region concerned. By obtaining the understanding and participation of local residents, the government will systematically promote infrastructure improvement aiming at preservation of migration routes of designated species with close attention

to their life history. – MAFF

- ⑨ Conservation activities for inland water biodiversity will be promoted. For example, we will promote biodiversity-conscious resource enhancement activities by local people, mainly fishery operators who implement improvement of spawning grounds and hatchery facilities and hatchery release. – MAFF

#### 4) Promotion of efforts in collaboration of local communities as the core implementing bodies

##### Current status and issues

The functions of Satochi-satoyama, such as development of biodiversity and good landscape, have been fulfilled by which the local communities including farmers, foresters and villagers take roles in agricultural production and the maintenance of the natural environment.

In semi-mountainous regions, however, depopulation and aging have advanced, significantly changing the regional styles of living and working that have been made by the local people. The viability of the communities was reduced, making it difficult for regional people to take roles in the production and maintenance as they used to do.

In semi-mountainous regions, which comprises of many Satochi-satoyama areas, it is essential to implement the activities of Satochi-satoyama conservation and sustainable use by local communities as the core implementing bodies. The national government should proactively assist such efforts by farmers, foresters and local communities, through providing financial resources and labors as well as promoting exchanges with other stakeholders.

##### Measures to be taken

- ① The Measures to Conserve and Improve Land, Water, and Environment fosters the development of regional communities through the conservation of healthy farmlands, water and the natural environment and quality improvement of these resources. For these purposes, the government will support region-wide, effective cooperative efforts of local residents as well as innovative farming practices involving agricultural industries, in an integrated and comprehensive manner. – MAFF <the same as in 7(4)2>
- ② Using the grant of improving rural area, the maintenance of *Satoyama* woodlands and other measures will be carried out with the engagement of NPOs and others. – MAFF
- ③ Under the Program for the Promotion of Comprehensive Forest Resource Use, the national government will promote collaboration among various bodies including local residents and NPOs, aiming for utilization of *Satoyama* woodlands in a way that the local community can independently continue resource use. – MAFF
- ④ The national government will provide training opportunities to the people who are willing to participate in forest improvement and conservation, including those who wish to return to rural areas, in order to secure and develop human resources to continue the improvement and conservation of regional forests in the future. – MAFF
- ⑤ The national government will offer assistance to activities to provide places for farming experience such as the “Terraced Paddies Owner System” and community gardens. – MAFF

## (5) Revitalizing landscape, tradition and culture through conservation and community exchange

### Current status and issues

In Satochi-satoyama areas, landscape, foods, living culture such as crafts and traditional events, which are characteristic to each locality, have been nurtured through a long period of human interventions on the natural environment, such as farming and forestry activities. To appreciate the values of such landscape and culture leads to the sustenance of the regional society and conservation of the regional biodiversity.

In recent years, however, owing to changes in socio-economic conditions, such as reduced utilization and management of forest and farmlands and reduced viability of settlements, the locally nurtured sound relationship between humans and nature is vanishing. Accordingly, landscape and culture unique to Satochi-satoyama areas is being altered.

We need to proactively implement the conservation of landscape and traditional culture in Satochi-satoyama areas, because they are the sources of a variety of our country's regional culture as well as the place where people can find the image of their hometown.

On the other hand, people who visit Satochi-satoyama have been increasing. These people seek for a landscape such as terraced rice paddies and plants and animals, and experiences of farming and forestry activities and life of the countryside. The Basic Policies for the Promotion of Ecotourism, decided in June 2008, states that terraced paddies and grasslands in Satochi-satoyama are nature tourism resources and can be targets for ecotourism. To meet with such public needs, the national government will make efforts on conservation and sustainable use of cultural landscape and traditional culture in Satochi-satoyama areas as resources to activate the regional community through exchanges between rural and urban citizens. Such efforts are also extremely important in activating the engagement of local communities to the activities of Satochi-satoyama conservation and sustainable use.

### Measures to be taken

- ① Satochi-satoyama is regarded as a cultural landscape that has been nurtured through interactions of humans and the natural environment. Based on this perspective, the national government selects especially important cultural landscape areas as "Important Cultural Landscape Preservation Area" from among those for which appropriate protective measures have been taken. The government partially subsidizes research projects and Cultural Landscape Preservation Planning Projects run by regional governments. Also for the areas selected as Particularly Important Area, the government partially subsidizes maintenance projects, including restoration and landscaping. – MEXT
- ② Based on the conservation and management policies for natural parks, the national government will promote the conservation of Satochi-satoyama landscape such as the grassland landscape in Aso. – MOE
- ③ Ecotourism will be promoted by supporting regional governments and communities to design 'overall plans' for the implementation of ecotourism. – MOE
- ④ Exchanges between cities and rural areas will be enhanced by implementing 'blue tourism' and 'green tourism'. – MAFF
- ⑤ The national government will accept more tourists from abroad to experience the life in Satochi-satoyama, in order to disseminate the attractions of our country, in which humans are harmonized with the natural environments. – MOE, MLIT, MEXT and MAFF

## (6) Re-evaluating traditional technologies and sustainable use of Satochi-satoyama as new resources

### Current status and issues

In Satochi-satoyama areas, diverse habitats for various wild fauna and flora have been created and maintained through moderate human interventions and resource use activities, such as farming and forestry activities and collection of fuel wood and fallen leaves.

Traditional technologies to utilize resources in such ways have been fostered according to the natural characteristics of a given region. Such technologies involve much wisdom from which we should learn today in terms of biodiversity conservation and sustainable resource use. To this end, it is necessary to reevaluate and pass down the wisdom for the promotion of resource use activities again.

Farming and forestry productions and utilization of woodlands and grasslands in daily lives have been reduced in Satochi-satoyama areas. On the other hand, plant biomass generated by thinning of artificial forest, management of secondary forest, and harvesting of grasslands can be used as the alternative energy to fossil fuel, contributing to realizing a low carbon society.

In addition, activation of new resource use in Satoyama woodlands can play a role in the maintenance and recovery of biodiversity and establishment of a recycling-oriented society.

Therefore, the national government will carry on the development of new technologies and marketing systems to utilize biomass resources in Satochi-satoyama.

### Measures to be taken

- ① The national government will collect information and case studies regarding to agricultural technologies that foster wild organisms, such as winter flooding for rice paddy cultivation, and release the collected data to the public. – MAFF
- ② The national government will promote re-evaluation and succession of knowledge and technologies arising from traditional culture of life, and utilization of these wisdoms as resources of the regional communities. The government will also collect and analyze a wide range of unique efforts across the country and will introduce these examples to the public so as to expand such efforts throughout the country. The government will also seek new forms of utilization of Satochi-satoyama, by examining specific experimental activities run by local communities, such as opportunities for environmental education and ecotourism and biomass use of thinned wood and grass. – MOE, MEXT, MAFF and MLIT
- ③ The national government will carry on the large-scale biofuel demonstration projects, covering the entire process from material procurement, and production to utilization. – MAFF
- ④ The national government will support creative and voluntary activities by local communities to use biomass energy, such as planning a biomass town concept and integrated improvement of both biomass conversion and users facilities. – MAFF

## (7) Utilizing Satochi-satoyama as places for environmental experience and education

### Current status and issues

Progressive urbanization in daily lives has reduced the human-nature relationships across the country. Therefore, it is important to increase the opportunities for the public to be in contact with the natural environments: such as hands-on nature experiences; environmental education; and farming and forestry experiences. These opportunities will increase the citizens' interests in and understanding of their natural environments and their conservation as well as to foster healthy development of children as leaders of the next generation.

Located between primitive nature and cities, Satochi-satoyama is a familiar natural environment in the neighborhood. Therefore, Satochi-satoyama areas have been increasingly valued as the fields for the above activities to experience the natural world.

It is necessary to stimulate such new ways of utilizing Satochi-satoyama in collaboration of stakeholders.

### Measures to be taken

- ① The national government will promote the Project for Exchange between School Children and Rural Communities, which send elementary school children to rural villages to experience a long-term stay in rural villages for about a week. – MIC, MEXT, MAFF and MOE
- ② The government will promote the citizens' interactions with the natural environment in their neighborhood and activities of hands-on nature experience in Satochi-satoyama in natural parks. – MOE
- ③ The government will promote activities of "Junior Green Clubs", which was formed to develop children into people who love and conserve greeneries in nature and have healthy and bright hearts. Together with this program, the government will enhance forest environmental education by designating "Yu-yu-no-mori" forests at national forests, where elementary schools give outdoor nature experiences to their students. – MAFF
- ④ Nature experience programs for young people will be promoted through providing opportunities and fields for hands-on activities and training course for leaders at the facilities of National Institute for Youth Education; and supporting experience-based activities run by private organizations. – MEXT
- ⑤ The government will promote hands-on nature experience programs at various facilities, such as learning centers for hands-on nature experience; ecology parks; facilities for protection and breeding of animals or plants; urban greening botanical gardens equipped with an activity center for environmental education; and urban parks including environment contact parks. – MLIT

## (8) Promoting and assisting locally-based efforts by engagement and cooperation of diverse groups

### Current status and issues

For the conservation and sustainable use of Satochi-satoyama areas, it is necessary to stimulate locally based voluntary activities. However, it is becoming difficult to maintain farmlands and forests only by farmers, foresters and local communities as before. Therefore, such activities should be undertaken as a cooperative effort involving a wide range of entities including local residents, groups working on the activities, businesses, administrative bodies, so on.

To this end, the national government will promote the development of systems for collaboration and provision of technical assistance, proactively supporting cooperative efforts of Satochi-satoyama conservation and sustainable use.

### Measures to be taken

- ① The national government offers technical supports to community efforts in various ways, such as devising Guidelines for Planning Satochi-satoyama Conservation and Restoration, based on the discussion and specific activities of the Conservation and Use of Satochi-satoyama Model Projects (conducted from FY2004 to 2007); holding training programs; and sending instructors to give advice and know-how. – MOE
- ② The national government will construct a framework for utilizing and managing Satochi-satoyama as common resources (new commons) by various entities, such as urban residents, enterprises, etc. – MOE
- ③ The government will offer financial supports to activities fostering conservation and restoration of biodiversity in Satochi-satoyama areas with participation and cooperation of local residents, NPOs, and regional governments, etc., using the government funding for the Promotion of Biodiversity Conservation. – MOE
- ④ Using the scheme of Law for the Promotion of Nature Restoration, the government will steadily continue promoting restoration of secondary forests and grasslands in Satochi-satoyama. – MOE, MAFF and MLIT
- ⑤ At national forests, to promote forest improvement by participation of the citizens, the government will promote designation of “corporate forests” for development by business corporations as part of their social responsibilities, and establishment of “friendly forests” to provide opportunities for citizens willing to develop forests on their own. – MAFF
- ⑥ The government will implement environmental improvement and conservation by participation of citizens in city parks and others that contain Satochi-satoyama areas. – MLIT
- ⑦ In order to conserve coastal sea environments, the government will promote cooperative efforts of local communities to conserve both Satochi-satoyama and Satoumi environments as a whole area integrating forest, rivers and the ocean. – MOE

## Appendix: Prefectural ordinances and measures concerning conservation and sustainable use of Satochi-satoyama

Prefecture	Ordinance ( ) denotes the fiscal year of establishment	Specified measures	Ordinance specifying the funding source (tax, etc.)
Hokkaido	Hokkaido Ordinance for Forestry Improvement (2002)	“Hokkaido Forestry Improvement Basic Plan” • Forest improvement according to the regional features, in collaboration with prefecture citizens.	
Aomori	Aomori Prefecture Ordinance Concerning the Conservation and Creation of Rural Forests, Rivers and the Sea (2001)	• Areas of forests, rivers and the sea of rural regions targeted for conservation - designating conservation areas and conservation planning • Programs concerning conservation and creation of forests, rivers and the sea of rural areas - promoting voluntary activities by Rural Environment Supporters and private groups, etc.	
Iwate	Iwate Prefecture Ordinance Concerning the Conservation and Creation of Rural Forests, Rivers and the Sea (2003)	• Conservation efforts by collaborating watershed citizens, business operators, administrative bodies, etc. - developing rules and systems to promote watershed-level measures and Basic Plan for Watershed Conservation. • Activities concerning forests - maintenance, conservation and cyclic use of forest resources by participation of prefecture residents, etc.	○
Miyagi	————	“The Program to Support Collaborative Restoration of Satoyama Woodlands in Miyagi” • Counsels companies, etc. and introduces them as candidate forests. • Intermediates and assists enterprises etc. and landowners partnerships and their agreement formulation • Offers technical consultations necessary for restoration work and introducing labor resources, etc.	
Akita	Akita Prefecture Ordinance Concerning the Conservation and Creation of Rural Forests, Rivers and the Ocean (2003)	“Akita Prefecture ‘Water and Greenery’ Basic Plan” • Established ‘Watershed Network for Water and Greenery’ • Develops advisors of ‘Water and Greenery’ • Develops forest volunteers	○
Yamagata	Yamagata Prefecture Ordinance for Conservation of the Natural Environment (1973)	“Satoyama Environment Conservation Plan” • Designates <i>Satoyama</i> areas for environmental conservation - formulating plans for conservation of <i>Satoyama</i> environments, and implementing maintenance and creation of natural environments in <i>Satoyama</i> , etc.	○
Fukushima	————	• <i>Satochi-Tanada</i> Conservation and Maintenance Project (Subsidy Program for Creation of Rural Areas with Vitality) • Forest conservation involved prefecture residents (Subsidy Program for Forest Environment)	○
Ibaraki	————	“Ibaraki Prefecture Promotion of Green Environment Conservation Project” • Agreement on conservation and management - agreement for conservation; agreement for conservation and utilization	○
Tochigi	Tochigi Ordinance for Creation of Forest with Vitality Tax (2007)	• Programs using Creation of Viable Forest Tax - creating forest with vitality: maintains <i>Satoyama</i> woodlands in open and safe conditions; developing human resources to foster forests)	○
Gunma	Gunma Ordinance for Conservation of the Natural Environment (1973)	• Designates ‘Gunma Greenery Environment Conservation Area’	
Saitama	Ordinance for Protection and Fostering Rural Greenery of Saitama (2005)	“Plan for Conservation of Rural Green Landscape” • Agreement program for management by citizens • Programs to assist activities by rural mountain rangers (using ‘Sai-no-kuni Greenery Fund’)	○

Prefecture	Ordinance ( ) denotes the fiscal year of establishment	Specified measures	Ordinance specifying the funding source (tax, etc.)
Chiba	Chiba Prefecture Ordinance Concerning the Promotion of Conservation, Improvement and Utilization of Satochi-satoyama (2003)	<p>“Chiba Satoyama Basic Plan”</p> <ul style="list-style-type: none"> <li>• Promotes and approves <i>Satoyama</i> Activity Agreement.</li> <li>• Provides landowners etc. with groups working on <i>Satoyama</i> activity: ‘Chiba <i>Satoyama</i> Center’; <i>Satoyama</i> Information Bank Program. etc.</li> </ul>	
Tokyo	Tokyo Nature Conservation Ordinance (2000)	<ul style="list-style-type: none"> <li>• Coordinates with the citizens and municipalities, etc.</li> <li>• Designates five conservation zones - ‘<i>Satoyama</i> Conservation Area’; ‘Historical Environment Conservation Area’; ‘Greenery Conservation Area’, etc.</li> <li>• Plans conservation activities</li> </ul>	
Kanagawa	Kanagawa Prefecture Ordinance Concerning Promotion of Conservation, Restoration and Utilization of Satochi-satoyama(2008)	<ul style="list-style-type: none"> <li>• Designates Satochi-satoyama conservation areas</li> <li>• Approves agreement for Satochi-satoyama activity</li> <li>• Assists activities for Satochi-satoyama conservation, etc.</li> </ul>	○
Niigata	Ordinance for Rural Areas Conservation Fund (1992)	<ul style="list-style-type: none"> <li>• Measures for conserving rural areas, water and soil assisting residents activities using the combination of “Measures for rural areas, water and soil conservation in hilly, mountainous regions”; “Subsidy program for municipalities”; and “Subsidy Program for Revitalizing Agriculture, Mountain, and Fishing Villages” (formerly known as, “<i>Satochi-Tanada</i> Conservation and Maintenance”)</li> </ul>	○
Toyama	Toyama Prefecture Ordinance for Green Forest Improvement (2007)	<p>“Toyama Prefecture Green Forest Improvement Plan”</p> <ul style="list-style-type: none"> <li>• Conducts <i>Satoyama</i> restoration and maintenance</li> </ul>	○
Ishikawa	Ordinance for Protection and Fostering Rural Greenery of Ishikawa (2004)	<p>“Ishikawa Prefecture Master Plan for the Environment”</p> <ul style="list-style-type: none"> <li>• Discusses the formulation of Ishikawa method of “Vision for Biodiversity Strategy”, with focus on <i>Satoyama</i> , <i>Satoumi</i></li> <li>• Designates “leading <i>Satoyama</i> conservation areas”</li> <li>• Creates businesses utilizing <i>Satoyama</i> resource</li> </ul> <p>“Program to Promote Restoration of Rural <i>Satoyama</i> Areas”</p> <ul style="list-style-type: none"> <li>• Approves agreements on <i>Satoyama</i> conservation and restoration</li> </ul>	○
	Ishikawa Ordinance for Forest Environment Fund (2007)	<ul style="list-style-type: none"> <li>• Ishikawa Program for Conservation of Surrounding Forest - conservation and utilization of abandoned community forests.</li> <li>• Ishikawa Program for Promotion of <i>Satoyama</i> Corridor</li> <li>• Program to assist <i>Satoyama</i> conservation activities, etc.</li> </ul>	○
Fukui	Fukui Prefecture Environmental Basic Ordinance (1995)	<p>“Fukui Prefecture Environmental Basic Plan”</p> <ul style="list-style-type: none"> <li>• Program for Promoting Conservation and Utilization of Satochi-satoyama - promoting conservation and restoration activities in the “important Satochi-Satoyama sites”</li> </ul>	
Yamanashi	————	<ul style="list-style-type: none"> <li>• Established Yamanashi Forest Improvement Commission: supporting forest improvement activities by various entities</li> </ul>	
Nagano	Nagano Prefecture Ordinance for Creation of Rural Forest (2004)	<ul style="list-style-type: none"> <li>• Certification of <i>Satoyama</i> conservation and utilization areas - designating <i>Satoyama</i> areas for conservation and utilization; promoting councils of the activities and agreement, etc.</li> </ul>	○
Gifu	Gifu Prefecture Basic Ordinance for Forest Improvement (2006)	<p>“Forest Improvement Basic Plan”</p> <ul style="list-style-type: none"> <li>• Promotes conservation and use of <i>Satoyama</i> - assisting establishment of NPO’s; promoting prefecture residents to participate in <i>Satoyama</i> conservation; and fostering leaders and their registration, etc.</li> </ul>	

Prefecture	Ordinance ( ) denotes the fiscal year of establishment	Specified measures	Ordinance specifying the funding source (tax, etc.)
Shizuoka	Shizuoka Prefecture Ordinance Concerning Coexistence between Prefecture Citizens and Forest (2004)	<p>“Shizuoka Prefecture Environmental Basic Plan”</p> <ul style="list-style-type: none"> <li>• Program for Promoting Conservation of <i>Satoyama</i> -promoting conservation and utilization of <i>Satoyama</i>; and promoting forest environmental education at “Yuki-no-mori”, etc.</li> <li>• Program for Promoting Collaboration of Linking the Citizens and Forest - promoting the “Shizuoka Supporters of Future Forest” system, etc.</li> </ul>	○
Aichi	Ordinance for Aichi Forest Greenbelt Tax (2008)	<p>“Aichi Forest Greenbelt Project”</p> <ul style="list-style-type: none"> <li>• Program for <i>Satoyama</i> Woodlands Improvement - improving <i>Satoyama</i> woodlands; and improving surrounding <i>Satoyama</i> woodlands</li> </ul>	○
Mie	Mie Prefecture Ordinance for Conservation of the Natural Environment (2003)	<ul style="list-style-type: none"> <li>• Certificate program for Satochi-satoyama conservation activities - providing information on the activities; and subsidizing expenses for purchasing necessary equipments, etc.</li> </ul>	○
	Ordinance for Forest Improvement of Mie (2005)	<p>“Basic Plan for Forest Improvement of Mie”</p> <ul style="list-style-type: none"> <li>• Promotes activities for improvement and conservation of <i>Satoyama</i> -We all Save the Nature; Certificate program for Satochi-satoyama conservation activity plan.</li> </ul>	
Shiga	Ordinance for Lake Biwa Forest Improvement (2004)	<p>“Basic Plan for Biwako Forest Improvement”</p> <ul style="list-style-type: none"> <li>• Improves <i>Satoyama</i>; promotes utilization (Forest under <i>Satoyama</i> Improvement Agreement)</li> </ul>	○
	Ordinance for Lake Biwa Forest Improvement Tax (2005)	<ul style="list-style-type: none"> <li>• Lake Biwa Forest Improvement Project (<i>Satoyama</i> improvement by cooperating prefecture residents)</li> </ul>	
Kyoto	Kyoto Prefecture Ordinance for Protection of Rich Greenery (2006)	<p>“Policies for Forest Utilization and Conservation”</p> <ul style="list-style-type: none"> <li>• Designates Areas Prioritized for Forest Utilization and Conservation; develop Forest Utilization and Conservation Plan</li> <li>• Registers organizations working on forest utilization and conservation; Certificates Agreement for Forest Utilization and Conservation</li> </ul> <p>Promotion of “Kyoto Model Forest Activity”</p>	○
Osaka	Osaka Prefecture Environmental Basic Ordinance (1994)	<p>“Osaka Environmental Master Plan for the 21<sup>st</sup> Century”</p> <ul style="list-style-type: none"> <li>• Promotes activities for conservation of forests and <i>Satoyama</i> (<i>Satoyama</i> Trust Program)</li> </ul>	○
	Osaka Prefecture Ordinance Concerning Promotion of Urban Agriculture and Conservation and Utilization of Farming Space (2007)	<ul style="list-style-type: none"> <li>• Osaka Program for Certified Farmers</li> <li>• Program for Farming Space Conservation Areas</li> </ul>	
Hyogo	Ordinance Concerning the Conservation and Creation of the Environment (1995)	<ul style="list-style-type: none"> <li>• Preserves “hometown greenery”, etc.</li> <li>• Forms good landscape</li> <li>• Creates places for contacting nature.</li> </ul>	○
		<p>“New Hyogo Forest Improvement”</p> <ul style="list-style-type: none"> <li>• Forest improvement by public involvement (restoration of <i>Satoyama</i> woodlands)</li> <li>• Forest improvement activities by participating prefecture citizens (dissemination and education; Mission for Fostering 10,000 Forest Volunteers)</li> </ul>	
Nara	Nara Prefecture Environmental Basic Ordinance (1996)	<p>“Nara Prefecture New Environmental Master Plan”</p> <ul style="list-style-type: none"> <li>• Beautiful Hometown “Nara” Creation Project -improving <i>Satoyama</i> woodlands in collaboration with prefecture citizens.</li> </ul>	○
	Nara Prefecture Ordinance for Forest Environment Tax (2005)	<ul style="list-style-type: none"> <li>• Program for Recovery and Maintenance of <i>Satoyama</i> Woodland Functions -forest management with participation of prefecture citizens (contracting management agreement)</li> </ul>	



Prefecture	Ordinance ( ) denotes the fiscal year of establishment	Specified measures	Ordinance specifying the funding source (tax, etc.)
Wakayama	Kinokuni Ordinance for Forest Improvement Tax (2005)	<ul style="list-style-type: none"> <li>• Programs using Kinokuni Forest Improvement Tax: improving wasted forest; developing forest management leaders; using forest resources, etc.</li> <li>• Programs for promoting corporate forests</li> </ul>	○
		<ul style="list-style-type: none"> <li>• Promotes activities to maintain and enhance multi-dimensional functions of farmlands, ditches and ponds.</li> </ul>	
Tottori	Tottori Tax Ordinance (2005)	<ul style="list-style-type: none"> <li>• Improvement of bamboo forest - providing workshops fostering leader training for promoting bamboo forest improvement</li> </ul>	○
		<ul style="list-style-type: none"> <li>• Program for training and registering Tottori Prefecture Wild Animal Technicians (so called, “ino-shi-shi”) by School for Wild Animals and <i>Satoyama</i></li> </ul>	
Shimane	Ordinance for Shimane Prefectural Nature Park (1961)	<ul style="list-style-type: none"> <li>• “Agreement Program for Landscape Conservation (revised in 2003)”- for <i>Satoyama</i> and other areas with problems in conservation, NPOs designated by park management organizations conduct management for landowners under agreement.</li> </ul>	○
	Ordinance for Tax for Water and Green Forest Improvement (2004)	<ul style="list-style-type: none"> <li>• Citizens Forest Restoration (Citizens Forest Restoration Agreement)</li> </ul>	
Okayama	————	<ul style="list-style-type: none"> <li>Activity Fostering Beautiful Forest “Support Program for <i>Satoyama</i> Forest for Nature Experience Activity”</li> <li>• <i>Satoyama</i> Volunteer Master Course</li> <li>• Supports <i>Satoyama</i> Nature Experience Activity, etc.</li> </ul>	○
Hiroshima	Hiroshima Ordinance for Forest Improvement Tax(2007)	<ul style="list-style-type: none"> <li>• Hiroshima Forest Improvement Program (Measures for <i>Satoyama</i> and other areas – <i>Satoyama</i> woodland improvement)</li> </ul>	○
Yamaguchi	Yamaguchi Prefecture Landscape Ordinance (2006)	<ul style="list-style-type: none"> <li>“Yamaguchi Prefecture Vision for the Landscape”</li> <li>• Provides assistance regarding to the sustenance of living (assisting <i>Satoyama</i> restoration activities by residents with the purposes of <i>Satoyama</i> restoration and creation of <i>Satoyama</i> culture)</li> </ul>	○
Tokushima	Tokushima Prefecture Ordinance for Promotion of Measures Against Global Warming; Tokushima Prefecture Basic Ordinance for Foods, Agriculture, Forestry and Fisheries, and Agriculture, Fishing and Mountain Villages (Both in 2009)	<ul style="list-style-type: none"> <li>• Tokushima Cooperative Forest Improvement: implementing a model program using the “carbon offset” mechanism</li> </ul>	
Kagawa	Kagawa Prefecture Ordinance for Conservation of the Environment (1974)	<ul style="list-style-type: none"> <li>“Basic Plan for Greenery”</li> <li>• Developing programs for sustaining <i>Satoyama</i> (Kagawa Forest Volunteer Network (KFVN, a forest volunteers registration system); a <i>Satoyama</i> ownership system, etc.)</li> </ul>	
Ehime	Ehime Prefecture Ordinance for Forest Environment Tax (2004)	<ul style="list-style-type: none"> <li>• Measures under Grass-roots Forest Improvement (<i>Satochi-satoyama</i> restoration model projects, Forest Exchange Center, etc.)</li> </ul>	○
Kochi	Kochi Prefecture Ordinance for Forest Environment Conservation Fund (2003)	<ul style="list-style-type: none"> <li>• Measures to promote Grass-roots Forest Improvement (programs for Kochi Mountain Day; comprehensive support programs for education about mountains)</li> <li>• Programs under Forest Environment Emergency Conservation (thinning; <i>Satoyama</i> management); programs to promote volunteer activities for forest conservation</li> </ul>	○

Prefecture	Ordinance ( ) denotes the fiscal year of establishment	Specified measures	Ordinance specifying the funding source (tax, etc.)
Fukuoka	Fukuoka Prefecture Ordinance for Forest Environment Tax (2008)	• Fukuoka Prefecture Call for Forest Improvement Activities (target activities: <i>Satoyama</i> conservation, utilization, etc.)	○
Saga	Saga Prefecture Ordinance for Forest Environment Tax (2007)	• Restoration of Saga-no-mori (restoration of devastated forest; grass-roots forest improvement, etc.)	○
Nagasaki	Nagasaki Ordinance for Forest Environment Tax (2007)	• Nagasaki Forest Environment Conservation Programs: emergency measures for Nagasaki Forest Improvement - managing invaded bamboo forest and wind damaged forest; thinning on the islands- ; grass-roots forest improvement activities.	○
Kumamoto	Kumamoto Prefecture Ordinance for Water and Green Forest Improvement Tax (2005)	• Water and Green Forest Improvement: grass-roots forest improvement activities – measures to promote conservation and use of <i>Satoyama</i> woodlands and activities of Forest for Learning. • Measures to promote Water and Green Forest Improvement: promoting volunteer activities and environmental education.	○
Oita	Ordinance Concerning Provisional Tax for Conservation of Forest Environment (2005)	• Promotion of grass-roots forest improvement activities: carry out photo contest and other related events. • Programs for forest improvement, connecting mountains, rivers and the sea. • Measures to assist creation of beautiful <i>Satoyama</i> • Promotion of prefecture wood products meeting with consumer demands, etc.	○
Miyazaki	Miyazaki Prefecture Ordinance for Water and Green Forest Improvement (2006)	• Grass-roots forest improvement activities: improving <i>Satoyama</i> and other areas	○
	Miyazaki Prefecture Ordinance for Forest Environment Tax (2006)	• Programs for improving forests facilitating water storage and disaster control: thinning trees and bamboos for restoration of <i>Satoyama</i> artificial forests • “Corporate Forest” activities – providing supports to these activities with Forest Environment Tax	
Kagoshima	Basic Ordinance for Natural Environment (1999)	“New Green Plan 21 – Kagoshima Prefecture Greenery Basic Plan” • Utilizing greenery in the neighborhood – using surrounding forests ( <i>Satoyama</i> woodlands, etc.) • Promoting forest experience • Promoting farming experience	○
	Kagoshima Prefecture Ordinance for Forest Environment Tax (2005)	• Designating activities for creation of regional forest environment – locally proposed activities • Designating activities for promoting forest experiences - open application	
Okinawa	———	“Okinawa the Best 100 Selections of Rural Villages” • The Community Category targets communities make efforts in conserving and balancing with natural environments in Satochi-satoyama.	

Notes:

1 This table summarizes provincial ordinances that are considered to target Satochi-satoyama areas, based on MO E, “Report for Selection of Important Satochi-satoyama Areas and Other Commissioned Tasks” (March 2009) etc.

2 In the column of ‘Ordinance that specifies funding sources (tax, etc.)’, ○ denotes that the prefecture has established ordinances, including those in the table, that stipulate tax or other financial sources with purposes of forest improvement etc.