

里山

The  
Satoyama  
Initiative

A Vision for Sustainable Rural Societies in Harmony with Nature

# The Satoyama Landscape Our Cultural and Natural Heritage

The two kanji characters written on the front jacket of this pamphlet are pronounced ‘Satoyama’. Traditionally, Satoyama refers to secondary woodlands such as oak coppices, pinewoods and bamboo groves, as well as grasslands managed for thatch, fodder and compost. These secondary environments were maintained by long-term sustainable use of the vital natural resources they provided.

Japan’s traditional landscape includes various other rural environments, such as arable fields and orchards, rice paddies, irrigation ponds and ditches, and the villages and farmsteads themselves. The complex rural ecosystem formed by the combination of Satoyama and these other environments is called the ‘Satoyama Landscape’.

In the local Satoyama Landscape many different kinds of woodland, grassland and wetland environments are mixed together in a complicated mosaic pattern. This rich mixture creates habitats for numerous species of wildlife, many of which are now endangered; and also enhances disaster prevention, watershed protection and other vital ecosystem services.

The Japanese people feel a deep emotional attachment to their Satoyama Landscape, which has always been a powerful source of inspiration, imagination and creativity. Satoyama motifs feature prominently in haiku poetry, traditional art and handicrafts, and even music. These motifs are also frequently used as the settings for traditional folk tales and modern-day anime movies.

**The Satoyama Initiative** targets complex rural ecosystems, such as the Japanese Satoyama Landscape, formed by long periods of interaction between human lifestyles and the natural world. The Initiative strives to create a vision for resource management and land use that balances the twin needs of biodiversity conservation and sustainable utilization.





## Nature in the Satoyama Landscape

Nature in the Satoyama Landscape is composed of managed environments that have been created and maintained within the lifestyles of local people engaged in farming and forestry.

### ***Secondary Woodlands***

Secondary woodlands, which consist of coppices and other managed woodlands, contain mostly tree species suitable for producing firewood and charcoal, such as oak (*Quercus serrata*, *Q. acutissima*) and pine (*Pinus densiflora*). By carefully harvesting the trees every 10 to 30 years, the woodlands are maintained open and airy, providing ideal habitats for many species of wildflowers such as violets, lilies, gentians and orchids.



### ***Rice Paddies***

Rice has been the staple in the Japanese diet for over 2000 years. Seasonal changes in the rice paddy landscapes are highly evocative to the Japanese people. In addition, rice paddies are filled with water from spring through summer. In some areas the paddies are filled again in winter. Paddies thus function as huge wetlands which provide crucial habitats for various wildlife.



### ***Irrigation Ponds and Ditches***

Water is the necessary component in wet rice farming. Cold spring water is collected and warmed in small ponds before being sent on to the paddies through a complicated network of canals and ditches. These ponds and ditches also serve as habitats for aquatic plants and insects, such as dragonflies and damselflies. Frogs and salamanders, as well as small fish like medaka ricefish, breed in the water.



### ***Pastures and Grasslands***

Secondary grasslands include pastures for livestock, and fields of silver grass or dwarf bamboo that have been managed for making thatch, fencing and various utensils. Grassland management, which involves annual cutting and burn-off, creates habitats for various species of wildflower, insect, bird and small mammal. Autumn landscapes featuring fields of ripe silver grass shining in the sun form one of the classic motifs of the Satoyama Landscape.



# Utilization and Management of the Satoyama Landscape

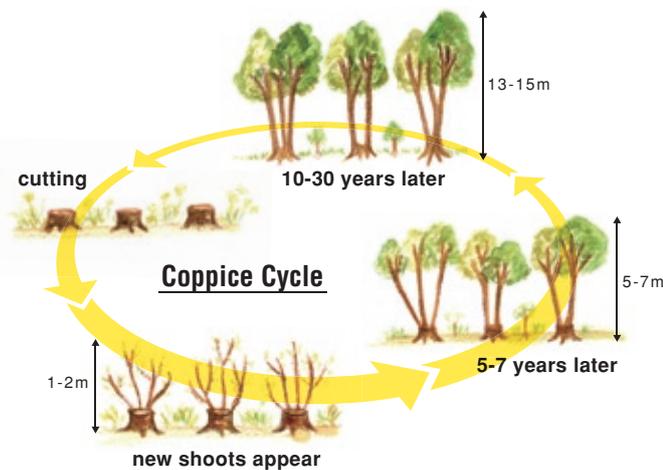
-A Vital Process for Conservation of Biodiversity-



1 Pheasant  
2 Red Skimmer Dragonfly  
3 Rice paddy spirits protect the harvest

## Traditional Coppice Management

Management includes cutting of undergrowth in summer and collecting of fallen leaves for compost in winter. The trees are felled on a 10 to 30 year cycle, but new shoots soon grow from the stump. In recent years, the demand for wood fuel has dropped, and many coppices have been abandoned. When this happens the woodland reverts to dense thicket, leading to loss of forest-floor wildflowers and other species that depend on the traditional open habitat. To conserve biodiversity, it is vital to maintain the balance between human activities and the natural world through proper management of the Satoyama.



Japanese Fawn Lilies thrive in coppice habitat



Shiitake mushrooms grown on oak logs



Charcoal is an essential element in the tea ceremony

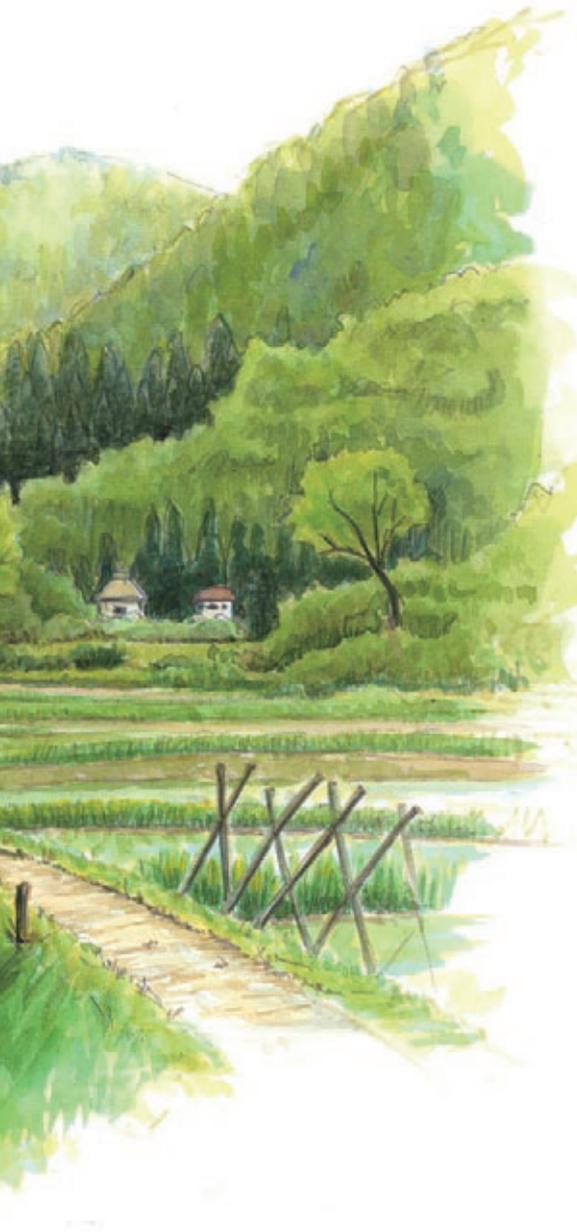


## Rice Paddies -Rich Wetland Ecosystems-

Rice paddies function ecologically as seasonal wetlands, which provide habitats for various aquatic insects, crustaceans, fish and amphibians. These small animals in turn are vital prey for waterbirds and other predators. Smaller paddies in narrow valleys or on steep slopes, with adjacent woodlands, are especially rich in biodiversity. Many

species require both the woodland and waterside habitats to survive. These small paddies, however, are often abandoned because of labor shortage or inefficiency of production. Awareness of the need to maintain and restore rich paddy wetland ecosystems is gradually increasing.

***Many species of waterbird feed and forage in and around the rice paddies***



**1** Swan and ducks **2** Golden Plover and Ruddy Turnstone **3** Black-spotted Pond Frog  
**4** Oriental Stork and Grey Heron

The Satoyama Landscape creates habitats that various species of plant and animal have learned to take advantage of, allowing a rich biodiversity to coexist in harmony with agricultural production. Rice paddies play an internationally important role in biodiversity conservation, serving as stopover wetland habitat for migratory shorebirds such as Golden Plover.

# The Satoyama Initiative

## A Vision for Sustainable Rural Societies in Harmony with Nature

The Satoyama Initiative is designed to develop a common awareness of the value of secondary nature in the modern world, and to create models for sustainable rural society in harmony with nature, which can be proposed at CBD/COP10. Examples of sustainable natural resource management are collected and analyzed from all over the world, forming the core of a systematic data base. The vital principles common to these examples are then extracted, and a wide range of expertise and experience is used to create operational guidelines for development, implementation and evaluation of sustainable management strategies for each specific region. Concrete action plans, based on these guidelines, can then be expanded at the global level.

**Create a shared database and models for sustainable use and management at global level (Propose at CBD/COP10)**

### STEP 1

Collect and analyze cases of sustainable natural resource management from around the world

### STEP 2

Analyze the current situation and identify challenges ahead for the conservation and management of secondary nature

Eco-agriculture  
Agro-forestry  
Community forestry

COLLABORATION

Ecosystem Approach  
Addis Ababa Principles  
and Guidelines etc.

### STEP 3

Creation of principles, guidelines and action plans

- 1 Extract principles that are important points in common among these cases
- 2 Develop operational guidelines for planning, implementation and evaluation of sustainable management strategies
- 3 Develop a systematic database of good practices
- 4 Establish action plans to expand at global level

## Development of Land Use Strategies Based on the Framework of Complex Ecosystems

Rural landscapes in Asia are characterized by various types of forest and wetland secondary environments, combined in a mosaic spatial structure that is tightly integrated into the local topography. These land-use patterns create complex ecosystems that conserve regional biodiversity and also provide vital ecosystem services, such as watershed protection, natural disaster prevention, pest control, and food, fuel and timber, for the people living in these areas. These benefits, however, depend on the complex ecosystem, and are lost or deteriorated when the traditional mosaic pattern turns to mono-cultural land use. Land use strategies must be based on an understanding of the importance of complex ecosystems, and strive to achieve a balance between production and conservation of biodiversity and ecosystem services. Developing an inventory of species in the target area can be a useful first step in this direction.



Food



Pollination



Food



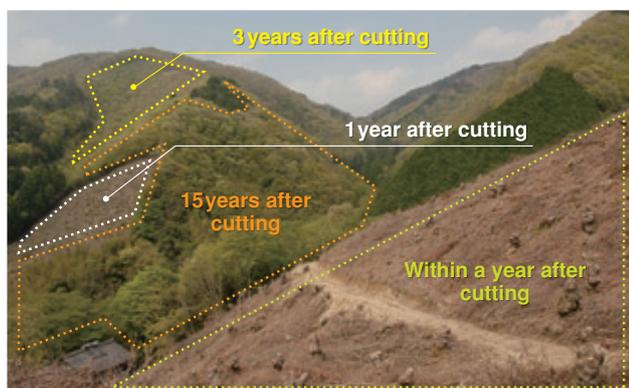
Timber/ Fuel



Watershed protection

## Sustainable Resource Use According to Environmental Capacity and Natural Resilience

Sustainable resource management and land use strategies must be designed at an appropriate scale, taking into account the environmental capacity and natural resilience in each individual target region. Ignoring these vital factors can result in exhaustion of local wood and water resources, soil deterioration and erosion, and general loss of biodiversity and ecosystem services. The concepts of eco-agriculture, agro-forestry and rotating land use should be essential elements in the strategies, along with establishment and monitoring of environmental indicators. A good example is oak coppicing for charcoal manufacture in Hyogo Prefecture, where swaths of trees in various stages of regeneration are mixed together in a mosaic pattern. Each swath provides a slightly different natural environment, offering rich habitats for diverse species.



Oak coppice in Hyogo Prefecture, Japan

## Consensus-Based Multi-Stakeholder Decision Making Focused in the Local Community

The development, implementation and evaluation of sustainable management strategies should be based on consensus-style decision making, focused in the local communities but also actively seeking input from a wide range of stakeholders, such as local governments, NGOs, and all beneficiaries of ecosystem services, including enterprises and consumers in urban areas. The concept of community forestry, for example, encourages establishment of a management council, zoning to achieve a balance among utilization, conservation and regeneration, and provisions for environmental education.



## Balance Between Development and Conservation

Sustainable management strategies cannot fail to address the issues of rural poverty and development. An estimated 75% of the world's poor are said to live in rural areas, where a vicious cycle of poverty and landscape degradation disrupts the ecosystem services necessary for their livelihoods. Biodiversity conservation is impossible without first halting this cycle. Ecotourism promotion and value creation for local biodiversity-friendly products can contribute to rural development; while modern technology and science can be combined with traditional knowledge and wisdom to formulate strategies that provide both conservation and economic benefits.



## Steps Forward for the Future

The Satoyama Initiative is a collaboration between the United Nations University and the Japan Ministry of the Environment, with active participation of governmental agencies, NGOs and other organizations around the world. Its goal is to develop models and create a shared database for sustainable management practices. We invite input from stakeholders of all regions and backgrounds for help in designing the next steps forward.



The Satoyama Initiative international workshop

# The Satoyama Landscape Nurturing of Traditional Village Culture

Over the centuries, ecosystem services provided by the Satoyama Landscape have inspired a rich tradition of community-based performing arts and artistic culture. These blessings of nature are never taken for granted. The people always express their prayers and gratitude for abundant water, favorable weather and good harvests at various festivals and ceremonies held throughout the year. These annual lifestyle rhythms, which are embedded so deeply in the Japanese psyche, are vanishing from the cities, but are still observed in the Satoyama rural regions.



Celebrating the transplanting of the rice seedlings –Shimonoseki City, Yamaguchi prefecture



Rain Festival –Tsurugashima City, Saitama Prefecture

Terraced rice paddies in Nagaoka-City, Niigata Prefecture

## The Satoyama Initiative

A Vision for Sustainable Rural Societies in Harmony with Nature

Published in March 2009

**Produced by**

Nature Conservation Bureau, Ministry of the Environment, Government of Japan  
1-2-2 Kasumigaseki, Chiyodaku, Tokyo  
100-8975 Japan  
Tel: 03-3581-3351(main)

**Editorial work:**

Japan Wildlife Research Center  
Eastern Create Inc.  
MacEwen Productions Inc.

**Design:**

Nagashima Design Office Inc.

