| Category No. 6 | Practices associated with the mechanisms of joint forest management and use and profit sharing among participants |
|---|---|

## 1.    Overview

### (1)    Background and features of the practice

There are many cases in artificially developed forest vegetation around the world (e.g. secondary forests and afforested areas) in which improper usage and management have caused deteriorations in various ecosystem services and negatively affected the survival and safety and comfort of livelihood of local residents.

In tropical forest areas, for example, there are many cases in which people have converted forests into agricultural land to deal with rapid population growth, or engaged in excessive deforestation for the purpose of large-scale commercial crop cultivations. One of the causes of this lies in the difficulty in regulating improper usage by individual residents or major companies from the outside due to the unclear ownership of forests.

In developed countries, there are many cases where the performance of the forestry remains sluggish due to an expansion of timber imports and lowered timber prices, which has caused insufficient usage and management of forests. One of the causes of this lies in the difficulty in improving operational efficiency due to the large number of small-scale forest owners.

As a new measure to deal with these problems, the mechanism of shared forest use and management by local residents, along with the distribution of benefits to participants, is gaining popularity.

### (2)    Details of the practices and their applicability

Two major practices are available as follows.

#### 1)    ,Social forestry, community forestry, residential forestry

i.    Details of the practice
- Mechanisms of the shared use and management of forests by local residents, along with the distribution of benefits to participants, are employed in the field of international development assistance as methods to promote both economic stabilization and the conservation of biodiversity in forested areas.
- Until recently these methods were called "social forestry", but in recent years they are often called "community forestry" to put more emphasis on the participation of local societies.
- This method is also called "residential forestry" which emphasizes independent forest management by local residents and guaranteed returns.

ii.    Range of application
- This practice is applicable to areas that experience deteriorated ecosystem services and associated socioeconomic problems such as deteriorations in the livelihoods of local residents due to an overexploitation of forest resources.

iii.    Implementing bodies
- Organizations such as local communities and forest associations become operating entities, and profits are distributed to individual forest owners.

**[Cases]**

Around the world No.6: Community forestry in Thailand

Around the world No.19: Forest management through Community-based Forest Enterprises in Ixtlán de Juárez, Oaxaca, Mexico

### 2)  Group forestry to promote the use and management of forests

 i. Details of the practice
- In this practice, organizations such as forest associations contract with multiple land owners to facilitate efficient forestry and conduct integrated forest management as well as the sales of forest products in areas where small-scale land owners possess divided ownership of forests.
- When the sales of forest products generate profits, the profits are distributed to contracted forest owners.

 ii. Range of application
- This practice is applicable to areas that experience deteriorated ecosystem services and associated socioeconomic problems such as deteriorations in the livelihoods of local residents due to an under-exploitation of forest resources.

 iii. Implementing bodies
- Organizations such as forest associations become operating entities, and profits are distributed to individual forest owners.
- Public entities such as government organizations and international organizations provide assistance in the planning phase and the initial phase of implementation.

## 2.  Effects obtained from these Cases regarding the sustainable use and management of natural resources

Implementation of the practices in this category is associated with the following effects in the sustainable use and management of natural resources and the maintenance of a healthy secondary nature.

### (1)  Effects on the sustainable use and management of natural resources (socioeconomic effects)

**(Effects of social forestry, community forestry, and residential forestry)**
- It is expected that the disorderly use of forests by individual residents will be reduced, and all local residents can gain fair and stable incomes through the clarification of their rights and responsibilities with regard to the use and management of forests.
- By uniting, it is expected that local residents will gain the ability to fight against illegal deforestation or developments as well as gain abilities for information gathering and negotiation skills to sell forest crops at proper prices.

**(Effects of group forestry to promote the use and management of forests)**
- In comparison to cases where forest owners individually use and manage forests, improvements in forestry operations and livelihoods can be expected through significant efficiency improvements in forestry operations.

### (2)  Effects on the health of the secondary nature (effects on ecosystem and biodiversity)
- Through the introduction of this practice, we can expect the restoration of forests that have been degraded due to overexploitation or under-exploitation and the improvement in the biodiversity of these areas.

## 3. Toward the implementation of this practice
### : Points of planning and examples of action items based on the "Five Perspectives" of the SATOYAMA Initiative

The following sections describe points and action items to plan the implementation of this practice in areas with a secondary nature.

Table: Points of planning and action items based on the "Five Perspectives" of the *Satoyama* Initiatives

| "Five Perspectives" of the Satoyama Initiative | Points of planning | Action items |
|---|---|---|
| (1) Resource use within the carrying capacity and resilience of the environment | • In order to improve the health of artificially created forest vegetation (e.g. secondary forests, afforested areas, and cutover areas), it is necessary to create plans with a focus on socioeconomic issues that are the original causes of problems such as overexploitation and under-exploitation. | • Study and analyze the status of the use and management of forests.<br>• Plan implementation details based on the mechanisms of shared use and management. |
| (2) Cyclic use of natural resources | • It is necessary to make sure that implementing this practice does not impede an area's natural resource circulations. | • Check whether the practice is in harmony with the area's natural resource circulations. |
| (3) Recognition of the value and importance of local traditions and cultures | • It is necessary to explore the applicability of the traditional knowledge of the region. | • Verify applicability of traditional knowledge. |
| (4) Natural resource management by various participating and cooperating entities | • It is necessary that public entities such as government organizations and international organizations to be involved as a neutral party to encourage agreements and the participation of many local residents.<br>• It is necessary to establish a system, rules, and mechanisms to ensure proper use and management by local residents. | • Establish implementation systems.<br>• Establish rules and mechanisms of use and management. |
| (5) Contributions to local socio-economies | • It is effective to work with local businesses and operations that utilize developed forests to gain the understanding and cooperat ion of local residents.<br>• To promote autonomous management by local residents it is important to provide education, human resources development, and capacity building. | • Plan to utilize the developed ecosystems.<br>• Plan for education, human resources development, and capacity building. |

## (1)  Resource use within the carrying capacity and resilience of the environment

| Points of planning | • In order to improve the health of artificially created forest vegetation (e.g. secondary forests, afforested areas, and cutover areas), it is necessary to create plans with a focus on socioeconomic issues that are the original causes of problems such as overexploitation and under-exploitation. |
|---|---|
| Action items | • Study and analyze the status of the use and management of forests.<br>• Plan implementation details based on the mechanisms of shared use and management. |

This practice aims to improve the supply and demand balance of forest resources in the whole area by incorporating a system of shared use and management for artificially created vegetation (e.g. secondary forests, afforested areas, and cutover areas) where sustainable use and the management of forest resources have become difficult.

Details of efforts required to improve the supply-demand balance vary greatly depending on the problems a given area faces. A major policy is that it is necessary to expand the available amount of resources for supply and reduce overexploitation in areas where the overexploitation of forest resources is a problem, and that it is necessary to create demands for resources in areas where under-exploitation is a problem.

In order to establish the details of efforts based on shared use and management, it is first necessary to organize the status and problems of the use and management of forest resources (status of overexploitation or under-exploitation) as well as the socioeconomic problems that have become the root causes of these problems (e.g. population increase or decrease, reduced income of local residents, and stagnation in the market values of forest crops).

Based on the findings, it is necessary to increase the socioeconomic advantages while establishing the content of efforts that can improve the supply-demand balance.

Table: Examples of work content based on shared use and management

| Problem | Policy to improve supply-demand balance | Examples of work content based on shared use and management |
|---|---|---|
| Overexploitation | Increasing the amount of resources available for supply | • Regenerate forests lost in overexploitation or create new forests<br>• Increase the density of forest use through multi-layered use (e.g. agroforestry). |
| | Restriction of overexploitation | • Restrict illegitimate forest uses for sales outside a target area.<br>• Set up rules and systems to restrict overexploitation (→see "4) Participation and cooperation of various groups"). |
| Under-exploitation | Creation of demands | • Improve forestry efficiency through shared operation.<br>• Gradual conversion to tree species and uses with high commercial values.<br>  *When livelihoods other than forestry are available, it is possible to convert areas into natural forests with the perspective of improving public ecosystem functions and biodiversity.* |

## (2)　Cyclic use of natural resources

| Points of planning | • It is necessary to make sure that implementing this practice does not impede an area's natural resource circulations. |
|---|---|
| Action items | • Check whether the practice is in harmony with the area's natural resource circulations. |

In order to maximize the effects of this practice, it is essential that the material flow of target forest ecosystems is in harmony with the local circulation of natural resources.

Thus, it is necessary to check whether the practice can be smoothly incorporated into existing resource circulations by comparing the details of forests to be nurtured through the efforts set up in 1) with the details of healthy forests in nearby areas.

## (3)　Recognition of the value and importance of local traditions and cultures

| Points of planning | • It is necessary to explore the applicability of the traditional knowledge of the region. |
|---|---|
| Action items | • Verify applicability of traditional knowledge. |

Local wisdom of traditional resource circulations and a knowledge of useful plants may include information that can be utilized in the efforts and the mechanisms of shared use and management. In addition, local traditional mechanisms of self-governing and local rules related to use and management of natural resources may include mechanisms that can be applied to today's mechanisms of shared use and management.

Thus, as a part of the preliminary research to plan the implementation of this practice, it is necessary to sort the details and locations of traditional knowledge, identify their natural and social rationalities in scientific ways, and examine their applicability. For example, in the case of the community forestry in Oaxaca, Mexico, sustainable forest operation is realized by succeeding a traditional self-governing system of indigenous people which has the concept of shared use and management. Through this process, forestry businesses run by the local community obtain FSC forest certification.

## (4) Natural resource management by various participating and cooperating entities

| Points of planning | • It is necessary that public entities such as government organizations and international organizations to be involved as a neutral party to encourage agreements and the participation of many local residents.<br>• It is necessary to establish a system, rules, and mechanisms to ensure proper use and management by local residents. |
|---|---|
| Action items | • Establish implementation systems.<br>• Establish rules and mechanisms of use and management. |

This practice cannot be successful without the agreement and participation of many local residents. However, since the needs of local residents vary, and are connected with each other through complicated interests, it may be difficult to carry out the efforts in this practice through discussions among residents alone.

Thus, it is expected to explain the meaning and effects of the practice and balance the interests of stakeholders in the planning phase through the involvement of public entities such as government organizations and international organizations as neutral parties. In order to encourage the agreement and understanding of local residents, it is effective to show the economic advantages in various ways. For example, by conducting small-scale experiments with some motivated residents or having the residents actually see advanced case studies in other areas.

When at the stage to fully implement the shared use and management of forests, it is necessary to establish organized implementation systems involving local residents (e.g. forest associations) while establishing local rules and mechanisms to guarantee proper use and management so that the problem of overexploitation or under-exploitation is not repeated.

In order to make the systems, rules, and mechanisms created by local residents viable, it is effective for government organizations to provide support such as a legal guarantee of rights. Also, when the beneficiaries of public ecosystem functions that originate in the nurtured forests include an unspecified number of people in a wide area, it is effective to combine the practices associated with the conservation and regeneration of upstream forests by fishermen and water users (Category No. 9) to secure proper responsibilities of the beneficiaries.

Table: Examples of rules and mechanisms to guarantee proper use and management by local residents

| Category | Expected contents | Purpose of the rules and mechanisms described on the left |
|---|---|---|
| Rules for use and management | • Establish an upper limit to the amount of use (total and individual amount of use) | • Ensure use within the carrying capacity and resilience of the environmnet |
|  | • Usage zoning (e.g. locations where use is allowed, locations where use is limited, locations where use is not allowed)<br>• Limits on actions associated with use and management<br>• Limits to the period of use | • Usage control to reduce the negative impacts on public ecosystem functions (e.g. disaster prevention functions and climate controlling functions).<br>• Prevention of use during vegetation growth phases |
| Systems of use and management | • Allocation of available amount of resources depending on management burdens | • Setting up responsibility dependent upon benefits received<br>• Motivation for management |
|  | • Limits on the transfer of land or usage rights etc. | • Prevention of improper use by entities or parties from outside the area |

## (5)    Contributions to local socio-economies

| Points of planning | • It is effective to work with local businesses and operations that utilize developed forests to gain the understanding and cooperat ion of local residents.<br>• To promote autonomous management by local residents it is important to provide education, human resources development, and capacity building. |
|---|---|
| Action items | • Plan to utilize the developed ecosystems.<br>• Plan for education, human resources development, and capacity building. |

In order to continue the sustainable use and management of forests developed through this practice, it is essential to promote the maintenance and improvement of economic benefits that local residents can receive. It is effective to work on new local businesses and operations that utilize forests to do so. Specific examples include the compound operation of agriculture and forestry based on multi-layered land uses (Category No. 1), the development of industries using traditional cultures and skills (Category No. 4), biomass utilization (Category No. 5), and ecotourism (Category No. 7).

Also, in order to maintain favorable conditions through the autonomous activities of local residents, it is important for individual participants involved in the use and management of forests to understand the basic concepts of this practice and obtain the knowledge and skills to realize them. Thus, it is effective that public entities that are involved in the operation provide education, human resources development, and capacity building programs targeting local residents.

Table: Examples of new local businesses in forests

| Field of local business | Specific examples |
|---|---|
| Compound agriculture and forestry based on multi-layered land uses (Category No. 1) | • Introduction of agroforestry in tropical forests<br>• Introduction of fish and shellfish culture in mangrove forests<br>• Introduction of forest grazing that also works as undergrowth vegetation management |
| Development of industries using traditional cultures and skills (Category No. 4) | • Manufacturing of traditional arts and crafts that use wood as the raw material<br>• Cultivation of traditionally useful plants |
| Biomass utilization (Category No. 5) | • Utilization of wooden biomass energy<br>• Manufacturing of new products that use wood as their raw material |
| Ecotourism (Category No. 7) | • Implementation of ecotourism that uses local ecosystems, relevant culture, and other local features |