

**Policy Recommendation for Participatory Forest Management
in Indonesia and the Philippines and Timber Trade Policy**

TOWARDS PARTICIPATORY FOREST CONSERVATION IN INDONESIA¹⁶

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ABSTRACT

The rich tropical forest in Indonesia has been over exploited since the late 1960s AS A result of Indonesian policies allowing foreign investors to invest their capital in Indonesia forestry. These policies lead to a 'timber boom' during the 1970s, causing a high deforestation rate and forest degradation. Strong criticisms rose from international and domestic institutions, particularly on the negative impacts on the environment and local communities. In response to these critiques, the Indonesian government developed new forest policies, of which one focuses on forest conservation, including the establishment and development of National Parks (NP), nature reserves, wildlife reserves and game parks. This policy strategy, however, has still not been successful, mainly due to poor policy designs developed by the 'elite' from Jakarta central departments, uncoordinated implementation of these policies that were often overlapping, poor understanding of policy implications, particularly at the grassroots levels and lack of community support in the implementation of forest conservation programs. The key to the success of forest conservation is a shift in the policy approach to participatory forest conservation that involves all instrumental stakeholders in this process. This participatory approach is essential for creating a more comprehensive and appropriate design, developing more acceptable conservation programs, reducing conflicts of interest and uses and minimizing the risk of conservation policy failure. The involvement of forest communities, therefore, is crucial and the main step to achieving this is to empower local communities and institutions, particularly to include their aspirations and needs in the conservation policy and activities.

I. RATIONALE BEHIND THE IMPORTANCE OF FOREST CONSERVATION

Indonesian tropical rain forests are considered among the most species-rich habitats and a centers for biodiversity. As the third largest tropical forest in the world, Indonesia support 17 percent of the world's total species, containing 12 percent of the world's mammals, 15 percent of the world's amphibians and reptiles, 17 percent of the world's birds and 37 percent of the world's fish. Indonesia is also rich in flora, covering approximately 11 percent of the world's flora (MNLH, 1993).

Despite their importance, Indonesia's biodiversity is believed to be under serious threat. This can be seen from the large number of endangered species in Indonesia. By the mid 1990s approximately 126 bird species, 63 mammals and 21 reptiles were at high risk of loss. Similarly, many species of flora have also reached in endangered conditions. This includes 36 wood species such as *ulin* timber in South Kalimantan, *Dipterocarpus hasselti* (*kayu kruing*) and *kayu pundak* in Java, *sawo kecil* in East Java, West Bali and Sumbawa and black timber in Sulawesi. *Cycas Rumphii* (*pakis haji*), *Ponia Sylvestris* (*pakis hias*), Java orchids or *Phalaenopsis Javanica* is also at high risk and a species of rattan or *Ceratolobus Glaucescens* is rarely found

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now on the south coast of Java. In Kalimantan alone, endangered species included the *orang utan*, rhinoceros and proboscis monkey. In total, about 538 species have been classified as protected species. (KMNLH, 1997: 557- 558).

Although the government has developed forest conservation areas, the decline in biodiversity is still widespread throughout Indonesia. Many species have already disappeared, such as *Vanellus Macroptenus* and *Eutrichomyias Rowleyi* in North Sulawesi and the *Phantera Tigris* (tiger) in Java and Bali. According to the Ministry of Environment (1994) Indonesia losses more than one species each day and therefore is known as the first greatest endangered species country in the world.

The Major Threats

The increasing loss of forest biodiversity is closely related to an increasing volume of economic and development activities in forestry. Over exploitation of forest resources started in the late 1960s when the Indonesian government first allowed foreign and domestic investment in developing forest resources in this country. This policy has resulted in a high rate of deforestation and forest deterioration that has directly led to problems of nature conservation.

The deforestation rate has increased rapidly over the last thirty years. During the 1980s, the annual deforestation rate was about 1.2 million hectares and slightly declined to 1.1 million hectares in the early and middle 1990s (ITTO, 1998). According to Hasanuddin (1996), the annual rate of deforestation varied between 263,000 hectares (TAG, 1991) to 2.4 million hectares, while according to Seve (1999:11) between 600,000 hectares and 1.3 million hectares. In Java and Bali, most of the forests (91 percent) have been cleared with an annual deforestation of 1.7 percent, the second highest (after Sumatra) deforestation rate in Indonesia (KMNLH, 1997:543).

This high deforestation rate is closely related to government policies on forest development through logging and timber industries, estate plantations and transmigration settlements (World Bank, 1990 and 1994; Fraser, 1996; Sunderlin and Resosudarmo, 1997; ITTO, 1998). The government policies on logging and timber industries have significantly increased the number of timber concession companies (HPH) throughout Indonesia (more than 500 HPH), particularly in the islands of Sumatra, Kalimantan, Maluku and Irian Jaya (Papua), covering approximately 64 million hectares of productive forests (Atmawidjaya, 1994). In Maluku, for example, more than 50 percent of the total forests, especially on Seram Island are under concession areas (Hidayati *et al*, 1999). Government policy to establish estate crop plantations has converted 500,000 hectares of forest annually with a total area of approximately 1.8 million hectares converted into plantations by 1995 (ITTO, 1998).

Rapid increase in population growth, particularly of forest dependent inhabitants, is another important contributor to deforestation. This is closely related to their activities, particularly of shifting cultivation and smallholder plantations and settlements. Shifting cultivation is still practiced in many parts of Indonesia. By the end of the 1990s, the total areas of shifting cultivation was about 11 million hectares or about 21 percent of total deforestation in Indonesia, with the annual forest clearing estimated at between 300,000 - 500,000 hectares (ITTO, 1998).

Although many anthropological studies argue that traditional shifting cultivation is ecologically sound (Freeman, 1955; Conklin, 1957; Geertz, 1963), in many areas, especially surrounding big cities and centers of economic and development activities, shifting cultivators (who are mostly migrants) practice shifting cultivation techniques without applying the traditional criteria. They burn and slash trees in the forest and plant rice or cassava or taro, then leave the areas after harvesting, causing widespread grasslands or *alang-alang* throughout the old cultivated areas (Hidayati *et al.*, 1999:155).

Forest Fires

Forest fires that regularly occur during long drought seasons and have direct impacts on deforestation and forest degradation. In 1982/83, about 5 million hectares of forest burned, most (3.5 million hectares) in East Kalimantan. Another big fire occurred again in 1997/98 with the total burning areas varying, according to data sources between less than 1 million hectares to 7 million hectares. The fires were especially in Sumatra and Kalimantan, located in the primary and secondary forests, production forests, including logging concession and plantation areas, one million hectare of peat land and cultivation areas (ITTO, 1998).

The impacts of these forest fires were enormous. Direct ecological impact was the loss of biodiversity. Many species of wildlife died due to habitat loss, lack of food and water, the heat and smoke of the fires. Fires also led to changes in vegetation and composition of fruits. The loss of key organisms such as pollinators and decomposers slowed the recovery of the forest ecosystem. The 1982/83 fires had a substantial impact on populations of birds, reptiles, small mammals and insects in Kutai National Park, although after a few years most were indicated to have rebounded (WWF, 1998). Fires again in 1987 and 1991 killed new growth and wildlife in regenerating secondary habitats (MacKinnon and Sumardja, 1996:61), while the 1997/98 fires had a serious impact on *orang utan* on East and Central Kalimantan. (WWF, 1998).

Threats to forests have substantially increased; therefore in order to limit further damage and achieve sustainable use of forest resources, forest conservation is urgently needed. This is particularly important when the Indonesian people's dependence on this resource has been constantly increasing, mainly due to population pressure, economic and development activities in forests. The situation has become much worse because Indonesia is undergoing an economic crisis, where the Indonesian government highly promotes development based on utilization of forest resources such as plantations and agroindustry and more and more people gain benefits from forest resources and for their survival are forced to exploit forest resources.

II. FOREST CONSERVATION

There has been a growing realization within the Indonesian government on the essential need to conserve forests and protect biodiversity; therefore the government has developed forest conservation policies. The government has set a target of conservation areas of 10 percent of total forest lands. About 19 million hectares have been allocated for forest conservation areas (Atmawidjaya, 1991; MacKinnon and Sumardja, 1996:64). The government commitment is reflected by the development of a legal basis for conservation as shown in Law No.5, 1990 (UU

No.5/1990) on the conservation of the living environment and its ecosystems. This indicates how Indonesia has already adopted and committed itself to international agreements related to environmental protection. This constitution, however, is not the only legal act produced by the Indonesian government. Laws and regulations have been implemented, such as Basic Forestry Law No.5, 1967, the Spatial Use Management Law of 1992 (UU No.24/1992) and the law on the Management of the Living Environment of 1997 (UU No23/1997).

The concept of forest conservation was first introduced in 1967 when the Indonesian government announced Basic Forestry Law No.5 that included conservation areas, particularly through the concept of *swaka alam* that consists of *cagar alam* or nature reserves and *swaka margasatwa* or wildlife reserves (Atmawidjaya, 1991). This concept has been developed and changed. The latest concept from the Department of Forestry and Plantations shows four types of conservation areas: (1) nature reserves or *cagar alam*, (2) wildlife reserves or *suaka margasatwa*, (3) game parks or *taman buru* and (4) national parks or *taman nasional* (Department of Forestry and Plantations, 2000).

In the year 2000, the total conservation area, according to the latest report for recalculation of conservation areas, is approximately 17,377,095 hectares or more than half (58 percent) of the total protected and conservation areas in Indonesia. Most of the conservation areas (62 percent) are located in primary forest and the remainder is secondary forest (17 percent) and non-forested areas (21 percent). The largest area is allocated for national parks, covering more than half of the total conservation area, while the smallest amount designated for game reserves (see Table 1.). The size of conservation area varies between regions depending on the total area of each region (forest and non forest), with the largest conservation area appointed to Irian Jaya (Papua) and the least in Nusa Tenggara, followed by Maluku, Java and Bali (see Table 2.).

Table 1. The Conservation Area Based on Forest Status

Conservation Area	Primary Forest		Secondary Forest		Non-Forest		Total (ha)
	Size (ha)	%	Size (ha)	%	Size (ha)	%	
Nature reserves	2,475,611	75	389,183	12	428,251	13	3,293,045
Wildlife reserves	2,867,228	56	516,384	10	1,755,840	34	5,139,452
Game reserves	49,922	24	82,786	40	76,708	37	209,416
National parks	5,368,272	61	1,967,817	23	1,399,093	16	8,735,182

Total area	10,761,033	62	2,956,170	17	3,659,892	21	17,377,095
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Source: Department of Forestry and Plantations, 2000

Table 2. The Distribution of Conservation Areas in Indonesia, 2000

Conservation Area	Primary Forest		Secondary Forest		Non-Forest		Total (ha)
	Size (ha)	%	Size (ha)	%	Size (ha)	%	
Sumatra	1,957,717	55	1,179,043	33	414,152	12	3,550,912
Java-Bali	168,953	35	51,901	11	264,901	54	485,755
Kalimantan	2,707,710	68	735,836	19	523,543	13	3,967,089
Sulawesi	694,750	52	381,243	29	256,315	19	1,332,308
Nusa Tenggara	36,151	20	5,516	3	205,882	77	247,549
Maluku	176,468	63	84,444	30	20,440	7	281,352
Irian Jaya (Papua)	5,019,284	67	518,187	7	1,974,659	26	7,512,130
Indonesia	10,761,033	62	2,956,170	17	3,659,892	21	17,377,095

Source: Department of Forestry and Plantations, 2000

The Indonesian government began to establish Natural Parks (NP) in 1980 when the government declared three national parks. Since then the numbers of NP have increased substantially, growing to 11 NP in 1982 and 34 NP in 1996/97 with a total area of about 10 million hectares spreading across 23 provinces (Sukandar and Santoso, 1997:60). By the year 2000, the total areas of NP was reduced to 8.74 million hectares, mainly due to recalculation of the areas. Like in all conservation areas, the largest areas are allocated in primary forest (5,368,272 hectares) and the remainder is in secondary forest (1,967,817 hectares) and non-forested areas (1,399,093 hectares) (Department of Forestry and Plantations, 2000). The main objective of national parks is not only for conservation (protected areas of natural resources), but also for education and research.

The NP approach was aimed at conservation of species for biodiversity protection, but this approach failed to protect flora and fauna within the NP areas. The major reason was due to lack of community support. Therefore, there was a growing realization of the need to develop more appropriate approach to protect the ecosystem of the forest. In 1996, the Indonesian government developed an Integrated Conservation and Development Project (ICDP) with the main objective of reducing the pressures on NP resources by increasing the income of local people and the efficiency of resource utilization of selected villages surrounding the NP.

Current Conditions of Forest Conservation Areas

The development of forest conservation areas has still not been fully successful. This can be seen from many conservation areas such as National Parks (Kutai National Park, Bukit Tigapuluh, Bukit Baka-Bukit Raya, Tanjungputing, Gunung Leuser, Kerinci Seblat, and many others) still being over exploited and under serious threat.

Kutai National Park (KNP) was developed during the colonial period in 1936, particularly to protect the Sumatran rhino, the *banteng* or *Bas javanicus* and the *orang utan*. The implementation of KNP has faced many problems. By 1982, the total area of the park declined substantially to 200,000 hectares or about 106,000 hectares less than the original area. The major reason was forest conversion to other activities, particularly for logging, oil exploitation and industrial development activities such as oil, fertilizer and natural gas factories. The decline in KNP areas tended to continue over time since illegal logging and agricultural practices still operated in this region. This condition was even worse because of coal mining constructed at Sangatta and road building between Bontang to Sangatta and Sangkulirang. However, to limit further damage, the owners of the coal mines led by the Kaltim Primacoal (KPC) have agreed to assist PHPA to protect the park (Cleary and Eaton, 1995; MacKinnon and Sumardja, 1996:67-68). Recently, the degradation of KNP has increased substantially, about 5,000 to 7,000 thousand hectares of the park have been converted for development and economic activities, both by legal and illegal practices. The activities are particularly related to the development of Sangatta the capital city of the district (Pikiran Rakyat, November 16, 1999).

Bukit Tigapuluh National Park (BTNP) covers an area of about 127,698 hectares consisting of protected area (70,250 hectares) and limited productive area (57,448 hectares). The BTNP is currently under serious threat from over exploitation of the park by the government and big companies, including logging concession activities, palm oil plantations, transmigration, coal mining and by local communities such as for smallholders and cultivation practices (Republika, October 25, 1999).

In the Kerinci Seblat National Park (KSNP), covering an area of about 1.37 million hectares and one of the largest conservation areas in South East Asia, disagreement over the KSNP areas with local communities has been the major cause of the less successful implementation of this national park. The KSNP that lies along the Barisan Mountain in four Sumatra provinces (West Sumatra, Jambi, Bengkulu and South Sumatra) was eventually declared to be a national park in 1995 since it's nomination in 1982. It was difficult to achieve agreement between the

communities widely spread over 450 villages, particularly those with have lands within the KSNP areas. (Kusumanto, 2000).

Bukit Baka is another National Park in Kalimantan covering an area of about 210,000 hectares from the total 800,000 hectares of the plan, covering from lowlands to Montana forests. This park has been threaten by logging concessions operating in the northern part and local communities who harvest forest products. The disturbance might continue, particularly in the areas surrounding the new trans-Kalimantan highway (MacKinnon and Sumardja, 1996:69).

Major Reasons for Conservation Failures

The forest conservation programs have quantitatively been implemented, but their implementation has not been qualitatively successful. Key factors affecting this failure can be classified into two main points: management of forest conservation by the government and involvement of forest communities in the conservation programs. From a management point of view, the failure of forest conservation is mainly related to four factors: (1) poor design of the conservation programs, (2) poor management of existing threats, (3) inadequate institutional capacity and (4) insufficient information.

1. Poor Design of Conservation Programs

Poor design of conservation programs mainly stems from inadequate understanding of conservation issues. The development of forest conservation policy using a top-down approach with the domination of Jakarta 'elites' from the Ministry of Forestry also plays an important role in the creation of inappropriate programs. The 'elites' often fail to perceive community aspirations and needs, largely due to their lack of attention to information based on empirical evidence. Their understanding of grass roots conditions are low thereby limiting their capability to develop appropriate and comprehensive designs for forest conservation. Most conservation areas have not been surveyed or mapped and the boundaries have not been measured (ADB, 1995). From 79 priority areas, only less than half (31 locations) have clear conservation designs, but not all are fully implemented (World Bank, 1994). Consequently, it produces weak and unclear programs that often result in overlapping and contradictory interests among government sectors and between the government, private companies and local communities within the conservation areas.

The Department of Forestry, under the Directorate General of Forest Protection and Conservation, known as PHPA, has the authority to manage conservation areas, but many examples show overlapping and contradictions between PHPA and other government sectors at the province and local level. In Kutai National Park, conflicts of interests over forest utilization within the conservation areas occur among the Department of Forestry, Mining and Energy, Industry, Public Works and Transportation. Consequently some parts of the park have been converted to logging, oil exploitation, industrial development (oil, fertilizer and natural gas) and road construction activities (Cleary and Eaton, 1995; MacKinnon and Sumardja, 1996; Pikiran Rakyat, November 16, 1999). In Bukit Tigapuluh National Park (BTNP), the problems are also complex, involving many sectors such as the Forestry, Plantation, Mining, Social and Transmigration sectors (Republika, 25 October, 1999).

2. Management of existing threats

So far, the management of existing threats within conservation areas is still limited. Although there is a growing realization about the increased pressures on conservation areas, government efforts in protecting and controlling the destruction of forest conservation areas are still inadequate. The government 'will' to reduce existing threats is still low, with three main reasons: lack of motivation, access and facilities to carry out this task. Many regulations produced to support forest conservation have not been effectively implemented for three main reasons. First, as discussed above, the regulations for forest conservation and forest resource development are overlapping and contradictory. Second, the regulations have not been fully implemented, mainly due to lack of information and lack of enforcement. Third, the existing regulations are still inadequate to support the implementation of forest conservation, particularly at the grass roots level.

Therefore, many examples (such as Kutai National Park in East Kalimantan, Bukit Tigapuluh, Berbak and Kerinci Seblat in Jambi, Gunung Leuser in North Sumatra) show how (1) overlapping and contradictory utilization of forest conservation areas still exist without appropriate problem solving and (2) illegal logging and other practices still operate within the conservation areas, both by private companies and local villagers. By March 2000, about 20,000 hectares of Berbak National Park in Jambi and approximately 12,000 hectares of Kerinci Seblat have been deforested by illegal practices, particularly logging activities (Media Indonesia, March 17, 2000).

3. Law enforcement

The existing laws and regulation are often difficult to enforce. Forest institutional capacity, particularly PHPA in Indonesia is still weak. The number of forest guards (*jagawana*) and other relevant staff (policemen, *babinsa*), their capabilities and facilities for managing conservation areas is still limited, thus it is not easy to control the huge areas of forest conservation throughout Indonesia. The coordination and network of the PHPA and other enforcement authority institutions (police, district attorney) are still inadequate. In addition, motivation of the relevant staff to enforce law and regulations is still low and the staff, in some cases, are also involved in illegal practices, for example by allowing and supporting the operation of illegal loggers and other practices within the forest conservation areas.

4. Lack of information

Lack of information is another important factor affecting the deterioration of forest conservation areas. Many staff, companies and villagers do not know the economic and ecological function and value of forest conservation. They also lack information related to regulations on the conservation forest resource management, including the conservation boundaries, what they can or cannot do, why and what sanctions they face if they do not follow the regulations.

From the forest communities perspective, the main reason affecting conservation programs is their lack of support. There are many factors for their weak participation, including conflicts of

interests over forest conservation areas, low benefits to be gained by the community, lack of information and access.

Conflicts of interests over forest conservation areas often occur in areas where forest communities have manipulated forest resources to gain products for their consumption and production. When the government determines the area to be a conservation location, the communities face problems, mainly related to their cultivation lands within the conservation areas, limiting their access to harvest forest resources and increasing disagreement over conversion rate of lands and cultivated plants.

This condition often leads to local pressures on the implementation of forest conservation areas, causing degradation of the conservation areas. Many examples cited in this paper show pressures from local communities (indigenous people and migrants) on BTNP, KSNP, Berbak, Gunung Leuser and other conservation areas.

III. PARTICIPATORY FOREST CONSERVATION

Learning from previous experiences, there is a crucial need to shift conservation management from a sectoral approach to a more comprehensive management that involves greater participation and collaboration between all instrumental stakeholders, particularly local communities, NGOs, private businesses and relevant government sectors. A participatory management approach seeks to develop acceptable strategies to reduce conflicts of interest and minimize risks to conservation failures. This management approach is urgently needed, particularly in conditions where government efforts in maintaining forest conservation areas are still limited and deterioration of forest resources in these areas has been increasing in more recent times. This approach is particularly crucial during the new autonomy era when the 1999 constitution No.22 will be implemented.

In the participatory approach, policy makers (both sectoral departments and local governments) should share authority and responsibility with other instrumental stakeholders both in horizontal and vertical line structures (Hidayati, 2000). This management is based on a combination of bottom-up and top-down management processes where the central government restricts its role and delegates some of its tasks to regional and local institutions. This means that in the conservation management system there are three main management levels: the national level, provincial and/or district level, and the local level. Each management level complements the other, *with the national management policy as an umbrella as a basic guidance tool.*

A national framework is essential to undertake a participatory conservation system at the national level. The national framework is a 'blue print' that determines the strategic direction of forest conservation to ensure its value to society at the national level. This framework should be a synthesis of comprehensive national policies, strategies, programs and action plans for forest ecosystem conservation and management at the national level. This framework should also link the physical environment with socio-economic, cultural and institutional setting characteristics in a dynamic interactional process.

As a national guideline, the national framework for participatory forest conservation management should set common principles for sustainable implementation of conservation in a broadly based plan, including: (1) the dynamic nature of forest conservation areas, thus it cannot be too rigid, (2) the different socio-economic, political, and cultural contexts of forest conservation areas, (3) employment of a participatory forest conservation management plan to be developed by provincial/district, local institutions and community groups and (4) a balance between a top-down and bottom-up approach to development planning and management, with a complementary interplay between national, provincial/district and local levels.

Who are the Instrumental Stakeholders?

The instrumental stakeholders are all actors who should have a strong influence, directly or indirectly, on forest conservation. They can be classified into two main groups: detrimental stakeholders and those who are concerned with the success of forest conservation. The first group use forest resources to gain profit, both economic and non-economic, without considering the long-term sustainability of forest conservation. In contrast the second group is the group who are concerned, due to their own awareness or duty, with sustainable utilization of forest resources. They include individual or community group and formal and informal institutions at the village, provincial/district and national levels. Both groups have different or even contradictory interests. These differences and contradictory interests require attention and should be anticipated in the implementation of conservation programs.

The Role of Community Participation

The basic principle of participatory forest conservation is sharing authority and responsibility between the government and the community, including NGOs, private businesses, and local institutions. At the local level, much of the authority is in the hands of the local community, although overall conservation policy and coordination are still government responsibility.

Forest community participation plays a major role and becomes the key to the success of conservation management. Many examples show how the government cannot effectively implement its conservation programs without the support of forest communities. The implementation of forest conservation largely relies on the active involvement of forest communities in maintaining and protecting their surrounding conservation areas. Community-based management of forest conservation is more effective (than centralized/sectoral management), particularly since conservation areas are so extensive. It is impossible to control the area with a few forest guards (*jagawana*) and limited facilities, without close contact with forest communities.

Forest communities should strongly be encouraged to participate in maintaining and protecting their surrounding conservation areas. Their involvement will be more effective if it has a strong community structure. For this, the key step is to empower forest communities and local institutions. This empowerment is essential, particularly in conditions where the quality of community resources and local institutions are still limited, while the conservation system requires specific treatment in the implementation.

In the implementation, forest communities need assistance from community development organizations such as local NGOs and other instrumental stakeholders. This is particularly important to increase their involvement in the participatory conservation programs. The assistance should include: (1) increasing forest community well-being through alternative income generation that is economically valuable and ecologically sound, (2) providing access for forest communities, particularly relevant information, economic opportunities, surveillance, law enforcement and protection and access to supporting facilities and services, (3) increasing public awareness, (4) increasing the community's involvement in maintaining and protecting forest conservation areas and (5) increasing the community's capability to maintain and protect forest resources, particularly conservation areas.

The Need for Increasing Local Initiatives

In the participatory approach, local instrumental stakeholders should be involved in the whole process of conservation management, including the planning, implementation, monitoring and evaluation of the management.

Forest conservation planning should consider local specific needs and aspirations with the main purpose of developing effective and appropriate management structures at the local level. This can be obtained, for example, by developing forest conservation zones with clear boundaries between zones. This planning should be further discussed with the forest community, particularly when deciding the location, size of each zone and activities within the conservation area.

Therefore, the forest community should be included in the development of local conservation planning through intensive discussions and clear negotiations based on the participatory approach. In many areas, the forest communities have developed forest utilization zones based on their traditional system, including productive and protected forest. Forest communities have lived and are dependent on forest resources and usually manage the forests in a sustainable manner. They have developed strategies that enable them to utilize and modify forest resources to provide a sustainable livelihood. These become customary rules for their right to control and manage the forests. Unlike previous times when the government often ignored these traditional rules, the customary rules (including also land tenure system) should be considered and accommodated in the participatory conservation management.

Participatory conservation management should also encourage the traditional agroecosystem that plays an important role in protecting species and maintaining forest biodiversity. Forest communities grow fruit trees, food crops, medicine plants and other types of timbers in their cultivation areas. The numbers of plant varieties are numerous, for example, 450 fruit species, 250 vegetables, 100 root crops, 100 beans, more than 40 bananas, 300 mangoes, 152 wood/timber, 70 spices, 150 rattan, 1000 flowers and 940 medicine plants (KMNLH, 1997:564).

Income generation, particularly in order to increase the well being of the forest communities, is essential in this participatory conservation management. Experience shows how forest communities are also involved in the degradation of forest conservation areas (MacKinnon and

Sumardja, 1991; 1994). Their activities are usually carried out for several reasons, with economic benefit as the most important. The strategy used to limit the problem is to provide alternative activities that increase forest villagers' well being. The development of income generation activities should be discussed in local initiatives since previous experience shows how income generation programs such as IDT often fail to support villagers due to inappropriate activities. The activities should also take into account the potentials and limitations of natural and human resources, and supporting infrastructure and services.

Management of existing threats is crucial, particularly in response to the substantial increase of threats to the conservation areas and limited efforts of problem solving. This is urgently needed, particularly in order to limit further damage. Although the government, through the central government, has produced regulations related to forest management, these have not been effectively implemented. Many examples in this paper show how threats are still widespread throughout conservation areas (Cleary and Eaton, 1995; MacKinnon and Sumardja, 1996; KMNH, 1997), indicating ineffective surveillance and enforcement. Although *jagawana* have been placed in conservation areas, their number, skills and facilities are still very limited.

Therefore, forest communities and other instrumental stakeholders should be involved in reducing the existing threats, especially through local initiatives. Two key strategies could be carried out: increased community awareness and surveillance and enforcement. Increasing community awareness about the importance of forest conservation and socialization of regulations related to forest resources must be implemented for ordinary forest villagers, illegal forest businessmen and formal and informal leaders at the local level. The approach to community awareness should be suited to local conditions and types of stakeholders.

Cooperative enforcement is an important element that should be strongly considered in participatory conservation management, particularly in dealing with diversity of problems and a large expanse of conservation areas. The *jagawana* and other relevant officials should practice and enforce regulations, while forest communities and other instrumental stakeholders should support the authority officials by, for example, reporting illegal practices. Staff who have private ties with illegal forest business should receive sanctions. Complete prosecution of offenders is important because experience shows that offenders are often freed with no punishment after being caught by the authorities. Networks and cooperation among the communities and other instrumental stakeholders is extremely important.

The Role of NGOs

Non Government Organizations (NGOs) play an important role in the development of forest communities, particularly in forest conservation management. Although in some conservation areas NGOs have assisted the communities, in general their roles have not been significant. Major factors constrain their roles, particularly their limited access and bargaining power and their limited resources, including human resources, capacity and budget (Hidayati, 2000).

In forest conservation programs, NGOs should function as forest community development and government partners. NGOs should provide assistance, access and support in order to empower forest communities. In some areas, NGOs have increased community awareness on the

importance of sustainable use of forest resources, assisted the communities in selecting more appropriate ecologically sound and economically valuable activities, increasing the communities well being. NGO assistance in empowering forest communities has been widespread throughout Indonesia such as participatory mapping by SFMP (Sustainability Forest Management System) and PLASMA in East Kalimantan, WWF, KOPPESSA NTT in Wanggameti NP, DFID in Jambi, LP3ES in Mataram and many others.

In more recent times, there has been a growing realization of the important roles of NGOs in community development within the government. This has led to efforts to undertake close relations, indicated by the development of communication forums and involvement of the NGOs in forest management programs. Similarly, NGOs have also developed efforts and established networks to increase their influence within the government. Therefore, NGOs are potential facilitators and mediators between forest communities and the government or other instrumental stakeholders. NGOs could bridge differences and conflicts of interests among these groups and search for solutions through dialog and negotiations. Many examples show NGO involvement in reducing conflicts, including in Gunung Betung forest protection area, Rempek protected forest in Lombok, Alam Riung recreation park in Flores Island, and Laiwangi-Wanggabetei national parks on Sumba Island.

Building and Strengthening Institutional Capacity

Two main issues raised in this section are adequate institutional capacity and strong institutional cooperation. Lack of skill, a shortage of manpower and limited technical and managerial capabilities are the current picture of institutional capacity of forest management. This condition hinders the implementation of forest conservation. Like forest communities, local NGOs and other institutions also need empowerment such as through education and training. This is particularly important to a balanced distribution of skilled manpower and technical facilities throughout Indonesia, mainly due to both personnel and facilities, so far, still concentrating on particular conservation areas.

The second issue is institutional linkage, collaboration and coordination as a part of overall participatory management. Collaboration and coordination play an important role among the agencies and communities involved in the management, both in horizontal and vertical line structures. The improvement and enhancement of collaboration and coordination among sectors, NGOs, communities, private businesses and other stakeholders is essential in participatory management. A strong political will and clear policy guidance is needed to stimulate intersectoral and other institutional linkages and cooperation. Communication and harmonization should be promoted among them through an interactive process within appropriate coordinating mechanisms.

Collaboration in a wider environment, regional and international, is also needed in order to determine strategies and methodologies within the framework of sustainable forest resources. The collaboration is considered an effective strategy to search for appropriate solutions, such as through cooperative activities, research and bilateral and multilateral cooperation.

IV. CONCLUSION

This paper discusses forest conservation in Indonesia, its importance, current conditions and need for management change. The analysis began with the rationale behind the importance of forest conservation management, with three main issues: the substantial decline in biodiversity, the deterioration of the forest ecosystem, mainly due to high deforestation, forest degradation and forest fires, and increased population growth and their pressures on forest resources. Growing concern about sustainable forest development has led the government to include conservation as an important strategy. This can be seen from the government commitment to conserve forests through the development of conservation policies and programs through Law No.5, 1990, Law No.24, 1967, Law No.23, 1997 and regulations related to the application of the programs. The implementation of the programs, however, has not been completely successful, therefore the threat to conservation areas have been increasing over time. Many factors affect those program failures, particularly related to ineffective conservation management and lack of forest community support. Government efforts to overcome these problems are still limited and therefore the existing threats are poorly resolved.

Experience suggests the need to develop forest conservation management, ecologically and economically sustainable forest resources and to overcome the degradation of conservation areas. There is a crucial need to change conservation management to become a more comprehensive system involving more participation and collaboration of all instrumental stakeholders, particularly local communities, NGOs, private businesses and relevant government sectors. A participatory management approach seeks to develop acceptable strategies to reduce conflicts of interest and to minimize risks to conservation failures, particularly through the sharing of power, access and responsibilities among instrumental stakeholders. At the local level, although overall conservation programs and coordination are still the government's responsibility, forest communities should play an important role and become the key to the success of this management. The forest community involvement is crucial for the whole conservation process, including the planning, implementation, monitoring and evaluation of the program. For this, the key step is to strengthen forest community and local institutional capacity with assistance from NGOs, PHPA and other instrumental stakeholders.

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POLICY RECOMMENDATION FOR PARTICIPATORY FOREST MANAGEMENT¹⁷

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1. Introduction

1-1. Framework to elaborate policy recommendations

The IGES team working on the sub-theme of Participatory Forest Management conducted a comprehensive process that led to the preparation of policy recommendations. First of all, in the target countries (Indonesia, Thailand, The Philippines, Vietnam, and Laos) we identified the “**external constraints**” on local participation in forest management by means of clarifying the gaps and contradictions between national land/forest policies and “**customary land rights and forest/land management by the local people.**” Second, we identified the “**internal constraints**” immanent in the local communities, in terms of economic, social, and cultural aspects. Third, “**possible main actors**” were clarified by means of evaluating the local realities and national forest policies. As well, we identified the lessons learned from public participation in developed countries.

We elaborated these policy recommendations by considering how to overcome the internal and external constraints, and suggested the main actors to carry out them.

1-2. General findings

1-2-1. Characteristics of Participatory Forest Management (PFM) Systems in Southeast Asian Countries

PFM in Social forestry

¹⁷ This paper is a draft report intended only for the IGES-LIPI Workshop on Forest Conservation Strategy on 28-29 June. Please refrain from citing it for any purpose.

In the late 1970s, professional foresters in the tropics noticed that they could not manage the forest sustainably under the principles of conventional and industrial forestry, where the local people have been considered to be obstacles or constraints on forest management. “Social forestry” was recognized as an important norm or principle to produce successful sustainable forest management, even though industrial forestry has been dominant in practice.

Originally, social forestry and community forestry were defined similarly as any situation that intimately involves local people in a forestry activity for rural development. These days, however, it seems that the term social forestry involves a wider range of comprehensive participatory activities, and the term “community forestry” implies collective activities rather than individual activities such as farm forestry.

In general, social forestry consists of two major components. One of them is participatory forest management (PFM) in the forestry sector. The other includes: 1) development of infrastructure such as roads, meeting places, schools, and clinics; 2) agricultural extension; and 3) generation of income sources for rural development, etc. If the latter activities prevail without the component of PFM, however, the activities are not necessarily called “social forestry” but the more general term “rural development.” It is evident that the core of social forestry is PFM.

The purpose of this section is to clarify the characteristics of the PFM systems in Southeast Asian countries under certain common criteria.

Activities of forest management

We placed various activities of forest management into four categories: 1) “plantation” or man-made forest management consisting of reforestation and afforestation; 2) “harvest” or natural forest management for timber production; 3) “conservation” including the collection of fuelwood and non-timber forest products (NTFP) and small-scale recreation; and 4) “protection” or preservation of the forest from any kind of utilization. We can assume that the management of protection areas consists of “protection” and “conservation.”

Analytical framework

In order to compare the policies, two concepts are applied as an analytical framework or valuation basis: “legal status of land” and “main actors of forest management.”

Legal status of land - Generally, possible legal possessors of land and forest are individuals, organizations, villages, outsiders, and governments such as districts, provinces, and the state. The PFM systems can be adopted regardless of the legal status of the land. Provisionally, we recognize land with differing legal status to be “individual land,” “organizational land,” “village land” (owned by both of formal village or indigenous people's community), “outsiders' land,” and “national land” (owned by the local and national government).

Main actors of forest management - In order to evaluate the character of participation, it is useful to consider who are the main actors—those who have management responsibility and take initiative. In these terms, the main actors are classified as follows: 1) individuals or peasants living in the village and their households (their forest management can be called “peasant forestry” or “farm forestry”); 2) functional groups such as forest users’ groups, cooperatives, schools, temples, women’s unions and elder's groups (“functional group forestry”); 3) fundamental groups such as relative's groups, natural villages, and indigenous cultural communities (“fundamental group forestry”); 4) an executive body of the formal village (“village forestry” that includes centralized community forestry); 5) outsiders and corporations (“private forestry”); and 6) local and national governments (“public forestry”).

Functional group forestry, fundamental group forestry, and village forestry are included in the concept of “community forestry,” since they are based on collective management. Public forestry in cooperation with the local people is called “joint forest management” (JFM) since it is based on co-management.

Results

The characteristics of the PFM systems in each country are listed below.

- In most of the PFM systems, the land still belongs to the state and the right to use the land is granted to the local people.
- In terms of transfer of responsibilities for forest management from government agencies to the local people, the system in the Philippines seems to be more advanced because the Indigenous Cultural Communities (ICCs) and Indigenous Peoples (IPs) are granted land ownership and the local people are involved even in the management of protected areas.
- Some of the systems in Laos are also remarkable because de facto land ownership is granted to individuals, organizations, and villages.
- Protected areas are mainly controlled by the government.
- Harvesting and conservation activities are mainly managed collectively.
- It is ascertained that most of the collective management by the local people is not implemented by fundamental groups but by functional groups, except for the management by ICCs and IPs in the Philippines. Also, village forestry activities in Laos may be managed by fundamental groups.
- It is interesting that several programs assume that collective management can be suitable for planting activities consisting of reforestation and afforestation, even though individual management seems to be suitable for planting activities rather than collective management in terms of economic incentives.

Diversification of the actors seems to be advantageous for forest management in order to achieve ecological sustainability and social justice. The government of each country should devise and improve tenure arrangements, where various types of actors

can be involved in all the processes of forest management such as planning, decision-making, implementation, and profiting.

1-2-2. Lessons learned from public participation in developed countries

Study of the experiences with the policies in the United States of America, New Zealand, and Japan provided some lessons as follows.

- PFM is better than an exclusive and centralized management system if the aim is success in sustainable forest management, because this approach reflects local conditions with less cost.
- Public participation in forest management is important for avoiding disputes and reaching agreement among various stakeholders.
- Complex planning processes make it difficult for people to understand the process and prevent effective and timely participation in the process itself.
- Mutual communication is essential and serious discussion should be encouraged among stakeholders and specialists in order to make better decisions and plans.
- Informal participation supplements the formal participation process, helps to promote mutual understanding, and guarantees the people substantial opportunities to share in decision-making.
- Centralized planning systems are inconsistent with participation from the local people.
- Participation should be secured in the whole process of forest management, such as appraisal, planning, implementation, monitoring, evaluation, and revising plans.

1-3. Principles to elaborate the policy recommendations

We elaborated the policy recommendations to facilitate PFM in each country based on the following principles:

Principle 1: People's participation is very important to have success in sustainable forest management with lower transaction costs, as well to avoid social conflicts over forest utilization, which themselves increase management costs.

Supplementary explanation

Most stakeholders recognize that the forest should be managed in such a way that economic benefits, social justice, and ecological sustainability can be achieved without excluding other stakeholders. The main problem to overcome is the distribution of economic benefits among stakeholders such as local people, cooperatives, timber companies, and governments.

Principle 2: In the tropics, the concept of “local participation” is more useful today than the concept of “public participation.”

Supplementary explanation

People's participation consists of “public participation” that refers to the participation of the larger society, including city dwellers and citizens. “Local participation” refers to the participation a smaller subset of society or the local community.

Principle 3: Our concern is to show what is an ideal forest management *system* in terms of local participation, rather than to indicate a concrete *procedure*.

Supplementary explanation

This strategy should be examined from the perspective of feasibility under present social and political conditions.

Principle 4: The “Participatory top-down approach” should not be included in the strategy for PFM.

Supplementary explanation

The term “participation” in this context does not reveal the actual level of participation because the meaning of the term varies widely. The spectrum of participation could be put into three categories (Inoue, 2000) as follows:

- A) the “participatory top-down approach” is a blueprint approach where residents are considered to be wage laborers, volunteers, fund providers, etc.
- B) the “professionally-guided participatory approach” is a relatively flexible blueprint approach where drafts of the plan made by professional planners are examined by the residents and citizens and modified through discussion, workshops, etc.
- C) the “endogenous bottom up approach” is a learning process approach where professionals just act as facilitators.

Formal institutional arrangements can be part of the endogenous bottom up approach when a customary law is developed in the local community, because the residents can manage their resources well by themselves. On the other hand, application of the professional-guided participatory approach seems to be reasonable when the customary law has not been developed or has already lapsed.

In any case the participatory top down approach should be avoided. This approach is usually considered by local people to be nominal and fake.

Principle 5: Both collective forest management and individual-based forest management are considered to be included in PFM for the time being.

Supplementary explanation

It is true that collective forest management by fundamental groups, functional groups, and the executive body of the formal village is the core of PFM. It can safely be said that individual- or household-based forest management on national land, called “peasant forestry” here, is also recognized as a form of PFM. On the other hand, peasant forestry on private land may not be regarded as a form of PFM but as “private forestry.” In order to promote PFM, however, it seems better that we provisionally consider it to be a form of PFM for the time being.

Principle 6: The policy recommendations should be based on a recognition—which can be common between developed and developing countries—of the importance and validity of participation.

Supplementary explanation

Key issues in community involvement (Salim and Ullsten, 1999) are: defining the community; willingness and ability to have a dialogue; presenting scientific information in a form which can be easily understood; reconciling local, national and perhaps global interests; and political will to respect and enforce the conclusions. We believe that these ideas are appropriate for civil societies worldwide, including developing countries.

Principle 7: Diversity of land ownership and main actors is an important aspect of PFM in order for the local people to make good choices in accordance with the local conditions.

Supplementary explanation

We would like to develop a strategy for facilitating PFM on national land, village land, organizational land, and individual land; and for facilitating PFM by individuals, functional groups, fundamental groups, and executive bodies of the villages. We believe it is best for the policy of each country to cover every combination of the land ownership with the main actors.

Principle 8: The planting of trees should be practiced mainly by individuals; conservation of the forests should be done collectively by village communities and fundamental groups; and the government should bear the responsibility for the protection, sometimes entrusting the local people with the daily activities.

Supplementary explanation

As mentioned in “Section 1-2. General findings,” forest management consists of four activities: “plantation,” “harvest,” “conservation” and “protection.” In terms of an economic incentive, individuals must prefer plantation. In terms of opportunity cost for patrolling the forest, collective management may have the advantage in conservation.

Principle 9: The policy recommendations should be elaborated by making use of the results of our own research. It is not necessary for them to be so comprehensive as to cover all the aspects of PFM.

Supplementary explanation

Even though some of our strategies have already been pointed out, a local-specific strategy based on field studies must be in itself valuable.

Principle 10: Our policy recommendations should be elaborated from the viewpoint of the local people.

Supplementary explanation

Priorities for forest conservation differ when viewed from local, national, and global perspectives. All are legitimate and should be taken into account (WRI, IUCN and UNEP, 1992). Even though it is true that stakeholders have a vested interest in conserving their forest, we consider that facilitating PFM cannot help changing the vested interest more or less.

Principle 11: The policy recommendations are to consist of several sets of objectives and necessary actions aimed at local people, the governments, non-governmental organizations (NGOs), and international organizations.

Supplementary explanation

One function of the strategy is linking the local reality to the national policy. In each action proposed here, the intended actors for each action are specified clearly.

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2. Indonesia

2-1. Findings

Policy evaluation using two concepts

Land ownership in Indonesia is categorized as national land or private land. According to the new Forestry Law promulgated in September 1999, as well as the Basic Forestry Law (1967), all the forests on national land, except forests on private land registered in accordance with the Basic Agrarian Law (1960), belong to the state even though the forests have been managed by local communities collectively.

In Indonesia “social forestry” is an umbrella term for governmental PFM programs. However, only the Community Forest Program and Individual Forest Program, out of the governmental social forestry programs, can be regarded as PFM systems as shown below. The NGO-supported “community-based forest management system (SHK)” can be integrated with the management of Customary Forests (Hutan Adat) prescribed in the new Forestry Law.

“Tumpang Sari” in Java: For more than 100 years, the “Tumpang Sari” system or intercropping agroforestry has operated where peasants plant agricultural products between rows of planted trees such as teak. The peasants, however, do not have any rights to the trees and cannot be the main actors of forest management. The same characteristics can be seen in the improved Tumpang Sari system and Perhutanan Sosial program conducted by Perum Perhutai.

The Forest Village Social Development (PMDH) Program in forestry concession areas: Logging companies are put under obligations to: construct roads, elementary schools, clinics, churches and mosques; to help the people to introduce agroforestry systems; to buy their agricultural produce; and to plant fast-growing species in degraded land and alang-alang grassland. Under the program, however, the local people cannot be involved in forest management and are rather excluded from the management.

Tumpang Sari and Transmigration with industrial tree plantations (HTI-Trans) in industrial tree plantation areas: Even though the Tumpang Sari systems are introduced for the people, these are no more than temporary measures. Under the HTI-Trans program, the people are just considered to be low-cost laborers. The local people cannot be involved in forest management under either program.

Community Forest (Hutan Kemasyarakatan) Program: The program is practiced by local people, specifically cooperatives of people living within and near the forests, who obtain a community forestry concession. The concession, lasting 35 years, is granted in production forests, protection forests, and conservation areas such as national parks, within the national forests that are free of other rights such as natural forestry concessions (HPHA), man-made forestry concessions (HTHT), mixed plantation concessions (HPH Tanaman Campuran prescribed in August 1999), and tree felling rights (IPK) to develop oil palm plantation and transmigration areas.

All the activities of producing wood and non-wood forest products, including planting, tending, protecting, harvesting, and marketing, for the purpose of self consumption and sale, are regarded as community forestry activities. Therefore, the Community Forest Program can be regarded as “functional group forestry” on “national land.”

Individual Forest (Hutan Rakyat) Program: This program is controlled by the provincial government and practiced on private land. The people hold a certification

of land ownership outside the national forest. The main activity of the Individual Forest Program is re-greening or afforestation and *Paraserianthes falcataria* is planted by many people. The program can be regarded as “peasant forestry” on “individual land.”

Community-based Forest Management System [Sistem Hutan Kerakyatan (SHK)]: The NGO-supported SHK is defined as a customary forest management system by the local people, especially the indigenous peoples. The people depending on the forests have initiative, form an organization, and develop customary regulations to manage the forests. The SHK can be regarded as “fundamental group forestry” on “national land.”

Management of Customary Forest (Hutan Adat): In the new Forestry Law, the important points in terms of local participation are in Article 1 where the law defines the “Customary Forest” (Hutan Adat) inside the state forests, and Article 67 which prescribes “the community which practices customary law (Masyarakat Hukum Adat).” Under this law, the community shall have the rights to: 1) collect forest products for daily needs; 2) undertake forest management in accordance with prevailing customary laws; and 3) be empowered to improve its welfare. Accordingly, we conclude that the management of Customary Forests can be regarded as “fundamental group forestry” on “national land.”

Recent policy reform

A great deal of effort has been put into the reformation of forest policy. However, the following steps and clarifications would help move PFM further toward full implementation:

- Although it is beneficial that the government issued a decree of Director General of Reforestation and Land Rehabilitation (041/Kpts/V/1998) where socio-economic and cultural conditions are included as the data to be collected in making field technical plans for land rehabilitation and soil conservation, such a policy should be applied to the whole process of demarcating forests.
- The Local Government Law (UU No.22, 1999) promulgated in May 1999 and the governmental regulation for the authority of the government and province (PP No.25, 2000) in May 2000, asserted autonomy of villages based on the customary law and devolution of sovereignty to the province (Propinsi) and district (Kotamadya/ Kabupaten) government. It should be noted that decentralization is not equivalent to the promotion of local participation.
- The rights of the people to Customary Forest (Hutan Adat) can be recognized under the condition that the customary laws do not contradict the national law and local regulations. It is clear that the possibility of local participation depends on how the customary laws will be evaluated, and who will do the evaluation.
- In a draft of the “National Development Program (PROPENAS) 2001-2005” published on 20 March 2000, the “Program to enhance the role of the Public in the management of natural resources and environment” is recommended as one of the important policy strategies. Local participation should be ensured in the process of implementation.

Customary land rights and forest/land management by local people

Field studies in East Kalimantan, characterized by rich forests, in Southeast Maluku, characterized by the strict customary law, and in Central Java, characterized by high population density and prevailing private land, identified the following facts:

- Forest/land utilization is controlled by customary law called “hukum adat” throughout Kalimantan, even though the rules vary from community to community.
- In East Kalimantan, the Dayaks or indigenous people recognize private property rights and communal property rights.
- In East Kalimantan, under the traditional land category in Dayak villages, reserved forest (*tana mawa*), utilization forest (*tana belahan*), sacred land (*tana to'*), graveyard (*tana patai*) and other primary forest (*tana' kaso*) are considered communal property, while swiddens (*tana luma'*) and agroforest (*tana lepu'un*) planted by individuals are considered private property.
- In East Kalimantan, the customary rights of the village to primary forest and natural resources are rather loose; customary rights of individuals and households are rather tight.
- In Southeast Maluku, customary land (*petuanan*) is divided into three categories: private land, lineage (*marga*) land, and village land.
- In Southeast Maluku, people are prohibited to enter certain lands during a certain period to protect certain resources, such as sago palm, under the local resource management system (*sasi, yutut*).
- In Central Java, the land is categorized into homestead planted with various perennial and annual crops (*pekarangan*), mixed gardens mainly planted with perennial crops (*kebun*), dry field mainly planted with annual crops (*tegalan*), paddy field (*sawah*), sloping dry field (*pereng*), swidden (*ladang*), and state land (*alas*) including grassland (*padang rumput*) and forest (*hutan*).
- In Central Java, the land consists of private land, national land, and village land (*tanah bengkok*) that is mostly used as paddy fields. Communal forest does not exist.
- In Central Java, a phenomenon of “gardenization” can be seen. It is an evolution of land use in a way of expanding tree gardens planted with various perennial crops.
- People have been using the forests for swidden agriculture, sources of diet (hunting, fishing, collecting nuts, fruits, and wild vegetables), and materials for construction and handicrafts (iron wood, rattan, *Shorea spp.*, etc.).
- The poor people are more dependent on a variety of forest products and hence are more vulnerable to sudden changes in the provision of such products and their price.

External constraints on local participation

- The rights of the local people to utilize and manage the forests have been neglected by the government.
- Logging or timber companies, including the national forestry corporation (Perum Perhutani), usually apply top-down decision-making, and local needs are often neglected.

- The government classifies forest land into five functional categories, but the actual state of land utilization and socio-economic aspects are totally neglected in this classification, because the main criteria for the classification used are the degree of slope, fragility to soil erosion, and strength of rainfall.
- In Central Java the recent economic crisis triggered many young migrant workers to return to their home village because they had lost their jobs in Jakarta. Since then, some may started illegal logging and illegal cultivation.
- Especially in Java, organized illegal logging can be a great obstacle to sustainable forest management by local people as well as by the national forest corporation.

Internal constraints on local participation

- In a village where a customary forest management system does not exist in East Kalimantan, loose norms cannot function as a sound basis for enforcing observance, and as a protective wall against external pressures.
- In such a village, weak collaboration makes it difficult to develop any form of village-wide forestry program, and high competition for forest products, particularly timber, has caused the people to be more careless about sustainability of the forests.
- In two villages of East Kalimantan, village leadership based on the law of village government does not generate local participation and tends to disintegrate the communities by serving the governmental interests .
- In Southeast Maluku, the younger generation tends to cut trees in the customary forests to get money for commodities and frivolities.
- In Central Java, illegal logging can be seen in the national forests (managed by national forestry corporation, Perum Perhutani) probably conducted by local people who own little or no farmland and cannot work outside the village. They may log to obtain firewood to be used to produce brown sugar from the coconut palm.

Main actors for participatory forest management

- In a village in East Kalimantan where a customary forest management system does not exist, “households” play an important role in swidden agriculture, rubber gardening, rattan forestry, and candle nut forestry. “Individuals” play a role in logging, hunting, fishing, and gathering. Collective management of the forests seems to be difficult because customary rules concerning village property are too loose and the village leadership does not support the collective work.
- In a village where a customary forest management system exists in East Kalimantan, the “village community” can manage the communal forests as it has in the past.
- In Southeast Maluku, the “village community” headed by elder men plays an important role for customary forest management; “individuals” and “households” play important roles for agriculture and hunting.
- In Central Java, the “household” plays an important role for forest management in the Tumpang Sari plantation area on national land as well as in the tree gardens on private land.

2-2. Policy recommendations

Objective 1: Secure the participation of local people.

Action 1-1: The government and NGOs should work together to establish the mechanism of a “green safety net” to secure the minimum level of forest conservation.

-- This action will provide the foundation for PFM in terms of forest conservation, because "green safety net" is minimum regulation by the national government to secure sustainable forest management and forest conservation.

Action 1-2: The provincial government should take the actual state of land use and socio-economic conditions into consideration for forest land classification.

-- This action will enable the government to identify the forest areas which should be managed by the local people. At present it seems to be difficult for the government to ascertain the actual state of land use under certain socio-economic contexts. In the process of land classification, the government should actively involve the local people and NGOs by way of participatory rural appraisals (PRA), etc. Although the importance of this action has been pointed out for more than a decade, ongoing efforts are still necessary.

Action 1-3: The national government should define clearly in the form of a decree or law the involvement of local people and NGOs in forest management.

-- This action will ensure the process of fair evaluation of local customary laws and existing local forest management systems. The importance of this action has been pointed out before, and the need to take action continues to exist.

Action 1-4: The national government should revise the Forest Village Social Development (PMDH) program as a basis for facilitating local participation.

-- This action will improve the livelihood of the local people, which will encourage them to participate in forest management.

Action 1-5: The national government should establish rules to obligate local governments to secure the local participation and to report publicly on the condition of PFM in cooperation with NGOs.

-- This action will prevent the local government from top-down decision-making and centralized forest management.

... obligate local governments to report publicly on the role of NGOs in PFM.

Action 1-6: NGOs should cooperate with the provincial governments to encourage them to use a bottom-up decision-making process in the management of national parks and the demarcation of forest areas. NGOs should cooperate with the district (Kabupaten) government to be involved in the activities of reforestation and re-greening, the management of protection forests and private forests, the control of hunting and collecting of non-wood forest products, and extension activities.

-- This action will accelerate the people's participation in accordance with the devolution of authority for forest management to each level of local government.

Objective 2: Operationalize the management of the Customary Forest (Hutan Adat) as prescribed in the new Forestry Law.

Action 2-1: The government should evaluate the customary law fairly in terms of collective forest management in cooperation with various stakeholders such as local communities, local governments, NGOs, and academics.

-- This action will guarantee the fair judgment of the customary law. Under the new Forestry Law, the rights of the local community can be recognized under the condition that the customary laws do not contradict the national laws and local regulations.

Action 2-2: NGOs and the governments should persuade the local people to modify their customary forest utilization where the need exists to develop appropriate technology for sustainable forest management.

-- This action will help the local people avoid being excluded from official approval of customary forests.

Action 2-3: The government should issue a decree to designate the areas where the local people practice customary forest management or SHK as a traditional-use zones or socio-cultural zones of the conservation areas.

-- This action will facilitate customary forest management in and around the conservation areas and will secure sustainable forest management. These results can be expected because most of the customary forest must be covered with relatively rich forests that have a high possibility to be designated as conservation areas.

Action 2-4: As a next step, the government should consider the release of the Customary Forest (Hutan Adat) from state-owned forest under certain regulations.

-- This action will solve the latent conflicts and accelerate the decentralization and devolution of forest management. It will provide the basis for the complete integration of a community-based forest management system (SHK) with the management of Customary Forests (Hutan Adat).

Objective 3: Facilitate collective forest management by revising the Community Forest (Hutan Kemasyarakatan) Program.

Action 3-1: The government should give priority to community forestry concessions (HPHKM) over other rights such as natural forestry concessions (HPHA), man-made forestry concessions (HTHT), mixed plantation concessions (HPH Tanaman Campuran prescribed in August 1999), and tree-felling rights (IPK) to develop oil palm plantation and transmigration areas.

-- This action will allow local people obtain concessions on good quality forests; otherwise they will be allocated only degraded forests.

Action 3-2: The government should regard the village community, as well as local cooperatives, as managers of the community forests.

-- This action will lower the threshold for the local people to acquire the HPHKM.

Action 3-3: The local people should organize themselves, discuss the rules for forest utilization, and conclude agreements for forest management in cooperation with external agencies such as NGOs and the local government.

-- This action may reform the local leadership and provide all the villagers the incentives to participate in the process, even in areas where community-based forest management has not yet existed. Although the importance of this action has already been pointed out, the former political regime made implementation impossible. Now is an opportune time to take action.

Objective 4: Facilitate individual- or household-based forest management.

Action 4-1: The government shares the profits from planted trees between the local people who participate in the Tumpang Sari (or the Perhutanan Sosial program), and the national forestry corporation (Perum Perhutani) in Java.

-- This action will provide the participants economic incentives to manage the forest until trees (such as teak and pine) are harvested .

Action 4-2: The State Forest Corporation (Perum Perhutani) should plant tree species suitable for use as fuelwood by the local people on sites of an improved Tumpang Sari or Perhutanan Sosial program in Java.

-- This action may reduce illegal logging of fuelwood for making brown sugar of Aren palm, and encourage the people to take part in the management of fuelwood plantations on national land.

Action 4-3: The government and NGOs should help the local people to patrol the forest areas they manage.

-- This action will prevent illegal logging by outsiders.

Action 4-4: The government should introduce an individual- or household-based sharecropping forestry program in the degraded production forest areas on national land in outer Indonesia.

-- This action will motivate the local people to plant tree species even on national land, similar to the individual forest (Hutan Rakyat) program on private land in Java. Individuals or households could sub-contract with the executive bodies responsible for community forest management under the Community Forest (Hutan Kemasyarakatan) Program.

Action 4-5: The State Forest Corporation (Perum Perhutani) should devolve to local people the rights of forest management on some national land.

-- This action will promote the process of “gardenization” practiced by the local people.

Action 4-6: NGOs should help the local people to obtain land ownership for tree plantations.

-- This action will provide the basis for introducing Individual Forest Programs (Hutan Rakyat) on private land.

3. The Philippines

3-1. Findings

Policy evaluation using two concepts

Land categories in the Philippines by land ownership are: “private land” owned by individuals and organizations; “public land (domain)” owned by the state; “ancestral land” of which Indigenous Cultural Communities (ICCs) or Indigenous Peoples (IPs) have the rights of de facto land ownership but the right of disposal is limited to the members of ICCs and IPs; and “ancestral domain” of which ICCs or IPs have the rights of utilization but do not have the right of disposal. Public land consists of "non-forest lands" (alienable or disposable lands or A&D land), and "forest lands" which include "permanent forests (forest reserves)" and "public forest (unclassified public land)".

Forest policy in the Philippines consists of three components: Community-Based Forest Management (CBFM) for the purpose of conservation and production; industrial forestry for the purpose of timber production; and National Integrated Protected Areas Systems (NIPAS) for the purpose of conservation. Participatory forest management can be seen in the CBFM, the Socialized Industrial Forest Management Program in industrial forestry, and management of the protected areas in NIPAS.

Community-Based Forest Management (CBFM): Under the CBFM, two types of forest management are employed. Under the first type, ICCs or IPs acquire a Certificate of Ancestral Domain Claim (CADC) or Certificate of Ancestral Land Claim (CALC) and make the Ancestral Domain Management Plan (ADMP) in order to gain control and manage the forest. ICCs/IPs have the right to claim ownership of land, to develop land and natural resources, to stay in the territory, and to govern and empower themselves. This type is basically regarded as “fundamental group forestry” on ancestral land and domain or “village land.”

Under the second type of forest management, the residents living in the upland and coastal lands in a public domain that includes permanent forest make up a People's Organization (PO), conclude a CBFM Agreement (CBFMA) or 25-year production-sharing agreement with the government, and produce a Comprehensive Resource Management Framework (CRMF). Individuals can manage the forest within the area of CBFMA after acquiring the Individual Property Right (IPR) from the People's Organization or Certificates of Stewardship Contract (CSC) from the Department of Environment and Natural Resources (DENR). This management type is regarded as

“functional group forestry” and sometimes “peasant forestry” on public domain or “national land.”

Socialized Industrial Forest Management Program: This program allows individuals or families and associations or cooperatives to participate in forest plantation development in forest areas ranging in size from 1 to 10 ha and from 10 to 500 ha by providing them security of tenure through the issuance of a Socialized Industrial Forest Management Agreement (SIFMA). The program is regarded as “peasant forestry” and “functional group forestry” on forest lands or “national land” for the purpose of wood production.

Management of the protected areas in NIPAS: According to the National Integrated Protected Areas System Act (Act No.7586, 1992), the DENR shall have no power to evict Indigenous Cultural Communities (ICC) from their present occupancy nor resettle them to another area without their consent. ICCs can manage their surroundings within the restrictions as a result of an agreement between the local people and the government. The management of protected areas by ICCs can be regarded as “fundamental group forestry” on ancestral land and domain or “village land.”

In the same way, the “tenured migrant” who has actually and continuously occupied an area for five years prior to its designation as part of a protected area is eligible to become a steward of a portion of the protected area. Their activities, however, are governed by the guidelines prescribed in the management plan as well as the prohibitions set out in the Act. In this case, the management by tenured migrants can be regarded as “public forestry” in cooperation with local people on the public domain or “national land.”

Customary land rights and forest/land management by local people

Field studies were conducted in the municipality of Banaue, recognized as ancestral domain with relatively well-preserved forests in the Province of Ifugao, and in the northern Sierra Madre mountain region in the Province of Isabela where commercial logging activities have operated until recently. The studies identified the following facts:

- In Banaue, the landscape consists of eight major land forms: terraces for rice production, drained fields for vegetable production, swidden area for sweet potato production, low grasslands, high grasslands, community forests, private forests, and housing lots.
- In Banaue, the lower elevation of the community forests (*inahalan*) is allocated for swidden agriculture, and the higher elevation is preserved as watershed forests where swidden agriculture is customarily prohibited.
- In Banaue, there have not been any regulations in resource extraction in the community forest. As a result, most of the trees suitable for woodcarving and house construction have already been taken and many woodcarvers have to find trees outside Banaue.
- In Banaue, private forests (*pinugo, muyong*) or man-made forests scattered in the rice terraces secure water for irrigation and protect against landslides and erosion.

- In Banaue, people make use of forest products such as firewood, construction material, and woodcarving materials for their livelihood.
- In Sierra Madre, villagers usually categorize the land as “lowland“ or “alienable or disposable land” where land title was officially recognized, and “upland“ or public timber land where land title was not recognized by the government.
- In Sierra Madre, however, customary laws for utilizing forest resources were not evident to researchers, because communities (barangays) here were formed recently —after the Second World War.

External constraints on local participation

- A major external constraint on PFM appears to be an attitude which imposes government-designed forest projects on upland communities, where local people are requested to follow them, to act as tools of the government.
- In most cases, these projects do not consider local conditions such as land use, people's dependence on forest resources for their livelihood and the local value systems.
- Requiring local people to participate in the government-designed reforestation projects brings about adverse effects, including resistance and conflicts between the government and local people, as well as among the local people themselves.
- NGOs may be expected to play substantial roles, not as instruments of the government, but as catalysts to empower the local people in formulating solutions on their own to existing problems.
- Most small-scale loggers think the forests are still controlled by the government, because logging in all CBFM sites was suspended in 1988.

Internal constraints on local participation

- In Banaue, few internal constraints of social and cultural aspects towards forest management can be identified.
- In Banaue, even though the people have a desire to improve the stand quality in private forests by planting trees, particularly trees for woodcarving, they do not intend to do so if they have to pay for seedlings.
- In Banaue, planting seedlings for woodcarving materials in the community forests is hardly expected, because it may be difficult to find witnesses of the plantation activities in the community forest since they are necessary in order to claim one's ownership on planted trees.
- In Sierra Madre, there are some conflicts between the cooperative or an executive body of CBFM program and illegal loggers, and between the cooperatives and new migrants. Even the members of the cooperative expect benefits from the cooperative rather than self-sacrifice, because the cooperative is a kind of a functional group.

- In Sierra Madre, the policies of the cooperative sometimes fluctuate, because the requests of the government and the villagers contradict each other.

Main actors for participatory forest management

- In Banaue, the blood kinship group is regarded as the main actor of PFM in private forests, because co-owned private forests are actively managed by close blood kinship groups.
- In Banaue, the village community can be an actor to regulate loosely the use of community forests.
- In Sierra Madre, the cooperative seems to be the best actor for natural forest management.
- In Sierra Madre, individuals seem to be the best actors for reforestation activities.

3-2. Policy recommendations

Objective 1: Secure the participation of local people in general.

Action 1-1: The government and NGOs should work together to establish a mechanism of a “green safety net” to secure the minimum level of forest conservation.

-- This action will provide the foundation for PFM in terms of forest conservation, because "green safety net" is minimum regulation by the national government to secure sustainable forest management and forest conservation.

Action 1-2: The government officers should change their attitude towards the local people, and regard them not as tools of the government but as equal partners.

-- This action will fill the gap between the intentions of the government and the impressions of the local people. Although the importance of this action has been pointed out for more than a decade, ongoing efforts are still necessary.

Action 1-3: The project managers and planners should carefully consider the local conditions before introducing a forestry project, such as customary utilization of the land and forests, people's dependence on forest resources for their livelihood and the local value systems.

-- This action will enable the project managers and planners to set up an appropriate project plan. At present seems to be difficult for planners to ascertain the actual state of local conditions. In this process, the project planners should actively involve the local people and NGOs by way of participatory rural appraisals (PRA), etc. Although the importance of this action has been pointed out for more than a decade, ongoing efforts are still necessary.

Action 1-4: The government should define clearly in the form of a decree or law the involvement of local people and NGOs.

-- This action will ensure the process of fair evaluation of local conditions and existing local forest management systems.

Objective 2: Facilitate collective forest management.

Action 2-1: The local people should recognize that the function of the village community is different from that of the cooperatives as Peoples Organizations (PO) for CBFM.

-- This action will make them recognize the potential role of cooperatives. The village community is a fundamental group dealing with every aspect of their livelihood. Cooperatives could serve as a functional group for the purpose of managing their forests.

Action 2-2: The cooperatives should commit themselves to representing the interests of the local people, rather than being agents to implement governmental programs.

-- This action will create the trust of the local people toward the executive bodies of the cooperatives.

Action 2-3: The local people should leave the rights of forest management to the executive bodies of their cooperatives.

-- This action will guarantee that the executive bodies manage the forests as effectively as private timber companies.

Action 2-4: The government should permit selective logging by the cooperatives.

-- This action will sustain the livelihoods of the local people who work for the cooperatives, and also sustain timber resources because of reduced illegal logging.

Action 2-5: The government should give greater priority to Certificates of Ancestral Domain Title (CADT) or Certificates of Ancestral Land Title (CALT) provided by Republic Act No. 8371, compared to mining concessions provided by the Mining Act of 1995 or Republic Act No. 7942.

-- This action will facilitate the collective management of natural forests.

Action 2-6: NGOs should help the local people and the government to take the actions proposed here.

Objective 3: Facilitate individual-based forest management.

Action 3-1: The CBFM cooperatives should recommend that local people acquire Individual Property Rights (IPR) from the cooperatives for managing the forests within the area of CBFMA.

-- This action will promote individual management of plantation forestry, but the cooperative will still play a leadership role in terms of promoting sustainable agriculture and forestry techniques, collection of market information, etc.

Action 3-2: The government should conclude a Socialized Industrial Forest Management Agreement (SIFMA).

-- This action will promote tree plantations in private forests fostering individual practices of socialized industrial forest management.

Action 3-3: NGOs should help the cooperative and the government to take the actions proposed here.

Legal & Administrative Supporting Measures
Sub-theme¹⁸

DRAFT PRINCIPLES ON LOCAL PEOPLE’S PARTICIPATION

Drafted By
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1. – Findings

(1) Attitudes toward establishing a new convention on forest conservation

Many international instruments relevant to forest conservation already exist, but consensus has not yet been reached on adopting a “Forestry Convention.” Discussions continue internationally.

- Several countries have taken the position that already enough international instruments exist and that their effective implementation should be the main agenda of international society. This position emphasizes compliance with existing instruments already adopted by many countries instead of establishing a new convention on forest conservation.
- Other countries emphasize the necessity of establishing a new international legal instrument to cope mainly with issues of forest conservation. Proponents of this approach point out that differences in the purposes of the existing international instruments can cause conflicts among the agreements.

(2) Characteristics of measures that deal with nature conservation issues

As mentioned, many instruments that in some way relate to forests already exist—their common characteristic is some reference to nature conservation. Almost all of them require contracting parties to take account of the environmental values in the decision-making, implementation and evaluation process relating to governmental policies.

- The various types of eco-systems are too diverse to develop an objective indicator to evaluate whether a forest is managed in a sustainable manner or not at the present. Hence, the processes of nature conservation should make use of the “Precautionary Principle” in order to avoid irreversible changes to ecosystems.
- In using the “Precautionary Principle,” the environmental, economic and social aspects should be considered.
- In order to consider these three aspects within the forest management process, an environmental impact assessment system is required. Moreover, several requirements for sustainable forest management under the “Precautionary Principle” have been pointed out,

¹⁸ This paper is a draft report intended only for the IGES-LIPI Workshop on Forest Conservation Strategy on 28-29 June. Please refrain from citing it for any purpose.

for example, institutional coordination, international cooperation, research, capacity-building and information disclosure.

- Public participation, especially the participation of local people, is recognized as an important principle. In the case of forest conservation, the same process is required in order to manage forests in a sustainable manner.

(3) Measures of public participation in international treaties

There is recognition of the necessity of ensuring public participation in international society through legal and administrative measures. As mentioned in Agenda 21, the Rio Declaration and other international instruments, public participation should be secured and respected to ensure the efficiency of the system of environmental protection and to protect basic human rights. There are several elements to be dealt with in the process of participation. In particular, two major elements should be considered.

- First, the composition of participants can be an important element. The term “public” includes four categories: the general public, the public affected or concerned, the local community or local people, and indigenous people. Particularly, the role of local people and indigenous people is recognized as crucial in nature conservation. Some international conventions have tried to clarify guidelines to ensure the local people's participation. The Ramsar Convention on wetlands includes many experiences in studying local people's participation.

The reason why local people and indigenous people play such an important role can be justified out on several grounds. Concerning environmental aspects, the difference in ecosystems between areas leads to the necessity of management systems suited to each ecosystem. In order to develop such a management systems, decentralization of management systems is required. In a decentralized management system, local people play an important role in order to ensure the effectiveness of regulations concerning forest conservation. Regarding the economic aspect, local people and indigenous people receive benefits directly from the forest, and they are often the first to bear the cost of forest conservation. They often have knowledge about the most effective and sustainable utilization of forest resources that could aid in yielding the maximum economic benefits. Moreover, this leads to issues of human rights, in particular, for local and indigenous people who depend on forest resources for their livelihood. In this case, deforestation or forest degradation threatens their lives and culture - a violation of human rights. These are the social aspects of forest management. Clearly, local and indigenous people's participation should be respected and ensured.

- The second element is the level of participation. There are several steps to participation in the process of forest management, including access to information, participation in decision-making, involvement in implementation and access to means of redress. In Europe, the Aarhus Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters) was adopted as a regional treaty in order to guarantee these important steps. An environmental impact assessment system can also play an important role in measures for ensuring participation in several international treaties.

- Other elements to address later include the accountability of local and indigenous communities, the demarcation of rights and responsibilities of local and indigenous communities and people, the costs and benefits of public participation, and stable funding for public participation.

(4) Experiences in target countries

Experiences in China, Indonesia, Malaysia, Papua New Guinea, Thailand and Vietnam revealed the following lessons :

- Importance of a meaningful consultation process with local people and ensuring benefits for them - When a forest development project starts, project proponents should consult with local people from the early stages. In order to ensure it, advice from experts and the right to consult secured by law should be provided. Moreover, small-scale logging industries managed by local people should be encouraged and concessions should be agreed on under equal relationships between a company and the local people in order to ensure their economic benefit. For the purpose of ensuring equality, advice from experts is indispensable. In case of the government permitting concessions, it is necessary to involve local people in the decision-making process in order to consider their benefit.
- Importance of cooperation among the central government, local government and local people - Some countries adopted a centralized political system. In these countries, the central governments have begun to enact policies to ensure local people's participation, but implementation is weak due to the lack of a general system supporting and ensuring participation. Besides, local governments sometimes interpret policies different from the central government to protect forests in order to deal with special problems, such as poverty, in each area. Moreover, local people have inadequate information and forest conservation awareness is sometimes very low. This also causes the ineffectiveness of forest conservation policies. Therefore, it is necessary to disclose information to people at least relevant to forest conservation and management systems in order to create awareness. The central government should seek building cooperation with local governments and local people in order to implement their policies effectively by ensuring their participation. According to experiences in a country with a decentralized political system, the central government should support the local government in order to ensure local and indigenous people's participation.
- Importance of recognizing the rights of local people and a dispute settlement mechanism - Many conflicts have arisen at the site level due to multiple systems within a government. Among government organizations concerned with forests, there are many differences of ideas on forest management, hence coordination and cooperation among these organizations is necessary. These organizations can often ignore the current situation and problems at the local level and it becomes another source of conflict. Therefore, in order to ensure their participation in the forest management process, it is necessary for governments to recognize local people's needs and problems, and also to recognize the rights of local people, including tenure rights, to earn a living. An environmental impact assessment system can help to minimize conflicts. It is necessary, not only to avoid disputes, but also to build a dispute settlement mechanism in a fair and equitable manner.

2. - Recommendations

(1) Compliance with existing international instruments

There are many existing international legal instruments relevant to forest conservation, yet there is still not consensus for establishing a new international convention on forest conservation. Therefore, it is necessary to consider measures on forest conservation at the international level while referring to three points:

- It is important to enhance compliance mechanisms on existing instruments.
- Coordination among these instruments and dispute settlements will be important in existing compliance mechanisms.
- When developing new compliance mechanisms it is important to keep in mind the differences in the characteristics of instruments that exist for nature conservation compared with instruments concerned with other issues.

(2) Ensuring local people's participation

Public participation is indispensable for the sustainable use or management of natural resources. It is clear that it has become one of the legal principles in some international instruments, but the specific contents of the principle depends on the characteristics of the natural resources in question. Research has revealed several important principles of public participation as follows:

- The participation of local people and indigenous people should be respected and ensured.
- Forest management systems should adopt the “ Subsidiary Principle ,” a general principle of governance that means making and implementing decisions at the lowest effective level of government or organization. Not only central governments but also international treaties and organizations should support local people and indigenous people's participation. The former should act in a subsidiary role and as a safety net when problems cannot be solved by local and indigenous people themselves.
- In the case of considering local people's participation in forest management, guidelines which in Resolution 8 adopted at COP 7 of the Ramsar Convention on wetlands are useful here. Key principles on local people's participation are as follows (detailed guidelines are described in the appendix):
 - 1) Incentives are essential for local and indigenous people's involvement and sustainable management. Everyone must benefit in the long term.
 - 2) Trust among stakeholders is essential and must be developed.
 - 3) Flexibility is required.
 - 4) Knowledge exchange and capacity-building are fundamental.
 - 5) Continuity of resources and efforts is important.
 - 6) When involving local and indigenous people in the participatory process, those who facilitate or coordinate such efforts should consider each local community's situation.
 - 7) The process of local people's participation should be evaluated when complete.
- Based on learned experience, several actions are necessary to ensuring local people's participation:

- 1) Ensure their economic benefit.
- 2) Provide advice from experts and the right to consult with the concession company should be secured by law.
- 3) Disclosure of information to people at least relevant to forest conservation and management systems in order to create public awareness.
- 4) Support from the central government for the local government in order to ensure local and indigenous people's participation.
- 5) Coordination and cooperation among these organizations.
- 6) Recognition of the rights of local people, including tenure rights, to earn a living relevant to their culture.
- 7) Not only avoid disputes but also build dispute settlement mechanisms in line with a fair and equitable manner.

(3) Necessity of dispute settlement mechanisms

Concerning dispute settlement, the following components should be considered to design a mechanism for solving conflicts over forest management:

- In order to prevent conflicts, it is important to clarify and guarantee basic rights of indigenous people by law, give tenure status over land to the local community, and provide opportunities to participate in decision-making processes at various stages, in particular at the early stage. This process should also be transparent. The introduction of a system of environmental impact assessments will be a useful method to improve the participation of local people.
- Once conflicts occur, a neutral and independent mediator with no vested interest in the case or the parties should be involved in the conflict solution mechanism. The rights of people should be clearly defined and reliable in court.
- Most of these elements have been mentioned and discussed widely at international forums, although at national or sub-regional levels, the importance of these elements has been recognized, few concrete measures have been taken to realize these concepts.

Appendix

Guidelines for ensuring local people's participation

(This draft is made based on guidelines developed by Ramsar Convention. Almost all of it is same with the guidelines and it should be revised based on discussion of this workshop)

(1) Incentives for local and indigenous people's involvement and sustainable management are essential; everyone must benefit in the long term.

- a. Local and indigenous people benefit from participatory management arrangements through the maintenance of sustainable livelihoods.
- b. Other benefits of participatory management for local and indigenous people include:
 - i. maintaining spiritual and cultural values associated with a forest,
 - ii. more equitable access to forest resources;
 - iii. increased local capacity and empowerment;
 - iv. reduced conflicts among stakeholders; and
 - v. maintaining ecosystem functions.
- c. Government agencies benefit from participatory management arrangements through:
 - i. improved ecosystem viability;
 - ii. reduced management costs;
 - iii. assistance with monitoring and surveillance;
 - iv. fewer infringements; and
 - v. enhanced social sustainability and quality of life for communities dependent on forests.
- c. Incentives such as tax concessions, subsidies, conservation easements, special arrangements for licenses, increased market access, financial compensation schemes, increased infrastructure, and development activities can, if appropriately structured, further sustainable management objectives when directed to local and indigenous stakeholders.

(2) Trust among stakeholders is essential and must be developed.

- a. Development of trust among stakeholders takes time, effort and attention. Elements that contribute to building trust include:
 - i. a willingness to seek joint objectives cooperatively;
 - ii. mutual effort;
 - iii. mutual respect;
 - iv. open and ongoing communication;
 - v. clear and realistic expectations about process outcomes;
 - vi. satisfactory and timely completion of agreed tasks;
 - vii. follow-through on commitments; and
 - viii. participation of all sectors of the community.
- b. Participatory management works best when stakeholders' interests are openly stated.
- c. Clearly stated terms of reference and objectives assist in the establishment of management partnerships.

- d. Participatory management processes require strong facilitation that builds trust among stakeholders. Independent brokers with strong leadership skills are most effective. (Often this is a role for NGOs).
- e. Appropriate legal or policy frameworks (such as the right to organize, legal recognition of NGOs, conservation easements, etc.) assist in the establishment of participatory management arrangement.
- f. Forums, study groups, and workshops can be useful means to increase shared understanding of principles of sustainable forest management and the value of resources being conserved or sustainably used.

(3) Flexibility is required.

- a. There is no single level of local and indigenous people's involvement that fits all contexts.
- b. There is no one approach or recipe that will make the process work in all contexts.
- c. For participatory management regimes to be successful, it may be necessary to meet basic development needs in the process of pursuing sustainable management objectives.
- d. The "learning-by-doing" approach (i.e., ongoing assessment of process and outcomes) allows for re-orientation as needed.

(4) Knowledge exchange and capacity-building are fundamental.

- a. Government agencies often require capacity-building in participatory management approaches, such as those specified below for stakeholders.
- b. Stakeholders often require capacity-building in:
 - i. establishing and maintaining appropriate organizations;
 - ii. effective relations with government agencies;
 - iii. negotiating and contributing to decision-making;
 - iv. technical aspects of sustainable forest management;
 - v. monitoring of forest ecology and identifying changes in ecological character;
 - vi. evaluation of participatory processes; and
 - vii. elaboration and design of project proposals to obtain funding.
- c. Local environmental knowledge can make a significant contribution to forest conservation strategies, especially when blended with the best available science.
- d. Engaging local stakeholders in site monitoring and process evaluation makes a valuable and substantive contribution to achieving participatory conservation objectives.
- e. A multidisciplinary approach utilizing biological and social science expertise is vital for establishing participatory management regimes.
- f. Site monitoring can take advantage of a "marginal cost" approach - technical experts may be engaged, and established facilities (such as university laboratories) may be used at minimal cost.
- g. Networking mechanisms such as regular meetings, newsletters, and radio programmes fulfil information exchange and educational purposes.
- h. Basic concepts of sustainable forest management, stewardship principles and ecological values can be conveyed through the educational curriculum of local schools. Centres for conveying information on ecological value to local people can:
- i. catalyze active and informed participation of local and indigenous people;

- ii. serve as demonstration sites for sustainable forest management;
- iii. support formal, informal and non-formal educational programs that involve a wide range of stakeholders;
- iv. help to bring local and indigenous people's concerns to the attention of decision-makers; and
- v. provide information and advice on forests and their management.

(5) Continuity of resources and effort is important.

- a. Establishing participatory management takes time.
- b. As with any management regime, participatory management may never be fully self-financing.
- c. Financing through donor and/or government channels is important for sustainability.
- d. Appropriate legal and policy frameworks at national and local levels contribute to continuity.
- e. High-level political support, ideally from a number of the appropriate Ministries, is important for maintaining government commitment to participatory management regimes.

When involving local and indigenous people in the participatory process, those who facilitate or coordinate such efforts are required to:

- a. Ensure that all stakeholders understand the role of the facilitators/coordinators.
- b. Regularly verify that all stakeholders agree upon the basic objectives of the initiative.
- c. Raise awareness of forest conservation and sustainability issues. Involve local and indigenous people in preparing and running awareness-raising activities.
- d. Ensure the involvement of influential individuals in the community and all sectors of the population, and especially the women and youth of the community.
- e. Encourage stakeholder ownership of the process and participatory management arrangements, ensuring that no key participants are excluded.
- f. Involve and strengthen local organizations and traditional structures that represent different stakeholders among local and indigenous people. Assist in the establishment of such organizations if they do not already exist.
- g. Develop local capacity, including organizational and negotiating skills, keeping of records and financial accounts, and conflict management, and provide (as necessary) the meeting place, telephone access, basic equipment, and transportation.
- h. Ensure that persons acting as facilitators and coordinators are properly trained in participatory assessment and planning techniques and possess the necessary facilitation skills.
- i. Work with public-sector stakeholders to build capacity for developing and administering participatory management processes.
- j. Ensure that key parties have a clear understanding of each other's needs, responsibilities and limitations.
- k. Ensure that local and indigenous people learn participatory assessment and planning techniques so that they can be applied to other community concerns.
- l. Ensure that all commitments are met
- m. Develop a site monitoring and process testing programme using local resources to check progress.
- n. Ensure that tasks taken up by various stakeholders are within their capabilities.

- o. Keep funding agencies aware of issues and progress of participatory management approaches.
- p. Establish networks among communities involved in forest management and encourage regular contact and sharing of experiences.
- q. Support the application of traditional knowledge to forest management including, where possible, the establishment of centres to conserve indigenous and traditional knowledge systems.

The following list is a brief, non-exhaustive checklist of indicators that can assist to measure the extent of local and indigenous people 's involvement.

(1) Incentives

- a. Local and indigenous people have achieved an economic stake or other interest in the sustainable management of forest resources.
- b. The government agency has stated policies supporting participatory management.
- c. Appropriate legal and financial incentives for participatory management are in place.
- d. A more equitable sharing of benefits among stakeholders has resulted from the participatory management process.
- e. Stakeholders have expressed satisfaction with their involvement in the process.

(2) Trust

- a. There is a clearly stated and widely known policy or legal document that makes a commitment to involving local and indigenous people.
- b. All key stakeholders (particularly government) acknowledge participatory management as legitimate and desirable.
- c. Local and indigenous people are now involved in making substantive decisions affecting the forest resource use and management.
- d. Local organizations to advance participatory management are respected within the community.
- e. Representatives of the local and indigenous people are truly representative and accountable to them.
- f. There are resource use and participation rules which are appropriate to the local situation.
- g. A management agreement exists between stakeholders (oral or written, formal or informal).
- h. The management agreement has clearly defined boundaries and membership.
- i. The management agreement specifically defines stakeholders' functions, rights and responsibilities.
- j. The management agreement has been approved by at least the resource-using stakeholders and key decision-making groups.
- k. Parties to the agreement meet their commitments.
- l. Non-compliance with approaches, rules, rights, and responsibilities outlined in the management agreement is deemed to be at an acceptable level.
- m. Any system of graduated sanctions for infringement of rules has been agreed upon by all key parties.

- n. There is evidence that resource management controls are being implemented.

(3) Flexibility

- a. There is the potential for collective modification of the rules relating to resource use by those affected.
- b. There are “nested” management units (different bodies at different levels).
- c. There is evidence that the local and indigenous people can influence the speed and direction of change in relation to the resources with which they are concerned.
- d. Facilitators/coordinators practice “learning by doing” and adaptive management.

(4) Knowledge exchange and capacity-building

- a. There is an awareness among stakeholders of new management approaches, rules, rights, and responsibilities.
- b. There is a two-way flow of information and communication between local and indigenous people and relevant government agencies.
- c. Information reaches local and indigenous people in a timely and accurate manner, and in a form which is readily understandable.
- d. Local and indigenous people participate in site monitoring and in evaluation of the participatory process.
- e. There is evidence of respect by key government agencies for local human systems and local ecological knowledge.
- f. Stakeholders are demonstrating necessary skills and empowerment (e.g., capacity to make decisions, monitoring skills, etc.).
- g. Measurement methods, established by the stakeholders, demonstrate and quantify the degree to which local participation was intended, and actually has improved or conserved the recognized “functions and values” of the forest and its sustainable management.

(5) Continuity

- a. There are one or more organizational structures that facilitate local and indigenous people’s involvement (e.g., a council, management body, women’s group, etc.).
- b. A random sample of local and indigenous people are able to identify the community’s role in forest management, and the individuals who are directly involved can accurately describe the objective of their involvement.
- c. The government agency and its staff have a demonstrated commitment to participatory management, and can accurately describe the objective of local and indigenous people’s involvement.
- d. There is an appropriately long-term source of funding for ongoing participation and resource management.
- e. Local and indigenous people have provided in-kind support (time, labour, traditional knowledge and expertise) to implement the participatory management agreement.
- f. Conflict management mechanisms exist, and there is an appeals process in case of conflicts within the management partnership.
- g. There is integration between local forest management and management of the entire catchment.

STRATEGY FOR TIMBER TRADE POLICY TO SUPPORT SUSTAINABLE FOREST MANAGEMENT

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1. Targets

The target of this sub-team is to investigate and recommend appropriate strategies to form timber trade (TT) policies leading to sustainable forest management. The study program is composed of four sections. First, we surveyed data availabilities and then set up frameworks for forest resource accounting. Second, we discussed sustainable forest management from a viewpoint suitable for the measures of forest / timber certification. Third, we studied timber trade structures and the policies of major timber-trading countries from their historical perspectives – especially examining the econometric analyses using time-series data that revealed impacts of customs duties and non-tariff barriers on international timber trades. Finally, we built a spatial equilibrium model for the timber trade of the Asia Pacific region to simulate regional timber trade to assess various policy measures.

2. - Background

2.1 – The need to study timber trade to connect with sustainable forest management

Recently, global timber trade structures have changed drastically from a trade in logs to trade in wood products. This change seems to reflect worldwide environmental movements as well as the exhaustion of useful forest resources. Considering this shift in timber trade, we believe that an orderly timber trade is needed to realize sustainable management of forests.

To see the recent situation of the global forests from a bird's-eye, historical view, one would notice increases in forest areas in many developed countries and decreases in virtually all the developing countries. Although we should not overlook the decay of the "new kind" of forests in Europe, the situation in developing countries has been very devastating.

This cross-sectional view can be translated into a time-series setting. At the onset of economic development natural forests existed abundantly. People once lived in rich forests in harmony, utilizing and collecting necessities from the forest. As people cultivated land, they converted forests into farmland. Agricultural production enabled human populations to grow, which in turn accelerated deforestation. Industrialization has hastened the speed of deforestation, because more human population can be accommodated with increased agricultural production using more chemicals and mechanization. But in the course of economic development, the pressures of deforestation have become starkly apparent. Historically, perhaps because of comparative advantages, industrialized economies imported forest products in exchange for industrial products. Thus they wouldn't need their own forests as sources of timber. Partly because of degraded forests from past overuse, industrialized countries realized the need to restore their own forests, and changed their forest policy from development to reforestation and protection.

Admittedly, this is an oversimplification, but this story has an element of truth in it. In the course of economic development, many of today's developed countries import timber from other countries to lessen the pressures on their own forest resources. Now perhaps, many of the deforested developing countries may have to import timber from the restored forests of developed countries. The importance of timber trade policies on forest resource management must not be overlooked.

2.2 - Recent Situation with Free Trade of Forest Products

In the Uruguay Round, consensus was reached to reduce global tariffs by an average one-third from base rates. The major trading partners agreed to tariff elimination in commodity sectors that included beer, brown-distilled spirits, pharmaceuticals, steel, construction equipment, agricultural equipment, medical equipment, toys, furniture, paper and paper products. The agreement called for the reductions to be made over five years in equal, annually-staged reductions, although in some cases, such as pulp and paper, the reductions are being implemented over 10 years. The agreement over the pulp and paper sub-sector in the zero-for-zero initiative for wood products was made among the US, EU, Canada, Japan, Korea, Finland, Austria, New Zealand, Hong Kong, Singapore, Australia, Brazil, and Chile.

In the furniture sub-sector, the Uruguay Round reached a zero-for-zero agreement with key countries with tariffs to be eliminated over five years. However, for the lumber and wood products sub-sector, the Uruguay Round wasn't successful in achieving the zero-for-zero initiative. The US, Canada, EU, Hong Kong, New Zealand, Singapore, and Sweden supported it, but Japan did not agree.

In 1994 APEC leaders agreed to set a goal of free and open trade in the APEC region by 2010 for developed countries and by 2020 for developing countries. In 1997 the leaders nominated 15 sectors including forest products (which was nominated by US, Canada, NZ, Indonesia) for Early Voluntary Sectoral Liberalization (EVSL). The Forest Products sector was also selected as one of the 9 for immediate action. The proposals of Forest Products EVSL Initiative by 4 countries were merged and each country was assigned the study of 4 elements (Tariff Initiatives, Non-Tariff Measures, Standards and Conformance, Economic and Technical Cooperation). At the APEC summit in November 1998, leaders agreed to move the tariff portions of the sectoral EVSL initiatives to the WTO in order to seek a critical mass of support for concluding an agreement in all eight sectors (because telecommunications MRA didn't contain a tariff component) by the end of 1999. Work on the other elements of the sectoral EVSL initiatives continues within APEC.

The ATL (Accelerated Tariff Liberalization) initiative includes further reductions and acceleration in the timing of the reductions of tariffs compared with terms agreed to as part of the Uruguay Round. Because of the existence of the Uruguay Round zero-for-zero agreement on pulp, paper, and printed materials, different disciplines were proposed for these commodities than for the other products covered by the proposal.

The proposal is that in the categories of wood, rattan, and wood chemicals and furniture, developed countries would eliminate tariffs by January 1, 2002. The proposal suggests that developing countries should strive to meet the same targets, but accepts that in special circumstances and on a case-by-case basis elimination could be delayed until January 1, 2004.

For pulp, paper, and printed products, existing parties to the Uruguay Round zero-for-zero agreement would accelerate tariff removal by January 1, 2000. Others would attempt to remove tariffs by the same date, but developing countries could delay tariff removal until January 1, 2002, on a case-by-case basis for a limited number of specific products.

3. - Findings

3.1 - Forest Resource Accounting

In Agenda 21, the action program adopted at the UN's conference on Environment and Development (1992), it explicitly stated that all members should develop environmental accounts to measure the impacts of economic activities on the natural environment.

It is important to construct forest resource accounts as a consistent framework in order to consider the relationships between the social economy and the natural environment. It is obvious that there are still difficulties in constructing the system, because most developing countries do not have much environmental information. However, forest resource accounts may be the shorter way to solving the problems of forest conservation.

3.2. - Reasoning for Tariff Elimination in the U.S. Trade Representative (USTR) Report

The Report claims that the following results are derived from the spatial equilibrium model, which supports the tariff elimination:

First, there are no significant changes in production and consumption in the world-scale timber trade. They simulated with two models, but for both models, and for all products, production and consumption changes by less than 1 percent, and typically by less than 0.5 percent, compared to the baseline in 2010.

Second, there are changes in the commodity composition of trade (a shift toward more processed products), and in geographic patterns of production and trade, which are not necessarily bad. Both models indicate that the ATL is likely to increase production in, and exports from northern Europe, Oceania (Australia and New Zealand), South America (Chile), and Asia (Indonesia and Malaysia).

Third, they indicate little or no net effect on U.S. production and consumption in timber, accompanied with little change in international trade. Both models indicate the likelihood of reductions in U.S. exports of logs and increases in exports of some processed products.

Finally, both models suggest that the ATL is likely to change timber harvests in a number of countries, but both models indicate the likelihood that the net effect at the world scale will be small (less than 0.5% increase in timber harvests for industrial products.)

The above mentioned reasonings may be derived from some spatial equilibrium models. But the USTR's claim does not end there. USTR claims that there are other reasonings for supporting the tariff elimination.

Competition will encourage the development of cost-and-resource-efficient manufacturing technologies, and increased use of recovered fiber in the manufacture of paper and paperboard. This cannot be derived from the spatial equilibrium models. These cannot be results, but assumptions or conjectures.

They also claim that decreases in timber harvesting will be concentrated in primary forests and the increases will be concentrated in secondary forests and plantations. This claim also cannot be derived but is just stated.

Generally, trade liberalization, and the package of ATL initiatives, in particular, may contribute to higher incomes, especially in developing countries. They claim that there is also widely-accepted evidence that increasing income in developing countries will eventually contribute to greater investments in environmental protection, and a reduction in the consumption of fuelwood.

Recently environmental economists have been talking about the so-called “Kuznetz environmental curve.” The curve states that forest resources, measured in forest area or standing stock, or whatever environmental indicator is used in general, first deteriorates but, sometime in the course of economic development, hits the bottom and improves afterwards. Some studies reveal that this bottom is reached when an economy reaches the level of 6000 US dollars in per capita income. The above argument seems to assume every economy to have per capita income to be more than 6000 US dollars, which is all but a dream.

To summarize the defects and limitations of the spatial equilibrium model, which is claimed to be used in the simulation that is supportive of tariff abolishment, the models are short of the analysis on forest resources within each country about the effects of change of trade on the situation. For example, parameters like the acceleration of harvesting natural forests and incentives for reforestation or plantation are not included in the models.

They also fail to capture the industrial structure of forest products industries. The monopolistic or oligopolistic characteristics of the industries, for example, will distort the distribution of the profits of free trade theoretically derivable from the principles of free trade.

The analysis fails to study the quantitative and qualitative comparison about the merits of free trade, and who will gain the benefits of the tariff elimination, who will lose profits or who will suffer the disadvantages.

3.3-Actual Situation in South East Asia

In the Philippines and Thailand, a large part of their natural forest is already gone, and though reforestation efforts are put forth, mainly through reforestation projects by the government, there has not been much success yet in restoring forest cover.

In Indonesia, on the other hand, the natural forest is still under exploitation. However, a shortage of materials to satisfy the production capacity of processing industries is apparent, and the country is still suffering from difficulties in the transition period from the Suharto-era. Because of these difficulties, Indonesia needs liberalization of the domestic industrial structure, but they are concerned with excessive intervention from the IMF and multinational corporations. To illustrate, in 1997, the IMF made the government reduce the export tariff rate on logs. Then in 1998 the IMF recommended the auction of concession acquisitions (i.e. opening the concession market to foreign companies). The IMF requirements meant opening up more forests for the exploitation of forest resources (materials).

4.- Strategy

4.1 - Forest Resource Accounting

Our objective is to consider the relationship between the social economy and natural environment in the forest sector. To achieve this it is important to delineate what are social economic activities and what is the natural environment in the forest sector, and then define how these parameters are measured. To these ends, we propose certain accounting schemes. One of the major factors in social economic activities in this context is timber production and timber trade. People utilize wood resources to fulfill their needs, affecting the natural environment in the forest sector. In an accounting framework, Wood Products Account is configured. Logs are derived from the forest to produce timber products. This accounting is closely related with the Input-Output Table of a national economy, and Water and Waste Accounts through production wastes.

Harvesting logs affects the forest standing stock, one of the major entities in the Forest Accounts dealing with forest growth, natural losses, plantation, silvicultural losses, and harvesting. This accounting is also closely related to water accounts. At least in a theoretical sense, environmental information should be included in these forest accounts.

Some of the harvesting is the result of land use changes and these changes are tabulated into the Forestland Accounts, a part of more general Land Accounts. These human activities are, in a sense, economic activities and can be tabulated into the Forest Management Accounts, which deal with operating expenses and operating revenues.

These accounts should be tabulated in both stock and flow terms. For example, forestland accounts in stock terms deal with areas by various forest types, and those in flow terms deal with their changes.

4.2-Forest Products Trade Should Be Controlled under the Principle of Forest Sustainability and the Mitigation of Degradation of Natural Forests

Economic incentives will be necessary for planting and tending trees in the private sector, so the domestic log market (which is not competitive in the international market) should be developed. Domestic forest industries will be necessary for forestry to be developed. Thus trade restrictions are needed for countries such as the Philippines and Thailand.

From this stand point, it is recommended that Indonesia develop processing industries for employment and earning foreign exchange, improve the efficiency of recovery rate, and exploit forest resources internally. One method to bring up the domestic processing industry, as an infant industry, is by domestic competition or competition with non-monopolistic companies.

The free trade argument is based on a perfect competitive market environment with perfect vision among a complete number of markets, including future markets. In reality, wood, timber, and log markets are not competitive. Monopolistic profit is the norm. With developing economies, forest-based industries are “infant industries” and should be guarded from international competition. Forests from which wood is harvested constitute major components in environmental functions, with benefits that will be shared by future generations. Markets in reality never speak for them. We cannot rely on the free trade argument to formulate timber trade policy.

5. - Country: Malaysia

a. Peninsular Malaysia

1. Findings

(1) Forest related policies of Peninsular Malaysia are based on Federal Policies, such as the National Forestry Policy (1978) and 1st and 2nd Industrial Master Plans of Malaysia (1986-).

(2) Forest exploitation of Peninsular Malaysia began to convert forests into rubber and oil palm plantations in the early part of the twentieth century. As a result, Peninsular Malaysia has plentiful rubber wood plantations, which are made into furniture and other products.

(3) A log export ban has been enforced since the 1960s.

(4) Peninsular Malaysia has been promoting furniture, MDF and molding industries.

2. Strategies

The current forest-related situation of Peninsular Malaysia is going well, so it is important for them to continuously promote wood-based industries, especially high value-added products.

And furthermore, it may be necessary to encourage investigations into new material to make wood products, like palm, for instance.

b. Sabah State

1. Findings

(1) The forest-related industry of the state of Sabah is independent of policies of the Malaysian federal government.

(2) Forest exploitation of Sabah has expanded since the 1960s because of its high quality timber. State revenues have been heavily dependent on timber-related royalties, especially from export logs.

(3) As a result of rapid forest exploitation, forest resources have been decreasing drastically since the 1970s. The current state of forest resources is deteriorating with a scarcity of wood materials, a decrease of old-growth forests and an increase of secondary forests.

(4) Promoting wood-based industries, that is plywood and saw-timber, Sabah has imposed log export restrictions since the end of the 1980s with a log export quota from 1989 to 1992 and starting again from 1996 and a log export ban from 1993 to 1996.

2. Strategies

(1) Sabah needs to diversify its wood-based industries in order to improve its economy which is based mostly on the timber industry.

(2) It is important for Sabah to plant trees intensively and immediately. The decrease of forest resources is a serious problem for both the local economy and global environment. We must cooperate on this action.

c. Sarawak State

1. Findings

(1) Like Sabah, the forest-related industry of Sarawak is independent of policies of the Malaysian federal government.

(2) Forest exploitation of Sarawak started in the 1980s, later than Sabah because its timber was of lower quality and hence less desirable. Exports surged to fill the gap when export restrictions were started in Indonesia and Sabah. Due to its late start, Sarawak still has rich forests compared to Sabah.

(3) Sarawak began a log export quota in 1992 and tightened it in 1993 to encourage wood-based industries. Sarawak has developed positively some timber processing zones in the 1990s.

(4) Sarawak has promoted forest-related industries on the whole such as logs, plywood, wood residue products and pulp and paper.

2. Strategies

The current situation in Sarawak is going well. Its timber processing zones will play an important role for development of its forest-related industries and the state's economy. However, it is necessary for Sarawak to sustain its forest resources through afforestation.