

# **FOREST MANAGEMENT BY THE BAHAU SA' PEOPLE OF EAST KALIMANTAN**

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## **BACKGROUND**

Immediately after forest fires raged in Kalimantan and Sumatera in 1997/98 many people blamed Indonesia's forest management system, which gives too much priority to concessionaires (Cf. Schindler 1998; Schweithelm 1998). The government of Indonesia (GoI) considers traditional practices, such as swidden cultivation, to be a major cause of forest destruction and therefore remains committed to eliminating all forms of swidden cultivation (Brookfield and others 1995). Efforts to develop local-based forest management have been made since several years ago, but this has not been accepted nationwide or adopted in national laws and regulations. Forest control privileges have been given to the capitalists.

The devastating fires remind us that giving too many privileges to concessionaires and alienating local systems is a serious mistake. Therefore, within the vibrant spirit of reformation in Indonesia (following the resignation of former President Suharto), there has been much discussion carried out at local and national levels to review and revise the forest management system. Attention is focused on giving forest control to local people using their own systems. Most of these systems are indigenous.

Many researchers and NGO activists have argued that indigenous methods of managing and utilizing forests are sustainable and hence must be promoted (Sponsel and others 1996, Poffenberger 1990, Alcorn and Molnar 1996). This study is a part of an effort to promote local forest management. It explores the practice of local forest management and utilization, including issues and problems encountered by the local villagers.

## **RESEARCH OBJECTIVES**

This study aims to understand the traditional and current forest tenure systems according to resource categories and how resources are managed and exploited. Given that tenure systems are changing or adapting in response to changes in ecological and/or social and economic conditions, the study in particular will explore the process of these changes and their causes.

The general objective includes the following particular objectives:

1. To describe the profile of the research site in terms of geographical information, demography, infrastructure and facilities, economy and livelihood systems, and social and administrative organizations.
2. To describe the traditional forest and land management patterns and tenure systems of the community and any changes to the systems as well as factors accounting for the changes.
3. To identify principal forest (or natural) resources and products found in the site territory and the utilization of these resources in the past and present.
4. To identify key tenure and forest management issues of the community.
5. To list recommendations for and policy improvement and further research.

## **METHODOLOGY**

### **Selection of the Site.**

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This study was carried out in a remote village of East Kalimantan Province. The village selected was Matalibaq, in the subdistrict (*Kecamatan*) of Long Hubung, Kutai Regency (*Kabupaten Kutai*), roughly 220 km northwest of the provincial capital city of Samarinda or 1450 km northeast of Jakarta. The village can be reached by boat.

The reason this village was selected is that the community has been living there for decades; they have their own system of forest and resource management. The original populations was the Bahau sub-ethnic group. Recently, however, many migrants from Java and Flores have started to live within the village territory through programs of transmigration. Most of them work for the commercial plantations known as *Hutan Tanaman Industri* (HTI). Forests have deteriorated owing to external intervention through the establishment of industrial tree plantation. Meanwhile some NGOs have intervened in community matters related to forestry issues. This fact has prompted calls for an analysis of the changing situation of forest management and utilization by forest dwellers.

### **Data gathering and analysis**

This study applied a descriptive procedure, methods, and tools for collecting data. Fieldwork was conducted over seventeen days in September 1998. Prior to the fieldwork I spent one week collecting secondary information. In December 1998 I had the opportunity to meet with several villagers in Samarinda, and from then until February 1999, Lembaga Bina Benua Puti Jaji (LBBPJ), an NGO in Samarinda, continued to send me information about conflicts over land between the community and a timber estate corporation.

There are two methods of data gathering employed in this study. The first one was group interview and discussion. This method was used to collect data on village territory, land use, resource use, and village history. The other one was individual semi-structured interview (SSI). Twenty one households were interviewed on forest use and rest product preference, two were interviewed on local customs (*adat*), and one person (the village secretary) was interviewed on village monograph data.

Some of the data has been collected and analyzed by LBBPJ, which has conducted research in this village. Thus, to some extent, interviews and discussions were simply for verification. LBBPJ has also made maps of the village proper and territory. In this case the existing maps were very useful; all discussions on territory and land use were based on these maps. Data analysis, that is, bringing data into order, will be directed to reveal patterns in the forest use and management.

## **THE SETTING**

### **Location and Access**

Located along the banks of the Pari' River in the interior area of the Kutai District, East Kalimantan, Matalibaq can only be reached by boat. From the provincial capital of Samarinda it takes 35-40 hours to reach Lutan village by wooden boat. Then a small motor boat (*ces*) goes to Matalibaq, which takes around 10-20 minutes.

The total area of Matalibaq is 775,000 hectares. It borders with Kecamatan Tabang (to the East and North), Laham (to the Northwest), Long Hubung (to the West), and Lutan (to the South and Southeast). The area includes 180 hectares of transmigration land called Satuan Pemukiman (SP) or a settlement unit, that is SP 1 (later named Tri Pari' Makmur) and SP 2 (named Wana Pari').

Its elevation is about 60 m above sea level and the annual rainfall level is 4,000 mm. Annual temperature ranges from 25 to 30 degrees Celsius.

## Population and Infrastructure

The total population in 1997 was 668 people in 158 households, of which there were 353 males and 315 females. Religious affiliations were as follows: 571 Catholics, 87 Moslems, and 10 Protestants. By type of work there were 472 farmers, 180 workers from several companies, 3 teachers, and 7 storeowners.<sup>1</sup> Outgoing migration in 1996/97 was small: only 4 people. Data relating to incoming migration was not available. Births during the year totaled three.

Public facilities found in the village are: 1 power generator (donated by HTI), 1 Catholic church, 1 elementary school building, *amin aya'* (village hall), the office of *Lembaga Ketahanan Masyarakat Desa* (LKMD or the Village Defense Organization) and *Pendidikan Kesejahteraan Keluarga* (PKK or Women's Organization), a football pitch and volley ball court. One office of PMDH (*Pembinaan Masyarakat Desa Hutan*) or the forest village community development program of the HTI, had recently been constructed. Some households own rice mills. There is no ground transportation. No road connects the village to other villages. The village is connected to neighboring villages only by river transportation.

Approximately 20 people own chain saws which are very helpful for felling trees and making boards and bars. Almost every household owns motor boats, although with different capacities, which they use to travel and to transport products.

## History of the Community

The people of Matalibaq were originally the Kayan-Kenyah ethnic group from Apo Kayan in the northern part of East Kalimantan Province, which belongs to the administration of Kabupaten Bulungan (Bulungan District). This is one of the indigenous communities of Borneo Island which are generally known as Dayak. In Matalibaq they are called Bahau Sa'.<sup>2</sup> Their origin explains why the people of Matalibaq are distinguishable from other Bahau groups in terms of customs and traditions (*adat*). The *hudoq* festival, for example, is held in the harvesting period in Matalibaq, while in other Bahau communities it is held in the planting season. They speak Matalibaq dialect which differentiates them from other Bahau groups.

At the onset of the 19<sup>th</sup> century the first group traveled from Apo Kayan to the Mahakam area via the Boh River. It is believed that they left Apo Kayan due to an inter-village war (*ayau*).<sup>3</sup> Their first station was in Ujoh Seph'un near Datah Bilang. At that time the Middle Mahakam area was under the sultanate of Kutai, when Tenggarong, the capital of the sultanate, was named Tangga Arung. From Ujoh Seph'un they moved to Lirung Isau on the banks of the Pari' river and then respectively to Uma Tutung Kalung (1821) and Long Panek (1907).<sup>4</sup> The small community was split when they moved to other places. One group under Hipui Gah Bang built a residence at Bato Lavau. Because of a disaster (*layo'*) they moved to Ban Lirung Halo'. Another group under Hipui Bo Ngau Wan Imang made their residence at Gah Bekahaling (1909), along the banks of the Tuva' River and Gah Belawing. The remains of their residence and lepu'un can be found there. In 1913 the two groups united and moved to Uma' Lirung Bunyau under the leadership of Hipui Belawing Ubung, who was given the noble title "Mas Romeo" by the sultan of Kutai. In the new hamlet they were again stricken by a disaster (disease), which forced them to seek another area in which to live. The new area was called Datah Itung or Lirung Arau or Teliva' which they built in 1919. The name Teliva' later became Matalibaq (from *Datah Liba'*: literally plains or lowland) at the beginning of Indonesian independence.

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<sup>1</sup> Monografi Desa Tahun 1996/97.

<sup>2</sup> When the researcher asked why they are called Bahau Sa' while they were originally Kayan-Kenyah, nobody was able to give a satisfactory answer. This was probably the result of evolution, since they live within the area of the Bahau ethnic group.

<sup>3</sup> Another reason given for the exodus was that the soil in the area was no longer fertile.

<sup>4</sup> Years mentioned in this section is only estimates by village elders

Their history indicates many different phases in the people's exodus from Apo Kayan. They have built several *luvungs* (temporary residences). In each *luvung* they planted tree-crops such as rambutan, jackfruit, durian, etc. Later those *luvungs* became known as *tana lepu'un uma*, which is considered important evidence of their rights and ownership of the land and claim over the territory.

Figure 1. The Research Site

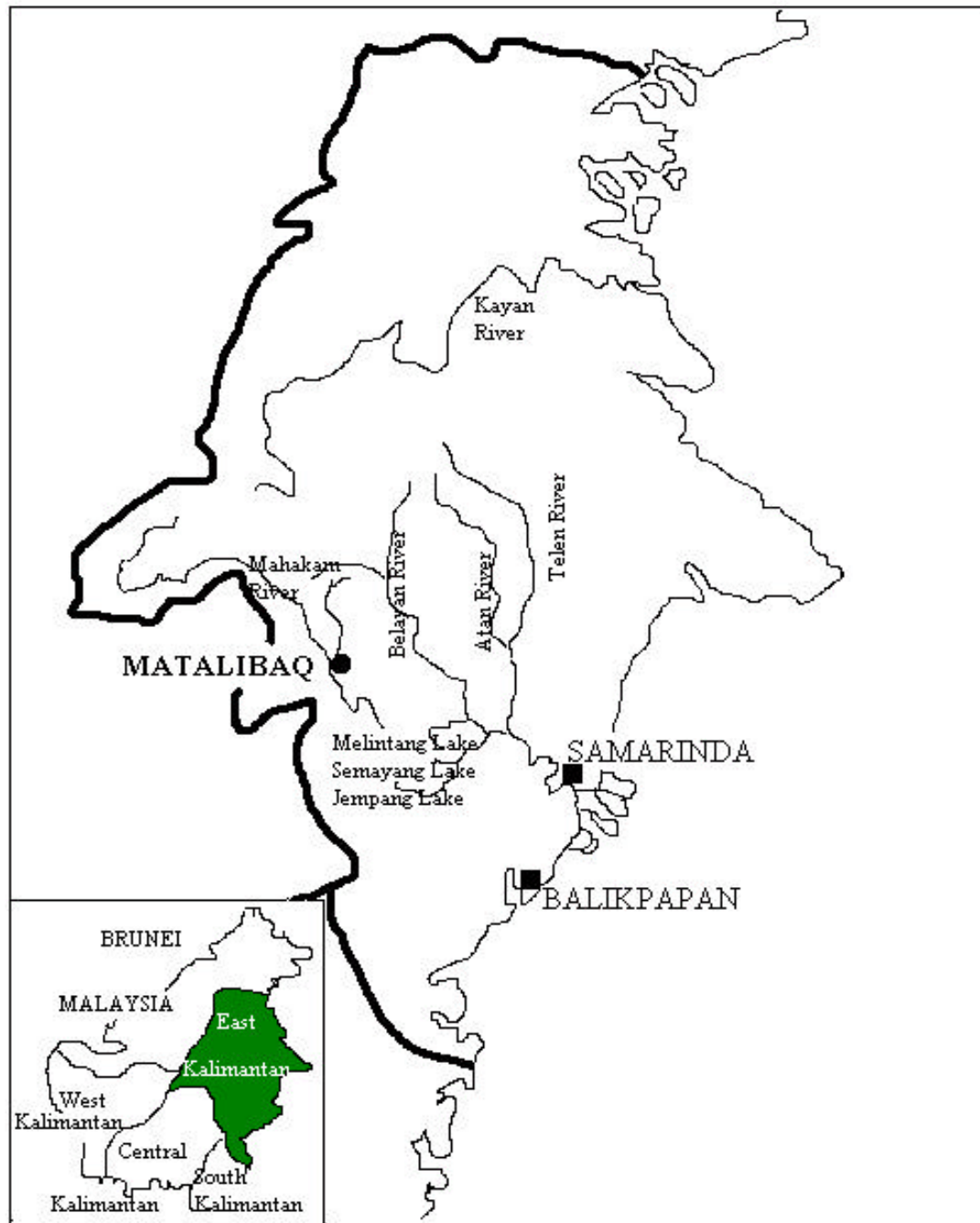
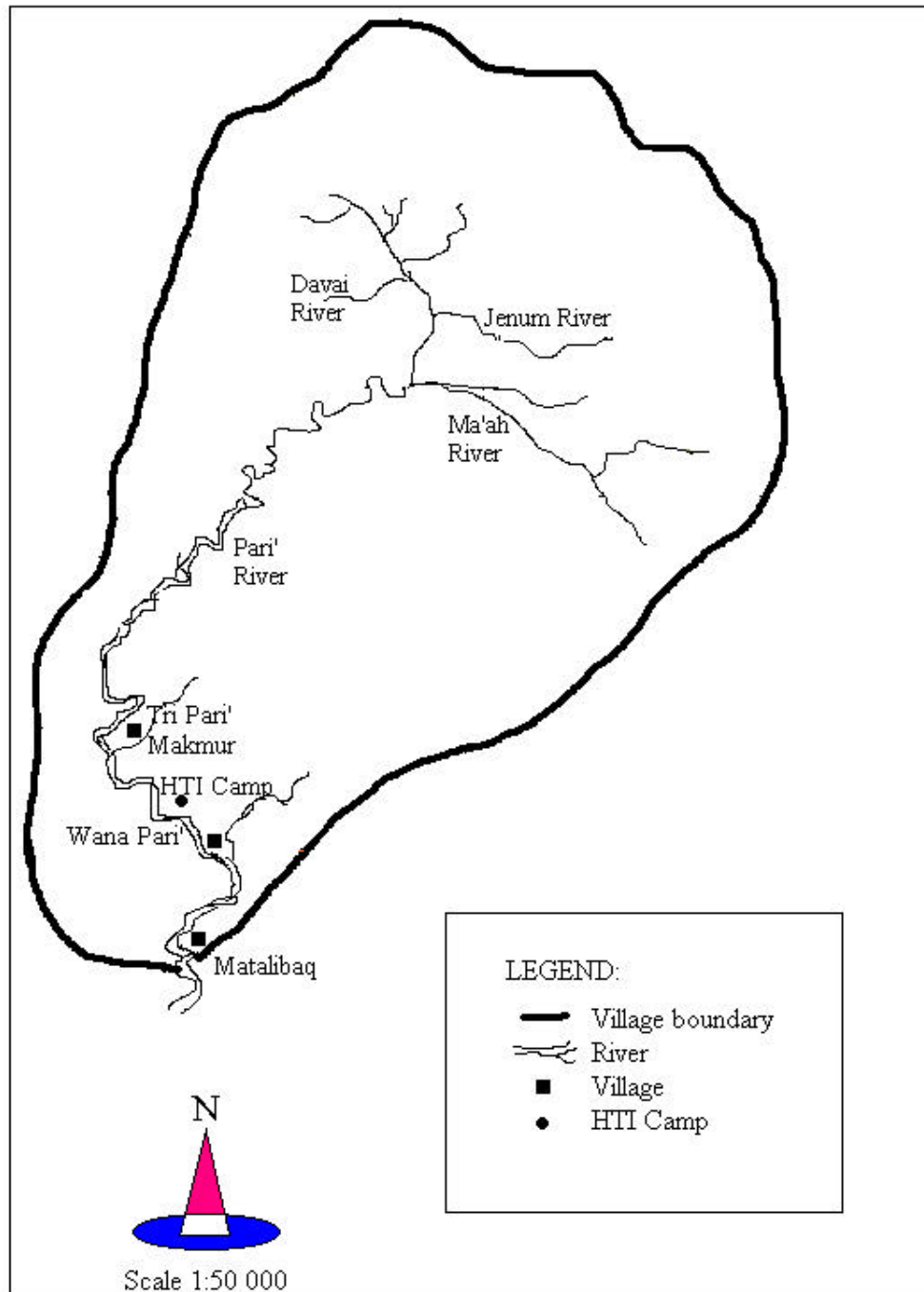


Figure 2. Map of the territory of Matalibaq village



Source: LBB Puti Jaji

## ***Leadership History***

In the past the village leader was called *hipui*. The first *hipui*, when the people were in Lirung Isau, was Tana Yong. The subsequent ones were: Bang Gah, Hubung Bang (a woman), Bo Ngau Wan Imang, Belawing Ubung (Mas Romeo), *Hipui Lawing* (a woman), Bang Long and Kueng Hang.

Villagers translate the word “*hipui*” into *raja* (king). However, I prefer not to use the term “king” to describe *hipui* because it does not match the traditional notion of a king. Traditionally kingship is characterized by an existence of a palace as a center for political and ritual activities, ownership of a large track of land, and a gap between the king and common people. These characteristics do not exist within the *hipui* system. For this reason, I prefer use the word “hereditary leader” for the *hipui* as a person, and “hereditary leadership” for the system.

The structure of the *hipui* government was (from top to bottom respectively): *hipui* (adat leader/great adat leader), *pegawa'* (deputy of *hipui* who is responsible for arranging adat procedures and mechanisms), *hukang* (“human relations”), *kelunan aya' daleh* (group leader or leader of *bilik* in the long house), and *panyin* (commoners).<sup>5</sup> Under the *hipui* system adat was effectively enforced. The *hipui* system was applicable because in the past most of the population was homogeneous in ethnicity. The homogeneity of the population was the key to their compliance with adat.

The *hipui* leadership system ended in 1953 after which a village leader was called *petinggi*, a system imposed by the government.<sup>6</sup> And since the implementation of the Village Government Law (VGL) in 1979 a village leader is now called *kepala desa*. The new village government system separates the village head from the adat leader.

The current leadership system in Matalibaq is composed of a village headman, *kepala adat* (the adat leader), and *ketua lembaga adat* (chair of the Adat Council). The latest organization was set up in 1994. The village headman is simply an extension of higher government levels such as Camat, Bupati (regent), governor, and president. The adat leader is a community leader in affairs related to adat. While the chair of the Lembaga Adat is also an adat leader, he has no authority to make decisions on important matters. Kepala adat is unrelated to lembaga adat. This is strange because both organizations were established following government regulation. In other villages of East Kalimantan Lembaga Adat is chaired by the kepala adat.

## ***The Livelihood System***

Agriculture is the main pillar of the villagers' livelihood. By agriculture we mean swidden cultivation, that is, clearing an area by slashing and burning the vegetation cover. All village residents are swiddeners, including teachers and those who run small variety stores. A rice field is not only cultivated with rice, but also with *palawija* or nonperennial crops, such as cassava, banana, chili, etc. However, rice is only for subsistence and is not sold for cash. *Lepu'un* (fruit gardens) have been traditionally utilized by the community. One *lepu'un* usually contains: rambutan (from several species), jackfruit, durian (*durio zibethinus*), duku and langsung (*lansium domesticum*), mango, coconut, etc. *Lepu'un* still plays a minor role in the community's economy in the sense that it is complementary. Of these products, durian, jackfruit and rambutan have recently contributed more and more significantly to the people's economy.

By the end of the 1980s, people started to grow pepper, cacao, and sengon (*Paraserianthes falcataria*). During off-season, people usually go for *belahan* or *berusaha*, which means making

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<sup>5</sup> Equivalent terms for *pegawa* and *hukang* used here are not exactly correct. This is meant simply to give a rough idea of the meaning of the terms.

<sup>6</sup> In his report of research in Matalibaq, Paulus Kadok mentioned that the *hipui* system was terminated in 1972 upon the establishment of a new system which introduced the institution of *kepala desa* and *kepala adat*. See LBBPJ Manuscript. Studi Tentang Pengelolaan Sumber Daya Hutan oleh Masyarakat, no date.

money by collecting wild forest products such as rattan and wood. When possible, such as during droughts, people run small scale community mines outside the village area. Recently some households (e.g., the village headman) have begun to grow annual crops such as beans, mung beans, string beans, peanuts, and chili. Thus, each household has a “multi-livelihood”: one is the main one and the others are complementary to the main livelihood.

## LAND AND TREE TENURE

### Land Rights and Rights over Natural Resources

Indigenous peoples throughout Kalimantan convey their rights to convert or use particular forest territories under *adat*. *Adat* encompasses every aspect of traditional life one of which is traditional access rule called *hukum adat*. The rules vary from village to village or from community to community, but in general the Dayaks recognize two types of property tenure: common property rights, and private property rights. Both common and private rights are not dependent on the presence of the owners. This means that, if the owners are away for several years, or some community members die, the land still belongs to the owners and the community.

#### *Common Property Rights*

Common property rights are held by the village as a whole. Lepu'un uma' belongs to the whole community and hence it belongs to the common property rights category. In Matalibaq there are nine major lepu'un umas. In the past the common property produce was collected alternately by each household. Nowadays there is some a certain amount of competition among the villagers. Those who are more diligent and aggressive will get more. Private ownership is not allowed within the lepu'un uma. However, recently several people have claimed certain trees based on their relationship to their ancestors.<sup>7</sup>

Primary forest (*tana kaso*) is also common property. Nobody has private claims over primary forestland. However, as we will see, private claims over trees are allowed. In terms of function, people have *tana' mawa* or *tana' peraa'* (literally meaning beloved land). This is land that is well preserved because of its richness: abundant resources needed by the community. This may also include *tana kaso*. The area of the Meriti' River was originally allocated as *tana' mawa* and *tana' belahan*. It functions as the community's savings. They collect the products whenever they really need them for public (such as village ritual support, construction of village hall, etc.) or private interest, particularly in emergencies, for instance, during drought and starvation or harvest failure. Outsiders are allowed to extract products from the *tana' mawa*, provided they have a permit from village leaders, that is, *hipui* in the past, *kepala desa* and *kepala adat* at present. Furthermore, they must give one percent of the products they collect to the community.<sup>8</sup>

Aside from the two common property rights, the community recognizes another common right which they call *luma' hap*. This refers to a piece of land, that is allocated for community interest and cultivated with the cooperation of the whole community.

#### *Private Property Rights*

Private rights to land and forest products are generally recognized by the community members if one or all of the following circumstances exist:<sup>9</sup>

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<sup>7</sup> Rights derived from relationships with ancestors or tree planters, finders, or owners are called descent property rights or descent group common property rights (See Peluso, no date).

<sup>8</sup> This requirement seems new, since in the past people did not make accounts using percentages.

<sup>9</sup> Cf. LBBPJ Manuscript.



1. Labor investment in the land or in the product management (*naa luma'*). Ownership of land was usually acquired after one opened a virgin forest (*tana tu'an*) for swiddening. This is what we call labor investment. Such investment is recognized as well if one has planted crops. Perennial crops are very important as a proof of ownership of the land. Labor-investment-based land ownership applies to both individual and household. Household ownership is based on the fact that it is the household which invest labor, that is, by opening a primary forest on the land.
2. Inheritance (*tana bo haya'*). One can inherit land from his or her parent, grandparents, or even non-kin, if it is bequeathed to him or her by them, or if there is consensus among kin members. When land is bequeathed it includes crops that grow on it and vice versa. Thus, when one inherits a piece of land he or she inherits the *lepu'un* as well; when one gets the *lepu'un* he or she also gets the land. *Lepu'un luma* cannot be handed down to individuals. Only certain crops that grow on it can be handed down. But this is very rare. If both the father and mother die and they haven't handed down their property, inheritance is decided based on consensus among the children. Both sons and daughters have equal rights to the property. However, in many cases, parents' property is given to the youngest son or daughter on the assumption that he or she is the most dependent. Property may also be handed down automatically, that is, when the parent has only one daughter or son. If most of the children have lived independently from the parents and only one has stayed at home with the parents, the parents' property will be handed down "semi-automatically" to him or her.<sup>10</sup> Land and gardens may be handed down to whomever the owner wishes, either kin or non-kin.
3. Prior claim (finder's rights). This kind of right is claimed over trees and swallows' caves. The most important tree is the honey tree (*ayut*).
4. Donation (*keline*). In the past a newcomer to the village might have received a piece of land as a donation from *hipui*.
5. Sale (*pebele'*). In the past people did not sell land. However, recently one family sold its land to transmigrants.
6. Customary Fine (*Uvaat denda*). A person can pay a fine with a piece of land. This is possible, but according to the leader of *Lembaga Adat*, it is also very rare.

### **Tree and Forest Products Tenure**

By forest product tenure I mean the terms of authority or control over certain forest products. This includes rights over trees, swallow nests, virgin forests, and usufruct of trees.

#### ***Rights over trees and swallow nests***

Rights over trees have two bases. The first one is ownership of land. One who owns a piece of land is also the owner of the trees or crops that grow on the land. This is why trees or crops are important proof ("living certificates") of land ownership in the community. The second one is a prior claim which is called a finder's right. This is particularly applied in the ownership of honey trees (usually *benggeris* or *koompassia exelsa*). To show a claim over a tree, the finder clears and fells small trees around the trunk, and if it is a honey tree, nails *pantak* (wooden nail-like tools used to climb up the tree) onto the trunk. In the past, people have claimed temporary ownership over trees in virgin forests by making recognized signs around the tree by felling small trees.

Rights based on prior claim are also applied to the ownership of swallow nests. The first finder of a bird's cave has the right over the cave and the nest. Since the price of the nest is very high, and hence subject to theft, owners tend to keep the information unknown to others.<sup>11</sup>

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<sup>10</sup> See LBBPJ manuscript.

<sup>11</sup> In a group discussion of land use map participants were refusing to indicate the birds' nest caves on the map. They have to keep them unknown to other people.

## *Usufructs*

Among the Bahau Sa' of Matalibaq, temporary possession can be given to a family member or relative if the owner is away for a long period. This is very rare. However, use of forest and tree products can be granted at any time. Honey or bees wax can be harvested from an *ayut* (honey tree) with or without prior approval by the owner. In cases where there is no prior approval, the collector should give a portion of the honey he collects to the owner. Otherwise, he will be fined by adat. Collecting of rattan should be based on prior approval by the owner, otherwise it is considered theft. Traditionally, lepu'un can be collected without prior approval from the owner. In this case, according to adat, the collector should bring the products to the owner and the owner will give him his share.

## LAND USE

### *Land use allocation*

Discussion on current land use reveals that the most "active area" is near rivers as well as village settlements, while most natural forest products are found in the upper river areas, far from village residences (Figure 3). By "active area" I mean an area that is more exploited, converted, or managed by human beings for swiddening, gardening, agroforestry, or other purposes. Much of the active area is taken and used for tree plantation by PT. Barito Pacific Timber (14,000 ha), and for two transmigration areas (180 ha). Logging activities are particularly encroaching in the virgin forest. The encroachment of the plantation and transmigration projects are occurring without prior approval from the village community. This is the reason why conflict has arisen between the community and the plantation.

Because of this people have started to allocate their land for new land use patterns (Figure 4). When I reminded the people that the allocated areas have changed due to the arrival of the timber estate (HTI) and transmigration, they insisted they did not want to change their allocation and argued that they still strove to dismiss the HTI. They do not recognize the existence of the HTI in the current location.

### *Swidden Cultivation*

Everyone in the village practices swidden cultivation. People share the same preference in selecting areas for swiddening. Their selection is based on the type of vegetation. The following is the categories of land based on the vegetation:

- *Tana' Tu'an*: primary forest. Very old regrown swiddened areas and primary-forest-like vegetation are also named tana' tu'an.
- *Be'e*: first year after swiddening; dominant vegetation is grass and scrub.
- *Sepitang*: This includes *sepitang uk* and *sepitang aya'*. *Sepitang uk* refers to 2-3 years after swiddening. Dominant vegetation is small trees (scrubs) with many grasses. In infertile soil the vegetation is usually small, even though it has been left for years to grow, and thus is also called *sepitang uk* (*uk*: small). If after 5-7 years the vegetation grows well, the trees become bigger, and most of the grass has gone, it is called *sepitang aya'* (*aya'*: big).
- *Kaharah*: vegetation dominated by big trees. Smaller trees are called *kaharah uk* and the bigger ones *kaharah aya'*.

Preferred areas for swiddening are areas near major rivers (to facilitate transportation of the produce) and near fields where they have previously planted fruit trees (lepu'un) to facilitate care for the trees. They also prefer hilly areas to restrict access by wild boar.<sup>12</sup> In terms of vegetation,

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<sup>12</sup> I have visited four *ladangs* (rice fields). All are in hilly areas, but are less likely to deter wild boar because the slopes are not very steep.

they prefer *sepitang aya'* and *kaharah uk*. This implies a period of 5-10 years to leave the swiddened area fallow. They believe that after such a long time the soil fertility will recover. Another reason is that clearing this kind of land will result in few grasses and weeds. However, they generally cultivate a piece of land twice consecutively. Therefore, after the first cultivation they will cultivate again the next year and after that leave the land fallow until it is suitable for re-cultivation.<sup>13</sup>

### **Agroforestry**

There are several definitions of agroforestry. One of them defines agroforestry as “the deliberate incorporation of trees into, or the protection of trees within, an agro-ecosystem in an effort to enhance its short-and long-term productiveness, its economic and cultural utility, and its ecological stability” (Clarke and Thaman 1993:10).

The indigenous peoples of the Borneo rainforest have similar traditions of growing tree crops known as agroforests. In East Kalimantan such agroforests are called *lembo*. The Benuaq people call them *simpukng* and the Bahau people call them *lepu'un*.<sup>14</sup>

This kind of agroforest can grow anywhere, where the people are sedentary such as where there is a hut in a rice field (*adang/uma*), or a residential area, and where there are frequent activities in certain places such as a stopover point for journeys. Dominant vegetation grown in the *lepu'un* are perennial crops such as durian, rambutan, jackfruits,

The Bahau Sa' people acknowledge two kinds of *lepu'un*, that is, *lepuun luma'* and *lepu'un uma'*. *Lepu'un luma'* is privately owned by an individual who has cultivated it in his own land. According to the village headman, traditionally, every new household is supposed to cultivate such crops. *Lepu'un uma'* is owned by the community. This is because it is related to the community's history. Usually this kind of *lepu'un* was grown in the previous residential areas of the ancestors. However, as the chair of Lembaga Adat said, certain individuals or families have claimed begun to claim some *lepu'un uma'* as their own. The *lepu'un* in the village proper of Matalibaq is owned by individual households.

### **Gardening**

*Lepu'un* is usually called a fruit garden. The Bahau word for garden is *lidaa*. However people do not use the term *lidaa* to refer to this system. The term “*lidaa*” has two meanings: a garden around a rice field hut and a “new kind of garden.” The first comprises mung bean, string bean, chili, banana, soybean, etc, and the latter includes perennial crops such as rattan, cacao, pepper, coffee,<sup>15</sup> *sengon* (*paraserianthes falcataria*), eucalyptus, and *gamelina* (*gmelina arborea*). Areas surrounding a house in the village proper where people plant several types of crops are called *tamba'* or *pekarangan*.

Villagers started planting pepper and cacao in 1988 and *sengon* in 1989. Soybean was introduced to the community in 1955. People were encouraged to grow cacao and pepper by the Catholic Church and the government because it was quite productive and prospective. People also envisioned the glistening prospect of industrial crops such as *sengon*, eucalyptus, and *gmelina*. Some households have several hectares of *sengon* plantations.

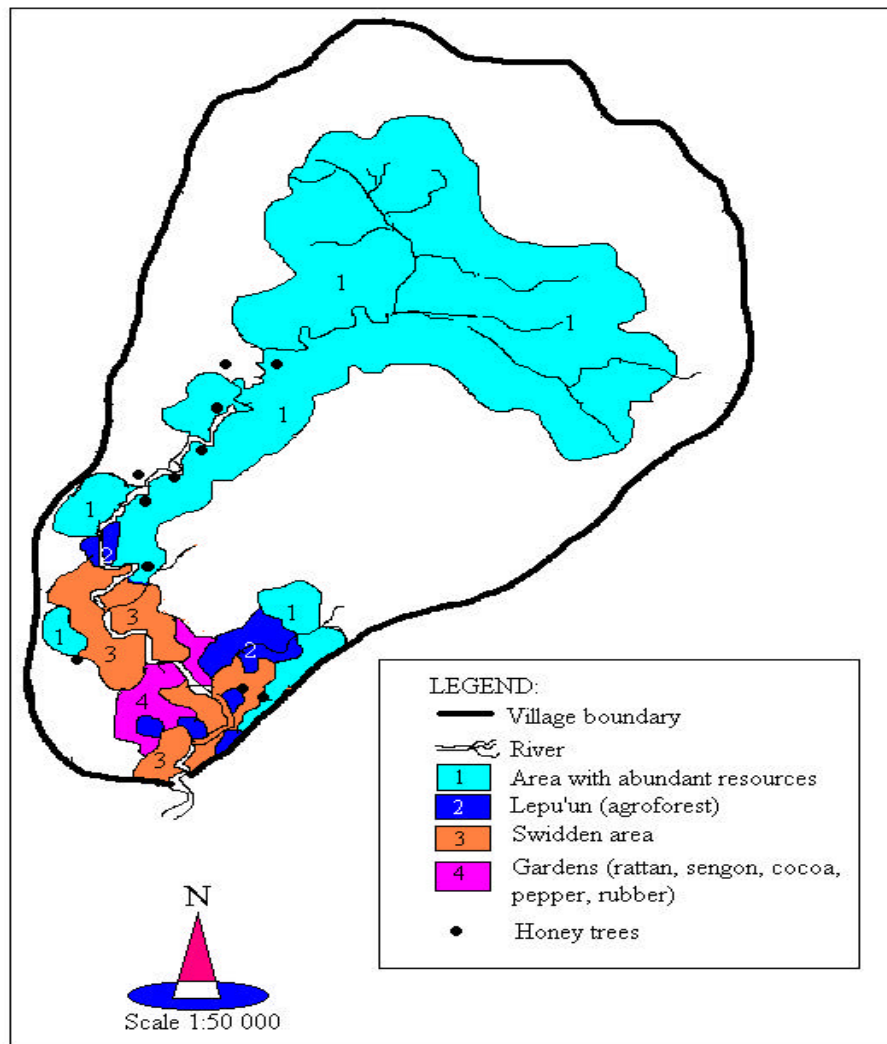
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<sup>13</sup> Cf. Study Tentang Pengelolaan Hutan Oleh Masyarakat by LBB Puti Jaji ( a manuscript).

<sup>14</sup> A comprehensive study on *lembo* has been conducted by Dr. M. Agung Sarjono. See Mustofa Agung Sarjono, “Budidaya Lembo di Kalimantan Timur: Satu Model untuk Pengembangan Pemanfaatan Lahan Agroforestry di Daerah Tropis Lembab.” Disertasi untuk Mendapatkan Titel Doktor pada Universitas Hamburg Bidang Biologi. Mulawarman Forestry Report No. 7, Hamburg 1990.

<sup>15</sup> Traditionally people grow banana, chili, and cucumber at the time they plant rice. Recently, however, they tend to make separate garden for those crops.

Figure 3. Lay out map of current land use pattern by residents of Matalibaq



Source: Group interview

### AGRICULTURAL WORK ORGANIZATIONS

An exploration of how works and labors are organized is important in order to know the social relations of the community and how these change if the mode of production changes.

#### *Labor management*

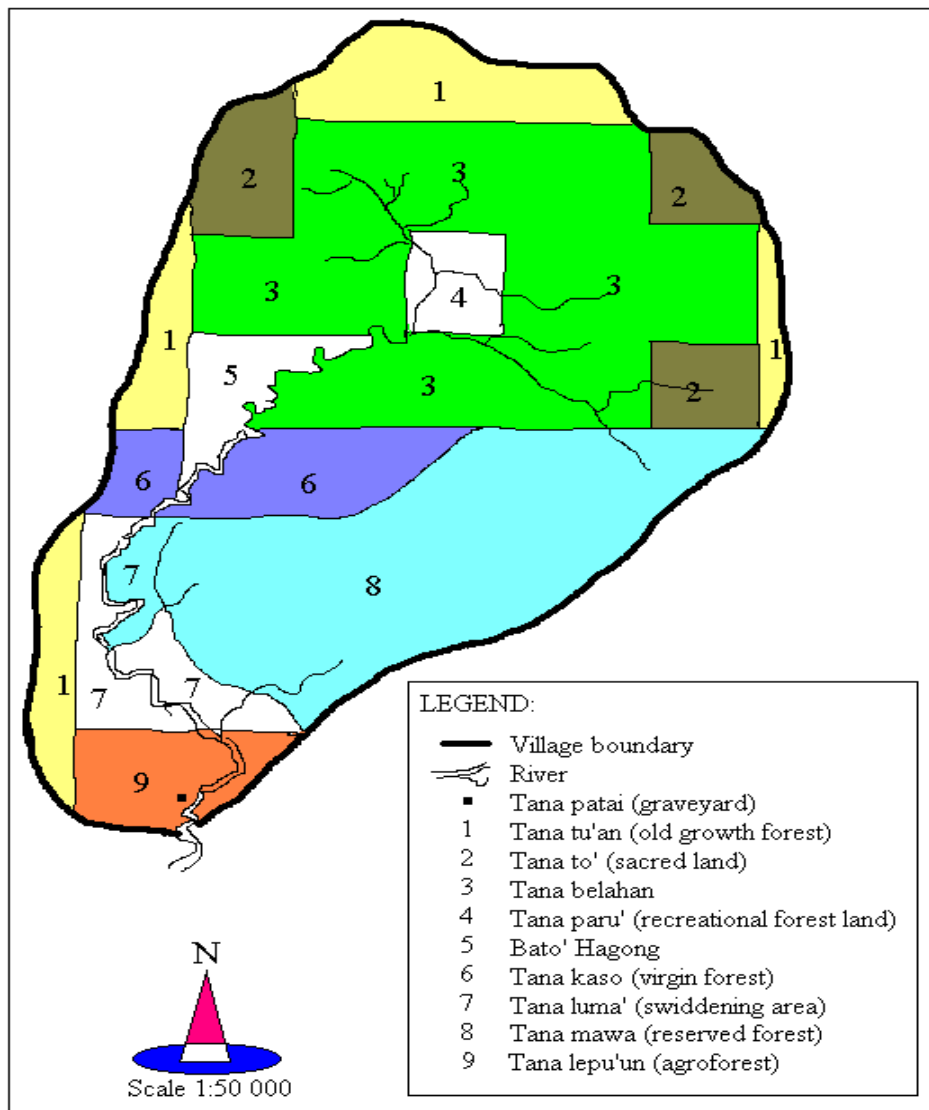
Agricultural labor in the Matalibaq village can be divided into three types, to wit:

1. Reciprocal labor (*pelak dau*): one works on other people's land in exchange for their work on his or hers. In Matalibaq this kind of labor is done either by kin or non-kin. It is generally practiced when farming activities need much labor, such as land clearing, planting, and

weeding. Each village member is traditionally and socially bound to this labor system. Therefore, only for serious reasons may a member avoid this kind of labor. However, during farming season in one day there might be several invitations for reciprocal help, so household members often work separately in different farms.

2. Sharecropping: Shares in the harvest are exchanged for labor. This is usually applied when a household is unable to harvest a rice field. After a day's work, those who have helped the family will go home with a basket of rice. This kind of labor is also practiced in fruit and honey harvesting.
3. Wage labor: monetary or other remuneration for someone who works on one's land. In the past this kind of labor was unknown to the community. Only recently have people started to

Figure 4. Approximate map of new land use allocation by residents of Matalibaq



Source: group interview

## BOX 1. FARMING TRADITION AND RITUALS

Every year people must select areas for swiddening. Each household has the freedom to select areas in its own land. If one wishes to select common land, for instance primary forest, he must get permission or approval from hipui, kepala adat, and the community.

Swiddening activities involve many steps. However, these steps can be categorized into three: land clearing, planting, and harvesting. All of these activities follow sophisticated rituals and norms.

The planting ritual is called *lali ugaan* (literally, *lali* means taboo and *ugaan* means planting). This covers sixteen days. On the first day (called *lavu aya'*), only hipui is allowed to plant. Common people start planting on the fourth day. The seventh day is a holiday and nobody is allowed to work in the rice field. Every person is supposed to stay in the village playing tug-of-war; men play *gasing* (tops), women play *kelap ga*, and a small ritual is carried out by a group of women. Farming activities resume the next day and there is a holiday again on the eleventh day (*lo kenaah livah*) and the last day (day 15th), which is called *lo ketusu' livah*. On these days similar activities to those of the 7<sup>th</sup> day are conducted by villagers, men and women, old and young. After the *lo ketusu' livah* day normal activities resume.

The harvesting season is preceded by planting rituals lasting for seven days. This ritual is called *lali pakaan*. Within these days people perform *hudo'* rituals. *Hudo'* is a symbol of the spirit of rice, presented in the form of mask with a human shape. People start harvesting after these ritual holidays.

I stayed in Matalibaq during the *lali ugaan* period. However, planting rituals were not well conducted, since many villagers were busy working for cash. No adult men played *gasing*, and there was no tug-of-war because, I was told, rattan was not available due to the recent forest fire. Rattan is used for the robe.

4. Communal labor: people work together on a common land for their mutual benefit. This kind of agricultural labor was recently developed. In the late 1980s community members were divided into two groups of *Rukun Tetangga* (RT or Neighborhood Association) called RT I and RT II. Each RT developed its own coffee garden. Initially people were very enthusiastic and everybody came to work. However, the garden was not well maintained and produced no results for the members. According to the chair of Lembaga Adat, this was because most members did not consider the group interest important, they were more individualistic. Another reason was lack of coordination and lack of focus. There are also “kebun PKK” (garden cultivated by a group of women), where women work together.

### **Labor Calendar**

I divided agricultural labor in the Bahau Sa' community of Matalibaq into two categories: seasonal labor and non-seasonal labor.

1. *Seasonal labor*. This includes a) *swiddening labor*, that is, work and activities involved in the process of swiddening. There are several phases of this process: land clearing (cutting small bushes/*lemirek/meda*), felling trees (*nevang/mepat*), pre-burning (*kelihang pat*) and burning (*nutung/mekup*), planting rituals (*lali ugaan*), planting (*nugaan*), weeding (*havau*), building rice storage (*nabaraang*), harvesting rituals (*lali pakaan*), harvesting (*ngelunau*), and off-season (*ledoh*). (All activities involve both men and women);<sup>16</sup> b) collecting or harvesting agroforest and garden products such as durian, jackfruit, rambutan, mango, coffee, etc.

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<sup>16</sup> The role of men and women or gender division of labor is not well documented in this study.

2. *Non-seasonal labor.* This labor is employed at any time throughout the year. It includes wood collecting, fishing, rattan collecting, sprout collecting, sugar palm collecting, pandan collecting, and wild boar hunting. However, to some extent, some of these activities can be called seasonal. Wild boar hunting, for instance, has a season, where population of the boars is at a peak, mainly due to migration in search of food from one area to another, usually across a river.

## **FOREST UTILIZATION**

People of Matalibaq used the forest for agriculture, source of diets (hunting, fishing, collecting wild vegetables), construction materials and other needs, commercial purpose, and recreation. The following sections contain descriptions of each use.

### **Forest for Agriculture**

Shifting cultivation dominates the use of forest in Matalibaq. All households practice this cultivation system. In the past people used to clear primary forest (*tana tu'an*) because of two advantages: less grasses and weeds and higher productivity. However, since late 1960s people have not cleared primary forest because of the increasing value of timber/woods and the location is more distant from their residence. Production of hill rice has decreased since the 1970s and reached its lowest level in 1998 due to the long drought. During the drought of 1997/98 people noticed many absolute harvest failure.

The use of forest land for agriculture is not only for rice farming, but for cultivating vegetables and other non-perennial crops as well. A rice field is also a vegetable garden. Some vegetable species, such as cucumber and maize, are planted at the time of planting rice (*nugaan*). Other species are planted one or two months after planting rice. These are banana, chili, cassava and others. Some people may plant pineapple.

After years a small location of the rice field, i.e., around the hut or rice barn, may develop into a fruit garden (*lepu'un*). This is because people like to plant several fruit species (rambutan, jackfruit, durian, etc.) around. Some household may plant fruit in the whole rice field. Traditionally, a rice field is also a vegetable garden. Only in recent years some households have made separate vegetable gardens from rice fields and developed special tree gardens such as *sengon* (*paraserianthes falcataria*) and *gmelina arborea*.

### **Forest as a Source of Diets**

The shifting cultivation practitioners are hunters, fishers and gatherers at the same time. People benefit a lot from forest as they can get their diets from it. Hunting is very popular, particularly wild boar. Wild boar population is high -- and increased after the forest fires -- and there is a season where they move (migrate) in a group from one river side to another. This is a good moment where people can hunt them while crossing the river. Wild boar is not only popular for its meat, but for its fat as well. The fat is a delicious cooking oil used by the people. Many households acknowledged that since the economic crisis, in which commercial cooking oil was rare and expensive, wild boar "cooking oil" was a great substitute.

People also hunt deer, mouse deer, stag, porcupine. But the population of these animals are relatively low. Monkey is also hunted. But its meat is not popular for diet. Birds is hunted as well. It has delicious meat, but the hunting was directed primarily to catch birds which have high economic value such as myna bird.

Fishing is quite popular. However, although some households or people have sold fish, they did not catch it in large amount. Recently people complained about people from outside who caught (stole) fish in the village's rivers by electrocution. They said it endangers all kind of fish,

particularly the small ones. Forest is also an important source of vegetables such as sprouts (of bamboo, rattan, *nivung*, *nanga'*, etc.), ferns, sugar palm, and fruits (*lansium domesticum*, *nephelium spp*, etc.).

### **Construction Materials and Other Needs**

Houses are made of wood. For this purpose ironwood (*eusideroxylon zwageri*), dipterocarps (*dipterocarpus spp*), and other species of wood such as *bengkirai* (*shorea laevis*), *meranti* (*shorea spp*), and *kapur* (*dryobalanops spp*), are very important. People also cut these tree species to make boat and to construct a raft (rakit) in the river. Like a house raft is important for each household because it functions as a place for taking a bath and cleaning clothes as well as toilet. Each household makes its own materials. But rich households have paid some people to make such construction materials. Since the only transportation is by boat, resin plays an important role as a boat caulking. Wood is also collected for fuel, but not every wood is good as firewood. Easily-ignite wood is preferred.

Rattan is a major non-timber product. In Matalibaq rattan is mainly extracted from natural forest. Only few people have planted rattan. Rattan is used to make bags, carrier, mats, and as cord to tie. In the past house roofs were tied with rattan. But for long time people have used nails instead of rattan. Other uses such as ritual's paraphernalia, medicinal plants, blowing pipe and its arrows and poison, broom, etc. are collected from the forest, either primary or secondary. Mats are also made of pandan (*pandanus tectorius*).

### **Commercial Forest products**

Many forest products have relatively higher economic value. These are rattan, wood (from several species), honey, fruits, game animals, fish, durian, jackfruit, and bird nests. Among these rattan has a longer commercial history. Since the 1950s people have sold rattan. The use of rattan per household has been declined since the 1960s, but production for commercial market increased until the end of the 1980s. After the drop in rattan price in early the 1990s the production of rattan dropped as well. But the drought and forest fires together with economic crisis in 1997 have forced the people to collect more rattan from the forest.

Wood also has a long commercial history. The 1960s was a decade that saw wood production boom, and was called *banjir kap* or *kopersil*. During the *banjir kap* period, many villagers entered the forest and felled trees for timber. The *banjir kap* was stopped by the government in the early 1970s and replaced with the introduction of HPH (*Hak Pengusahaan Hutan*), or logging concessions given to corporations. Since then, many people have worked as laborers for the concessionaires. In Matalibaq, the peak of wood production by the villagers was in the 1980s. Production began to drop in the early 1990s. People sell wood in the forms of log, beam, bar, and board. Recently many wood species have economic value. Among these ironwood (*eusideroxylon zwageri*), *meranti* (*shorea spp*), *bengkirai* (*shorea laevis*), and *kapur* (*dryobalanops spp*) have the highest value. However, selling and trading wood, including wood from one's own forest, is not easy without government permit. After the drought and fire of 1997/98 a rich man of the village who has been running business in the provincial capital city, has gained a permit to collect dead durian trees caused by the drought. All durian trees near rivers have been cut down. Honey, game animals, and fish, sprouts, bamboo, and pandan are collected for "local market" within the community itself, but only in small volume. Durian and jackfruit are marketable. But their prices are dependent on the seasons: in some season the production is abundant and thus low price and vice versa.

It is worth note that poor households sold more varieties of forest products. They sold whatever products that can be sold, particularly after the harvest failure in 1998. This includes rattan, wood, honey, fruits, game animals, fish, medicinal plants, durian, jackfruit, sprouts,



bamboo, and pandan. Richer household sold fewer varieties, mainly rattan, wood, durian and jackfruit, and bird nests. The richer the people are, the more they collect forest products for their own use and the less they sell the products. The reason for this is because they have other sources of income, such as salaries from teaching or running small variety stores. Most of the products collected by people of this category are for their own use.

The advent of commercial tree estate company (HTI) in 1992 has motivated the people, particularly the rich, to plant trees of commercial values such as sengon and *gmelina arborea*. People were motivated by a perceived market brought about by the existence of operation of the timber estate company as well as by the government campaign about the big profit they will get from the market. However, the late forest fire has destroyed most of the villagers' tree plantations before they can harvest them.

### **Forest for Recreation**

The recreation forest is called *tana' paru'*. People of Matalibaq sometimes go for a *paru'* (recreation) in the upper area of Pari' River, about one hour away by a motor boat from the village residence. The recreational activities include fishing, collecting wild vegetables, and cooking and having a party together. They do it in a group (family or other kinds of group). The recreational activity is not done frequently and has no regular schedule.

## **FOREST PRODUCTS UTILIZATION**

I explored the utilization of forest products by socio-economic status. A process of wealth ranking divided the community into three socio-economic status (SES), that is, high (rich), medium, and low (poor). Rich households are characterized by at least three of these: ownership of semi permanent wooden house, high capacity motorboat, large track of land, garden and plantation (sengon, cocoa, rattan, or rubber), small variety store, permanent salary, and children get high school or university education. Medium SES includes households with moderate house quality, enough land, some have plantation, medium to high capacity motor boat, and children get high education. Poor households rely mainly on swidden agriculture, old house or non-completely constructed house, small capacity motorboat or not at all, children mostly do not get high school education.

As it is impossible for the households to provide precise data of forest products they have collected, used, or sold., we used corn quantification technique to help them make estimate of relative ranks of it within one year-period before the forest fires. Twenty-one households (7 low, 9 medium, and 5 high) were asked to draw a products-use matrix. Various products were listed along the vertical axis, and three columns were drawn for products collection, use, and sale. Then they marked the columns with corn seeds to indicate the estimate of products they have collected, use, and sold within one-year period (1996-97). The maximum markers on a box were limited to 10 seeds, representing the highest rank, and one seed marks the lowest. After completing the collection column, the informants were asked to make estimates of the use and sale out of the collections. To make a comparison of the three categories possible, we converted the average estimate of each SES category into percentages (Figure 5 and Table 2).

The products list indicates that both wood and non-wood forest products (NWFP) are very important for the community's economy, either for cash or use/consumption. Fifteen of the products listed are NWFP. The ranks of collection by each SES category follow almost

similar trend: when collection by one category is low it tends to be as low in the other categories (Figure 5). The level of collection by the three categories is high for rattan, woods, fruits, game animals, fish, durian, jackfruit, sprouts, bamboo, and pandan, and low in other products.

In table 1 poor people seem more dependent on a variety of forest products for cash. Poor people sell every product they can (14 out of 16). Only products that have no market (resin) are not sold. Even though products have a good market, the people do not sell it all, they retain some for their own use or consumption. This is true in the case of rattan, woods, honey, fish, game animals, durian, and jackfruits. People of medium SES sell 12 varieties and people of high SES sell only 9 varieties.

Figure 5. Forest products utilization showing relative importance for each SES Category in Matalibaq within one year (1996-1997).

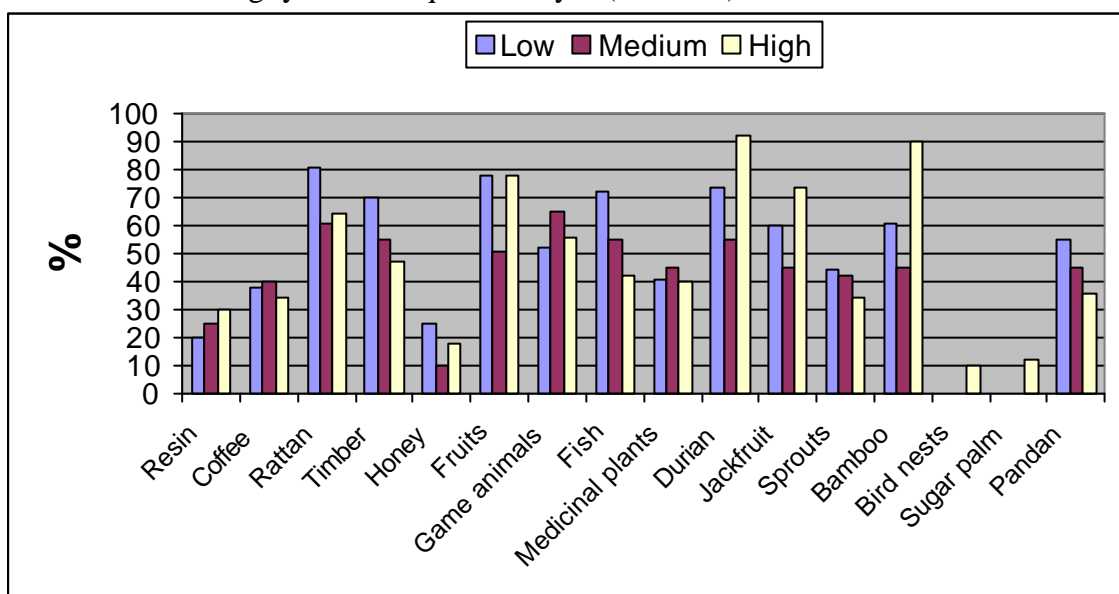


Table 1. Relative forest products sold and used by each SES Category of Matalibaq community within one year (1996-1997)

(Unit: %)

Forest Products	Sold			Used		
	Low SES	Medium SES	High SES	Low SES	Medium SES	High SES
Resin	0	0	0	100	100	100
Coffee	10	21	8	90	79	92
Rattan	58	72	64	42	28	36
Timber	53	51	30	47	49	70
Honey	44	14	4	56	86	96
Fruits	36	67	41	64	23	59
Game animals	53	43	0	47	57	100
Fish	53	41	0	47	59	100
Medicinal plants	17	0	0	83	100	100

Durian	44	54	58	56	46	42
Jackfruit	43	28	44	57	72	56
Sprouts	3	17	0	97	83	100
Bamboo	17	7	0	83	93	100
Bird nests	0	0	100	0	0	0
Sugar palm	0	0	0	0	0	100
Pandan	33	28	6	67	72	94

Source: Interview

Table 1 also reveals that richer people collect forest products more for their own use rather than selling them. The reason for this is because they have other sources of income, such as salaries from teaching or running small variety stores.

People ' s dependence on forest products is high. The Forest provides sufficient products if well preserved. The large scale forest fires of 1997/98 have destroyed a great deal of these products, and thus some households, particularly the poor ones, left the village to find alternative income such as engaging in small scale mining activities.

## ISSUES IN FOREST USE AND MANAGEMENT

### The Issues

This section discusses important issues and problems in the management and utilization of forests by the Matalibaq community. These issues fall into three categories as follows: land tenure security, forest fires, and village politics.

#### *Land Tenure Security*

The territory of Matalibaq covers a very large area including a large track of virgin forest as well as cultivated land. Within such a large area, with a very low population density, internal conflict over land is less likely to occur unless there is encroachment from external forces. Such encroachment began long ago with the advent of timber concessions. However, timber concessions created few problems for the community and tenure security was relatively stable until the arrival of HTI/HTI transmigration in 1992.

HTI/HTI Transmigration was allocated a large area in Matalibaq that is mainly within the cultivated land called *tanah adat* (customary land). The villagers admitted that the main problem they encountered was land expropriation by the HTI Corporation both for tree estate and transmigration location. They call it "land plundering" because the land was taken from them without prior consultation. The decision was made by the government. Such decision making processes are very common in the very centralized Indonesian government system.

Negotiations between the community and the corporation, and even tripartite negotiations which also involve the government have been frequently carried out, but no result has been completely acceptable to the community. The people are worried about the possibility of further HTI or logging activities in the future.

Land tenure insecurity is also a result of the absence of government recognition of customary land (*tanah adat*). During the New Order government development, priority and privilege was given to the so-called national interest, often at the expense of ethnic interest, such as access to land and natural resources. In Kalimantan, customary land ownership has never been recognized since, as the government says, the ethnic groups of the island do not have *tanah ulayat*, that is, land owned collectively by the whole community like in Minangkabau, West Sumatera.

## ***Forest Fires***

Two forest fires have raged in Matalibaq's history. The first occurred in 1982. This was a minor fire and did not destroy important resources. Forest products were easily available. Therefore, the people were not threatened by starvation despite the long drought. The second fire raged in 1997/98. This devastating fire destroyed the most important areas, including cultivated areas which, in the pre-fire period, provided a lot of produce such as rattan, fruits, etc. After the fire, forest production dropped sharply. Five months after the fire (in September 1998) production of durian, rambutan, mango and other products of lepu'un stopped completely, even though they were in season at the time. Dead durian trees were logged and sold for cash.<sup>17</sup> In many areas the burned forest vegetation changed into *imperata* grass and wild bananas (*musa* sp).

The core issue is how to re-grow the lost resources, particularly lepu'un and gardens. People have admitted that they will have to start again from zero. Fires have changed the ecosystem and, despite the fact that ecosystem is dynamic, it will take a long time to regenerate. Meanwhile, as studies revealed, young vegetation such as shrub and grass is more prone to fire. Regenerating forests are more likely to ignite and suffer heavy damage than are unburned and undisturbed forest (Schweithelm 1998). Thus, it requires a great effort to prevent fires in the next dry season.

## ***Village Politics***

By village politics I mean the distribution of power within the village community and the way it influences decision-making processes concerning public affairs. Village politics of Matalibaq are characterized by the existence and influences of both internal and external forces.

Internally the village has three important organizations, i.e. governmental organization, extra-governmental organization, and traditional organization. Governmental organization includes village government led by a village headman called *kepala desa* (*kades*). The village government is hierarchically tied to the higher government, and subsequently the sub-district (*kecamatan*), district or regency (*kabupaten*), province, and central governments. The Village Government Law (VGL) 1979 gives very weak authority to the village government to allocate resources or to make decisions. Therefore, in many villages, headmen are more likely to represent the government rather than the community (Nanang 1997). At the beginning of the land dispute with the HTI in Matalibaq, the headman was acting on behalf of the government. Since there was strong opposition from the community, however, he changed his mind and to some extent is now pro-community.

Extra-governmental organizations are called community organizations, but were established and regulated by the government to support government policy. The most important extra-governmental organization is *LKMD* (*Lembaga Ketahanan Masyarakat Desa*) or the Village Defense Organization. The village headman the chair ex-officio of LKMD. Despite its supposed importance LKMD has a small role in the community decision-making of Matalibaq.

The traditional organizations or "institutions" retain an ambiguous position. The institution is called *adat* and under the *adat* system, the village politics were managed under a *hipui* system. However, the *hipui* system has been diminished and has been replaced with government-designed organizations called *Kepala Adat* (customary leader) and *Lembaga Adat* (Customary Council). As mentioned before, the two organizations are separate. In the current Matalibaq community, only *Lembaga adat* plays an important role in community affairs, particularly in land disputes and negotiations with the HTI. The chair is very much respected by the community because he shares the same interests as them. The majority of the villagers are well organized around the chair of the *Lembaga Adat* and the group carried out all the dispute and negotiations with the HTI. Meanwhile, an internal conflict is making it difficult to solve the dispute.

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<sup>17</sup> The long drought of 1997/98 caused many durian trees to die, even though many trees were not burned by fires.

Until late December 1998 some powerful families of a “kingroup” were in a conflicting position with the community because they wanted to further their own interest in the land dispute with the HTI. They wanted compensation from the HTI for the death of their member in the forest fire last year at the expense of the larger village interest. This stance led to acute conflict with other village members and thereby exacerbates the issue of land insecurity in the community.

Village politics are also characterized by the existence of external forces. HTI and logging concessions (HPH) have significantly influenced the community, particularly in forest management and utilization. They limited the people’s access to the land and forest. Both HTI and HPH are supported by the government and military. A group discussion that we conducted indicated the role of *Komando Rayon Militer* (KORAMIL) or military headquarters at the sub-district level of Long Iram, the sub-district police (POLSEK) and the Local Forest Service (*Dinas Kehutanan*) of Melak.

## **BOX 2. LAND CONFLICT STORY**

### ***Conflict history***

As often happened in the very centralized New Order government of Indonesia, a program of timber plantation called HTI and HTI transmigration was imposed by the government. Accordingly an HTI plantation/HTI transmigration run by PT Limbang Praja, an affiliate of the Barito Pacific Group, was imposed in 1992 on the Matalibaq area by the government without prior discussion with or approval by the Matalibaq community.

The company has two projects, that is, transmigration and plantation. The transmigration project is actually a government program, which is incorporated in the plantation to provide labor for it. In May 1992, transmigrants from East Nusa Tenggara (NTT province) came to the area and inhabited the area around the Bengeh River (8,400 ha). This area is one of the most important customary lands of the Matalibaq community. The community declared their objection to the project. On 22 May 1992 a tripartite meeting was conducted between the community, the company, and the Sub-district government of Long Iram. It was decided that the community would formulate their conditions for the release of their customary land. The people then came up with 14 conditions. The company rejected the conditions on the basis that the company was simply an implementer of the government’s program. The community continues to appeal and at the time of my fieldwork the company had agreed to three of the conditions. These are: one typewriter for the village office, a power generator and electric installation for the village, and renovation of the *amin aya*’ (village hall).

Another project is timber plantation, in this case sengon (*paraserianthes falcataria*). PT Limbang Praja Timber gets a concession of 14,000 ha for the plantation. This includes the most reserved customary land along the Meriti’ River. Meanwhile the corporation has allegedly stolen a good deal of wood in the upper area of the Pari’ River. The company’s activities have swept away a lot of natural resources and forest riches.

The plantation was greatly burned during the last forest fire. Nonetheless, HTI activities continue in the area and now PT Anangga Pundi Nusa, another affiliate of the Barito Pacific Group, runs the management. The conflict with the community has not reached any solution. Meanwhile, many of the transmigrants (mostly from Tri Pari’ Makmur) have left their houses and designated lands seeking new livelihoods elsewhere.

### ***Conflict Resolution***

Negotiations have been carried out several times between the community and the HTI company. As mentioned before, the company agreed to provide the village with a typewriter and power generator as well as to renovate the village hall. Recently, based on government requirements, the company set up a PMDH (*Pembinaan Masyarakat Desa Hutan*) or Forest

Community Development Program ). A small office has been built in the village. Villagers believed that the PMDH program is simply to show the company's benevolence. The company wished to use this program as part of its obligation to pay compensation to the villagers. The villagers object to such a trick and continue to appeal.

Several negotiations were carried out in late 1998 and January 1999 (three months after my fieldwork). The company has agreed to meet the 14 conditions, but refused to pay compensation of 5 billion Rupiahs to the village. The villagers lowered the amount to 3 billion, but the company claimed that it can only pay 200 million. Meanwhile, the community was split into two groups: the village majority who hold a firm stance against the company, and a small group of "families" who have prioritized their own claims. Villagers believe that the recent forest fire was largely caused by the company and asked it to pay compensation. The group argues that compensation should also go to the family of woman who died because she was trapped in the fire.

There was an indication that the company will pay compensation to the dead woman, but they refused to separate it from other claims. This means that, if the company pay the compensation, it will not pay or comply with other claims. The majority keeps on with their claims and the group continues to appeal, but surprisingly the headman has not been involved in any negotiations. In late December 1998 the company refused to continue the negotiations and passed all matters onto its lawyers.

The conflict reached its most critical stage when, on February 1, 1999 angry villagers occupied the camp base of the HTI. This action was taken to force the company to resume negotiations. At the time that this report was finalized the conflict has not been settled.

The people admitted that some Samarinda-based NGOs play important roles in the community. This will be discussed below.

### **The Community's Response and Dispute Settlement**

Confronted by these issues, endeavors have been made by the community. The issue of land tenure security was responded to by village mapping activities as a means to gain government recognition of their land. Here the role of LBBPJ, an NGO based in the provincial capital, is very important. It provides training in community mapping using GPS (Geographic Positioning System) and thereby the community is able to make its own maps. Three maps have been made, that is, a territory map, a residence map (map of the village proper), and a map of the would-be land use allocation. The Sub-district head of Long Hubung has authorized the territory map. The community considers this authorization a preliminary recognition of their right over the lands and it offers a degree of security.

Other environment-oriented NGOs in Samarinda such as Komite Hak Azasi Manusia (Committee on Human Rights) and Plasma, have continuously supported the community in their dispute with the HTI by supplying ideas, legal input, and mediation. Until recently the dispute between the community and HTI had not been fully settled. Recent information shows that the corporation rejects to having negotiations and instead is taking litigation measures. Issues pertaining to the forest fire and village politics have not been overcome. The breakup of the community must be solved if it is to retain a strong stance against the corporation.

Traditionally, under the hipui system, conflict over land and natural resources were settled based on the adat. The mechanism was this: First, the dispute or conflict was to be settled between disputants themselves on the basis of the familial relationship. If unsettled, the issue was to be brought to the village elders (*tetua adat*), which was called *pegawa*. The highest level of dispute settlement was hipui, which is nowadays called *kepala adat* (adat leader). Those who are found guilty are to be fined what is called *ga' adat* or a customary fine.

There are two types of customary fine: a common fine and a fine relating to marital affairs. Common fines are enforced without discrimination or difference between the hipui and village

leaders and the common people. People of different ranks guilty of similar misconduct were to be fined in a similar way. In marital affairs, however, the hipui would be fined more than the common people. This was because *gawai* for the hipui wedding is higher than for the commoners. *Gawai* is all the requirements and paraphernalia provided by the groom for the wedding.

Levels of customary fines according to the Ketua Lembaga Adat are from the lowest to the highest respectively: *gunsing, mekau, maung, antang, terai, gong, mandau tampilan*. Customary fines for breaking of *lali* are: bead bracelets, clothes, eggs, *parang* (machete), rice, chicken, *belanai/tajau*. All of these items should be confiscated at once.

This manner of settling disputes cannot be applied to disputes between the community and outsiders, such as the dispute with the HTI. It is even doubtful that the traditional way can now be effectively applied in internal disputes because to some extent many people do not comply or observe adat norms. In other words adat has changed. The people need alternatives for settling disputes.

## SUMMARY AND DISCUSSION OF FINDINGS

The above description is summarized and discussed more deeply in this section based on the perspectives of community participation and resource sustainability. The summary and discussion cover the following points: land tenure, land use, work organizations, and forest product use.

### *Land Tenure*

The land tenure system is based on the traditional norms called adat or hukum adat (customary law). In this case the oral history of the community is a very important clue to understanding their claim to and ownership of land and natural resources, including the forest. However, the absence of formal recognition of the customary ownership system by the government has created a gap between the system and positive laws of the nation. As the people are in a weaker position before the government, which usually backs up concessionaires, they are confronted with land tenure insecurity. At any time the government can claim and expropriate customary land to be used for the so-called “national interest.” Customary land ownership is fragile.

Even though the people are beginning to be less obedient toward adat, adat is still a fundamental basis of land ownership and access to resources. They have been pressured by external forces to find a new way to defend their land. Territory and land use mapping has been quite meaningful. However, this is still a preliminary step toward a real and unambiguous adoption of customary land in national legislation.

Actually, as we have seen, the basis for this recognition has been laid down again by the People’s Consultative Assembly (MPR) in 1998 (Abdurrahman 1998). However, this is still to be interpreted in an unambiguous formulation of the national laws. Principles of recognition of customary land have been put forward by the Constitution, the Basic Agrarian Law of 1960, and the Basic Forestry Law of 1967. All these, however, are ambiguous and conditional: customary lands are recognized insofar as they still exist and do not contradict the national interest; a statement that is open to diverse interpretations (Nanang 1997). From another perspective, however, the government’s interpretation is clear-cut and unambiguous; it is based on article 33 of the Constitution which says, “land, water, and their natural riches are controlled by the State and are to be utilized for the maximum prosperity of the people” (Moniaga 1998:125). In reality this appears in a form of suppression of many indigenous rights over control of the land and its natural resources.

If the government of Indonesia is committed to upholding the people’s rights to land and natural resources, it should help to settle the existing conflict between the people and the HTI (which is in fact also a conflict with the government) in a benign way. The conflict is reaching a

critical stage; this was marked by the people's occupation of the HTI camp. This conflict is a result of the previous regime, which gave too many privileges to concessionaires and alienated local people's rights.

Securing the people's rights to land and natural resources is one of the important measures that must be taken by the government. Granting secure tenure to the people will stabilize their boundaries, protect the productive forest from attack, and enable them to develop their systems. Otherwise, more conflict will occur in the future, as Kalimantan is an island where many conflicting forces are at work and make "it no easy task to secure a mix of land uses which will be suitable and sustainable" (Padoch and Peluso 1996:36).

### ***Land Use***

Swidden cultivation as a main procurement, still dominates the land use pattern of Matalibaq people. The practice of swiddening is viable due to low population density (0,09 person/km<sup>2</sup>). Swidden agriculture can support 10-50 people per square kilometer, on average 25 people/km<sup>2</sup> (Ave and King 1986 in MacKinnon and others 1996). However, concentration of activities in a certain area is likely to induce problems in the future. Generally, swidden agriculture produces food only for the people's subsistence and not for the market.

People's response to market incentives is evident in their efforts to adopt new crops which have significant market value, such as industrial trees (*seigon* and *gmelina*), cacao, and pepper, as well as soybean and mung bean. In this way they have developed mono-culture plantation, a practice which was unknown before. In this way as well, another permanent land use pattern has begun. The development of marketable crops plantation may reduce the swiddening area and may create new relations of production or new work organizations.

Extractivism also continues to be an important alternative source of income. People extract wild products especially from the primary forest. Hence, conservation of the primary forest is one of their priorities. Logging activities encroaching in the primary forest is endangering the people's alternative income source.

It is not that people inadvertently develop a multi-based livelihood system. Nature itself provides various possibilities. The Matalibaq area is full of natural riches, but it also requires human labor. Only those who have a large labor force can produce more. In the traditional agricultural (swidden cultivation), those who lack labor force can expect additional labor from collaborative works. When such a work organization does not work, people have to rely on themselves or on smaller labor units such as kinship or household.

Even though the village territory is very large, activities of swiddening, gardening, and agroforestry are concentrated near rivers and residences. This is normal to facilitate access. This also indicates the importance of this area for the people. That is why the expropriation of a part of the area for HTI and transmigration is considered a serious attack on their rights over the land.

### ***Work Organizations***

The way the works are organized indicates the characteristics of social relations of the community. The characteristics of the work organizations of the Matalibaq community were not well explored. Thus, further research in this area is recommended.

At this point two things will be discussed regarding work organization of the community. Firstly, there was an established tradition of work and labor arrangement for swiddening activities. Social relations of cooperation beyond household or kinship level (reciprocal labor, sharecropping) are found only in swiddening activities. People are bound for such a cooperation by traditional norms. Recently, however, adoption of new technology (chainsaw) have led to the application of wage labor in swiddening works, which was not practiced in the past. Secondly, there is no tradition of cooperation in the works related to gardening in its broad sense, that is, including developing annual and perennial crop gardens. Several efforts have been done to develop communal



gardens, but they were unsuccessful. When the communal works (cooperation above household level) failed, cooperation is limited to household or family unit (either extended or nuclear). On the other hand, the rich families might hire workers on the basis of wage labor. It is evident that the change in the mode of procurement is likely to change the work organizations.

### *Forest Product Use*

The use of forest products reflects the people's economic condition and its response to opportunities. People respond well to market incentives. A variety of forest products (mainly non-timber) makes it easy to switch from one product to another when there is a decline in market value for one product. This is the way people acquire alternative or supplementary sources of income. During the droughts, when the harvest fails, these multiple products help the people to survive. For this reason, access to the market for more varieties of forest products is necessary.

We have seen that there is a difference in forest product use by poorer and richer households. Poor households are more dependent on the variety of forest products and hence they are more vulnerable to sudden changes in the provision of such products. This is true after the 1997/98 forest fire, when only people from this group migrated out in search of an alternative income. Some of them became involved in small-scale mining activities outside the village. Since the variety of the forest products provision is available mainly in the primary forest, then the sustainability of the primary forest is very important for the people's livelihood.

## REFERENCES

- Abdurrahman, H. "Kedudukan Masyarakat Adat Dalam Kebijakan Baru di Indonesia." Makalah pada Lokakarya Hutan Kerakyatan, Lembaga Bina Benua Puti Jaji-Japan NGO Network on Indonesia Asia Center/Japan Foundation, Samarinda, 6-10 December 1998 (unpublished).
- Agung Sarjono, Mustofa. 1990. *Budidaya Lembo di Kalimantan Timur: Satu Model untuk Pengembangan Pemanfaatan Lahan Agroforestry di Daerah Tropis Lembab*. Disertasi untuk Mendapatkan Titel Doktor pada Universitas Hamburg Bidang Biologi. Mulawarman Forestry Report No. 7.
- Alcorn, Janis B. and Augusta Molnar. 1996. "Deforestation and Human Forest Relationships: What can we learn from India?" In Leslie E. Sponsel, Thomas N. Headland, and Robert C. Bailey, eds. *Tropical Deforestation: The Human Dimension*. New York: Columbia University Press.
- Brookfield, Harold, Lesley Potter, and Yvonne Byron. 1995. *In Place of the Forest: Environmental and Socio-economic Transformation in Borneo and the Eastern Malay Peninsula*. Tokyo: United Nation University Press.
- Cooper, Robert. 1984. *Resource Scarcity and the Hmong Response. Pattern of Settlement and Economy in Transition*. Singapore: Singapore University Press National University of Singapore.
- MacKinnon, Katty, Ir. Gusti Hatta, and others. 1996. *The Ecology of Kalimantan*. Singapore: Periplus Editions, Ltd.
- LBB Puti Jaji. "Studi Tentang Pengelolaan Sumber Daya Hutan oleh Masyarakat" (a manuscript).
- LBB Puti Jaji. "Pemetaan Social gender di Desa Matalibaq" (a manuscript).
- Moniaga, Sandra. "Advocating for Community-Based Forest Management in Indonesia's Outer Islands: Political and Legal Constraints and Opportunities." In Proceeding of the IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region, Institute for Global Environmental Strategies, Hayama, Kanagawa, Japan, 21-23 July 1998.
- Nanang, Martinus. 1997. "Community Decision-Making Process: A Study of the Impact of Powers Structure on Community Participation in an East Kalimantan Village, Indonesia." MA Thesis, Ateneo de Manila University (unpublished).

- Padoch, Christine, and Nancy Lee Peluso, eds. 1996. *Borneo in Transition: People, Forest, Conservation, and Development*. Kuala Lumpur-Oxford-Singapore-New York: Oxford University Press.
- Peluso, Nancy Lee. *The Impact of Social and Environmental Change on Forest Management. A Case Study from West Kalimantan, Indonesia*. Food and Agriculture Organization of the United Nations: Community Forestry Case Study Series 8.
- Poffenberger, Mark, ed. 1990. *Keepers of the Forest: Land Management Alternatives in Southeast Asia*. West Hartford, Conn.: Kumarian Press.
- Schindler, Ludwig. "The Indonesian Fires and SE Asean Haze 1997/98: Review, Damages, Causes, Necessary Steps." Paper presented at the Asia-Pacific Regional Workshop on Transboundary Atmospheric Pollution. 27-28 May 1998, Pan Pacific Hotel, Singapore.
- Schweithelm, James. "The Fire this Time: an Overview of Indonesia's Forest Fires in 1997/98." World Wide Fund for Nature Indonesia Discussion Paper, May 1998.
- Sponsel, Leslie E., Robert C. Bailey, and Thomas N. Headland. 1996. "Anthropological Perspectives on the Causes, Consequences, and Solution of Deforestation." In Leslie E. Sponsel, Thomas N. Headland, and Robert C. Bailey, eds. *Tropical Deforestation: The Human Dimension*. New York: Columbia University Press.