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Local People in Forest Management and The Politics of Participation

Editors

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Credit:
(Upper Right)—Old secondary forest
Photo: Martinus Nanang

(Lower Right)—Banana garden in Kutai National Park
Photo: Martinus Nanang

(Left)—Old woman with canoe in River Lawa
Photo: Martinus Nanang

(Back Photo)—Kutai National Park: Burnt forest 2 years after forest fire in 1998
Photo: Martinus Nanang

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PREFACE

This report is the result of collaborative research conducted in Indonesia from 2001 to 2003 by the Institute for Global Environmental Strategies (IGES), the Center for Social Forestry (CSF) of Mulawarman University, Samarinda, and the Center for Society and Culture, Indonesian Institute of Sciences (PMB-LIPI) in Jakarta.

CSF and IGES conducted research using Participatory Action Research (PAR) techniques in five villages of West Kutai District and one village in Kutai National Park in East Kutai District. In carrying out the field research CSF and IGES were supported by field practitioners from Samarinda-based NGOs such as Puti Jaji, Bioma and Bikal. Support was also provided by the government of West Kutai through the District Forestry Service. The results of this field research form Part One of this report.

LIPI conducted research at the national level focusing on the politics and legal framework relating to local participation in forest management. Three reports by LIPI are included in Part Two of this report.

Based on these reports, guidelines for promoting local participation in forest management – "Village Action Guidelines" and "District Policy Guidelines" – have been developed for West Kutai in both Indonesian and English. Readers are encouraged to refer to this Country Report to gain a deeper understanding of these guidelines.

Any comments or suggestions on this report would be gratefully received.

Martinus Nanang, Coordinator of Indonesia Study
Inoue Makoto, Leader, Forest Conservation Project

PART ONE

THE FOREST AND THE LOCALS: PARTICIPATORY ACTION-RESEARCH IN EAST KALIMANTAN

Part One has seven chapters. Chapter One provides an introduction to Participatory Action-Research (PAR) and a framework to evaluate community participation. It also provides an evaluation of the participatory techniques that were used in the field in conducting the studies reported in Chapters Two to Seven.

Chapters Two to Seven provide descriptions of the six communities under study. For each community the description covers the following topics: community features, history, ecological zones and forest resources, economy, governance, local views on the forest, systems and means for forest management, problems in managing the forest, and prospects for a better future of involvement in forest management. These chapters show that all the communities have adapted to the changing environment. They also show that certain communities have greater potential to manage forests in a better way, whereas other communities face more serious challenges in their efforts for forest management.

Chapter Seven in particular discusses the relationship between a community and the forest in Kutai National Park. Ideally the community should be encouraged to take part in the management of the national park. However, at this point in time, such participation seems unlikely.

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Chapter 1.

Participatory Action–Research: Concepts and Practices

Martinus Nanang

Institute for Global Environmental Strategies

Part one of this book contains reports of field studies from East Kalimantan. The reports contain the results of Participatory Action–Research (PAR) applied in studying issues relating to local forest management. These issues include land tenure and management, resource management, social structure, decision-making processes, production and marketing, forest values, and so on.

This chapter explains the concept of PAR and describes the practices and technicalities in the field. The explanation and description will help readers to understand the results of the field activities presented in the following chapters (Chapters 2 to 7).

I. The Concept of PAR

1. Why PAR?

Deep in the rainforest of Borneo in 1999, a middle-aged woman came to me and said, "The Company is going to destroy my rattan garden. My land is full of rattans. I don't want to lose my rattan garden. What can I do to defend myself? Please help me if you can".

Those engaged in development-based research with and among rural communities certainly elicit the expectations of the people from whom they collect data. In most cases a fieldworker will immerse themselves in the lives of poor, marginalized rural people. In such a situation he or she may feel helpless despite great willingness to help the people.

However, thanks to the efforts of social science experts and development facilitators, participatory approaches that are increasingly able to draw on the capacity of ordinary people to create transformative and action-oriented knowledge, are constantly being developed and improved. One of these approaches is called PAR. In 2001, IGES Forest Conservation Project decided to apply this approach in its second phase research program in the study of local forest management in Laos and Indonesia. This decision was based on the assumption and expectation that the field research will bring about a transformative knowledge for the benefit of local people, because it is implemented by external researchers and the local communities together. A researcher is not expected to find a solution to every problem faced by the local community, but he or she works and learns together with the people to find potential ways in which they can collaboratively solve problems and transform local situations.

2. The Meaning and Principles of PAR

2.1. What is PAR?

Thirty-three years have passed since the Conference on Action-Research in Cartagena, Columbia, in 1970. In this time, numerous new experiences have emerged in the field that have helped to refine the concept and methodology of PAR.

PAR is based on the principle that people have the right to participate in the production of knowledge that affects their lives. Unlike conventional modes of inquiry – that is, empirical-analytic inquiry and interpretive inquiry – PAR belongs to the category of "liberatory inquiry". This category of research aims at creating movement for personal and social transformation in an effort to redress injustices, support peace, and form space for democracy. It views the social world as "humanly and collectively constructed within a historical context" (Maguire 1987:22). People are seen as active subjects of the world and their needs are the point of departure for production of knowledge and the justification of action (and not of knowledge for its own sake).

As such, PAR is about personal and social transformation for the liberation of marginalized people. People collectively enter the process by which they examine their reality by "asking penetrating questions, mulling over assumptions related to their daily struggles, deliberating alternatives, and taking meaningful actions" (Smith 1997: 177). Within the PAR process people create knowledge and at the same time educate themselves to develop a new consciousness and become mobilized for action.

IGES FC Project has decided to apply PAR in the local studies it organizes. This means integrating research and action. It also means that our field activities are not merely a matter of collecting data, but a means of organizing people as well. PAR applies a holistic ap-

proach in understanding issues relating to local forest management. The issues may include historical, demographic, economic, social, political, and environmental aspects. The holistic feature of PAR makes it possible for the research to contribute not only to issues of local forest management, but also to the development of the community as a whole.

All these features imply that field activities require strong teamwork and relatively long and frequent visits on the part of the external researchers to the communities under focus. Not only is analysis capability important, but the art and skill of communicating with and organizing people is also highly desirable. For its smooth implementation and for the benefit of local recipients, PAR requires a "loving heart" on the part of the researchers.

2.2. Principles of PAR

Depending on the groups in question and their situation, local people engaged in the PAR process may have one or more of the following intentions (Smith 1997: 183-4):

1) *To liberate themselves.* Liberation is the eventual achievement of equitable communities characterized by justice, freedom and ecological balance. PAR is about participation or subject-subject relationships in which the process aims for egalitarian, authentic participation among those engaged. To participate means to have meaningful influence (control) over how decisions are made, how resources are used, and how information is produced and distributed (further explanation of participation is given in section 2.3.). PAR is also about power relations. All aspects of the research have implications for the distribution of power in society and therefore the control of knowledge production is central to maintaining power (Tandon 1981:23). The PAR process leads people to become involved in the sharing of power and to dismantle all kinds of dominating power, or so-called "power-over". In PAR, "power-with" is established.
2) *To develop a compassionate culture* where people care about each other and strengthen their commitment to a shared struggle. In so doing, trust and solidarity are developed among them.
3) To participate in a *cohesively dynamic processes* of action-reflection (praxis). The process is organic, ever changing, non-linear, open and continuous, without predetermined time limits or fixed questions, and is interactive and unique to each group.
4) *To value what people know and believe* by using their present reality as a starting point and building upon it. Historical and current contexts are important. Popular knowledge is a vital way of knowing.
5) *To collectively investigate and act*. People work together through dialogue, and they determine the major questions and actions for themselves.
6) *To consciously produce knew knowledge.* In the PAR process, people seek a new and in-depth understanding, and use multiple (and often creative) means of knowledge creation. This entails education and a learning process by which critical consciousness is developed. According to Freire (1990:40), the development of critical consciousness has two essential phases. These are (1) unveiling the world of oppression and (2) expulsion of the myths and naïve consciousness created and developed by the old order.

2.3. PAR and the Concept of Participation

PAR is about participation. For a general understanding of participation in development, our studies use the six-level ladder of participation proposed by Inoue (2003:351-2).

Level 6. **Self-mobilization—**Independent initiatives by the local people are realized while advised and supported by external agents. They retain control over decisions and resource use; external agents facilitate them.

Level 5. **Partnership—**The local people participate in joint activities and decision-making in all processes, such as appraisal and investigation, development of action plans, formation or strengthening of local institutions, implementation, and evaluation. Participation is a right, not an obligation, to achieve a goal. It is also called "interactive participation".

Level 4. **Conciliation—**The local people may be involved in decision-making, but this tends to be only after major decisions have been made by external agents. Local people may be simply placated.

Level 3. **Consultation—**The local people are consulted, but analysis and decisions are made by external agents. The most frequent approaches to consultation are chaired meetings, where the local people do not contribute to the agenda, public hearings and surveys.

Level 2. **Information gathering—**The local people participate by answering questions posed by outsiders, such as researchers and development specialists. The information flows one way from the local people. But the people do not have the opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.

Level 1. **Informing—**The local people are simply told what has been decided and unilateral announcements are made by external agents. The information flows one way to the local people with neither a channel for feedback nor power for negotiation.

For specific evaluation of participation in forest management, our studies adopt the following indicators, as developed by Wollenberg (1998):

1. The community has access to and control over the surrounding forest areas and forest resources
2. All community members have equal opportunity to gain benefits from the forest resources
3. The community can make its own public decision independently
4. There is good cooperation among all related parties
5. There are problem-solving and conflict resolution

mechanisms which are acceptable by all sides
6. There is sufficient technical ability in the community to properly manage the forest

3. PAR Framework for Praxis

PAR is basically a marriage of two processes: action and reflection (Figure 1). Thoughtful reflection on real situations corresponds to informed action. Using only one process without the other is limiting. Reflection alone leads to informed passivity. Action alone leads to sporadic, sometimes chaotic, results with much potential for authoritarian control over decision-making.

The practice of PAR by IGES and its counterparts in Indonesia and Laos follows more detailed steps of an action-reflection process, which includes spiralling phases consisting of initiation (observation-reflection), planning, implementation (action), and monitoring and evaluation (reflection) (Figure 2; see Inoue 2003: 346). Each present moment incorporates the past and circles around the future. Village Action Guidelines (VAG) are drawn up based on the process that follows these four phases. However, by the end of the second phase of IGES' strategic research program, each of our research projects had progressed only as far as the first phase (Initiation-observation). VAG for the six villages have been drafted based on the results of Phase One.

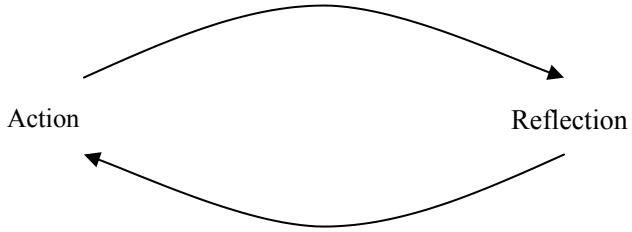

Figure 1. Dialectic of action-reflection in the PAR process

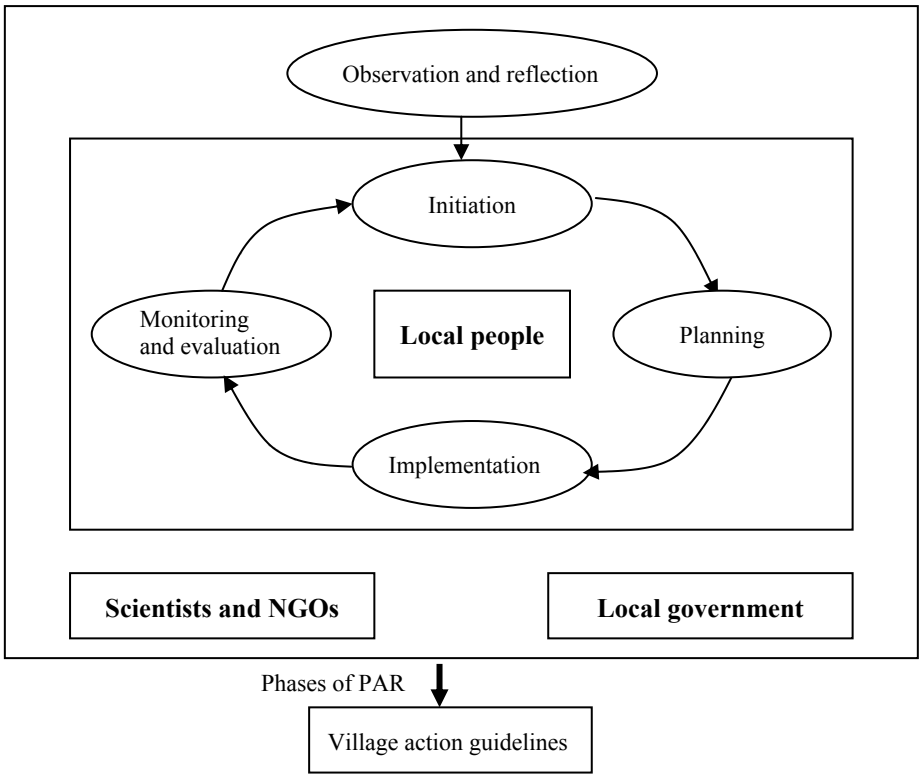

Figure 2. Elaborated PAR framework developed by IGES for research in East Kalimantan and Laos
Source: Inoue (2003: 34)

4. Evaluating the State of Participation

The ladder of participation and the praxis framework can be used to evaluate the degree of participation in a community by putting them in a matrix: the PAR phase is represented on the vertical axis and participation levels on the horizontal axis, as in Table 1 (Inoue 2003:353).

However, as our PAR activities did not reach phase two and beyond, the framework is difficult to use. A simpler framework that focuses on the process of decision-making is proposed (Table 2). A decision-making process usually comprises the following steps: initiation, legitimization and execution. Initiation refers to program proposals that may be stimulated by felt needs, anticipated needs, or crises. It includes the identification of problems and opportunities. Legitimization is a process of making a proposed action a legitimate one. It includes fixing priorities, promotion, and legitimization itself. In the 'legitimizing' process, conflicting viewpoints (approval and rejection) may emerge. Execution means any action directed towards realization of the objectives that the villagers have agreed to implement. The field studies may analyze the state of community decision-making in any sphere in order to understand whether or not a community has the potential for organized activity, including forest management.

5. Tools

Tools that are used for Participatory Learning and Action (PLA) or Rapid Rural Appraisal (RRA) listed in Box 1 can be applied as tools for PAR. The PAR team can creatively use a flexible combination of the tools based on the principle of triangulation (Inoue 2003: 347).

Table 1. Dummy matrix used to evaluate the state of participation

	Informing	Information gathering	Conciliation	Consultation	Partnership	Self-mobilization
Initiation						
Planning						
Implementation						
Monitoring/evaluation						

Table 2. Dummy table used to evaluate the state of participation in the decision-making process.

	Informing	Information gathering	Conciliation	Consultation	Partnership	Self-mobilization
Initiation						
Legitimization						
Execution						
Evaluation						

II. Process of PAR in East Kalimantan

1. Preliminaries to the Study

1.1. Determining the Objectives

The ultimate aim of the study, as formulated by the IGES Forest Conservation Project (IGES FC), was "to develop guidelines for participation of local people in forest management", which we term "Village Action Guidelines (VAG)", and guidelines for local government policy, known initially as "Local Policy Guidelines (LPG)", though these later became known as District Policy Guidelines—DPG. To achieve the goals, local research should cover relevant aspects such as village history, resources, forest management and utilization, production system, social structure, and the decision-making procedure. It is clear then, that the researchers should investigate overall issues of the community and analyze how they relate to and affect local participation in forest management.

Box 1. Tools for Participatory Learning and Rapid Rural Appraisal also used in PAR

1) Tools relating to dialogue
- Informal interview: open-ended interviews such as those taken while standing chatting, or walking.
- Semi-structured interview: interview with a checklist of key questions prepared in advance.
- Focus group interview including focus group discussion.
- Key informant interview: interviewing the key informant about specific issues.
- Direct observation.
- (Structured interview: interview with a questionnaire. Be careful: structured interviews often neglect the realities of the people.)

2) Tools relating to space
- Mapping: drawing maps of the village layout, natural resources, land utilization, *etc*. as perceived emotively and mentally by the people.
- (Three-dimensional model: making a three-dimensional model of the village territory. This may be difficult for our project because of the lack of easily applicable techniques).
- Transect: walking around the village territory to observe, discuss and record various issues.

3) Tools relating to time
- Chronological table: making a table through discussions.
- Daily routine table: making a schedule/time table of an informant whose daily routine is regarded as typical within a certain group. The pattern of the routine will depend on the season, gender, and social group.
- Seasonal calendar: making the calendar through group interview.
- 'Vision drawing': drawing a picture of a vision of an event in the near future and discussing it with each other.

4) Tools relating to social structure
- Venn diagram: listing all the organizations that exist in the village, drawing diagrams to show their inter-relationship, and discussing the function and the importance of their organization. Perception may differ among different social groups.
- (Role-play and flow charts: not so important for our project.)

5) Tools relating to order
- Pair-wise ranking: ranking made collectively.
- Matrix ranking: ranking through aggregation of each villager.
- Wealth ranking: identifying the criteria for wealth and grouping the villagers using cards.

6) Tools to establish rapport
- Joint working: helping the villagers with farming, festivals, *etc*.
- Recreation: relaxing with villagers.
- Eating together: eating together is important in the case where the core team can not stay at a villager's house.

7) Utilization of secondary data
- Aerial/satellite pictures: very useful
- Statistics and publications: collaborative organizations are requested to compile the publication.

Source: Inoue (2003:347)

During the technical meeting between IGES and the Center for Social Forestry (CSF) on 28th July, a new idea emerged. This was that the local community may need to develop "village rules", which differ in concept from IGES' local guidelines. The idea emerged again at the local workshop in Sendawar, West Kutai, on 31st July 2001. Representatives in all villages have since agreed to collaborate to try to develop village guidelines. This idea later became an important recommendation in the VAG of each village.

1.2. Selecting the Sites

Selection of the sites was made based on the preliminary assessment organized by CSF. CSF initially visited eight villages. However, due to budgetary limitations, it was agreed that five sites would be selected to represent the following indigenous ethnic groups: Bahau - Mataliba' village; Benua' - Engkuni-Pasek village and Tanjung Jan village; Kenyah - Batu Majang village; Tonyoi - Muara Jawa' village; and one site of migrant Buginese - Teluk Pandan village. The former five sites in West Kutai District were confirmed during the local workshop, and the latter, in East Kutai, was assessed after the workshop. The reports in this book cover PAR results for all of these sites.

The selection of focal villages was not made with a view to making comparisons among indigenous communities and migrants, *per se*. Rather it was based on the potential for continuation of PAR in the future. Tanjung Jan, Engkuni-Pasek, Mataliba' and Teluk Pandan are all communities that have received facilitation from NGOs. This makes it likely that these villages will also be focal sites for NGOs to further the results of our PAR in the future. Only the communities at Muara Jawa' and Batu Majang have no history of NGO support. However, the government of West Kutai has the intention of supporting afforestation activities in these areas.

Figure 1. Map of East Kalimantan and the research sites

1.3. Formulating Questions

Technically, the teams did not use predetermined questions: the teams only systematically prepared categories of issues. These issues included basic village information (demography, access, territory, infrastructure, *etc*.), village history, resource and land use (including the rights to them), customs and practices relating to forest management, forest utilization and forest values, social class and social structure, decision-making systems, production and marketing, social services, and information systems. Questioning was carried out during the focus group process. The focus group members sometimes raised unexpected critical questions.

1.4. The External PAR Teams

A number of researchers with diverse background from IGES, the Center for Social Forestry (CSF) of Mulawarman University, The University of Tokyo, and NGOs took part in the PAR activities. They worked closely with the local members of the PAR Teams.

Joint teams of researchers included the following people: in Batu Majang - Ndan Imang (Agricultural Economist - CSF), Apriadi D. Gani (Agronomist - CSF) and Akiko Mochizuki (Graduate student - The University of Tokyo); in Mataliba' - Apriadi D. Gani, Ndan Imang and Tetsuya Saito (Graduate student - The University of Tokyo). The research team in Engkuni-Pasek was made up of the following members: Rujehan (Forest Economist - CSF), Fadjar Phambudi (Yield Analyst - CSF), Setiawati (Community Forestry specialist - CSF) and Edy Mangopo Angi (NGO Activist - Bioma).

In Tanjung Jan the research members were Martinus Nanang (Anthropologist - IGES), Rujehan, Amir Riyantone (NGO Activist - Puti Jaji), and Samuel (Research Assistant). In Muara Jawa, Martinus Nanang acted as coordinator whilst other team members were rotated: Ary Yasir Filipus (Ecologist - CSF), Samuel, Veronika Sukapti (Anthropologist - Mulawarman University) and Amir Riyantone. For the PAR process in Teluk Pandan in the Kutai National Park, the members were Martinus Nanang, Muhammad Arifin (Anthropologist - Mulawarman University), Setiawati, and Mansur (Community Organizer - BIKAL).

2. The Field Activities

The field activities were conducted during three to four visits of periods ranging from 4 days to two weeks, depending on the team. The first visits took place in early August 2001 and the last visits were in March 2003.

In each village the teams followed similar steps in undertaking the participatory research. These were:

1) Holding a village meeting at the beginning of the activities. Of course this was preceded by a courtesy visit to the village headmen. Through these meetings, people were informed of the purpose of the visit. Usually after the meeting people did not have a detailed idea about what would happen thereafter. They did, however, have strong expectations with regards to the contribution the research might make to community development.
2) Selecting local members to participate in the core team. Later on, these teams were named the PAR Teams. The main criterion in selecting local members was the person's concern for the forest, which was gauged by his or her willingness to be active in the PAR process. Another condition was the team members' 'representativeness' of all groups within the community. However our selection could not always meet this condition. For instance, initial experience in Muara Jawa' suggested that the size of the team should be enlarged to include at least 10 people from the community. This was necessary because the team should be in a position to intensively discuss all issues by themselves, only inviting other people to join them when they are unable to answer certain questions themselves. We currently have 8 local members in Muara Jawa', 15 in Teluk Pandan, and 19 people in Tanjung Jan, 7 people in Batu Majang, 8 people in Mataliba', and 8 people in Engkuni-Pasek. In many cases focus groups are even larger because some people have voluntarily joined.
3) Daily team interaction sessions for the purpose of designing the next activity, discussing decided issues, reflecting on the last activity, and designing the next activity again. Whenever a discussion or focus group meeting was held in the evening (mostly so because people work during the day), a small number of team members organized the data on the day of the meeting, determined which issues to explore during the meeting and which techniques to employ, and pinpointed ways of improving the facilitation process.
4) Whenever possible, a village meeting was held before the external team members left a community. This was so that the wider public could be informed of the results of that phase of the research.
5) A few months after the last data gathering session, a community meeting was held in each village. The purpose of the meeting was to discuss the first draft of the VAG. Based on the input from these meetings, the draft was then revised.

3. Evaluation of the Participatory Process

In our first encounter with the six communities we found that they were very enthusiastic towards and curious about the PAR process. They strongly supported our activities and showed strong willingness to join us. The process since then has been very dynamic and has seen several ups and downs.

In Muara Jawa', a team evaluation which involved local members proved satisfactory, and local members said that they were happy to join the activities because the process was fun, they could learn new ways of learning, and because they could gain a more integrated view of their village. The evaluation provided the team with op-

timism that the research would be successful. However, during the second and third visit we found that the enthusiasm seemed to have faded and gathering team members was more difficult than in the first visit. Since most of group-based activities had been done during the first visit, the activities of the second and third visit involved little group work, and so it was something of a challenge to keep all members eager to participate in non-group activities such as household visits. There seemed to be constraints limiting their activity. In most cases they said that they were too busy to get involved in other work. Up to our third visit, successes in boosting participation were correspondingly limited.

In Tanjung Jan as well, we got strong support from local people particularly during the first visit. We were glad that the village head, unlike in Muara Jawa' and Teluk Pandan, was really keen to participate in the process and he joined most of the group activities. Also, in this village we have many young participants (team members). This is interesting since in many other communities (such as Teluk Pandan and Muara Jawa'), young people are interested only in sports and are not willing to get involved in alternative activities. On the other hand, we were faced with the difficulty of getting women to participate. During the first visit, five married women joined our group activities, but during the second and third visits only one came to the group meetings. Where were the others? The constraints here appear to be mainly social: although men and women are of relatively equal status, women rarely enter the public domain. Overcoming this barrier has actually become the challenge for our efforts to promote women's participation.

In Teluk Pandan, the dynamic of our work has been more stable. We got very strong support and many people were involved in the whole process. Although at the beginning we sought about 10 people as team members, a larger number of people wanted to join in and we were unable to turn them away. Group activities were going well and were very dynamic, creating an atmosphere in which people felt free to express their ideas. This situation lasted up to the latest visit in February 2002, although it had become a bit more difficult to encourage more people to join group meetings. Our constraints in Teluk Pandan were twofold: 1) the size of the village is too big and residential clusters are far from each other such that (for practical reasons) it was difficult for us to involve and meet all villagers. We could only get a few representatives of each residential group, called *dusun*, to join in. 2) Like in Tanjung Jan, promoting women's participation was difficult because the structure of the Buginese society is not compatible with this objective. In Buginese society, the role of women is basically domestic whilst men are active in the public domain. Men are very dominant in the society.

In Batu Majang, great common interest and support for the research came from the villagers, with great encouragement from prominent leaders. Support also came from a logging company which operates in the village area. In Mataliba' there is a common understanding among community members that they need guidelines for local forest management. As in Batu Majang, support from influential members of the village has been critical. A similar situation was also observed in Engkuni-Pasek.

Ideally, the local members of the PAR Team would continue the research process and other activities by themselves after the external members have left the village. However, it was commonly found that local members were unable to continue the process through independent initiative. In this respect, the PAR process has not been entirely successful. A successful process would have created independent initiative within the village. Thus further facilitation from external agents is deemed necessary.

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Chapter 2.

Forest management and community participation in Batu Majang

Ndan Imang, Apriadi D. Gani, Yasuhiro Yokota, Tetsuya Saito, Akiko Mochizuki

I. Introduction

Batu Majang is a 30-year old village with a population of 866. The village has been settled mainly by two Dayak sub-ethnic groups, the Kenyah Uma' Tukung and the Uma' Baka', since 1972. The main livelihoods of the villagers are dry farming (*ladang*[1]), forest products extraction, and working at forest companies in and around the village.

Batu Majang is accessible via the Mahakam River only, either by river taxi, engine boat (*ketinting*) or speedboat. It takes two and a half days to reach the village using the river taxi (*kapal taksi*). Nonetheless, relations with outsiders have developed extensively over the last 20 years, chiefly as a result of the arrival of forest companies, which have come to the village area to begin logging operations. The village is quite open to outsiders, as far as the newcomers follow the local customs and rules.

II. Overall Description of the Village

2.1. Village Territory and Access

Batu Majang village is located on the banks of two rivers: on the left side of the Alan River and the right side of the Mahakam River. Administratively, the village belongs to the Sub-District of Long Bagun, Kutai Barat District, East Kalimantan Province. Its borders with adjacent villages are as follows: Ujoh Bilang to the east, Long Bagun Hilir to the west, Long Bagun Hulu to the north, and Ujoh Bilang to the south.

Since the village is located up river and is quite isolated in terms of over land transportation, access by river, such as by the regular water taxi (*kapal taksi*), speedboat or outboard motorboat (*ketinting, ces*), are the main options for reaching the village. For a regular river taxi, it takes approximately 48 hours from Samarinda, and costs IDR 95,000 (around US$ 9.5). If the Mahakam River is sufficiently deep, two regular riverboats (*kapal*) service this route every day. The distance by river from Samarinda to Batu Majang is estimated at 560 km, following the twists and turns of the Mahakam River (Devung, 1985).

During long droughts, however, the water level of the Mahakam River falls, and transportation by river becomes a big problem. At such times, the regular boat can reach only as far as Long Iram, at a cost of IDR 65,000 (US$ 6.5). From Long Iram, passengers have to charter a small outboard motorboat or speedboat. A small outboard motorboat costs IDR 300,000 - 400,000 (US$ 30-40), and a speedboat (115 HP) costs IDR 1.2 million (US$ 120). Passengers may share a chartered boat for IDR 100,000 (US$ 10) each, if they are lucky. Transportation from the Sub-District Capital Ujoh Bilang to Batu Majang is by outboard motorboat, which costs IDR 25,000/ boat (US$ 2.5), or IDR 5,000 (US $ 0.5) per person (shared cost).

From an economic and development/infrastructure point of view, the village is regarded as a self-sufficient village (*desa swadaya*), meaning that the villagers' dependency on external food supplies is relatively low, and that daily needs can, by and large, be fulfilled by local products, particularly agricultural products.

2.2. Ecological Zones and Resources

The village is located 200m above sea level, at coordinate points 115' 12"E and 0'32'' N. The maximum mean annual temperature is 32^0C and the minimum is 24^0C. Yearly rainfall is around 1,982 - 3,895mm (Subroto, 1997). The topography is undulating and mountainous, and the highest peak is 600 m. Only a few flat areas occur, especially around km 13-21. The forest company PT. Sumalindo provides the area with wet rice farmland and dry farming areas (*ladang*). Mountainous areas, such as some parts of Mt. Ben, are protected as reserved forests (*tana' ulen*). Mt. Ben is a source of clean water and a habitat for many species of medicinal plants and timber trees. The left and right banks of the Alan River are designated as hunting areas and have been set aside for communal purposes (*i.e.* as common forest).

Batu Majang is also rich in certain mineral deposits, such as timber, gold and coal, and is also endowed with many species of animals and plants. Gold and coal are found along the Alan, Dio and Nyalung Rivers. Currently, the villagers practice traditional pan mining in the Dio and Nyalung Rivers, especially in the dry season. The primary forest area is used for hunting wild pig and deer, while the tributaries are used as fishing grounds, as well as forming the natural habitat for many species of wild rattans. Rattan is mostly used for making mats, car-

[1] The term *"ladang"* is the Indonesian term for dry farming or shifting cultivation and will be used frequently in this report. The term is used nation-wide in Indonesia.

rier bags, large mats for drying rice, and some other uses. Rattan has been planted in a 4 hectares plot in Batu Majang as recommended by the District Government. However, the young rattan plantation has been cut recently to make way for a *ladang* area.

Some of the tributaries of the Alan River provide potential areas for fishing for daily consumption. Accessibility to these areas is by outboard motorboat (*ketinting*), or by walking along the logging road. It takes 2-4 hours by *ketinting*, a journey that requires 10 liters of premium gasoline for the round trip. The current price of premium gasoline in Batu Majang is IDR 2.500/liter (US$ 0.25), while the standard national price (figure from *Pertamina*[2]) is IDR 1,600 (US$ 0.16). Besides fishing, the villagers also hunt wild game for meat. The hunting area is not limited to the village forest area, and so any hunter can go freely to any potential hunting ground. In this sense, the village boundary is not a constraint for the hunters. Villagers commonly make use of both hounds and shotguns (though illegal in Indonesia) for hunting in Batu Majang.

There are waterfalls and virgin forest in Batu Majang, both of which could potentially be made use of for ecological tourism, something that needs to be promoted in the future. A prime site for this is Mt. Ben, with 8,000 hectares of primary forest, and which lies very close to the village. Lirin Mering, Pius Kulau and other villagers revealed in the course of conversation with the authors that more than 400 species of plants and more than 30 species of animals and birds – such as deer, monkeys, wild pig, porcupine, horn bill and striped royal tiger – can be found in this forest. The villagers are likely to have gained this information from researchers who have worked in the area in the past. This area provides a very interesting site for ecological or biodiversity research. Both PT. Sumalindo and villagers in Batu Majang have agreed to maintain this area as a forest reserve (*tana' ulen*).

On the far side of this forest is a 500 m stretch of rapids, known as *"Hongkong"*, which can be reached in about 20 minutes by *ketinting* boat from the village. This is a potential track for fresh water resources. The waterfalls here are a major constraint for local people in accessing their *ladang* by boat (*ketinting*).

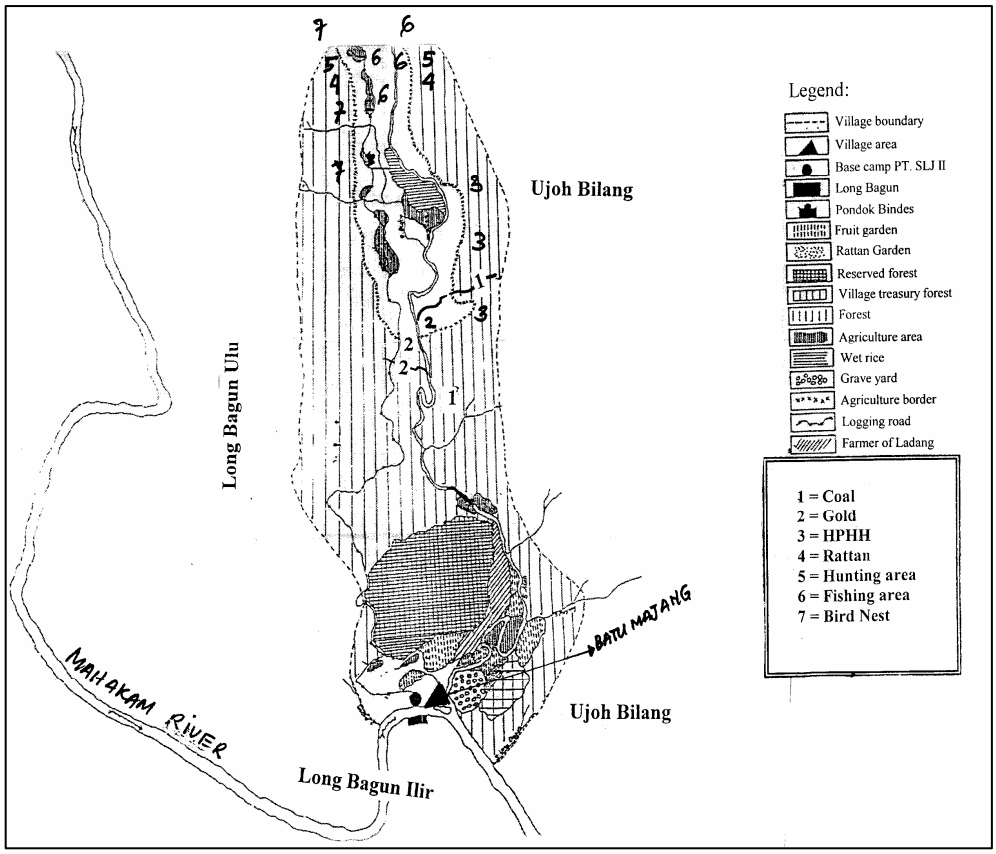

Figure 1. Land use and natural resources map of Batu Majang

[2] *Pertamina: Perusahaan Tambang Minyak Nasional* (National Oil Mining Company).

2.3. Population

The population is comprised of two major sub-ethnic groups, namely, the Kenya Uma' Baka' and Lepo' Tukung (see Table 1). *Uma*' and *Lepo*' are two words that have similar meanings, referring to the original long house or the village from where either group came from. As the exact area of Batu Majang village is currently unknown, the population density per km^2 remains unclear. However, the population density is believed to be low, because the village area is large compared to the population size.

Population size is influenced by four major factors, namely, immigration, emigration, birth rate, and mortality rate. Immigration, which results in an increase in population size, has been brought about in Batu Majang by people moving in from the interior of Kalimantan, and as a result of locals marrying with outsiders. In 2001, a total of seven persons moved into the village. Emigration brings about a decrease in population where villagers move to other regions, in particular Kutai Barat and Berau District. In 2001, 6 households comprising 59 persons of the Uma' Baka sub-ethnic group moved to the Merasa' River (Long Gi village), in the District of Berau. The major factor motivating villagers to move to new areas is the boundary conflict between Batu Majang and Long Bagun Ulu, which has resulted in restrictions being placed on the future development of new *ladang*. On the other hand, 'pull factors' remain the availability of vast primary forest within the Berau area, the accessibility of *ladang*, and the abundance of natural resources in Berau District. The availability of over land transportation throughout Berau is also considered as an attractive feature for people considering the move to Berau.

The birth rate is estimated at 11-12 persons per year and the mortality rate at approximately 3-4 persons per year. Based on these birth and mortality rates, the population of Batu Majang is expected to increase by around 100 persons over the next 10 years. However, the size of the population could also fall by 100 persons, because some of the Uma' Baka' households are planning to move to Berau District in 2002. As of July 2002, however, more than 24 households consisting of around 100 persons had moved to Berau. This means that the population issue is not likely to be such a serious problem in the future, barring an exodus from Apau Kayan (Malinau) to Batu Majang. Tables 1-4 below show the composition of the villagers by sub-ethnicity, sex and religion

Table 1 shows that Lepo' Tukung is the majority sub-ethnic group in Batu Majang, followed by Uma' Baka. If 50% of the Uma' Baka' households (not to mention all of them), moved to Berau District, the population of Batu Majang over the next ten years would decline. It is estimated that nearly 100 people had moved to Berau District by December 2002. Some others are planning to move to Berau for the same reasons.

Tables 1 and 2 and Tables 3 and 4 show a different number of Batu Majang residents in different years. This is because different data were used in compiling the tables. The distribution of population by age for the year 2002 census is not available presently, and so data from the 1996 census have been used. Table 2 also shows that most of the villagers (49.1%) fall within the range of (productive) labor force age (*i.e.* 19-55). This is reflected in the fact that the potential for the villagers to harvest forest products or otherwise use the forest is high, and is likely to increase as the birth rate rises in the future.

Table 1. Composition of the population by sub-ethnicity

Sub-ethnic group	No. of Households	No. of Persons	Percentage
Lepo' Tukung	65	302	42.0
Uma' Baka'	36	167	23.2
Lepo' Timay	3	15	2.1
Mix of other Dayaks	46	215	29.9
Non-Dayaks	4	20	2.8
Subtotal	154	719	100

Source: Village Monograph (1996)

Table 2. Distribution of population by age

Age group	Population	Percentage
0 - 6	93	12.9
7 - 12	125	17.4
13 - 15	65	9.0
16 - 18	53	7.4
19 - 24	67	9.3
25 - 55	286	39.8
> 55	30	4.2
Subtotal	719	100

Source: Village Monograph (1996)

Table 3. Population distribution by sex per Neighborhood Association

RT	Household	Male	Female	Sub-total
I	52	131	119	250
II	32	66	58	124
III	21	49	43	92
IV	19	43	38	81
V	34	74	86	160
VI	45	79	80	159
Subtotal	203	442	424	866

Source: Village Head Office, 2002

Table 4. Population by religion

Religion	No. of persons	Note
Catholic	495	Muslims are newcomers (non-Dayak) in
Protestant (GKII)[3]	328	Batu Majang
Muslim	43	
Total	866	

Source: Village Head Office, 2002

[3] GKII: Gereja Kemah Injil Indonesia (Indonesian Bible Camp Church).

2.4. Village History

Batu Majang villagers originally came from a number of villages in Apau Kayan, adjacent to the Malaysian border, especially from Long Uro' village (*Lepo' Timai*), Marung village (*Uma' Baka'*), and Sei Barang village (*Lepo' Tukung*). The original inhabitants or the founders of the village were the *Lepo' Timai*, who moved from Long Uro' to Batu Majang in 1924 and established a temporary settlement in the old Batu Majang area, around two kilometers up river from the present-day Batu Majang. They moved along the Urai and Temaha Rivers, led by *Pelahang Lawai* and the current *Pelenjau Apui*. In 1970, most of them moved to Bulok Sen, Sub-District of Kutai Kertanegara, led by *Pepai Lenjau* and then mixed with other groups that had settled there since 1901.

A second phase involved an influx of *Lepo' Tukung*: these people came from Sei Barang Village (Apau Kayan, Malinau District), and moved to Batu Majang in two groups. The first group, consisting of 15 households and around 75 people led by *Palang Lading*, moved to Long Mujud on the Boh River in 1949. They settled in this village only for a while before moving onto Batu Majang in 1968. A second group of 200 people, led by *Peding Uluk* and *Pebit Anye'*, moved from Sei Barang to Batu Majang in 1972 via the Temaha River.

The third wave involved the *Uma' Baka* in 1981, and consisted of 200 people from Long Marung led by *Peleting Usat* and *Pemadang Anye'*. They moved through Metulang village, using traditional canoes, rowing down to Naha Payau via the Uga River. In 1982 they left for Rukun Damai, a village down stream of Batu Majang and in 1983 moved up river (*i.e.* returned) to Batu Majang.

According to local history, the name Batu Majang is thought to have come from a big, long stone, which lies down in the old Batu Majang village area. In the Bahau language, "*majang*" means lean. Another possible origin for the name Batu Majang is that it comes from a Nandi rock statue of the Hindu Kingdom, which is known by local people as Batu Sapi. The current Batu Majang village was established under the resettlement program of the Social Department of the Republic of Indonesia in 1982.

Economic and practical reasons were the key motivating factors that encouraged people to move from their original villages into Batu Majang. It was very difficult to get hold of salt, clothes, gasoline, tobacco and/or it was difficult to build permanent houses because iron and timber products, nails and zinc roofs were not sold in Apau Kayan at that time. Other reasons included the lack of health facilities and schools. However, a salt shortage was the major reason for the exodus, according to the villagers.

Table 5 lists the main historical events of the Batu Majang settlement as a series of phases. Once they arrived in Batu Majang, the government provided immediate financial support to the villagers for housing construction. The villagers also received support from the timber company PT. Sumalindo to improve agricultural systems and infrastructure in the village. As a result, the villagers' standard of living has improved in many aspects, as compared with previous experiences in Apau Kayan.

However, there have been no significant changes in the agricultural system in terms of management and technique, as compared with the systems used previously. It seems that shifting cultivation is an indispensable element of local culture, and, as such, firmly remains a way of life in Batu Majang. The limited area available for *ladang* farming in Batu Majang, the transport problems and other socio-economic factors have, however, made a number of villagers moved to other areas of East Kalimantan. Thus Lepo' Timai moved to Bulok Sen village in Kutai Kertanegara District, and Uma' Baka' moved to Long Gie in Berau District. The dependency of agricultural yield on rainfall is significant. For instance, the failure of the harvests in 1982 was because of a long drought and its associated impacts.

Table 5. Historical events in Batu Majang.

Year	Events
1958	• First group of 6 households, or 48 persons led by *Alang Lading*, moved from Sei Barang to the Mujud River (now Km 76 of the PT. Sumalindo logging road). They walked and rowed for 3 months from Sei Barang along the Busi River to Long Mujud.
1960	• A second group of 100 persons led by *Tajah Surau* from Sei Barang moved to the site on the Mujud River, joining up with the first group. They took the same route as the first group.
1968	• The party moved from Mujud River to Batu Majang (the old village), joining with the *Kenyah Uma' Timai*. Here they began to open *ladang* upstream of the Alan River, in the area currently called Km 18 (the former *ladang* of *Uma' Timai*).
1972	• A third group of 250 persons moved directly from Sei Barang to Batu Majang. It took them around 4 months to get to Batu Majang. As the water level was very low – due to a long drought – the boats moved slowly. The population of Batu Majang (old village) rose to 500 persons. • The long drought also caused a cholera epidemic, where in one day 3 persons died. The long drought also caused a shortage of food and restricted the supply of medicines from Samarinda.

Table 5. Continued

Year	Events
1972-82	• Some people moved individually (*i.e.* not in groups) from Sei Barang to Batu Majang.
1974	• Flooding calamity for one day: a lot of live-stock died and rice fields were destroyed.
1981	• The fourth group of 178 persons of *Uma' Baka'* led by *Madang Anye'* (currently the Customary Headman) came from Lon Marung, Apau Kayan. It took 2 years to move from Long Marung. They moved via Muara Wahau, staying for a while in Rukun Damai, before finally moving to Batu Majang. In addition to those that ended up in Batu Majang and other areas up river of Mahakam, some of the *Uma' Baka'* group members moved to Malaysia and Berau District.
1982	• Villagers moved from the old village to the new location of the current Batu Majang in order to allow more access to outsiders. The Social Department of the Republic of Indonesia provided support by financing construction of 90 houses, an elementary school, *etc.* • Long drought, also called foggy drought, caused a failure of most agricultural products. • HPHH PT. Sumalindo started field operations in Batu Majang.
1983	• The Village Head, Taja Surau, asked PT. Sumalindo to enclave Mt. Ben as a protected forest (*tana' ulen*). Since then, there has been no activity in the area.
1984	• Through the Resettlement Project, villagers got seedlings of coconut, coffee, and *Durio zibhetinus* (durian). Each group got 200 seedlings for each species, but this program failed.
1985	• East Kalimantan Provincial Veterinary Service (Dinas Peternakan) gave 60 domestic pigs to the villagers and they still exist and have doubled in number.
1986	• Social Department handed over the Resettlement Project to the Provincial Government, signed by the Vice Governor of East Kalimantan. • Big meeting of Dayak Kenyah up river of Mahakam, attended by 4 big villages: Data Bilang Ilir, Data Bilang Ulu, Rukun Damai, and Batu Majang. Discussions were held on the process of electing the Customary Headman, a new Customary Headman was selected, customary laws were elaborated, and a sports and cultural festival was held.
1990	• Development of drinking water facility. The Catholic Church donated IDR 22 million and PT. Sumalindo IDR 3 million. A total of 13 mains water taps installed.
1991	• Sumalindo Community Service Section (HPH Bina Desa) assisted with: - Agriculture extension at Km 18. - Chicken raising cage. - Temporary education staff. - Football pitch. - Transportation for Church materials.
1992	• Community Service Section activities: - Meeting with PT Sumalindo to plan activities. - Establishment of farmer group/Kelompok Tani *Mudip Mading*. Membership made up of 38 persons. - 700 m road built from logging road to the farmer group area.
1993	• Community Service activities: - Construction of check-dam for irrigation purposes. - Elementary school (SD), library and church built.
1994	• State Secretary Minister of the Republic of Indonesia, Moerdiono, visited Batu Majang. • Development of the road to *Riam Udang* (*Udang* waterfall). - PT Sumalindo provided materials and transportation for the construction of Protestant and Catholic Churches.
1995	• Rice harvest failed because of prolonged drought. • Development of village electric power. • Irrigation dam built at Km 15 • Establishment of the Village Cooperative Unit (*KUD*), named *"Mudip Mading"*, at Km 18.
2000	• The biggest flood in Batu Majang.
2001	• Commencement of logging under *Banjir kap* HPHH forest operations. • Some members of Uma' Baka' moved to Berau District (Long Gie village). Population decreased significantly
2002	• All people of Batu Majang received fee from the HPHH, to a value of around IDR 700,000 (US$ 70) per person. Infants, children and adults got the same amount of money.

2.5. Social Structure and Relations with Outsiders

A social structure can be seen in many aspects of life in the village, such as in social stratification, the organization of labor, and in terms of age relations. Devung (1984) suggested that Dayak Kenyah communities have three social classes, as follows:

1. *Paren* or aristocrats.
2. *Panyen* or commoners, divided into *Panyen Tiga* or community leaders and *Panyen Kelayan* or common people.
3. *Ula'* or slaves.

The *Paren* class is maintained through vertical inheritance, though both the father and the mother must be from the *Paren* class for the line to be continued. *Panyen Tiga* is formed through cross-marriage between *Paren* and *Panyen Kelaya* or between *Panyen Tiga* and *Panyen Tiga*. It is possible for individuals to move up from *Panyen Kelayan* to *Panyen Tiga* through exceptional performance at work or by attaining a high level of education. *Ula*' or slaves are descendants of war prisoners, and virtually no longer exist since the establishment of the Dutch Administration post in Apau Kayan in 1907, at which time all tribal wars and head-hunting (*mengayau*) practices among Dayak tribes were halted.

An informant, Pius Kulau mentioned that the remaining pure aristocratic *Paren* of the village totals 4 persons, including the current Village Head and the Customary Headman. The rest, or 98 % of the villagers, are of the *Panyen Tiga* or *Panyen Kelayan* classes. It is difficult to identify the exact number of each class because of "cross-marriage" among the two.

In the daily activities, especially the economic activities, the distinction between social class does not appear, and everyone has the chance to attain a higher economic level. The arrival of Christianity has done away with the big distinction and gap between *Paren* and *Panyen.* Today it is quite possible for a *Panyen*'s standard of living in terms of economic status and education to be much higher than that of a *Paren*, depending on his/her achievements and on the kind of job he/she has. The differences among the classes are most clearly discerned at ritual ceremonies such as weddings and funerals, or from traditional clothing and paintings.

For the *Panyen,* it is a taboo to decorate their traditional clothes (*sapei adet*) either with a human head motif/design (*ulu kelunan*) or with a lion head (*ulu lenjau*) motif. Should this restriction not be observed, they believe that they will be cursed or struck down by a calamity. The human head and lion head motifs are exclusively for those from the higher class such as the aristocrats. The *Panyen* can only decorate their traditional clothes with a hornbill motif or any other common traditional motif. It is also prohibited to decorate a coffin of the common people or *Panyen*, as this custom is reserved for the aristocrats.

As this village has become more open to outsiders within the last 10 years, the differential treatment of those from different classes has gradually begun fading away. This doesn't mean that the traditional social stratification will disappear completely in the village. Rather, it still exists but it is not shown openly. A new trend amongst the Dayak Kenyah sub-ethnic group is that social class is based less on the ancestral line (as was the case with the old social stratification) and more on property, education level, and a person's position in local government or in a company.

In this new situation, everyone has the chance to become the Village Head or the Customary Headman by election, as far as he/she has the capability for the position. However, the *Panyen* still feel somewhat reluctant to become a candidate in the election process. They are afraid that the higher class would not listen to the words of a lower class person. In old Dayak culture, it is impolite for a lower class person to give orders to people from the higher classes: if he/she does so, he/she might be cursed (*parip*). So far, the Village Head and the Customary Headman has always come from the higher or the *Paren* class. In contrast, any class in the community can occupy any position within education or in a religious institution. There is no constraint for a lower class person to become a leader in these institutions.

From a gender perspective, men and women also have equal rights for all positions in the village. There are no restrictions placed on women becoming a Village Head or Customary Headman. However, in reality, a woman has never occupied either of these positions in Batu Majang so far. This is because of the Dayak Kenyah way of life itself, in which men are always dominant compared to women in the decision-making process. Women normally feel inferior and prefer to be good listeners instead of speaking up.

Access and communication with outsiders has burgeoned since traders and employees of forestry companies, as well as the Catholic and Protestant Missionaries, came to the village. Batu Majang is open to everyone who would like to come or settle there as far as they respect the customary rules and the village habits.

Under village regulations, every outsider who comes to the village, either for temporary or for permanent settlement, has to report to the Village Head (*Petinggi*) and the Customary Headman (*Kepala Adat*), explaining his/her objectives in coming to the village. The Village Head uses this opportunity to explain the rules and norms existing in the village. The Village Government (*Pemerintahan Kampung*) consists of Village Head, Village Secretary and three members of staff. The functions of the Village Government are managing the village, administration, and dealing with the government and external affairs. The staff of the Village Government assist the Village Head based on their sectional job descriptions (Village Governance Section, Development Section and General Affairs Section). The role of the Customary Institution (*Adat*), on the other hand, is mainly to deal with marriage- and divorce-related matters, to resolve internal conflicts, and to tackle cases relating to infringements of village norms and rules (Nanang, 2002). The Customary

Institution is composed of the Headman, secretary, ritual staff, law staff and treasurer.

Besides those two institutions, there are six other internal social organizations in Batu Majang:

1. Posyandu Vinolia: *Posyandu* stands for Pos Pelayanan Terpadu or Integrated Health Service for Infants and Mothers.
2. PKK: Family Welfare Education, especially for women
3. Karang Taruna "Sinar Terang": Youth club, the activities are focused mainly on sport-related matters.
4. Church (Catholic and Protestant).
5. Cooperative (KUD): deals with the sale of vegetables and other consumable products.
6. School: education, especially at the Elementary School (SD) level.

Among the existing institutions in the village, the Village Government and the Customary Institution are the two most likely to be involved in issues of forest management; the other institutions are by and large unrelated to forest management. By function, the Village Government and the Customary Institution are complementary to one another. Any issues relating to forests are commonly dealt with by both of these institutions together.

2.6. Decision-Making Process

The Village Head and staff plus the Customary Headman and staff hold joint responsibility for decision-making at the village level. However, within the decision-making process, these individuals cannot impose their ideas at will. The mechanism of the decision-making process at the Village Government level is that firstly the Village Head orders the *Pengirak* (the staff in charge of general affairs) to invite all Village Government staff, the Heads of the Neighborhood Association (*Ketua RT*), the Customary staff, and the representatives of all social organizations to a meeting on an appointed day, usually a Saturday or Sunday. The *Ketua RT* and the representatives of each social organization are considered as grass-root representatives.

Then, the Village Head explains the purpose of the meeting and asks for input from the participants. Arguing and debating are allowed and indeed welcomed during the discussion. A decision is resolved through agreement among all participants. Balan Tingai, the Village Head of Batu Majang, said that he always tries to accommodate all ideas of the villagers in order to achieve an agreement. This is the way in which villagers have traditionally come to an agreement and planned a course of action, even before they moved to Batu Majang.

In cases where no agreement is achieved in the meeting because of a long-running debate, the Village Head offers three options to those present, namely, to extend the meeting, to put the motion to a vote, or to invest the authority to make a decision in the Village Head alone, though he must accommodate the aspirations of the different voices. So far, decision-making attained through mutual agreement (*mufakat*) is the most common way to reach a decision

As mentioned earlier, women and men have equal rights and opportunity in the decision-making process. In a vote to settle a decision, women are able to fully use their rights. However, in a discussion to reach an agreement, and especially in a debate, men are dominant over the women. It seems that women are less vocal compared to men, as they feel a little shy to express what they would like to say, especially in a big meeting.

If there is a problem in the village such as if someone breaks the rules – for example, by having sexual relations without marriage – the Customary Headman will gather all his staff and the village elders. In a meeting they will decide the way to fine the man and woman being accused in this case. The fine could be in the form of antique properties (jars and *gong*), an amount of money, or any valuable materials such as a chain saw, outboard motor, *etc*. The two defendants also have to serve meals to all participants at the meeting.

In a Dayak Kenyah family, the decision-making is taken through discussion and agreement between the father and the mother, and in some cases also by asking comments and opinions from other family members. Basically, the role of a father and mother in decision-making are more dominant compared to the role of other family members.

2.7. Economic System

The villagers' regular income comes from agricultural products such as rice and vegetables, followed by the income earned as wages from forest companies, small shops, or from harvesting and selling edible bird nests. Vegetables are the main agricultural products that make cash. The income from timber earned through *banjir kap* seems to be a temporary source of income because of the limited area available for commercial logging, and because only around 25% of villagers can work in *banjir kap*. There are approximately ten small shops (*warung*) in the village, which sell household necessities. The main job of old men and women is working in the dry and wet rice fields (*uma* and *sawa* or wet land rice), and in the vegetable gardens (*banit*), while some young men work for the forest companies as administrative staff, surveyors, chainsaw operators, administrators, or as drivers. Some young women go to school and some work in *uma* to assist their parents to earn a living.

The Village Cooperative Unit (KUD = Koperasi Unit Desa "*Udip Mading-Alan Mening*, which means "new life together with the clean water of the Alan River") plays an important role in the economic activities in the village, especially for those involved in agricultural activities at Km 13-21. The transactions of buying and selling agricultural products from farmers to PT. Sumalindo are all done through the KUD. Farmers usually sell agricultural products to KUD three times a week, and KUD pay the price of the products every month to the farmers. The amount of money they get varies from IDR

150,000 to IDR 200,000/farmer/month, depending on the amount of vegetables sold. Increasing the number of times vegetables are sold from once to three times a week could double a farmer's income from IDR 200,000 to IDR 400,000 (US$ 20-40) a month[4].

KUD membership is open to everyone who would like to become a member. However, KUD members are actually the representatives of each household. This means that only one person from each family can become a KUD member, either the father or the mother, or one of the children. KUD requires everyone who would like to become a member to open a *ladang* or vegetable garden in Km 13-21 first before applying for membership. The number of members so far is 109 persons representing 109 households (there are 203 households in Batu Majang). The rest of the households are non-members of KUD because they do not have as *ladang* or vegetable garden in Km 13–21. They hold other jobs, such as teachers, businessmen, traders and workers in the forest companies or they have *ladang* and gardens at other sites.

The farming households usually know the amount of rice they need for their own consumption per year. Therefore, if there is any surplus in rice yield, they will sell it to PT. Sumalindo and other timber companies, or to local buyers. Other non-agricultural products, such as timber, gold, black bird nests (*lumut*)[5], honey and wild game meat, are also traded. Everyone has in principle free access to the resources. The products are sold to buyers either in Batu Majang or nearby villages. There are no regulations regarding as to where the products should be sold.

The private ownership of farmland, large lumber trees or honeybee trees, is recognized by custom as long as the owner or finder puts a sign on or nearby the claimed object. Whoever becomes the first one to clear a certain area of farmland, to plant a fruit tree or other crop, to find a big tree or honeybee tree in the forest, and then claims it/them, holds the individual rights to the resource.

2.8. Production and Marketing System

1) Agricultural Products

The agricultural areas (*uma*) in Km 13-21 had been used by the Lepo' Timai before the current farmers arrived. However, at that time two boats (*alut*) were required to get to the site via the narrow rapids which were impassible with only one boat. The first boat was used from the village as far as the lower side of the waterfall, and the second was used from the upper side and onto the *uma*. It took around 30 minutes to walk from lower to the upper level of the falls. After the arrival of PT. Sumalindo, the logging road through the agricultural areas (*uma*) was opened and over land transportation using the company's trucks was provided. In addition, an irrigation dam was built, and the agricultural activities have been much better from year to year in terms of yields and marketing arrangements.

For the dry farming system, in the first year the farmers open the farming area for rice and they usually mix rice crops with vegetables and other cash crops such as spinach, maize, cucumber, cassava, mustard and green beans. After the farmers have harvested the rice at the end of the first year, usually in February and March, they typically move to another area to open a new *ladang* (a three- to five-year old area of secondary forest left by the Lepo' Timai). The *ladang* used in the first year *(bekan*) are used by the farmers to plant vegetables and spices such as spinach, chili, scallion, ginger and eggplants, which are sold onto PT. Sumalindo.

Product marketing is done in a group system. All farmers based at Km 13-21 are divided into 3 groups, namely *Gunung Belarek, Sungai Urang,* and *Sungai Betung*. The *Gunung Belare'* group consists of 35 households (KK), and has the opportunity to sell their agricultural products every Friday. The *Sungai Urang* group consists of 38 households (KK) and can sell their products every Monday. The third group, the *Sungai Betung*, consists of 36 households has the chance to sell their products every Wednesday. In the event that all of the vegetables cannot be bought by the Village Cooperative (KUD) or by the Company (PT.Sumalindo) because of over supply, the farmers can sell the excess to buyers in Batu Majang or Long Bagun on Friday and Saturday.

As the demand and consumption of vegetables is increasing, due mainly to the increase in activity of the HPHH logging operation since 2001, PT. Sumalindo has asked KUD to sell vegetables from the three groups three times a week. Therefore, the three groups are now able to sell vegetables to KUD on Monday, Wednesday and Friday.

Regarding the wetland farming system, PT. Sumalindo has built a dam for irrigation at Km 13, as has been mentioned earlier. The aim of PT. Sumalindo is to encourage the farmers to cultivate wet rice and, of course, to increase rice production, so as to reduce pressure to the surrounding forest areas, and to show the advantage of wet rice compared to *ladang*. The dam can irrigate more than 20 hectares of wetland rice fields and has been utilized over the last 5 years. However, when the team visited the wet rice fields in August 2001 escorted by Pak Daryono and Pius Kulau, nobody was cultivating wet rice at that time. The reason for this was that extensive flooding had broken the check-dam, such that the water supply was not sufficient for the irrigation system. In addition, according to Pius Kulau, the Village Secretary, traditional Kenyah Dayak farming habits may form another reason why the farmers were not so enthusiastic to cultivate the wet rice fields: they have traditionally worked in dry fields rather than in wet fields.

Bambang Sugiharto, the site manager of PT. Sumalindo commented that PT. Sumalindo would fix the dam

[4] The exchange rate with the US $ has fluctuated daily against the IDR since 2001, typically in the range of IDR 8,200 to IDR 10,000 to the $.

[5] *Lumut* is the local term for black bird nest, the lowest quality of the edible bird nests.

if there were a commitment from the farmers to fully utilize it; if not, PT. Sumalindo would only be wasting money. He said that to increase farm production, the agricultural paradigm in the village needs to be changed from (only) *ladang* to a mixed system of *ladang*, vegetables, and wetland farming.

Concerning farm product marketing, Pak Daryono, a member of staff at PT. Sumalindo for Community Development, said that the total amount of transactions under KUD had reached over IDR 17 million/month, excluding vegetables and rice sold outside the KUD. According to him, PT. Sumalindo had already pledged capital of IDR 40 million (US$ 4,000) to KUD for expanding the market.

The advantage of the system mentioned above is that the farmers have a fixed market and buyer for their products, and they do not spend any money on transportation costs. The disadvantage of the system is the limited uptake by the company when yields are abundant. Another permanent buyer to replace PT. Sumalindo when the company closes in the future is also an important point to be considered. If there is no longer a buyer for the agricultural products, the villagers may revert their livelihoods from cultivation back to forest product extraction, as had been the case previously.

2) Export Commodity Products

Export commodity products such as cacao, pepper, fruits and banana, are very limited from this village. Only a few farmers plant bananas and pineapples, and then only for personal consumption. Jackfruits, hairy fruit (*rambutan*), and forest jackfruit (*nakan*) are grown for personal consumption as well as for sale. Most of these fruits are planted around the houses in the village or around the huts at the *ladang*. Some farmers have planted cacao but only on a limited small scale.

For the forthcoming Community Development (Bina Desa) program, PT. Sumalindo will provide cacao seedlings for farmers that will be planted along the right and left side of the logging road from Km 13 to Km 21. The first step for the program is to establish 20 hectares of cacao garden for a pilot project. In the future, every family will clear one hectare of cacao estate and PT. Sumalindo will provide seedlings, management and market support.

3) Forest Products and Wild Game

Non-timber forest products taken by the villagers from the forest are rattan, honey, and medical plants. The wild game hunted in the forest are wild pig (*Sus barbatus*), sambar deer. Wood is harvested for housing material. When someone wants to take wood from the forest, he must get written permission from the Village Head. If permission is granted, the official letter received from the Village Head must be shown to PT. Sumalindo personnel (or the driver) in order to get free transportation to take the wood from the forest to their village.

Banjir kap logging was allowed in West Kutai District from 1999 to 2001. Previously, the Village Head and the Customary Headman did not allow this system because it was considered as illegal logging. As this system was allowed by the District Government and already practiced in other villages, the Village Head of Batu Majang then allowed this system of timber cutting as long as the loggers paid the fee to the village, followed the rules, and cut timber only in the allocated areas. The allocated areas are in the forest outside of the protected forest (*tana' ulen*), and the loggers are only allowed to cut trees no closer than a minimum of 250 m from river banks. Other rules include the stipulation that the workers should come from Batu Majang and that a fee of IDR 10,000/m3 be paid to the Village Head.

2.9. Development Programs

There have been a number of development programs undertaken in the village, either funded by companies (PT. Sumalindo and PT. Pacific) or by the government. Some development programs that were funded by the companies are the building of the 2 km village road, and provision of drinking water facilities in 1993, by channeling clean water from Mt. Ben to the village through pipes of a length of 500 m. The company also provided an electric generator for the village, and all materials for the 20 x 30 m Village Hall (*Balai Desa*), and also the building materials for Catholic and Protestant Churches.

Besides physical support, PT Sumalindo also is also concerned with education development, health, and transportation. For education development, the company provides a 160 HP boat for transportation of students from Batu Majang to Ujoh Bilang and back (twice a day), and awards scholarships to elementary and senior high school (SD, SMP, SMA) students amounting to IDR 50,000 (US$ 5) per month, and IDR 600,000 (US$ 60) per semester to university students.

The development programs funded by the government involve provision of resettlement houses in Batu Majang under the Social Department of the Republic of Indonesia program in 1992, establishing the Community Health Center (Puskesmas Pembantu) and providing nurses, establishing facilities for elementary school (SD), providing official uniform for all village staff and an official allowance of IDR 150,000 (US$ 15)/month/person.

The development programs proposed by the villagers in the future are as follows:

- Improvement of the village road (cemented road). The villagers proposed this program because the road is muddy in the rainy season. The District Government has agreed to provide cement and PT Sumalindo will provide the gravel.
- Improvement of the drinking water pipes. Recently, some parts of the water pipes have broken.
- Rehabilitation of the irrigation dam in Km 13 in order to improve production in the wet rice fields.
- Promoting cacao plantation in Km 13-21, a program sponsored by PT Sumalindo under the Community Development program. PT Sumalindo

will provide the seedlings and other support for this program
- Placement of a full time agriculture extension officer for Batu Majang village. The farmers are facing some agricultural problems e.g. plant disease, pest, and the problem of how to improve the quality and yield of some vegetable species. The farmers said that they need a full time extension officer to help them to improve agricultural production.
- Establishing a branch of KUD Udip Mading at Km 122 to supply fuel for the people from Sub-District of Sungai Boh. This will be a joint-operation for benefit-sharing between PT Sumalindo and Batu Majang village

From the development programs listed above, promoting the cacao plantation, improvement of irrigation and agricultural extension are the programs directly related to forest management while the others are supportive, as they could improve the villagers' welfare and income and so, to an extent, decrease the pressure on the forest

2.10. Local Government Policies

As previously mentioned, in the period 1999 to 2001 the Kutai Barat District Government released some permits to the local people to extract forest products, especially timber, in a management system called *HPHH* (*Hak Pemungutan Hasil Hutan*) or small scale logging by the community. The size of one HPHH is 100 hectares or a multiple of this, and is rendered for one year or more, depending on the achievements of the HPHH and its partner company. The concession permit could be given to a person, a group of people, or to the Cooperative (KUD). The permit by regulation was based on field observations and the recommendation from the District Forestry Service (*Dinas Kehutanan*). The Village received a fee of between IDR 25,000/m^3 to IDR 125,000/m^3, depending on the negotiation between the HPHH concession holder, the village community and the partner company (KKPKD, 2001). In 2002 the HPHH logging system was not allowed to operate anymore, following new policy taken by the Department of Forestry.

The District Government through the District Forestry Service began to develop the Community Forestry program, by issuing a District Regulation on Community Forestry. In the regulation there are four alternatives schemes for the Community Forestry program management at the Village level: Village Forests Management (managed collectively by the Village Community members), Customary Forests Management (managed collectively by the Customary Community members), Private Forests Management (managed by an individual or group of forest land owners) and Joint Forest Management (managed collaboratively by the Forest Concession Holder and the Village Community). The use of the forest may vary, for example as a Conservation Forest, Protected Forest, Traditional Use Forest, Forest for Special Purposes, Production Forest, or as a combination of two or more of these, depending on the status, functions and conditions of the forests to be managed.

Under regional autonomy, the Village Government under the Village Head has been granted more authority from the District to deal with village affairs, including forest related matters. Previously, before this autonomy, the Village Head just acted as the extended hand of the Sub-District Head (*Camat*), such that the responsibility of a Village Head or a Customary Headman was limited. Currently, a Village Head or a Customary Headman may refuse the policy of the *Camat* if the policy is not suitable for the community. The dependency of the Village Head (*Petinggi*) on the Sub-District Head (*Camat*) has reduced. Rama Asia, the District Head (*Bupati*) of Kutai Barat mentioned in a newspaper on February 15, 2002, that the Village Government would get broader autonomy than that of the Sub-District Government. The first step will involve giving the authority to the Village Government to issue Identity Cards (*KTP*), which were previously issued by the *Camat*.

III. Existing forest and Land Management Practices

With regards to existing forest and land management practices, there are 3 approaches to land classifications in the Dayak Kenyah system, as shown in Table 6. Four of the subgroups in this classification are found in Batu Majang, as shown in Figure 4.

As for other indigenous Dayaks, the customary rights of the village to the primary forest (*ba'i*) and its natural resources are rather loose, whereas the customary rights of the individuals and households are rather tight. For example, neither the Village Head or the Customary Headman have the authority to impose regulations on the use of primary forest, except for in the *tana' ulen*. They cannot prohibit any one from collecting forest products in the primary forest. On the other hand, with regards to individual forest land (*jekau / bekan*), the owner has a clear right to prohibit anyone else from collecting products from the area. The following is a description of forest and land management as practiced in Batu Majang, specifically for the *Tana' Uma*, *Jekau / Bekan*, *Ba'i* and *Tana' Ulen*, as they relate directly to forest resources.

Table 6. Dayak Kenyah land classification

Classification	Description
Tana' Lepo'	The whole area of a village or communal land. The area is divided into: • *Lepo'*, land for village settlement/housing, including areas for rice storage (*lepubung*) and a cemetery (*liang*). • *Tana Uma*, special land that is prepared for agricultural purposes (*uma*). • *Tana Jekau* (*bekan*), secondary forests on old *ladang* sites. The land is privately owned. Fruit trees and some annual crops are the proof of land ownership. • *Ba'i*, primary forests, for common use. • *Tana' Ulen* (*Adet*), primary forest, reserved and protected, for public use only.
Tana' Tepun	Ancestral land, land where an ancestor opened a *ladang* and established a house for the first time (in the past). It might be within the existing *Tana' Lepo'* or beyond it.
Tana' Lepu'un	Former village sites that have been abandoned by people. It might be within the existing *Tana Lepo'* or beyond it.

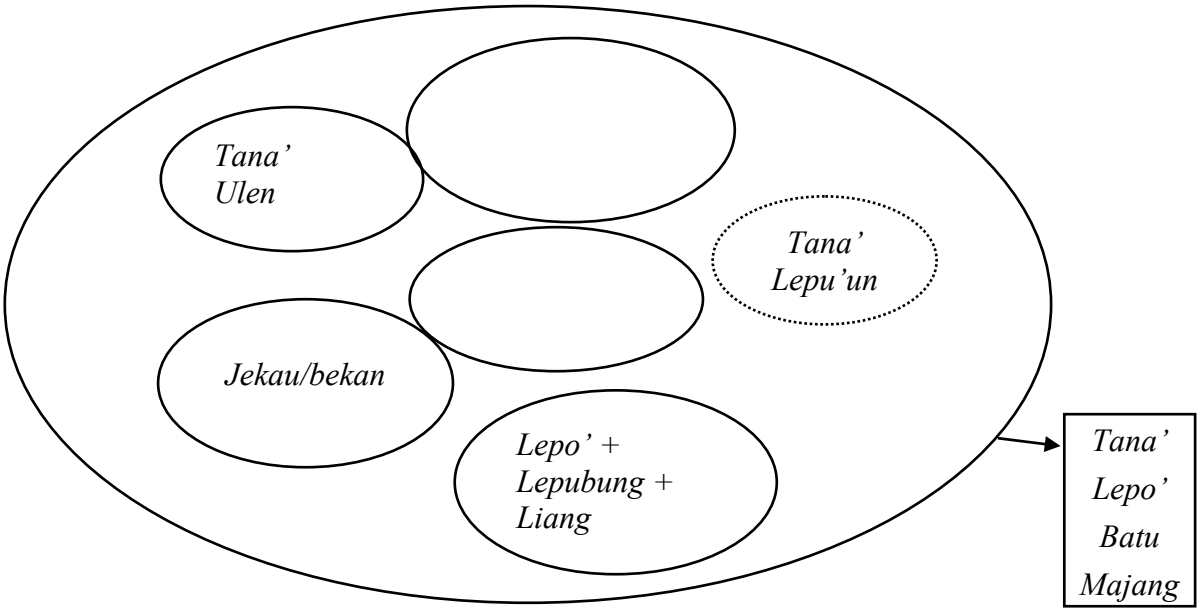

Figure 4. Land classification in Batu Majang

3.1. Tana' Uma

Every year, farmers open around 250-300 hectares of forest for *uma* / *ladang* in a rotating system (Subroto, 1997). This means that on average every household opens 1 hectare every year. A farmer can open a new *ladang* in secondary forest after a 3-5 year fallow period. It is prohibited to establish *ladang* in forests on slopes of 25% or more to protect the forest from soil erosion. The work involved in establishing new *ladang* is organized in groups. The decision-making process to select the new location for the *ladang* is conducted through group discussions. The outcome of this discussion is of a higher level than (*i.e.* takes precedence over) a family decision on where to locate a new *ladang*. As mentioned earlier, there are three farmers' groups (*Kelompok Tani*) in Batu Majang: *Gunung Belarek, Sungai Urang,* and *Sungai Betung*. A group member can move from one group to another group, depending on the location of his/her *ladang* in a certain year. The three groups of farmers are actually representatives of all the farmers who operate *ladang* in Km 13-21.

As a rotating system, new *ladang* are located on for-

mer *ladang* sites that have been left fallow for 3-5 years. In this way, the boundaries with regards to neighboring plots are not a problem as they always refer to the previous years' borders. Sometimes, a farmer lends his/her land to other farmers with a compensation of 1-2 tin cans (1 tin = 12 kg) of rice after harvesting. The norms and rules for the farmers to follow in common are:

- The first farmer who opens a patch of primary forest for *ladang* is automatically the owner of the land.
- Farmers should agree upon the boundaries of the *ladang* with their neighbors.
- Farmers should open a new *ladang* at the same time with other farmers as a pest prevention method.
- Burning the *ladang* must be done together by farmers in a *ladang* cluster on the same day. This is a means of safeguarding the forest against fire spreading throughout the forest area.
- Planting of rice must be in the same week, as a method for preventing pest attacks.
- The first day for planting (*nugan*) will be determined by the Customary Headman or the Elders in charge.
- Nobody is allowed to plant the *ladang* prior to the time determined by the Customary Headman or the village elders, all of who have experience in traditional astronomy (*mita tau*)[6].

An interesting aspect of the management measures on the *tana' uma* as mentioned above is fire prevention. Over the past 30 years, the forest area in Batu Majang has been free from forest fire, notably in both the large-scale fires of 1982/1983 and 1997/1998. This condition is more or less the result of the continuous prevention efforts of the villagers. Prevention measures are practiced from the moment the farmers cut trees to clear the forest for the *ladang*. The farmers always try to remove flammable twigs and litter along the border of the *ladang* with the forest, so making a firebreak between the *ladang* and the forest. The firebreak is locally known as "*sekat bakar*". When the farmers burn the *ladang,* they also have to watch and consider the direction of the wind. The burning is done at the same time in groups so that it would be easier to extinguish any excessive fire together.

Unfortunately, however, there are as yet no formal rules on how to fine someone who is involved in or becomes the cause of a forest fire. The sense of belonging to the *tana' uma* and the surrounding forest seems to be the main factor for people in being vigilant and keeping large-scale fires from breaking out. If someone encounters a forest fire, he/she has to tell the other people and ask for help in fighting the fire together. The tools for fire fighting are motorized-water pumps (*alkon*), manual water sprayers, and buckets.

[6] *Mita tau:* searching for the best day (date) for the first planting

3.2. Bekan / Jekau

The *bekan / jekau* are secondary forests developed during the rotational period of the *ladang*[7]. In the *ladang* system, the farmers maintain land fertility in a natural way by fallowing the land for about 3-5 years. During the period of rotation, soil fertility has the chance to recover and the land undergoes renewal in time for a new *ladang*. There are several indicators by which farmers may gauge whether the land is ready and suitable for a new *ladang*. Such indicators include the decline of shrubs and undergrowth as the tree canopy closes (especially with *Macaranga* sp.); a reversion in the color of the soil to a dark brown or black color; and the appearance of certain species of plants indicative of soil fertility.

As for the *ladang*, the *bekan* / *jekau* are privately owned by individual farmers and families. In some communities in East Kalimantan, there is a trend for the individual farmers and families to open as many *ladang* as possible in the primary forest to increase their property stock. Such a trend has led to intense competition amongst villagers to open vast *ladang*, so by decreasing the size of the surrounding primary forest. Fortunately, this trend is not observed in Batu Majang because the location of new *ladang* is allowed only in designated areas or on the sites of old *ladang* (*bekan* or *jekau*).

3.3. *Ba'i*

Ba'i, the primary forest in Batu Majang, has become part of the PT Sumalindo forest concession area. Traditionally, *bai'* is treated by the Dayak Kenyah as well as by the other Dayak groups as forest for common use, whereby every one has free access to the forest. In the case of Batu Majang, however, the access is "limited free". Access for hunting, fishing, collecting medicinal and edible products is relatively free in the area, but taking wood is limited to personal use only (not for sale). If someone would like to take wood from Batu Majang forest area for housing materials, he needs to get a letter of permission (*Surat Pengantar*) from the Village Head. He then has to show the letter to a PT Sumalindo member of staff (logging truck driver) in order to make arrangements for transportation in taking the wood home from the forest.

Individual claims to the primary forest are not allowed: there are no individual rights to primary forest. However, the claim to certain forest products, such as a tree in the forest, is recognized. If someone finds a big tree in the forest for building materials or for making a boat, he/she should put a sign on the tree. The sign is usually in the form of a drawing of a human face on the surface of the bark using a carving knife; shrubs and small trees around the "claimed tree" are cleared, or a sign known as an *"atep"* is erected close to the tree. Devung (1999) explained that the signs could be in the form of a small tree that is embedded in the ground facing to-

[7] *Bekan* or *Jekau* refers to a 2-year, or in some cases 10-year succession of secondary forest (old *ladang* sites).

wards the claimed tree, a drawing of human face on the tree's bark, or in the form of *Imperata* leaves skewered on the branches of the tree.

It would be fair to say that hunting and fishing are indispensable aspects of the Dayak Kenyah's life to fulfill the needs of the family for meat and protein. Hunting and fishing are actually a part of their forest-related culture. Hunters in Batu Majang mostly hunt wild pigs (*Sus barbatus*) and deer in the daytime using hounds and a shotgun. Some hunters also hunt wild pig and deer at nighttime using a flashlight (*senter*) and shotgun (*serapang*). The hunting area is not limited to the Batu Majang forest area: they also hunt in the neighboring village forest areas or where ever they would like to go hunting. Catching fish is mostly done in the Mahakam, Alan, Dio and Bulo' Rivers. They use fish lines (*pukat*) and fishnets (*kenjala'*), or fishhooks (*pesi*) for catching fish. The health and stock of both wild game and fish depend very much on the condition of the surrounding forest, as they normally get food from feeding trees. To conserve the fish population, the use of poisonous chemicals to catch fish is strictly prohibited in Batu Majang. However, some outsiders still use such materials covertly in Batu Majang waters.

As mentioned above, since the primary forest in Batu Majang belongs to the PT. Sumalindo concession area, taking wood has been limited to personal use only (not for sale), except during the HPHH and *Banjir Kap* euphoria of 1999 – 2001. These two logging systems have since been banned by the government, but it is worth describing them in brief here, as forest use and management systems once practiced by the Batu Majang villagers in their primary forest.

1) HPHH (*Hak Pemungutan Hasil Hutan*[8])

From 1999 to 2001 *Bupati* of Kutai Barat released 622 permits for HPHH. As in other villages, Batu Majang villagers submitted two HPHH applications in November 2000 after consultation with PT Sumalindo, and *Bupati* released one HPHH 'Principal Permit" (*Ijin Prinsip*) for 30 blocks in October 2001. It took one year and cost IDR 300 million to get the permit. The official cost for one block (100 ha) of HPHH was actually only IDR 7 million. All of the application costs were borne by the partner, PT Sumalindo, and deducted or reimbursed from the village fee.

At first, Batu Majang proposed IDR 131,000/m^3 as the fee for the village. The Village Head and the partner company, PT Sumalindo, discussed the fee a couple of times. Eventually, they agreed on a fee of IDR 75,000/m^3. Actually, the fee should have been IDR 90,000/m^3, but because PT Sumalindo could not extend the area of its concession (as it was not included in the yearly working program, *RKT* or *Rencana Kerja Tahunan*), they had to collaborate with PT Fahmi Cahya Insani in operating the HPHH. Consequently, PT Sumalindo had to pay the difference of IDR 15.000 (US$ 1.5) /m^3 as compensation to PT Fahmi Cahya Insani.

When PAR was conducted in the village, the community, with PT Sumalindo as the partner, were running the HPHH located at Km 13 along the Alan River. PT Sumalindo bore all operational costs including that of heavy equipment operators, chainsaw men, maintenance, logging truck drivers, etc. All field operational systems e.g. administration, forest rehabilitation, *etc*., were referred to the HPHH operational standard. In the implementation phase, only trees of over 50 cm diameter can be cut. The village committee (*Pengurus*) has recruited some villagers as supervisors in the field. The task of the supervisors is to calculate the volume of the timber together with the partner company's staff, to avoid misunderstandings in the calculation.

2) Banjir Kap

Banjir kap was used between 1969 and 1972 when it was very popular in the upriver reaches of the Mahakam. The term refers to a traditional system of cutting only those trees that can be floated and marketed along the big rivers. The area used under this system was limited, up to around 100-200m from the riversides at most, where only a jack or a *"trek"* was used to haul the timber to the riverbank. The system was banned in 1973 and replaced by large-scale forest concessions using a mechanized logging system.

Banjir kap was practiced again in some villages up river of Mahakam in tandem with the HPHH system. In Batu Majang, the Village Head and the Customary Headman gave permission to villagers to engage in *banjir kap* beginning October 2001 because it made much money especially when the price was high (as in October 2001, IDR 200,000/m^3). During the PAR activities, the price was very low, around IDR 125,000 (US$ 12.5) /m^3. Yen Ajang and Pius Kulau, in a discussion on December 4, 2001, gave some reasons that they had heard from buyers why the price decreased sharply:

- The log export ban imposed by the government since October 2001
- Over supply at the timber manufacturers in Samarinda
- Timber products from China became much cheaper than those from Indonesia, despite the fact that China sourced its timber imports from Indonesia
- The negative impacts on the global economy of the terrorist attack on the WTC on September 11, 2001.

For the villagers, the *banjir kap* system was very convenient. The main cost in the *banjir kap* system was manpower: laborers worked in groups of 3-4 people, the optimum number of members for such groups. A *banjir kap* worker said that there were 9 groups of *banjir kap* workers in Batu Majang at that time. Each group usually worked in the forest for two weeks. During the two-week period, each group could harvest 20-40 logs, equivalent

[8] Small-scale logging concessions usually run on a joint-operation basis between the villagers and a big company or capital holder.

to 60-120 m^3. The number of logs collected by each group depended on the slope of the land and the distance to the riverside. The closer the trees to the riverside, the more logs they could harvest.

Extra costs were incurred if they used a jack or *"trek"* to haul the logs to the river. The price of a jack in Samarinda was IDR 700,000 (US$ 70), which could lift up to a weight of 1.5 tons. The operational costs also included meals, fuel, *etc*. The boss or a buyer usually lent some money and other necessities to a group, which they would reimburse after they had sold the logs to the buyer or to their own boss. The transactions between the *banjir kap* workers and the buyers were done in the confluence of the Alan River and the Mahakam River. If the distance of the trees from the riverside increased, a motorized tool to pull the logs to the river would be needed. The tool used in such cases was called a "*mesin pancang*", and it could pull a tree of 10 m length and 100 cm diameter. The logging groups in Batu Majang did not use this machine.

The compensation or the fee for the village (through the Village Head) from the workers was IDR 10,000 (US$ 1) /m^3. By the time of our PAR, the Village Head had already received around IDR 5 million (US$ 500) as fees from *banjir kap* in the first phase. The Village Head distributed the income on the operational costs of the Village Head and the Customary Headman Institution, on the development programs, the *PKK* (Family Welfare Education), and on other public services in the village. The workers as well as the villagers had been waiting for the price of logs to rise, so that they could secure another sale. But their hopes were not fulfilled as the price of logs did not rise, and in any case HPHH and the *Banjir Kap* system were then outlawed by the government.

3.4. Tana' Ulen

Tana' ulen is a term used by the Dayak Kenyah for a reserved forest area. The Dayak Bahau also have similar type of land class, called *tana' mawa'*. Historically, the *tana' ulen* only belonged to the aristocratic families for hunting and fishing, and in which the large trees were reserved for making coffins or for any emergency need. Briefly, the functions of this forest class are to provide timber and consumable products at any time of need. Lamis (1999) described that the resources in the *tana' ulen* could only be utilized for public or village needs.

In Batu Majang, the *Tana' Ulen* is in the vicinity of Mt. Ben. The villagers are concerned enough about the conservation of the forest area because it gives direct benefits to the villagers and it is quite close to the village. The closest part of the forest is not more than 500 m from the village. Both Batu Majang and PT Sumalindo have agreed to enclave the area of Mt. Ben also as a source of drinking water, as a protected area for animals and many species of valuable timber trees. Previously, the 8,000 hectare (4 x 2 km) area belonged to the PT Sumalindo concession. As both sides concur that the area has an abundance of biodiversity, it is protected as the *Tana' Ulen* of Batu Majang.

The designation of this area as a reserved forest is the result of the efforts of Alang Lading, the former Customary Headman, in 1968. He did not give any permission to anyone to open *ladang* in the area. His efforts were continued by the former Village Head Tajah Surau, who continuously lobbied PT Sumalindo to formally designate the area as a reserved forest (*tana' ulen*). He was successful. In a meeting with the PT Sumalindo management on March 28, 2002, Jeffry Sirait, the Head of Logging Division revealed that the area had been released to Batu Majang for the *Tana' Ulen* a couple of years ago. This means that its status as a reserved site is strong enough. The next step would be the recognition from the District and the central government.

Box 1. HPHH and *Banjir Kap* shock

From early 1999 to the middle of 2001, the two terms "*banjir kap*" and "HPHH" were the most interesting topics for discussion in Kutai Barat District. Everybody, whether young or old, talked about these two sources of income. The Mahakam River, from upstream to downstream, was full with floating logs. In the past, local people were only able to stand by and watch as the logs floated down the river, the green gold bars of the Forest Concession Holders. Nowadays, they are players in the game.

However, the clamor to engage in *banjir kap* and HPHH suddenly began to fade, as timber prices fell as of September 2001. Laughter turned into desperation. The tragedy of September 11, 2001, dumping on world markets by the Chinese, and an over supply of timber were blamed as the causes of the problem. Viewed in context, HPHH and *Banjir kap* provided only temporary benefits for those involved in timber harvesting and extraction. The question remains, however, who will be responsible for the sustainability of forest resource utilization after the logging has ceased.

This area is of great potential for ecological tourism, for forest research, and especially for the preservation of forest biodiversity. The utilization of, and rules and regulations relating to the *Tana' Ulen* are determined through agreements made by the Village Head, the Customary Headman, and the villagers. Based on the agreement of all villagers and the village staff, it is strictly prohibited to cut trees and hunt for individual use, or to engage in agricultural activities in the area. The only activities allowed are collecting medicinal plants and taking *sang* (palm leaves, for making hats) and other minor NTFPs. The Village Head and the Customary Headman have the rights to punish anyone who breaks the rules and bylaws. The punishment is a fine, usually made in the form of antique properties e.g. *tempayan* (Chinese jar), *gong* or *mandau* (Dayak machete), or as cash equal in value to the antique goods. Pesimuq Garo', a village elder said that if someone is found cutting timber in this area, the Village Head will fine him/her for an amount of money equal to 50% of the value of the timber he/she cuts. Unfortunately, so far, there are no formal written rules or guidelines to manage the forest yet.

IV. Prospects for Community Participation

The existing forest and land management practices as elaborated in the previous section show a sound basic foundation for high degree of community participation in local forest management in the future. However, genuine participation will depend on the value of the forest and its resources in the local people's lives and on how the local people view the value itself from their own perspectives. Table 7 shows the ranking of the functions of forest as perceived by the Batu Majang villagers.

For the villagers of Batu Majang, the forest and the forest area are still perceived as immediate sources of necessities: for subsistence, shelter and a cash income. Therefore, promoting and enhancing community participation in local forest management needs to be directly related to securing these immediate needs.

Aside from that, there are also a number of problems that should be taken into consideration and tackled accordingly before undertaking further measures in promoting and enhancing community participation in local forest management. Table 8 lists five problems as viewed by the villagers in Batu Majang.

According to the villagers in Batu Majang, the most important problem for ensuring a secure system of local forest management in the village is still the unsettled boundary conflict with Long Bagun Ulu. Previously, about 20 years ago, there was agreement on the boundary between the two villages. However, after Batu Majang got compensation from PT Sumalindo (based on the Governor's Decree, IDR 3,000 (US$ 0.3) /m^3) for the timber cut from Batu Majang village area, Long Bagun Ulu reclaimed some parts of Batu Majang areas, and shifted the boundary line in their favor. In that way Batu Majang lost some potential areas: agricultural areas in Km 13-21 and a housing area in Batu Majang village were claimed as part of Long Bagun Ulu. A number of meetings have been conducted to settle the conflict but so far no agreement has been reached. Both sides have asked *Bupati* and the District Forestry Service for assistance in solving this conflict, but there is no significant progress yet as Long Bagun Ulu asserts the old boundaries based on the history of the land before the Batu Majang people arrived.

Another problem viewed by the villagers is that the extension service organized by the local government to offer instruction on how to best manage the forest is, to date, infrequent and insufficient. The villagers feel that they are in need of more extension services, in the decentralization of forest resource management to the village level, and under the socialization of new government regulations relating to forests. A lack of knowledge of government regulations on the part of the villagers makes it difficult for the village authority to enforce the rules both for locals and for outsiders. Continuing conflict amongst the villagers and between the villagers and outsiders remains likely, as customary rights that affect both the community and the individual are still not well administrated at the village level.

V. Conclusion and Suggestions

The PAR findings reveal that community participation in local forest management in Batu Majang has to an extent not been exercised by the local community, as viewed from the perspective of the six criteria for participation in forest management (Wollenberg, 1988; Devung and Nanang, 2003):

1. The community does not have full access to and control over the surrounding forest areas and forest resources, because the village forest area has been part of the PT Sumalindo concession area since 1982.
2. All community members have equal opportunity to gain benefits from the forest resources, but are limited either by PT Sumalindo regulations or by the customary regulations.
3. The community is able to make its own public decisions independently, but this is still limited to decisions relating to internal village affairs alone.
4. There is a good cooperation among all parties (within the village as well as between village members and PT Sumalindo) relating to the use and management of the forest and forest resources. On the other hand, however, there is still conflict with Long Bagun Ilir villages concerning the village boundary, which still prevents good cooperation between the two villages.
5. There are problem-solving and conflict-resolution mechanisms that are accepted by all sides at the village level, but these are not that effective for settling external conflicts, such as the conflict regarding the village boundary with Long Bagun Ulu.

Table 7. Pair-wise ranking of forest functions as perceived by Batu Majang villagers

Forest Function	1	2	3	4	5	6	7	8	Rank
1. Habitat for wildlife		2	1	1	1	1	1	8	III
2. Source of timber for house construction			2	2	2	2	2	8	II
3. Source of medicinal plants				3	3	3	3	8	III
4. Recreation					4	6	4	8	V
5. Depository of resources for the future						5	7	8	VI
6. Water catchment / source of drinking water, protection against flooding							6	8	IV
7. Purity of air, climate control								8	VI
8. Hunting area, habitat of rattan, resin, swift nests, *daun biru*[9], *etc*.									I

Legend: *Numbers 1 to 8 on the horizontal axis refer to the numbers of forest functions listed on the vertical axis. Numbers in the columns refer to the numbers in the two axes.*

Table 8. Pair-wise ranking of problems in local forest management as viewed by people in Batu Majang

Problem	1. Village boundary line is not secure	2. Lack of community awareness	3. Lack of knowledge on government regulations	4. Customary rights are not well adminis-trated	5. Lack of extension ser-vices from the government	Rank
1. Village boundary line is not secure		1. Village boundary line is not secure	1. Village boundary line is not secure	1. Village boundary line is not secure	1. Village boundary line is not secure	1. Village boundary line is not secure
2. Lack of community awareness			2. Lack of community awareness	4. Customary rights are not well adminis-trated	5. Lack of ex-tension ser-vices from the government	4. Customary rights are not well adminis-trated
3. Lack of knowledge on government regulations				4. Customary rights are not well adminis-trated	5. Lack of ex-tension ser-vices from the government	5. Lack of ex-tension ser-vices from the government
4. Customary rights are not well adminis-trated					5. Lack of ex-tension ser-vices from the government	3. Lack of knowledge on government regulations
5. Lack of extension ser-vices from the government						2. Lack of community awareness 2

[9] *Daun biru* is species of palm. Its broad leaves are used as the raw material for *seraung*, the traditional sunhat of the Dayak people

6. There is sufficient technical ability in the community to properly manage the forest, but it is still limited to its traditional and local uses such as in the case of *tana' ulen*. For other cases the community still needs extension services from the government and technical assistance from external parties.

To lay a sound foundation for a high degree of community participation in local forest management in Batu Majang, a number of necessary steps must now be taken:

1. Settling the boundary conflict with Long Bagun, with the assistance of the Kutai Barat Conflict Resolution Team and if necessary involving the PDKT (East Kalimantan Dayak Alliance) Elders as mediators.
2. Redefining and mapping the village administrative area in joint agreement with all the neighboring villages. This must then be certified at least at the Sub-district level.
3. Checking with PT Sumalindo which parts of the forest within the village administrative area overlap with the PT Sumalindo concession area. Development of a joint agreement with PT Sumalindo on the use and management of the forest area concerned, allowing for a greater role or at least more involvement of the villagers in the use and management of the forest area and its resources.
4. Development of written rules and regulations relating to the use and management of the *Tana' Ulen* as well as the *Ba'i* to avoid the "tragedy of the commons" in the forest areas.
5. Enhancement of the villagers' technical ability to better manage the forest, focusing firstly on the efficient use of the existing resources, the conservation of scarce resources, rehabilitation of the used resources and enrichment of the quantity as well as the diversity of the existing resources.

Initiatives to take steps towards these actions should ideally come from the village community members themselves, but assistance from outsiders at least at the beginning is of course still needed, whether from the government, NGOs, companies or other bodies.

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Chapter 3.

Forest management and community participation in Mataliba'

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I. Introduction

Mataliba' is a Dayak Bahau settlement. It is a village with a vast forest area nearby. The main livelihood of the villagers is dry farming agriculture, especially dry farming/shifting cultivation (*luma'*), followed by forest products extraction. *Banjir kap* and *HPHH* were the main sources of cash income in the past 2 years of our field visits. However, those two activities have now been banned by the government. Dry rice farming (*luma'*) will remain the main livelihood after the *HPHH* and *banjir kap* are over.

II. Overall Description of the Village

2.1 Village Territory and Access

Mataliba' is located on the right bank of the Pari' river, around 5 kilometers from its estuary with the Mahakam River, at a distance of around 430 km from Samarinda. The boundaries of Mataliba' with the neighboring villages are as follows: Meribu' River (to the east), Long Hubung and a mountainous area (to the west), the Ritan River/Tabang Sub-district, with dense primary forest (to the north), Lutan village with a forest area (to the south)

Administratively, Mataliba' has belonged to the Long Hubung sub-district of the Kutai Barat District since 1996. Previously, it belonged to the Long Iram Sub-District.

From Samarinda or Melak the village is only accessible by river transport, such as speedboat or outboard motorboat (*ketinting*). Regular water taxi (*kapal*) passengers have to get off at Lutan, at the mouth of the Pari' River and then continue the trip to Mataliba' by *ketinting* because the river is quite small and shallow (particularly in the dry season). A regular taxi takes around 30 hours from Samarinda to Lutan, a trip which costs IDR 75,000 (US$ 7.5), and another extra IDR 25,000 (US$ 2.5) for *ketinting* from Lutan to Mataliba', which takes approximately 15 minutes. The tariff for chartering an outboard motor varies depending on the size of the boat and the number of the passengers. The normal tariff ranges from around IDR 25,000 to IDR 75,000 (US$ 2.5-7.5). The bigger the boat and the more the passengers, the higher the cost charged. A passenger could also charter a *ketinting* from Long Iram to Mataliba' for IDR 200,000 (US$ 20) per boat for a 3 hours trip. Accessibility from the capital of Long Hubung Sub-District to Mataliba' and v.v. is limited to boats or speedboats, which cost IDR 50,000 (US$ 5). Mataliba' could also be reached from Melak by a chartered car to Tering Seberang and then the trip can be continued by *ketinting*. The costs are around IDR 25,000 (US$ 12.5) and IDR 200,000 (US$ 20) respectively.

As an agricultural village, with more than 90% of its population working as farmers, the villagers fulfill their needs for rice and agricultural products from their own *ladang* and wet rice (*sawah*) production. Some extractive activities include hunting wild pigs or deer, catching fish, and collecting non-timber forest products. Industrial products are mostly bought from the local traders or from traveling traders, and some villagers also go down to Samarinda to buy goods, clothes, *etc*. This village is categorized as a self-sufficient village (*desa swasembada*) for its dependency on agricultural and consumable products from the outside is relatively low.

2.2. Ecological Zones and Resources

Mataliba' is located at an altitude of 60 m above sea level. Its topography is flat downriver and undulating or hilly upriver. The rainfall is 4.4 mm/day or 4,000 mm/year on average, while the temperature is around 19^0C-30 ^{0}C (Kadok, 1998). The topography upriver is mountainous, with some slopes attaining 45% or more in some parts. The boundaries with adjacent villages are mostly river watersheds, big mountains or other natural boundaries.

The data presented in the table above are the result of a participative forest resources identification by 10 villagers conducted on August 7, 2001. The meeting took place at the Village Head's house. Some of the natural resources that have been used by Mataliba' and outsiders are timber, fish, wild pig, deer, and rattan. The rest are not so frequently used by the villagers. Some 50 inactive bird nest caves in this area need serious attention in the future because they could be important non-timber forest product sources. Before logging activities became took off in the area about 30 years ago, some of the bird nest caves could produce the best quality of bird nest (*sarang putih*). The current price for these is around IDR 12-15 million (US$ 1,200-1,500) per kilogram.

Table 1. Natural Resources in Mataliba'

Resource	Location
Valuable timber	All primary forest areas
Rattan areas	Ma'ah and Jenum rivers
Aloe wood (*gaharu*)	Primary forest areas
Honeybee trees	All along the Pari' and Meriti' rivers
Resins	Mt.Leng, Ma'ah and Jenum rivers
Edible bird nests	Megerang and Dalai rivers, Mt.Leng. There are more than 50 bird nest caves in these areas (mostly inactive)
Waterfall, caves, tourism sites	A 1 km long cliff at Mt. Putih creates a waterfall of the Jenum river
Hunting areas	Payang, Megerang, Ma'ah, Dalai, Jenum and Meriti' rivers.
Fishing areas	All rivers in the village area
Gold, uranium	Up the Pari' river, Mt. Putih
Coal	Up the Pari' river

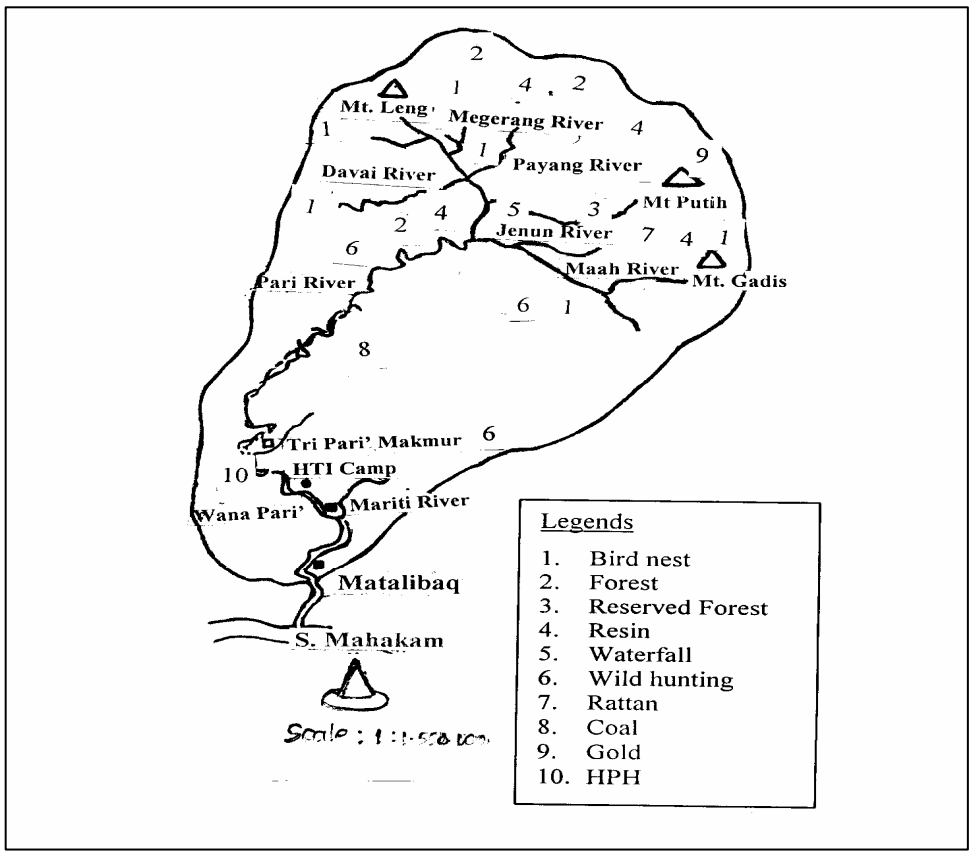


Figure 1. Map of the Natural Resources of Mataliba'

Source: Field Data and Nanang (1999)

2.3. Population

The population is mostly (95%) from the Bahau sub-ethnic group. The rest are Javanese, Buginese, Dayak Kenyah, and Dayak Benua'. The total population is 160 households (*KK*) comprising 668 persons. The Bahau sub-ethnic group in Mataliba' comprises the original Bahau of Pari' river and Bahau from the Mahakam river (Kadok, 1998). The Village Head, Hibau Bong, has identified four factors that influence the number of the population, namely birth, mortality, in-migration, and out-migration. The annual birth rate on average is 9-10 people, and the mortality rate is 3-4. In 2001, there was no in-migration nor out-migration. It seems that natural factors such as birth and mortality are the main factors that influence the population size. In the next ten, even twenty, years, the population density can remain very low compared to the appertaining vast forest area, if there is no in-migration to Mataliba'. The out-migration of educated people is also low. Some educated people have even returned to the village because of the attractions of the timber logging industry and for other reasons.

Some 200 persons of Timorese origin from Flores Island who are now living along the upper Pari' River (*HTI*[1]*- trans*) have a plan to settle down by merging into the population of Mataliba' village because of the failure of the HTI-trans program in the Mataliba' Customary Forest area. Another push-factor for these people's move is the difficulty of accessing markets and the limitations of their present habitation area for agriculture, especially for *ladang*. They have not been able to earn their living from income originating with the HTI-Trans. However, Mataliba' villagers have rejected this plan because they worry about sustaining Mataliba's existing fruit gardens as well as about keeping the Bahau culture. They are afraid of the negative influence of the outside culture if they share their village with people from a different culture, especially with the Timorese.

2.4. Village History

Pak Hibau Bong, the Village Head of Mataliba', has told us that the word 'Mataliba'' was not indigenously Bahau. The genuine Bahau term is Teliva'[2]. He said that the current Mataliba' population's ancestors came from Apau Kayan in the Malinau District. They moved down from one village to another because there were still many tribal wars (head-hunting) between one tribe and other tribes (*mengayau*). To avoid those, some of the Bahau tribesmen moved from Apau Kayan to the downriver location of Boh in 1819. Firstly, they settled down in Batu Lapau, upriver of Boh. In that village, there were a lot of deaths because of epidemics, so they moved and settled down in many different places. For the ninth time, they moved to Data Bilang (currently inhabited by Dayak Kenyah people). As they considered the area unsuitable, they moved again and settled down temporarily near the mouth of the Pari' River, and finally decided to move to Mataliba', their current village.

The name "Pari", according to Pak Hibau, is taken from a slave's or *"dipan"* name of the Bahau. The Bahau sacrificed the slave to the King (*Sultan*) of Kutai Kertanegara Tenggarong in order to free the indigenous Bahau from the obligation of paying taxes to the Kutai Kertanegara Kingdom. The request of the King to the Bahau tribe at the time was for a slave instead of for property or materials. There is no further information on how the King treated the slave.

A monumental struggle in the history of Mataliba' was the struggle of the local people to obtain compensation (*ganti rugi*) over the widespread destruction to the Customary Forest of Mataliba'. This was the first popular moral movement which succeeded in securing local rights over forest products before the reformation era in Indonesia. Local people felt no courage to fight for their rights in the Old and New Order eras. The success of the "moral movement" was a result of the support of local NGOs in Kutai Barat. The long history of the struggle of the local people is shown in table 3.

[1] *HTI: Hutan Tanaman Industri* (Industrial Plantation Forestry).

[2] According to Simon Devung, a Dayak Bahau Senior Anthropologist of Mulawarman University, the word Mataliba' comes from the Malay-Dutch mispronunciation of the previous local village name *Uma' Teliva'* which means simply Teliva' Village. Similar phenomenon applies to Mamahak which comes from the previous local name "Uma' Mahak."

Table 2. Historical Events in Mataliba'

Year	Events
1919	People started to settle down in Mataliba'
1955	Soybean was introduced and planted in Mataliba'
1969-1970	The first time people worked using traditional logging (*banjir kap*), using only axes to cut the trees and flooding the river to let the logs flow downstream
1972	The first HPH came to Mataliba' (Barito Group)
1980	Start of cacao and pepper planting on a small scale
1982	The first big forest fire. Only a small part of the forest burnt. No fruit garden burnt down.
1990	HPH Barito Pacific (without discussion with Mataliba' people) moved in to Mataliba' Customary Forest. Transmigrants (*HTI trans*) from Flores Island (ethnic Timorese) settled down in the Mataliba' forest area
1990	Start of planting of industrial trees (HTI)
1992	HPH Anangga Pundi Nusa came to the Mataliba' area
1992	People started to receive compensation for the trees that have been cut in Mataliba' forest (assisted by a local NGO, Puti Jaji)
1995	People began to plant cacao, pepper, and other crops on a large scale
1998	TPTI[3] = selective felling and Indonesian planting system introduced in Mataliba'
1997/1998	Large-scale forest fire. Some 40% of the forest burnt. The fire also devastated fruit gardens, pepper and cacao gardens, took human casualties, destroyed a graveyard, and some industrial plant forest (*sengon, gmelina*)
1999	The people of Mataliba' received compensation from PT. Barito Pacific of IDR 1.2 billion (US$ 1.2 milllion)
1999	*Banjir kap* in Mataliba' resumed
2001	The first HPHH concession[4] for Mataliba' and a IUPHHK[5] concession of 25,000 ha was released by Bupati for Mataliba'

Source: *Focus Group Discussion and Information from the Village Head* (*2001*)

Table 3. The Struggle of the Community in Mataliba'

Year	Event
1992	PT. Limbang Praja Timber (LPT), sub-contractor of PT. Barito Pacific Group, without any coordination and consultation with the Mataliba' community, started clear-cutting 8,400 ha of the Customary Forest of Mataliba' along the Bengéh River and 6,800 ha along the Meriti'' River for HTI-Trans (Industrial Forest Estate) for the trans-migrants. Most of the trans-migrants were Timorese (Nusa Tenggara Timur Province people) and some were locals. The Dayak Bahau people of Mataliba' lost a very valuable heritage in the form of virgin forest. They also lost the right to manage the forest resources, and associated hunting and fishing privileges as the forest had been occupied by the Timorese trans-migrants. The forest became an open area. Timber and rattan could no longer be taken from the area as it had been before. The people of Mataliba' spontaneously rejected the settlement of trans-migrants in the area. As a

[3] *Tebang Pilih Tanam Indonesia*
[4] *Hak Pemungutan Hasil Hutan*: the rights for forest (timber) harvesting
[5] *Ijin Usaha Pemungutan Hasil Hutan Kayu*: concession for timber product harvesting

Table 3. Continued

Year	Event
	reaction to the arrogance of the company to the local community, a group of 137 Mataliba' people had a meeting with the staff of Long Iram Sub-District and PT. Limbang Praja Timber at the PT. LPT base-camp on 23 May 1992. In the meeting, PT. LPT suggested to the Mataliba' community to propose a list of demands as a prerequisite to releasing the Customary land of the Mataliba' villagers in the Meriti' and Bengéh Rivers regions to PT. LPT. Based on the suggestion by PT. LPT, the Village Head and the Customary Headman on behalf of the community, passed on the 14 items of the community petition to PT. LPT (see Appendix 1). Tragically, the response of PT. LPT to the community demands was not as expected. PT. LPT management instead apologized that they were only the company designed by the central government (in the context of Soeharto era-New Order) to open up for exploitation the HTI-Trans area. PT. LPT rejected all of the community's demands except providing a manual typewriter (*mesin ketik*) for the Village Head's office and the setting up of an electric power generator for Mataliba' village.
1992-1996	It took 4 years for the company to address the demands of the Mataliba' community and after this long wait, only 2 of the 14 demands were fulfilled by the company. People were getting angry with Barito Pacific Group.
1997	January. While the demands of the community had not been fully fulfilled, another act of arrogance by the company to the local community emerged. Again, PT. LPT provoked the Mataliba' people. The company broke an agreement not to open up for any purpose the right bank of the Meriti' river because the right bank belonged to the timber stock of Mataliba' (*tanạ' mawạ'* and *tanạ' berahan*). PT. LPT stole around 1,000 pieces of timber (around 4,000 m^3) from the area, as well as neglecting about 6,000 m^3 in the forest. Mataliba' did not only lose the timber, they also lost their rattan, resin trees, sandalwood, bird nests, as well as fishing and hunting areas. Responding to this encroachment, the Mataliba' community demanded IDR 5 billion as compensation for the damage from PT. LPT. However, PT. LPT kept quiet rather than respond to the community's demands. A lot of reasons and excuses were given by PT. LPT to slow down the popular movement. As there was no positive response from PT. LPT[6] to the community's demands, a group of 60 Dayak Bahau Mataliba' who lived in Samarinda, (some of them educated people) got involved in the Mataliba' demonstration to obtain compensation. This group was the so-called "Team 60". In the local language, Kadok (2000) referred to them as *Hina' Harin Teliva'*. The group became involved as they believed the Village Government needed their support. It took 2 weeks for this group including people from Mataliba' to push Barito Pacific to fulfill their demands. A big dispute erupted every time they had a meeting with the company. Instead of giving the people cash, PT. Barito Pacific offered options to calm down the situation, such as creating a large-scale area of local rubber plantation, allowing Mataliba' people to increase their wealth. The Mataliba' people, however spontaneously refused this offer. They insisted on cash as compensation. They perceived the promise of creating a new rubber plantation as just strategic. As the deadlock took quite a long time, "Team 60" ran out of food in Samarinda. Therefore, they asked PT. Barito Pacific to allocate to them a living allowance of IDR 21,000 daily for the duration of the discussions. The result of this drawn-out effort was that PT. Barito agreed to fulfill some of the requests for compensation by granting some IDR 203 million in 3 phases, respectively of 8, 171 and 24 million rupiahs.

[6] PT. LPT replaced by PT. Anangga Pundi Nusa
[8] Ijin Usaha Pemanfaatan Hasil Hutan Kayu

Table 3. Continued

Year	Event
1998	February 1998 The anger of the Mataliba' community reached a peak. This was because of the reluctance of the company to pay all of the compensation as well as because of the large-scale forest fire in the Mataliba' area. The fire devastated about 40% of the forest area adjoining Mataliba' and more than 50 % of the fruit gardens. The Mataliba' community blamed the HTI-trans company for the fire as it had started in an HTI-trans area. Actually, government regulations prohibited the HTI from using fire to clear land. In fact, HTI-trans in Mataliba' had used fire instead of heavy equipment. There was also a human victim of the forest fire. The wife of the Customary Head was found dead after getting involved in the fire-fight.. Because of their anger, Mataliba' people mobilized around 300 people from Mataliba' to occupy the base-camp of Barito Pacific in Laham. All activities of the company were completely stopped. The result of this pressure by Mataliba' people was that the company paid a compensation of IDR 400 million. Living costs rose because the occupation was also a burden to the company. During the occupation, the Mataliba' people formed a "Team 10" to continue the struggle to obtain compensation for Mataliba'. "Team 10" consisted of 8 men and 2 women. For unknown reasons, the 2 women retired from team membership, so it was called "Team 8" thereafter. The team again requested the company to satisfy the remainder of the people's demands. They had another meeting at the base-camp of Barito in Laham village. PT. Barito only paid IDR 80 million.
1999	As the people of Mataliba' now considered that mass-mobilization to push the company was more effective than small team discussion, they mobilized all people of Mataliba', including children to detain the company's heavy equipment and to close the logging road between the base camp and HTI trans. The human barricade was used as a way to totally stop transportation from and to the base-camp. They labeled the demonstration a "moral movement" (*gerakan moral*). The demonstration took place at the bridge over the Pari' river (around 2 hours by a 5 HP *ketinting* up the Pari' river). This demonstration was the longest one in the movement's history. They detained all of the heavy equipment and closed the logging road for around 40 days. As the detention meant time and costs for them, the demonstrators asked PT. Barito to reimburse all of the costs of their 'moral movement'. PT. Barito, left with no other option, reimbursed living costs for the time of the demonstration for IDR 100 million. Some of the important demands of the demonstration were as follows: • PT. Barito to pay IDR 525,000/m^3 for 1,780 m^3 of logs that were taken from the Customary Forest. PT. Barito only agreed to pay IDR 913.5 million • IDR 500 million for the damage to the Customary degraded land (*paid*) • IDR 2 million/household as compensation for the burnt gardens and forests (*paid*) • IDR 150 million for capital of the corporation KUD *Pari' Ngaliman* (*paid*) After the management of Barito agreed upon some of the demands of the community, the community released the heavy equipment.
2001-2002	Even though the company could not fulfill all of the community's demands at that time, the current situation is relatively calm. The community is no longer so intent on fighting to get the rest of their demands. This is because the company has changed its approach to the community. The company treats the local community as a partner and has paid more respect to customary rights. In fact, the local cooperative (KUD *Pari' Ngaliman*) is now a joint-venture of IUPHHK[8] of Mataliba' village.

2.5. Social Structure and Relations with Outsiders

Village institutions and the customary institutions existing in this village are similar to those in other nearby villages. Those institutions play a strategic role in running the village government and the customary law institutions over time.

The village institutions are comprised of a total of five staff: one Village Head, one Village Secretary, and three staff covering three sections (Village Governance, Development and General Affairs). The customary institutions also comprise five persons, i.e. the Customary Headman, a Secretary, assisted by three staff (responsible for ritual, law, and the treasury).

The institutional structures show a hierarchy of leadership, both for the village institution and the customary institution. Even though the Village Head and the Customary Headman hold the highest positions in decision-making, in practice, the decision is usually reached by agreement. Based on their negative experience in the past, people in this village are committed to decision-making through an agreement of all villagers and customary law officials instead of the Village Head's single decision. This is a strategy designed to avoid unilateral decision-making.

Social stratification in this village is based on descent or people's family trees. The highest social class in the community is the aristocracy (*hipui*), the middle class (or honored people, *pegawa'*), followed by common people (*panyin*); the lowest class is made up of the slaves (*dipan*). The *dipan* are recruited from the descendants of those captured in tribal wars in the past. The *hipui* do not automatically become nobles (*bangsawan*). A ritual customary ceremony called "*dangai"* is needed to ennoble a *hipui.*

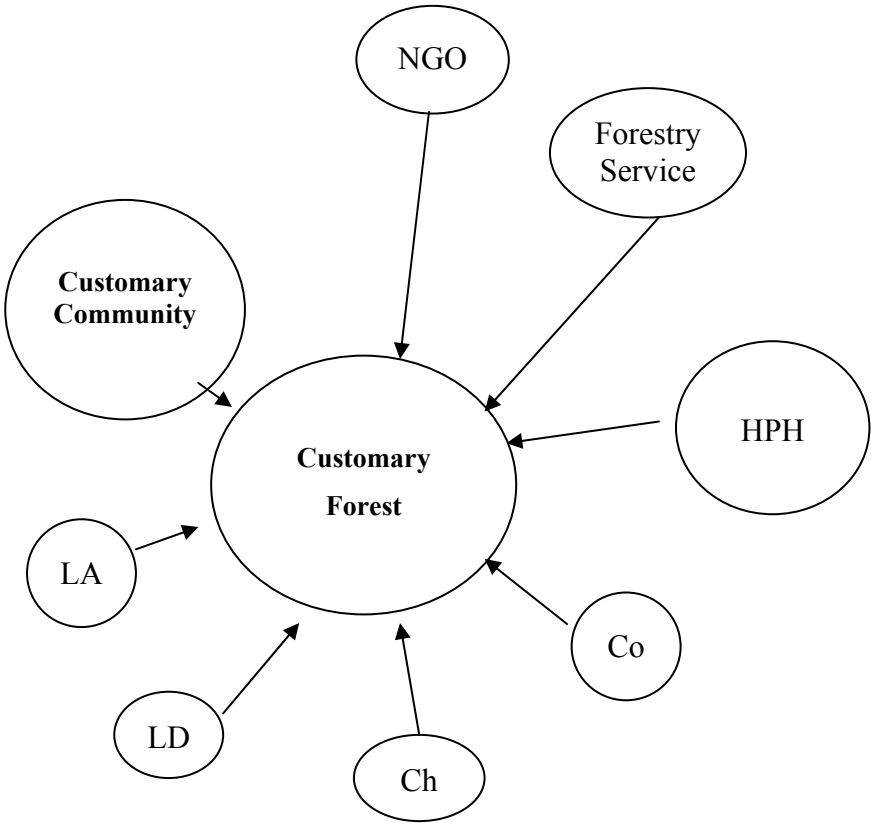
Social status is displayed on some occasions in the community, for instance during burial ceremonies or at the planting of rice. When planting rice, only the *hipui* can plant on the first day and the other classes follow in order on the second to the seventh days. If they break the custom, they believe that pests and diseases will attack and destroy the rice or any other plant in the field. For the burial ceremony, people from the higher classes will be buried after residing for 5-7 days at home or in the village hall (*amin adat*), while those of a lower class after only 2-3 days. The decoration of the coffin also shows differences in treatment between higher and lower classes. At present, the social stratification does not significantly influence relationships within the community. Everyone in the community has an equal right to go about their daily business. Even though the Village Head and the Customary Headman are recruited from the higher class, those from the lower classes have equal rights in decision-making.

Regarding relations with outsiders, the village is open to every outsider who would like to come, either temporarily or to settle down for a long time. Before settling down in Mataliba', one has to report to the Village Head and the Customary Headman, asking for their permission and checking the customary law of the village. The Village Head will designate an area to build a house as well as the location for *ladang*. Those who come to Mataliba' temporarily, for instance on business, research, as traveling traders or hunters, for the sake of politeness need to report to the Village Head or the Customary Headman or at least to the head of the Neighborhood Association (*Ketua RT*).

Beside the village institution and customary institutions, there are also other internal organizations in Mataliba' such as:

- The Youth Club (*Karang Taruna*). The activities are mostly related to sport and young men's spiritual improvement.
- Family Welfare Education (*PKK*), which deals with women's skills to manage the family life and health as well as infant health.
- The Catholic Church. 99 % of the population is Catholic.
- The Farmers' Group (*Kelompok Daléh*). A group of around 5-10 households who have committed to open *ladang* or estate in the same area (in a cluster).
- Cooperative (*KUD*). The role of cooperative so far is very small, though not nonexistent. However, the cooperative will play a more important role after the village gets its fee from the HPHH.
- On our last field trip, we found out that KUD *Pari'' Ngaliman* has had an agreement with PT. Barito Pacific to run the IUPHHK (*Ijin Usaha Pemungutan hasil Hutan Kayu*). The agreement is a 20 year joint-operation covering 25,000 ha.

In terms of relationships with outsiders, either governmental or individual, the Village Institution plays the main role in dealing with them, followed by the customary institutions. If the Customary Headman is only responsible for internal matters such as resolving internal custom-related disputes and generally, any issues related to custom, the Village Head bears responsibility on many aspects. For instance, the Village Head is frequently going to *Kabupaten* and *Kecamatan* to discuss and development program for the village. Other organizations such as the Youth Club, the Family Welfare Education, the Church, farmer groups, and the cooperative do not have an important role when it comes to outsiders.



Legend:
LA: Lembaga Adat = Customary Institution
LD: Lembaga Desa = Village Head's Office
CH: Church (Catholic)
Co: Cooperative (KUD: Koperasi Unit Desa *Pari' Ngaliman*)

Figure 2. Venn Diagram of the Relationship Amongst Stakeholders in Forest Management

The long and short arrows show the physical distance between the institutions and the customary forest, while the size of the circles shows the importance of such institutions to Customary Forest management. It seems that the Customary Community plays the most important role in forest management in a mutual relationship with the NGOs.

HPH and the Forestry Service also play important roles in forest management because they have the authority to do so. However, the customary community considers those institutions mostly a cause of negative impact on local forest management. The people of Mataliba' have experienced the negative influence of these institutions on their environment in the past, for instance in the forest fire caused by burning for land-clearing, and through the forest degradation caused by massive logging activities launched by the two.

Ranking of mutual relationships as identified by the villagers:

1. Customary Institution + Customary Community
2. Customary Institution + Village Head Office
3. Customary Institution + Church (Catholic)
4. Customary Community + NGOs
5. Customary Institution + Tourists, Researchers

Non-mutual relationships:

1. HPH and Forestry Service (Dinas Kehutanan)
2. Community and Forestry Service
3. Community and HPH

2.6. Decision-Making

The Village Head holds control over the decision-making process. He is the head of the village gov-

ernment. However, in the decision-making process, the Village Head is unable to impose his decision. A constant consultation between the Village Head and the Village Representative Body (VRB/*BPK: Badan Perwakilan Kampung*) needs to be maintained by the Village Head as both sides are legally equal in decision-making. The 5 members of VRB comprise community representatives and Neighborhood Association Heads (*Ketua RT*). The Decentralization Act (22/1999) describes the exclusive rights and the authority of the Village Representative Body (VRB) as follows (Nanang, 2002):

- To select candidates for the post of Village Head
- To deliberate, accept, or reject the reports of the Village Head
- To propose to the District Head (Bupati) to vacate the Village Head's position if necessary
- To adopt village rules
- To adopt the Annual Village Budget
- To participate in the process of village development initiated or sponsored by the District Government or any third party.

Men and women hold equal rights in decision making in Mataliba'. There is no barrier for women to get involved in decision-making. In reality, however, women do not use, or use rarely, such equal rights in decision-making. This is because of the influence of an old culture in which women always let men take decision by themselves. As in other Dayak villages, most rural women are quite reluctant to get involved in the decision-making process. That is why men occupy more superior social positions compared to women.

If there is any program involving the village, the Village Head would ask one of his staff, usually the Village General-Affairs Officer or the Village Mass Mobilizer *(Pengerah Massa),* to invite the villagers for a meeting at the village hall or at the house of the Village Head. The decision is taken following a discussion, or sometimes debate, before agreement or disagreement is reached. If there is a disagreement because of different perceptions and concepts among the participants, the Village Head can use his prerogative to make the decision based on the perceived majority aspirations or on voting. Sometimes decision-making could be delayed due to limitations of time.

Actual decision-making at Mataliba' is democratic. The Village Head usually involves his people in the decision-making in the village. The village officials and some educated people in the village may also intervene to recommend to the Village Head to avoid "single handed" decision-making. They fear that outsiders could use the weakness of a single decision-maker to promote a program that would be useless for the villagers, or even worse could have a bad impact on the village.

In case of an internal land boundary dispute among farmers, the Head of the Farmers Group (*Kepala Daléh*) asks both parties to meet, mediated by the *Kepala Daléh*. The *Kepala Daléh* then questions both sides to find the source of the conflict and proposes options for solving the conflict. If no agreement is achieved, the *Kepala Daléh* asks the Village Head or the Customary Head and officials to solve the problem. Normally, both sides have to provide meals to the villagers and the Customary officials involved in the meeting.

Decision-making to determine the location of a new *ladang* is very similar to those in other villages in Kutai Barat, even in East Kalimantan.

The main decision-makers in a family are the father and the mother. However, the family decision must also refer to the decision of the farmer group (*Kelompok Daléh*). To open a *ladang* as a group is better than doing so separately, to avoid pest attacks and for safety reasons.

In some meetings, the community usually gets involved where the activity is a program promoted by villagers. Conversely, if the activity is proposed by outsiders or the government, the involvement of the villagers is less, especially in physical development projects (often funded from outside). The development of a new road to extend the existing village road is one example of this. The villagers were not involved in the planning or decision-making process in this project. The project was evaluated by the villagers as being wasteful, but they were unable have any input in it.

2.7. Economic System

The villagers' livelihoods are linked closely to the ecology and natural resources available. The area is very suitable for agricultural and extractive activities as land and fishing and hunting grounds are abundant (including the Pari', Meriti', Meribu' rivers, and their tributaries). During the field visits, most women and old people were involved in agricultural activities while mature and young men were working for *banjir kap* logging.

There are several small shops (*warung*) in the village, which provide industrial products such as salt, MSG[9], gasoline, oil, noodles, coffee, tea, milk, *etc*. Traveling traders also come to Mataliba' to sell clothes, gold accessories, and sundries. Outboard motors (*ketinting*), pulling machines, chainsaws, and engines are bought in Samarinda. As the village is already open to the outside world, the medium of exchange is cash. Bartering has not been practiced in the village since the 1970s.

As mentioned earlier, Mataliba' villagers fulfill their needs for rice and agricultural products from their own *ladang* and vegetable gardens. The need for fish is fulfilled by the catch of the Pari' and Mahakam Rivers, whereas that for meat is met by traditional hunting. In the event that a hunter catches a large wild pig or a fisherman catches a lot, he could sell the excess to the other villagers for IDR 10,000 (US$ 1)/kg of meat or IDR 7,500 (US 0.75)/kg of fish. Some villagers are also rearing chicken and domestic pigs (typically 2-3 pigs/household). The livestock are usually served or sold at festivals and parties, which are commonly held in the

[9] Monosodium Glutamate (*Aji no-moto*, a kind of spice to improve the taste of food)

village. Wild pigs may sometimes disappear completely from the forest area, as their existence is only seasonal in the area. That is why most households rear domestic pigs.

2.8. Production and Marketing

The production systems, particularly agricultural production, in Mataliba' are mostly still traditional. Dry rice cultivation (*ladang*), wet rice cultivation, and vegetable gardening depend on the natural fertility of the soil and on rainfall. There are no fertilizers, irrigation systems, and/or chemical materials in use. The resulting agricultural products are mostly for self-consumption. Only small amounts of products such as vegetables, corn, or groundnut are sold to outside buyers or to the consumers in Mataliba'. Some people would plant such products together with rice on the same land, and some in a special vegetable garden.

1) Fruits

There are a lot of fruit species in this village such as *Durio zibetinus*, wild jackfruit (*cempedak*), lansium tree, hairy fruit (*Nephelium lappaceum*), longan, banana (*Musa paradisiaca*), *etc*. These fruits come from the traditional fruit gardens (*lidu'* and *lepu'un*) located around the village and all along the Pari' River and its tributaries. Every household has more than one traditional fruit garden (*lepu'un*), usually in different places. The traditional fruit gardens perform a number of functions, i.e. in them are grown the fruits themselves; land ownership marks are placed, and fuel wood is collected (usually twigs and branches). During the fruit season (usually every 2-3 years), the fruit products are both used for own consumption and for sale to outside traders who come from Samarinda and Melak. The traders then distribute the fruits to Samarinda, Bontang, Muara Badak, and Balikpapan. The average prices of the fruits in the season are: *durian* - IDR 3,500 (US$ 0.35) per piece, *langsat* IDR 15,000 (US$ 1.5) per tin, *kelengkeng* - IDR 25,000 (US$ 2.5) per tin, hairy-fruits - IDR 1,000 (US$ 0.1) per bunch.

Planted fruit trees are individually owned by the planter of the tree. Ownership of naturally occurring fruit trees is based on the tree's location: if the fruits grow naturally in the forest, without having been planted by a certain person, there is no ownership right in the fruits; only a "finder's right" is applicable in this case.

2) Timber

As mentioned earlier, the logging method known as *"banjir kap"* was still being practiced by the villagers during our field visits. Under this logging method, a group of 3-5 men is needed to pull the timber from the forest to the closest riverside or stream. A 15 HP engine called "*derek"* or *"pancang*" is also needed to pull the bigger logs to the river. When marketing, the workers have two options: to sell the timber to independent buyers, whether upriver or downriver, or to their boss (*toke*) who has lent them money or paid to them some operational advance.

The price upriver ranges from between IDR 125,000/m^3 to IDR 275,000/m^3 (US$ 12.5-27.5/m^3). Revenue per worker in a group is around IDR 1 million to IDR 3 million/month. The boss of each group or a buyer has to pay a form of tax of IDR 10,000 (US$ 1)/m^3 to the Village Head or the Customary Headman. The Village Head uses some of the tax to cover operational costs and the rest contributes to the activities conducted by the Customary Head as well as for some public purposes. Some IDR 5,000/m^3 (US$ 0.5) of the fee is allocated for the Village Treasury (*Kas Desa*).

Jiu, a 45 year old *banjir kap* worker as well as a boss of a group of 12 workers, opined that Mataliba' people could still rely on *banjir kap* over the next 5 years as long as the price was good and the method was not banned by the government. After *banjir kap* is completely over, the alternative sources of income will again be from agriculture – dry farming, wetland rice planting, rubber and pepper plantations. The villagers expect agricultural development to be an inseparable part of forest management. Forest management without agricultural development would be difficult as agricultural activities reduce the pressure on the forest. The weakness of *banjir kap* according to him was that only people who were physically strong could get more benefits, while old men, widows and very young men did not get much.

3) Crops and vegetables

The products of *ladang* and gardens are rice, groundnuts, green nuts, snake beans, bananas, spinach, cassava, soybean, etc. Some of the products are for own consumption and the rest are for sale. The buyers are mostly from outside the village. Groundnuts, green nuts, and soybean are the most advantageous. Soybean is mostly bought by Javanese as the raw material for *"tempe"*, a tasteful soybean product. The price of soybean is IDR 2,500/kg, of green nuts - IDR 3,500 (US$ 0.35)/kg, and of snake beans - IDR 3,000 (US$ 0.3)/kg.

2.9. Development Programs

Community/villagers, forest companies and local government are all involved in community development in Mataliba'. There has been no significant development in forestry and agriculture in the village creating a genuine difference with the system of simple product extraction from the forest. Agricultural activities are mostly practiced under the traditional dry farming system, while wet rice irrigation is so far still dependent on rainfall. In forestry, HPHH and *banjir kap* were the main players in timber logging when the PAR was undertaken, without any significant on-site efforts for forest rehabilitation.

Some development programs in this village are:

- The village harbor and village fence. Proposed by the community and performed by the community (1997-1998).
- The construction of the Catholic Church, proposed

by the Church Development Committee in 1999.

- The improvement of the village road (for 200 m at a width of 1,5 m), from the former gravel road to a cement road. The road improvement was proposed and self-funded by the community (*swadaya masyarakat*).
- The clean water facility, funded by the company PT. Anangga Pundi Nusa. This project is not complete yet. It seems that nobody is now specifically responsible for this project. This project was proposed by the community.
- The one on-going program is the development of a new cement road at the upper end of the village in order to extend the village (for new built houses). A company from Samarinda conducts this. The project leader has forced the Village Head to sign a statement letter, to indicate that the project is finished. The fact in the field is that the project has progressed only up to the phase of piling materials such as gravel and sand (only 10% to completion). This is an indication of "corruption" in the village development program.
- The establishment of the Community Health Center (Puskesmas) plus the supporting facilities such as housing for a doctor and nurses. This is an urgent need for the community, proposed by the community to the District Head (*Bupati*) in the year 2000. So far, there is no budget allocation from the *Bupati*.

None of the development programs are directly related to forest management. It seems that the community is focusing on physical development in the village.

2.10. Local Government Policy

The Kutai Barat District is divided into three development zones, i.e. Upper, Middle and Lower Zone. Mataliba' belongs to the Middle Zone. In the Middle Zone, the government program is focused on agriculture and plantation estates (rubber, cacao, pepper and other valuable commodities). In this way, estate development in Mataliba' is considered necessary to support forest management. The District Government has suggested to the farmers to open a *ladang* in a certain area (*Kelompok Ladang*) as practiced by Mataliba' villagers. A *Kelompok Ladang* is composed of 10 to 12 households. In this area, one household has at least three hectares of land, which will be cleared for a 0.5 - 1 ha *ladang* in a cultivation cycle. In the *ladang* system, the farmer only builds one hut and does not have to move to another area and build a new hut anymore. The idea of this system is to make external input (costs) lower, and minimise further encroachment in the primary forest, as well as to make the agriculture extension from government easier. Eventually, land certification is expected to become easier and to be carried out more cheaply.

In forest management, new policies by the new government of Kutai Barat District have been applied to this village. For instance, the reforestation of some critical land has been exercised under the District Forestry Service program. The new government, in the spirit of regional autonomy and decentralization, also concerns itself with grassroots aspirations in the forest.

Currently, the community is also involved in policy discussions on forest management. For instance, local people and the Customary Representatives are being involved in developing the regulations related to the forestry program for Kutai Barat District (KK-PKD)[10]. In the old system, all decisions related to the forest were centralized. Some "Team Ten" members have said that the community has set itself on developing a system on harvesting timber from the forest as well as continuously keeping the sustainability of the forest. However, the realization of this plan has not been undertaken yet. Harvesting activities such as *banjir kap*, HPHH and IUPHHK are not followed by a systematic planning of reforestation in the over-logged areas.

III. Existing Forest and Land Management

3.1. Forestland and Forest Resources

The size of the Mataliba' area is estimated to be 88,000 hectares, or 88 km^2. It is estimated that 40% of the forest burnt down during the forest fire in 1997/1998. A local NGO, Puti Jaji, had mapped the village area together with the community in a participatory way in 1998. However, the exact size of the area is not known yet, as the map was only a rough one. The area of land designated to different land uses has also not been mapped yet, but this is expected to be tackled in the future. Traditionally, the Dayak Bahau people divide the village land (*Tana' Ukung*) into eleven land categories as described below (Inoue, 2000; Kadok, 1998)[11]:

1. *Tana' Uma'*: land allocated for housing (*Perkampungan*).
2. *Tana' Luma'*: *ladang*, dry farming fields).
3. *Tana' Lepu'un luma'*: ex-*ladang* area planted with fruits.
4. *Tana' Lepu'un Uma'*: former settlement area planted with fruits and other perennial crops.
5. *Tana' Bio'*: customary land prohibited to everyone to use. A ritual needs to be performed before anybody opens this area up (which is, of course, rare).
6. *Tana' Patai* (*Kalé'*): the graveyard area.
7. *Tana' Berahan/Belahan*: a forest area, allocated to gathering forest products such as timber, as a hunting and fishing ground, and for any other income-generating forest products.
8. *Tana' Mawa'* or *Tana' Pera'*, restricted forest: a protected forest, used for extracting some valuable forest resources; such as rattan, resin, timber for housing and boat materials, honeybee trees, aloe

[10] *Kelompok Kerja Program Kehutanan Daerah Kutai Barat* (Working Group on Forestry Programs of Kutai Barat District)

[11] Checked by Simon Devung, the Dayak Bahau Anthropologist.

wood, and fruits are also available or grow in the forest. Nobody is allowed to open up this area to exclusive private exploitation.

9. *Tana' Ang/Hang*: the boundary of the Customary Forest, of either an internal village area or an external village border.
10. *Tana' Pukung*: a forest area in which a lot of fruits grow naturally.
11. *Tana' Kaso':* a dense virgin forest normally used for hunting. A lot of forest fruits grow in this area and this is where wild animals breed.

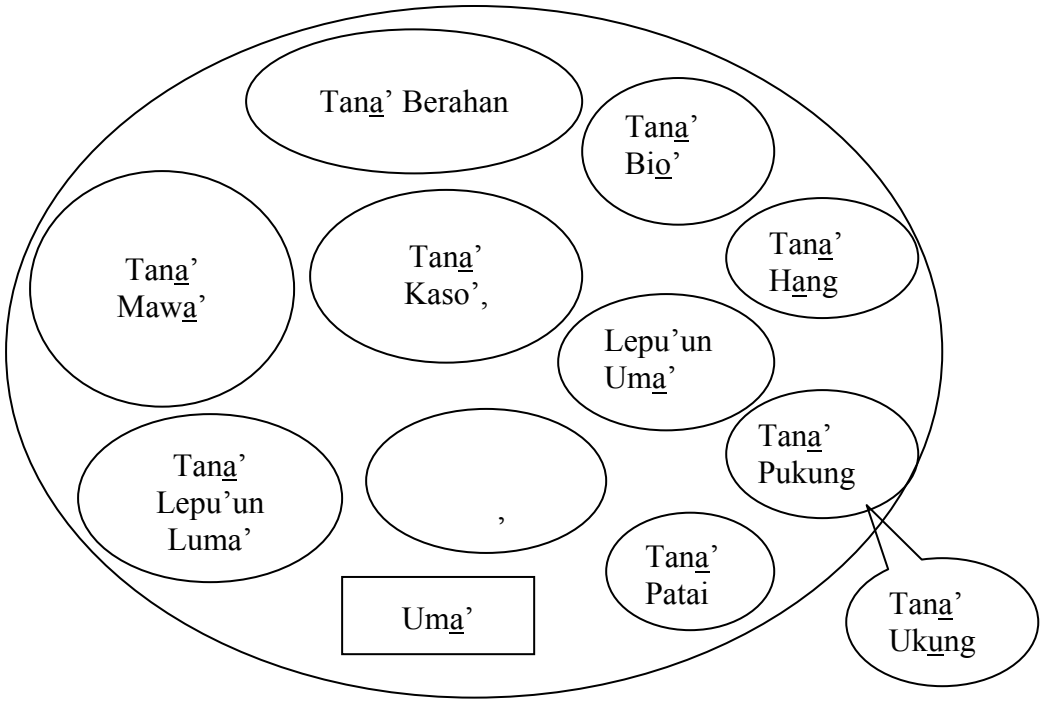


Figure 3. Dayak Bahau Land Classification

For land close to the Village, the people in Mataliba' have made a common agreement to allocate land use as follows:

Table 4. Land Utilization based on Villagers' Agreement in Mataliba'

Land Utilization	Area (ha)
Tana' Mawa' (restricted forest)	17,000
Tanah Kas Desa (village treasury land)	2,500
Perkebunan Rakyat (community estate land area)	2,500
Dry farming land	5,000
Pekuburan (graveyard)	50
Tanah sawah (wetland rice area)	100
Jalur hijau (green belt)	5
Tana' Lepu'un Uma' (former old village area)	300
Pasar Desa (village market)	1
Office area	5
Recreational area	2,500
Swamp/marshland area	50
Houses	5
Housing area	15
Village roads	1500 m

What follows is a description of forest and land management as practiced in Mataliba', for the *Tana' Luma'*, *Tana' Kaso', Tana' Berahan* and *Tana' Mawa'* which relate directly to the forest and forest resources.

1) Tana' Luma'

As the area of Mataliba' is vast compared to its small population, there is no restriction on the villagers to start *ladang* wherever they would like to, as far as the location is in designated *Tana' Luma'*. To set up a new *ladang* in the secondary forest, no permission from the Village Head or the Customary Headman is necessary. In this case, the Head of the Farmer Group (*Kepala Daléh*) plays the main role in deciding the location of the new *ladang*. The *Kepala Daléh* is chosen by the group members democratically. He is the leader of a small group composed of 10-15 farming households. Every activity related to *ladang*, particularly the schedule of farming activities is usually discussed among the members.

The norms surrounding the starting of a new *ladang* are similar to the norms in other Dayak villages. It is not permissible to start a *ladang* beyond the former boundaries of the zone. Honey bee trees should be kept standing and tended. New *ladang* should be started together at the same time, to better control pests. Cooperative work and mutual assistance ("*ruyong*"), are strongly recommended among group members. People from the highest class in the community (*hipui*) have the right to plant their *ladang* on the first day of the agreed planting days, followed by the lower classes.

The preferred area for *ladang* is one free from floods, flat, accessible and considerably fertile. However, the area which is most suitable on those criteria is located along the Pari' River, which is susceptible to flooding. Land-clearing in a cluster is preferred instead of a solitary block, as a strategy to reduce the loss from pest attacks. The Village Head encourages this strategy in order to reduce the cost as well as to make it easier to obtain land certification.

2) Tana' Kaso'

Compared to neighboring villages such as Data Bilang and Lutan, Mataliba offers the greatest potential for hunting as the primary forest area is huge and adjacent to the primary forests of the other villages. There are a lot of potential areas and rivers fit for hunting in this village such as the Upper Pari' and its tributaries, the Meriti' and Meribu' rivers. The rivers are also used for fishing.

The tools of the local hunter are hounds, shotguns, and traps (*jerat kaki*), while the tools for fishing are fish lines, casting nets, fishhooks, and scoop nets. There is an indication that some outsiders also use electrical shock (*strum*) and chemical materials for catching fish in the Mataliba' area. Hibau Bong, the Village Head, admits that it is quite difficult to control for such unsustainable practices because anyone has free access to the rivers in Mataliba'.

A similar phenomenon is also observed in hunting. Uncontrolled hunting seems to threaten the sustainability of endangered species such as the stripped tiger, the honey bear, and of several monkey and deer species. Hibau Bong states that some rules need to be enforced to keep the sustainability of hunted animals. The Village Head and the villagers have conducted a number of meetings to discuss regulations on hunting, for instance: allocating hunting and fishing areas, classifying the endangered species and imposing restrictions on hunting such species, including sanctions or fines for breaking

the rules. Every outsider who comes to the village, either for hunting or otherwise, needs to ask for permission from the Village Head or the Customary Headman, so that they could monitor what is happening in the forest. Chemicals are not allowed for catching animals. However, some hunters (particularly outsiders) tend to neglect such regulations if they have a chance.

3) Tana' Berahan

In principle, Tana' Berahan is a communal forest (Kadok, 1998). Everyone has free access in order to generate his family's income by extracting forest products from the area. However, individual rights to the natural resources in this area are also recognized in the form of "finder's rights". If someone finds a big tree and wants to use it, he could put a sign, called *"nyang"* on the tree at a height of one meter from the ground. This means that nobody else is allowed to cut the tree. The Customary Headman will charge the violators if there is a complaint from the finder.

Mataliba' villagers are not charged a fee for taking timber for housing materials and for sale, nor for collecting non timber products so long as they keep the rules and norms related to forest sustainability in the *Tana' Berahan*. Outsiders, however, should ask for permission from the Village Head or the Customary Headman if they would like to take any natural resources from the *Tana' Berahan* forest. They also have to pay to the Village Head a 1 % fee of the value of everything they take from the forest, in cash or as parts of the product. The Village Head will use the fee for public needs. In an informal discussion in August 2001 the Village Head, mentioned that local norms were still a better point of reference to keep the forest sustainability compared to formal governmental regulations.

As previously mentioned, *banjir kap* and *HPHH* were the main sources of cash income for Mataliba' villagers during our field visits. Although these two activities have been banned by the government, it is worth describing them in brief as forest use and management systems which have been practiced by the community members in utilizing their *Tana' Berahan*.

a) Banjir kap

Banjir kap is a method of taking timber from the forest without using heavy equipment or vehicles. The transportation of timber from upriver to the buyers downstream was achieved by floating the logs down the flooded river (*banjir* literally means flooding). It only needed small capital, since manpower was the main cost and flooding was the "logging truck" serving to carry the logs. However, it was a big problem to transport timber during the long drought when the river was shallow. The advantage of this system was that local people could receive a lot of money from the activity in a short time and in a simple way. The regulatory procedure was also simple. They only needed a permission letter from the Village Head and the Customary Headman.

The disadvantage (from the researchers' point of view) is that there was nothing done to rehabilitate the forest after exploitation. The person responsible for rehabilitation was not clear, as *banjir kap* workers themselves did not have time and money for rehabilitation. There were also some complaints about the issuance of *banjir kap* permit by the Village Head and the Customary Headman and about the use of the fees given by the *banjir kap* workers to the Village Head and Customary Headman, from community members who were not involved in the *banjir kap* activities, which sometimes resulted in internal conflicts among the villagers.

b) HPHH

HPHH (*Hak Pemungutan Hasil Hutan*) was different from *Banjir kap* in some aspects. A permission letter signed by *Bupati* was needed to run a *HPHH. HPHH* used heavy equipment, and was a joint-operation with a partner-HPH. The partner-HPH was responsible for all field operational costs, taxes, and administration costs, while the community got a fee from HPH ranging between IDR 25,000-125,000 (US$ 2.5-12.5)/m^3, or based on an agreement between both sides.

In Mataliba', the village fee is IDR 65,000 (US$ 6.5)/m^3. The fee was distributed to the HPHH Committee, the Village Government and Customary Institution, the Youth Club (*Karang Taruna*), the Family Welfare Education (*PKK*), and the local Church. The HPHH Committee was formed by the villagers to deal with HPHH management. The distribution percentage for each organization was decided through an agreement at a village meeting coordinated by the HPHH Committee before the HPHH would ran. The agreement stipulated that every organization would get a different amount of money depending on its role in the village.

In order to get more HPHH concessions, the village community divided the forest area into nine HPHH areas. However, the *Bupati* has only released one recommendation letter for HPHH because other applications are still considered unclear in term of area size and location. The HPHH Committee Chairman said that division of the forest areas into nine HPHH areas was the villagers' strategy to protect the forest from the encroachment of outsiders, especially from adjacent villages and other forest companies. The villagers had committed to keeping the sustainability of their Customary Forests and forest resources by making a plan for Customary Forest management in a participatory way.

4) Tana' Mawa'

Tana' Mawa' refers to a certain forest area, which contains natural resources such as rattan, resin, bird nests caves, and valuable timber for building materials and canoes. That is why *Tana' Mawa'* is also referred to as the Village Treasury Land (*Tanah Kas Desa*). Every natural resource in this area can only be used for collective purposes, such as for making the coffins for the dead, for traditional ceremonial materials, for food security in a

season of starving, for building materials for the church and village hall, etc. The Village Head and the Customary Headman have the authority to allow or reject a request to take from the natural resources in the area, and to fine someone who breaks the rules.

3.2. Forest Fire Management

Mataliba' has suffered severely from devastating forest fires, particularly in 1997/1998. The forest fire in 1982 did not cause much destruction to the forest and fruit gardens: only small parts of forest and fruit gardens around the village were burnt, while the rest and the villagers' houses survived. Conversely, the forest fire in 1997/1998 devastated a lot of primary and secondary forest, hundreds of hectares of fruit gardens around the village and along the Pari' and Meriti' Rivers, huts, agricultural areas, and even claimed one human victim. The wife of the Customary Headman died while trying to fight the fire from spreading to other areas.

In fighting the last forest fire in 1997/1998, the Village Head ordered all villagers to participate using any method and device, all day long and even during the nighttime. As the fire spread up to the village, all motorized-sprayer (*alkon*) owners set up the sprayers to fight the fire. Water was taken from the Pari' river. The villagers also showered or watered the houses and un-burnt forest to protect them from the spread of the fire.

In some parts, the villagers used a method of fighting fire, called "*sistem bakar balik*". The villagers made a fire deliberately at the opposite-side of the forest fire, in order to save and protect the bigger area from the fire. The forest fire would stop when it met with the "artificial" fire. The fire fighters also made barrier strips to prevent the fire spreading from one side to another. The villagers used this method to protect the most valuable areas such as gardens, fruit gardens, houses, or agricultural land by burning the non-valuable area to minimize the loss from the forest fire. The villagers also used this method when they believed that the forest fire would spread to a certain area at night, when it was impossible for the villagers to fight it at night. It was better for them to cut out the spreading fire at noon by burning out the "fuel" for the spreading fire (locally called *bakar balik*).

For the villagers, the cause of the fire was in the concession areas (HPH), specifically the HTI (Industrial Forest Plantation) area, because the fire came from the upper Pari' river, the location of the concession, and then spread down to the Mataliba' village. Another reason for them was that before the concession came to Mataliba' area, there had been no big forest fire, even during the long drought and dry farming related activities.

Some techniques for forest fire prevention during the dry farming season, commonly practiced by villagers, are as follows:

- Making a fuel free strip or barrier strip (*sekat bakar* or *tekat* in their local language) every time they burn the *ladang* or gardens
- Burning of *ladang* must be done together at the same time. Coordination between the farmer group members is needed to prevent the possibility of fire spreading to the forest. Burning the *ladang* alone is prohibited.
- Customary law prohibits the villagers to make a fire or to burn shrub, forest or create any source of forest fire.

It is a pity, however, that there is as yet no rule on how to charge someone who is suspected as the cause of forest fire. Maybe this is an indication that there was no fire caused by human error in the villages' history.

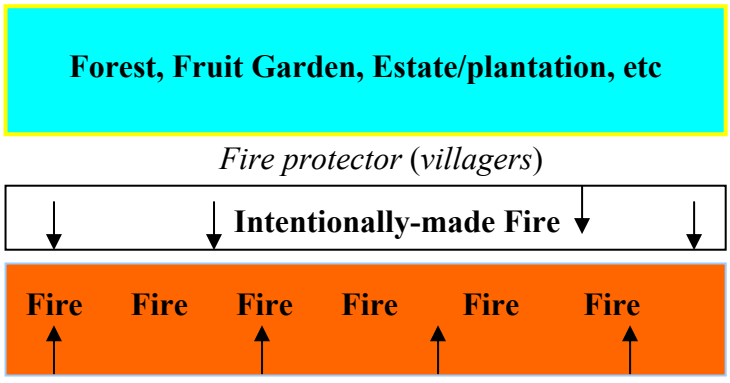


Figure 4. *Bakar Balik* System of Fire Protection

IV. Prospects for Community Participation

As for the case of Batu Majang, the forest and land management practices in Mataliba' as elaborated above, show a sound foundation for a high degree of community participation in local forest management in the future. However, the nature of participation will depend on the value of the forest and its resources to the local people and on their view of that value in their own perspectives. Table 7 shows the ranking of forest functions as perceived by the villagers in Mataliba'.

The table shows that the priority forest function for them is provision of building material (ranked 1st) followed by its role as a game/hunting area and as a habitat for rattan, resin, *daun biru etc*. (ranked 2nd), and as sources for traditional medicine and habitat for animals and birds (ranked 3rd). For the Mataliba' villagers, forest and forest areas are also still perceived as sources for immediate life needs: shelter, subsistence, and immediate cash income. Therefore, promoting and enhancing community participation in local forest management needs to be directly related to securing these immediate needs.

There are also a number of problems that should be taken into consideration and be tackled accordingly, before undertaking further measures in promoting and enhancing community participation in forest management. The following Table shows five problems as viewed by the villagers in Mataliba'.

Table 5. Pair-wise Ranking of Forest Functions as Perceived by Villagers in Mataliba'

Forest Function	1	2	3	4	5	6	7	8	9	10	11	Rank
1. Game/Hunting area		2	1	4	1	1	1	1	1	1	11	II
2. Source of construction materials			2	2	2	2	2	2	2	2	11	I
3. Source of traditional medicines				3	3	3	7	3	3	3	11	III
4. Habitat for animals and birds					5	4	4	4	4	4	11	III
5. Flood and erosion mitigation						5	5	8	5	5	11	V
6. Recreation; natural forest							6	8	6	6	11	VI
7. Account for present and future								7	7	7	7	IV
8. Source of water supply									8	8	8	IV
9. Keeping the climate cool and fresh										9	9	VII
10. Place for agricultural activities											11	II
11. Habitat for rattan, resin, *daun biru*												

The people of Mataliba' believe that the forest is taken as an object by the government (national, provincial and even district), to use as a resource in raising government revenue. The government and the concessionaires are only exploiting the forest without making any serious effort in conservation at field level. The proof is the destruction of the forest areas along the Pari' River in the last 10 years both by fire and by logging activities following the concessionaires' and the government's HTI programs. They also believe that there is some collusion between HPH, HTI and government staff to exploit the local forest for their own benefit, which does not allow much chance for the local people to become involved in the use and management of the forest under the forest concession scheme. In relation to this, people in Mataliba' notice the HPH practices of cutting timber out of Annual Plan plots and the illegal logging practiced by the outsiders and feel that they could no nothing to interfere.

The second problem for local forest management relates to the recognition of the customary rights over forest. Although the government has recognized such customary rights through the Basic Forestry Law (UUPK No. 41/1999), the reality of the law's implementation in the field is still unclear. The fact up till now is that the community has not fully held the authority to manage their Customary Forest. Apart from this, they also realize that the government policy is not sufficiently adoptive of the customary rights. The Hkm (Hutan Kemasyarakatan – Community Forestry) policy, for example, which re-

quires forest management by a cooperative (*Koperasi*), is not exactly compatible with the customary practices of managing the village forest as a common village property.

Table 6. Pair-wise Ranking of Problems in Local Forest Management as Viewed by People in Mataliba'

Forest Management Problems	1	2	3	4	5	6	7	8	9	Rank
1. Reforestation is not conducted appropriately by HPH		1	3	4	5	6	1	8	9	IV
2. Insufficient funds for reforestation allocated to the local community			3	4	5	6	2	2	9	IV
3. Forest is seen by the government (Forest Department) mostly as an object for the government's policy of raising revenue				3	3	3	3	3	3	I
4. Collusion between the HPH, HTI and government staff to exploit the local forest for their own benefit					4	6	4	4	4	II
5. The HPH practice of harvesting timber from Annual Plan plots and illegal logging practiced by outsiders						5	5	5	9	III
6. Customary rights have not been formally recognized by the government							6	6	6	II
7. Lack of awareness of the need for sustainable use of forest resources among many parties								8	9	V
8. Agricultural products' insufficient to support local livelihoods									9	IV
9. Government policy is not sufficiently inclusive of customary rights										III

V. Conclusion and Suggestions

The PAR findings reveal that community participation in local forest management in Mataliba' has been limited since the commencement of HPH by Barito Group in 1972, decreasing further still as HPH operations expanded in 1990, and as Anangga Pundi Nusa began logging in the area in 1992. Seen from the perspective of the six criteria of participation in forest management (Wollenberg, 1988; Devung and Nanang, 2003), the conclusions are as follows:

1. The community does not have full access to and control over the surrounding forest areas and forest resources, because the village forest area has been part of the Barito logging concession since 1982. Furthermore, a considerable part of the forest area has been used for HTI (Industrial Timber Plantation).
2. Not all community members have equal chances to gain benefits from the forest resources, for timber cutting – only the physically strong can become truly involved, while old men, widows, and young men cannot.

3. The community is able to take public decisions independently, but is still limited to decisions relating to internal village affairs, and decisions related to the forest areas which are still in their full control such as the *Tana' Mawa'*, *Tana' Lepu'un Luma'* and *Tana' Lepu'un Uma'*.
4. There is good cooperation among all concerned parties relating to the use and management of the forest and of forest resources among the villagers themselves, but not between the village members on the one hand and the forest concessionaires, particularly Anangga Pundi Nusa, on the other.
5. There are problem-solving and conflict-resolution mechanisms accepted by all sides at the village level, but these are not that effective for settling external conflicts, such as the conflict with Anangga Pundi Nusa, which forced the villagers to use a demonstration as a non-amicable measure of final resort.
6. There is considerable technical ability in the community to properly manage the forest, but it is still limited to the forest's traditional and local uses such as in the case of *Tana' Mawa'* or traditional forest fire control. For other cases, the community still needs technical assistance from other parties.

To gain a higher degree of community participation in local forest management in Mataliba', the following actions should be implemented:

1. Redefining, setting the precise boundaries and mapping of all the available Customary Forest and Land types.
2. Consulting the Anangga Pundi Nusa and the Barito Pacific concession holders and checking which parts of the customary forest and land types areas overlap with their existing areas of activity and develop a joint agreement with PT. Sumalindo on the use and management of the forest area concerned.
3. Revisiting and developing new rules and regulations concerning the use and management of all existing customary forest and land types ensuring that all community members have equal chances of gaining benefits from forest resources, including timber.
4. Activating the roles of the BPK (*Badan Perwakilan Desa*) – the Village Representative Council – as regulated in the Kutai Barat District Regulation for the new Village Government Structure in Kutai Barat District, to allow for more autonomy in decision making at the village level.
5. Fostering good cooperation among all concerned parties relating to the use and management of the forest and forest resources, among the village members, as well as with the forest concessionaires operating in the village areas, using the principle of joint forest use and management.
6. Developing problem solving and conflict resolution mechanisms which can be accepted by all sides at the village level, as well as for settling external conflicts, such as the conflict with Anangga Pundi Nusa.
7. Beginning to enhance the technical ability to better manage the forest, focusing firstly on the efficient use of the existing resources in the *Tana' Mawa',* the conservation of scarce resources, the rehabilitation of used resources (including the inactive swift nest caves in the Upper Pari') and enrichment of the quantity as well as the diversity of the existing resources.
8. Increasing agricultural production so as to support families sufficiently, to reduce their dependency on the forest resources, beginning with the development of a wetland rice (*sawa*) area, and rehabilitating the fruit gardens and estates burnt in the 1998 fire.

As for the village at Batu Majang, local initiative for positive action ideally come from the village community members themselves. However, assistance from outsiders, at least at the beginning, is still deemed as necessary, whether such outsiders are from the government, NGOs, private companies or elsewhere.

Acknowledgement

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Chapter 4.

Forest management and community participation in Engkuni-Pasek

Rujehan, Fadjar Pambudhi, Setiawati, Edi Mangopo Angi

I. Introduction

Engkuni-Pasek is predominantly a Dayak Benua' village. Formerly, the village was separated as two villages, Engkuni and Pasek; these merged into one in the 1960s (during the national census). As the village has existed for more than one hundred years (the exact year in which it was founded is unknown), with considerable phases of land clearing activities, the area of dense forest is now very limited and mostly located along the boundaries with the neighboring villages of Pepas Eheng, Mencimai, Benung and Temula.

The main livelihood of Engkuni Pasek is dry rice farming (shifting cultivation). Other sources of income are rattan gardens, rubber plantations and forest products, including natural (non-cultivated) rattans. Based on the capacity of the area to fulfill subsistence requirements and generate cash income through the sale of agricultural products harvested from villagers' *uma'* and vegetable gardens, the village is categorized by the government as a *desa swadaya* (a self-sufficient village).

II. Overall Description of the Village

2.1. Village Territory and Access

Engkuni Pasek is located on the bank of a small river, Idaatn, one of the tributaries of the Kedang Pahu River. The boundaries with other villages are Pepas Eheng village (West), Mencimai village (East), Benung village (North) and Temula village (South).

The village is accessible by both river and over-land transportation (gravel road). However, as access by road has become easier and cheaper, river transportation is no longer used to any great extent. Ground transportation by car or motorbike from Damai takes one hour for the distance of 18 km, and from Barong Tongkok takes 20 minutes for the distance of 10 km. The cost of transportation from Barong Tongkok to Engkuni by a regular taxi is IDR 5,000/person (US$ 0.5) and IDR 30,000/person (US $ 3) for a chartered motorbike (*ojek*). It takes one hour to get to Engkuni from Melak (the capital of Kutai Barat District) through Barong Tongkok.

2.2. Ecological Zones and Resources

Based on the *Bakosurtanal*[1] map (National Coordination for Surveying and Mapping Board), the elevation of the village is 50-100 m above sea level. The general topography is gently hilly and there are no big mountains in the village area. The rainfall based on Voss (1984) is 2,000 mm/year. The natural resources found in the village area are as follows:

1) **Forest:** Primary forest (*bengkar/lati*) is scattered along the boundaries with Pepas-Eheng, Mencimai, Benung and Temula villages. Timber trees found in the forest areas are *meranti merah* (*lempukng méa'*) and *bengkirai* (*jengan*).
2) **Waterfalls** (*jantur*): The feature of greatest potential for ecological tourism in the village are the "Gerongokng" waterfalls. The falls form part of the Idatn River, and are located a few minutes away from the residential area of the village. The waterfalls have been visited by a lot of people from Barong Tongkok or Melak, and even by visitors from outside of West Kutai District. It takes 15 minutes to get to the falls on foot from Engkuni village, and approximately one hour by car from Melak. In 1997, the waterfalls were used as a source of hydroelectric power in Engkuni, in a scheme jointly operated by GTZ and the Samarinda State Polytechnic (Poltek Samarinda). Unfortunately, however, the hydroelectric power station has since been abandoned following its complete destruction by flooding. Besides electric power, the falls are also used as a source of drinking water with support funds from the local government in 1997/1998. The waterfalls could become one of the prime spots for ecological tourism in the Kutai Barat District, especially on holidays.

[1] *Badan Koordinasi Survey dan Pemetaan Nasional*

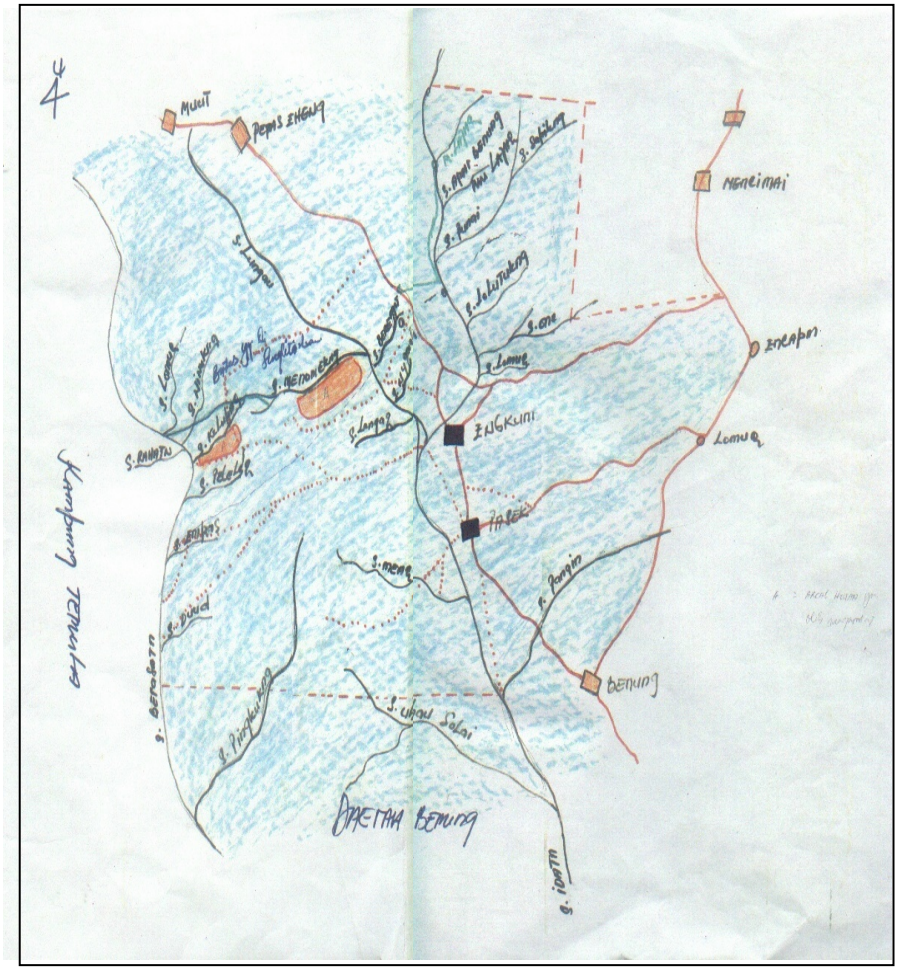

Figure 1. Sketch of Engkuni-Pasek resource map

3) **Honeybee trees** (*Simpukng Tanyut*): Honeybee trees are mostly found in the secondary forest (*urat*), though some also occur in the primary forest (*bengkar/lati*). Lately, the number of honeybee trees has decreased significantly because of forest degradation and severe forest fires in 1997/1998. The prime honeybee trees are *banggeris* (*puti*), *meranti* (*lempukng*), *bengkirai* (*jengan*) and *kenari* (*jelmuk*).
4) **'Climbing trees' for Rattan production (*simpukng wé*):** *Simpukng wé* means a forest and its component trees, which may be utilized as 'climbing trees' for natural/forest rattan (*i.e.* non-cultivated rattan) production. The main species of natural rattan are *pulut putih* (*wé pelas*), *semambu* (*wé tu*) and *manau* (*wé ngono*). These *simpukng wé*, or natural rattan forests, are spread out along the Liwir, Lelutukng, Punai and Berasatn Rivers.
5) **Wild game and vegetables:** To fulfill the village needs for meat, some villagers go hunting using hunting dogs, traps or shotguns. Hunting grounds are in the primary forest and secondary forest (*urat*). Wild pig (*Sus barbatus*), deer and *kijang* are the most common game of the traditional hunters in Engkuni Pasek. Unfortunately, the numbers of wild animals in the area have decreased recently. Besides wild game, there are also a number of wild vegetables found in Engkuni Pasek forest areas. The species of vegetables commonly extracted from the forests are: rattan shoot, *olukng sabai*, sugar palm, *nibung* (*niwukng*), *kelulénq*, *serit*, *nulang* (spices), *lempékng*, *kanap*, *kulat* (mushroom), *klemono*, *anpar*, *kenih* and many species of *paku'* (fern), forest banana heart (*donokng*), and bamboo shoot (*basukng*).
6) **Fresh water fish:** Along the main river, Idaatn, and its smaller branches, are several places for catching fish, either by using nets, fish lines or fish traps. Species of fish found in Engkuni Pasek waters are *lempapm*, *seluang*, *rungan*, *susur batu'*, *jelawat*, *keli*, *engkokng*, *baukng*, *puyau* and *kelabau*. According to the villagers, the number of fish has also decreased lately because of human activities and development, which disturb the water and its ecology. As a result, so as to fulfill the need for fish, villagers

have to buy supplies from traveling traders who come to the village every day. It seems that the volume of fish caught through traditional means is no longer sufficient for daily consumption.

7) **Wetlands and marshlands:** Three areas of wetland occur in Engkuni-Pasek. These are located beside the Lungau River, in the western part of the village and to the south of Engkuni (between Engkuni and Benung villages). However, the farming activities practiced in these wetland areas are not significant compared to other activities carried out in dry rice farming land. That is, villagers believe that there are many resources to be utilized besides wetlands. Traditional farming culture, which is more focused on dry rice farming, is also one of the reasons why people do not use the wetlands very much. The wetland areas are only cleared in the drought season when rainfall is not sufficient for production in the dry rice fields.

Apart from these natural resources, agriculture has been developed by the villagers over a period of decades. This comprises:

1) Dry rice fields (*uma'*): As mentioned earlier, this village is categorized as a self-sufficient village (*desa swadaya*). This is because the villagers are able to fulfill their needs for rice and most agricultural products by themselves. Rice (*paré*) and glutinous rice (*pulut*) are the most common agricultural products from the dry rice fields in the village. However, in the recent long drought, the villagers had to buy rice from Barong Tongkok or Melak. The villagers were supported by the local government at that time, in order to simply get hold of seed.
2) Vegetable Gardens: Planting vegetables in a garden or mixing species of vegetables with rice in rice fields, are the main ways in which villagers fulfill their needs for vegetables. An alternative way is to plant suitable vegetables in spaces around the house. Vegetable species commonly planted in the gardens are: snake bean (*kretak*), onion (*bawang balo*), *ubi jalar* (*aya'*), cassava (*jabau*) and eggplant (*ulapm*). Recently, some villagers have also bought vegetables from migrant farmers or traveling traders from Rejo Basuki (a migrant village) when vegetables are not available in Engkuni-Pasek itself.
3) Livestock: For self-consumption and for selling purposes, most households raise livestock such as domestic pigs (*unék*), chicken (*piak*), goats (*béhé'*) and cows (*sapi*). Cows were provided to villagers by the provincial government around 5 years ago. However, as the number of animals reared in the village has decreased lately, most meat for consumption is bought in Barong Tongkok or Melak.
4) Orchards (*Simpukng Munan*): Fruit gardens are land areas planted with many species of fruits, either in old dry rice fields (*urat*) or around the houses. Planting many species of fruits in old dry rice fields or around houses is part of the culture and tradition of the village, and symbolises an "unwritten certificate" of land tenure. Every household has at least two fruit gardens in different places. The favorite fruits commonly planted in the fruit gardens are *lisat* (*Lansium domesticum)*, *pasi* (*kapul*), *kalakng* (*durian, Durio zibethinus*) and *lai* (*Durio graveolens*).
5) Rattan gardens (*kebotn wé*): Every household in Engkuni-Pasek has at least one rattan garden, either planted by themselves or inherited from their ancestors. Rattan gardens are mostly found along the riversides and river basin, as land in these areas is the most suitable for rattan growth. The biggest rattan gardens are seen on the bank of the Berasatn River, close to the boundary with Temula village. Species of rattan planted in this area are *sega* (*wé soka'*), *jahab* and *pulut mérah* (*wé jepukng*).

2.3. Population and Public Facilities

The population of Engkuni Pasek is 412 people, living in 100 households. Most of the villagers (90%) are farmers and the rest (10%) are state officers (teachers), traders and employees. With regards to religion, 90% of the villagers are Catholic, and the remaining 10% are Protestant Christian, Muslim or other traditional religion. The majority of villagers are Benua' Dayak (90%), with the remainder being made up of Tunjung (Tonyoi), Buginese and Javanese.

Public facilities in the village are one Elementary School (SD), two Churches, three village bridges, four pipelines for drinking water, volley ball and football courts, a rice mill and seven parabola TVs.

2.4. Village History

Before the 1960s, Engkuni and Pasek were two separate villages. During the national population census in 1960, the provincial government merged the two villages into one village, named Engkuni-Pasek. According to their oral history, the early villagers came from Medakng Lamin in 1300, and then divided themselves into 4 smaller houses (*lou*), as follows:

1) **Engkuni (*Lou Medakng*):** The first Leader of the Lou Medakng was Ménotn (also called Wiraraja), who was replaced by one of his sons, Enté. Enté was replaced by his son Pancak, who in turn was replaced by his son, Gencékng. Gencékng was replaced by his son Lot, and Lot was replaced by his son Siwukng. Siwukng was the Leader of both Lamin Medakng and Lamin Pancur Benung. His territory covered a large area, ranging across the Idaatn, Kedang Pahu and Nyuatan Rivers. When Siwukng died, Amputn called upon Jempati to succeed his position as

the king of the Benua' ethnic group in the area.

2) **Benung (*Lou Benung Pancur*):** There is no information about who was the Leader of Lamin Benung Pancur after their independence from Lamin Medakng in the year 1500.
3) **Pasek (*Lou Ruii'*):** There is no reliable information on when Lou Ruii was separated from Lamin Medakng. In 1945, Lou Ruii was led by Incu (known as Kakah Bemekng). At the same time, Engkuni was led by Juling. In 1960, during the national national census, the provincial government grouped Pasek as one village along with Engkuni, named Engkuni-Pasek, as mentioned above.
4) **Pepas (*Lou Pepas*):** Lou Pepas was established in 1930, led by Tahutn (usually called Kakah Bahéw). In 1960, Kakah Bahéw was replaced by Muhamad Ali Gerung. Through the Local Community Settlement (PMD) program of the Department of Social Affairs, Lou Pepas was replaced by single houses, and since then no longer operated as a long house. In 1963, Muhamad Ali Gerung retired and several households moved to Eheng led by Merẹng; others move to Engkuni. Since then, Lou Pepas became deserted and no longer a village. Its territory is now integrated into Eheng and has become part of Pepas-Eheng village.

According to the villagers, the name *Engkuni* might come from either of two words. The first is the name of a tree, Engkuni. The tree usually grows in the river basin and is commonly used for building materials. The second meaning of Engkuni comes from the name of an accessory usually used in ritual ceremonies such as *kwangkai* (*Engkuni Liau*), curing rituals (*beliatn*), weddings and rice planting (*ngasak*) ceremonies. *Pasék* means hitting a drum in the traditional curing rituals. Some historical events in Engkuni-Pasek are shown in Table 1.

Table 1. Chronology of Historical Events in Engkuni-Pasek

Year	Events
Up to 1935	People living together in the *Lou Medakng* long house as a strategy to defend themselves from tribal attacks and latterly from the Dutch and Japanese armies. Livelihoods were mostly based on dry rice farming, livestock raising, collecting resin, rattan, and making boats/canoes.
1935	Community leader Tomong Kakah Lanuk established a separate long house, called *Lou Pasek*. Population increased and they started to make bags (*anjat*), mats and other handicrafts from rattans for sale.
1942	Severe drought in Engkuni. Eating cassava was the only option for survival.
1955	Wigers, a Dutch Pastor, introduced the Catholic religion to the people in Engkuni-Pasek. A Catholic Elementary School was established in Pasek.
1960	The population of Engkuni-Pasek decreased because some moved out to Mentika, Keont and Besiq. Epidemic diseases, particularly malaria, cholera, smallpox and diarrhea, impacted severely on the remaining people.
1965	Resin collection was no longer practiced due to a shortage of resources (most of the resin trees destroyed in a forest fire).
1970	Rice harvests totally failed and many villagers starved. To overcome this problem, the Village Head asked his people to eat cassava, bought from the neighboring village, Benung.
1970	"*Banjir kap*" Community Logging started in Engkuni and then stopped at the end of 1970, replaced by the National Logging Company (HPH) operation.
1970	PT. Dayak Besar (a National Logging Company) came to the village and cut timber along the Temula River
1982	Long drought. Rice harvests totally failed. Devastating forest fires.
1993/1994	Rubber plantation was introduced to the villages. Villagers were divided into 7 groups of rubber farmers and some successfully began to tap rubber. The yields were sold to traders in Rejo Basuki and Barong Tongkok.
1997/1998	Large-scale forest fires because of prolonged drought. The Idatn River and some other smaller rivers ran dry. Rice harvesting completely failed.
1999	Succession of the village leader. The village situation became worst, crisis of trust amongst villagers. The cooperative voluntary work scheme, established to develop mutual assistance amongst villagers (*gotong royong; Benua': pelo jerap*), begins to fade.
2001	The biggest ever flood in Engkuni-Pasek. Some houses were destroyed and many livestock died. The pipes of the hydropower electric plant drifted down river. The Village Head claimed that the flood was caused by intensive forest degradation over the previous two years. People tried to redevelop the spirit of "*gotong royong*" to regenerate the village.

2.5. Social Structure and Relations with Outsiders

The main organizational structures in the village are the formal Village Government and the Customary Institution. The Village Government is led by a Village Head and has a secretary (*Juru Tulis*) and three sections: Governance, Development, and General Affairs. The Customary Institution, chaired by a Customary Headman, has a secretary, staff of rituals, staff of law, and a treasurer. There are also some social organizations apart from the Village Administration and Customary Institution. These are: the Youth Organization (*Karang Taruna*), Family Welfare Education (PKK: *Pendidikan Kesejahteraan Keluarga*), Farmers' Group (*Kelompok Tani*), and the Civil Guardians (*Pertahanan Sipil*).

In the past, four social classes could be discerned within the Benua' community, as follows:

a. ***Ripatn*** (Slave), the lowest class in the community
b. ***Merentika*** (Common People), the commoners of the community
c. ***Penggawa*** (Public Figures), members of the noble families
d. ***Mantik*** (Noble), the highest class in the Benua' community.

The current social structure is quite different compared to this social stratification of 30-50 years ago. Currently, the social classes are no longer based on birth or family tree, but are much more closely related to prosperity and property, level of education, job, and official positions in the government. Right now, everyone has the chance to become the Village Head or the Customary Headman. Under the old social structure, only people from the highest class could become such leaders in the community.

Nowadays, if someone is born into a higher social class and yet doesn't have much money or is otherwise of a low economic level, that person would typically be shy about revealing their high-class ancestry. It seems that one's economic level or educational background is the new standard for social class in the community. However, this does not mean that the old social stratification has disappeared completely, as in some cases, such as in traditional ceremonies, the old social stratification identity will emerge.

According to the informants in this study, the differences between the lower and the higher classes in the past were obvious in certain aspects of life, such as:

a. Clothes and costume. The higher class wore more colorful and finer materials compared to those of the lower classes. There were also exclusive motifs used in clothing and uniform of the higher class.
b. The higher class could order people of lower classes around. It was prohibited for the lower classes to oppose the words of the higher class.
c. The higher class commonly did light work, while the lower class undertook hard labour.
d. The higher class had to speak in a very polite way to maintain their authority, while the lower classes were somewhat rougher in speech.

Though in the past the Village Head, Customary Headman and various religious leaders were selected from the higher class, today the selection process for those positions has changed significantly. The criteria are no longer based on the hereditary line, but more focused on attributes such as capability in Customary Laws, acceptability at the community level, self-integrity and openness to different or outside ideas.

Regarding the gender perspective, women actually have an equal chance of becoming a Village Head or Customary Headman. There is no explicit prohibition. However, women themselves mostly consider that their capability, education and leadership are still not sufficient to become leaders. Another constraint is the tendency that women are quite shy to speak out in meetings. Women are more interested in "kitchen work" instead of getting involving in a debate or discussion. Recently, however, as observed in a village workshop held in March 2003, more women (especially those with a high school education or university background) have had the courage to speak up in meetings and even argue against the men.

Over the years the community of Engkuni-Pasek has become quite open and welcomes the presence of outsiders as far as they follow the local culture, norms and habits. There are no restrictions or constraints regarding activities in the village, as far as those activities support the development of the village. Outsiders who commonly visit or even live in Engkuni include teachers, nurses, traveling traders, and nowadays also tourists and researchers.

Table 2 and Table 3 below show the inter-relationship between the internal and external institutions with the Engkuni-Pasek community, as well as the importance of the institutions to the community. The internal institutions are: *Lembaga Ketahanan Masyarakat Desa* (LKMD, Community Resilience Institution), *Badan Perwakilan Kampung* (BPK, Village Representative Council), *Karang Taruna* (Youth Club), *Pendidikan Kesejahteraan Keluarga* (PKK, Family Welfare Education), *Posyandu* (Integrated Infant Health Service), *Mudika* (Catholic Youth Group), Farmers Groups, Customary Institution, *Dewan Stasi* (Local Catholic Church Council), Village Government, Children's Sunday School, *Hansip* (Civil Guardian), and GPDI (Pentecostal Church). The key external institutions are: *Polindes* (Health Clinics), Elementary School, District Health Service, District Estate Service, NGO, Rio Tinto Foundation, and the University.

Table 2. Inter-relationship between Internal Institutions with the Community

Institutions	Role			Relationship				
	B	M	S	VC	C	M	F	VF
1. LKMD	X					X		
2. BPK (Village Representative Council)	X					X		
3. Karang Taruna (Youth Club)		X				X		
4. PKK (Family Welfare Education)	X					X		
5. Pos Yandu (Infants' Health)	X				X			
6. Mudika			X				X	
7. Kelompok Tani (Farmers Group)		X				X		
8. Lembaga Adat (Customary Institution)	X				X			
9. Dewan Stasi (Local Catholic Church)		X				X		
10. Pemerintah Kampung (Village Government)	X						X	
11. Sekolah Minggu (Sunday School)			X			X		
12. Hansip (Civil Guardian)		X				X		
13. GPDI (Pentecostal Church)		X				X		

Legend: B: Big; C: Close; F: Far; M: Moderate; S: Small; VC: Very Close; VF: Very Far

Table 2 above shows that 6 of the 13 internal institutions play important roles, while others are rated as either moderate or low in terms of their role in the village. In the case of forest management, only Village Government and Customary Institution are empowered to deal with forest-related issues.

Tabel 3. Relationship between External Institutions and the Community

Institutions	Role			Relationship with the Community				
	B	M	S	VC	C	M	F	VF
1. SHK (NGO)		X				X		
2. Rio Tinto Foundation		X				X		
3. District Estate Service		X				X		
4. Polindes (Health)	X					X		
5. SD (Elementary School)	X				X			
6. District Health Service	X					X		
7. CSF (University)	X					X		

Legend: B: Big; C: Close; F: Far; M: Moderate; S: Small; VC: Very Close; VF: Very Far

2.6. Decision-Making Process

Decision-making is basically democratic in nature. For example, if there is a conflict between villagers, regarding, say the *uma'* or rattan garden boundary, the Village Head will invite both sides and facilitate a meeting to clarify and settle the problem. The Village Head is the first person responsible for conflict resolution. If a solution cannot be obtained by the Village Head, then the Customary Headman and his staff are invited to sit down together to resolve the conflict.

As mentioned above, both men and women have equal rights in the decision-making process. Women are actually always invited to participate in all meetings in the village to give input and make suggestions. This is especially the case with representatives of the PKK (*Pendidikan Kesejahteraan Keluarga* or Family Welfare Education). However, women are sometimes reluctant to speak up or get involved in a debate at a meeting. They usually let the men make the decision. Some considerations why women are less active in village level decision-making are:

1. Women's workload is high, especially with regards to domestic work, and so it is difficult for them to get involved actively in all village meetings.
2. The influence of the old view that women are inferior as compared with men. The status of men is somewhat higher then women, so women must be loyal to her husband. *Motn balai* and *iwatn balai* are two terms in the Benua' community, meaning that a woman's status is somewhat lower than the status of men.

Regarding the public decision-making process, in some cases, for instance if there is a project due to come to the village, the decision-making process is less participative. The Village Secretary and some villagers have complained that they are not fully involved in deci-

sion-making where the decisions are related to the project. Decisions are mostly taken by the Village Head and the Project Owner. So, the decision-making process depends on the topic of the meeting: if it is related to public works (and is therefore non-profit), the process is participatory; if it is related to a Project (and so profit oriented), in many cases the process is less participative.

2.7. Economic System

As mentioned above, traditional farmers account for more than 90% of the population. The rest of the villagers work as teachers, nurses, traveling traders, craftspeople and some run small shops (*warung*). As farmers, the villagers work in their dry rice fields, rattan gardens, and rubber gardens. The small shops provide some daily consumption goods such as sugar, salt, rice, gasoline, flour, oil, *etc*. Every transaction between seller and buyer is in cash. However, in some cases, the barter system is still used, such as between a hunter who sells wild pig meat, or a fisherman who sells fish, with the small shopkeepers who sell sugar or salt.

In order to improve agricultural production and to improve agricultural management, Rio Tinto Foundation (a Community Development Agency of the PT. Kelian Equatorial Gold Mining Company) has formed a *"Kelompok Tani Karet"* (or Rubber Farmers' Group) and some "Kelompok Tani Palawija " (Cash Crop Farmers Groups). The farmers groups work cooperatively to increase agricultural production and gain more access to markets.

2.8. Production and Marketing System

As mentioned in the previous section, the forest products harvested in Engkuni Pasek comprise timber, particularly *meranti* (*lempukng méa'*) and *bengkirai* (*jengan*), and some species of rattans and forest fruits. Rattan species collected from the forest and from the rattan gardens are *sega*, *jahab*, and *seletup*. Rattan is used as a raw material for making mats and carrier bags (*anjat, berangka*, *etc*.) for both household use and sale. Some rattan farmers also sell wet/raw rattan to rattan buyers who come from Damai and Samarinda. The current price of wet rattan *sega* is around IDR 500-650/kg (US$ 0.05-0.065)

So far, there are no timber concessions in the village. This is because most of the village areas are endowed only with secondary forests, and very little primary forest. So it is not considered commercially beneficial to undertake large-scale timber production from the village forests.

Fruit garden (*simpukng munan*) products are mostly *durian* (*kalakng*), jackfruit, *kapul* (*pasi*), *rambutan*, *kelengkeng*, *kwini*, *langsat* (*lisat*), *mango*, *lai*, *etc*. A fruit garden has a number of functions: as a source of firewood, a source of timber for building and construction, land conservation, proof of land ownership, and, in the fruit seasons, fruit production for cash income. In the fruit seasons the price of fruit usually decreases significantly by 50–70% compared to the prices in the off-season. For instance, the price of durian in the fruit season is IDR 2,500-3,500/piece (US$ 0.25-0.35), while in the off-season the price is normally IDR 10,000-15,000/piece (US$ 1-1.5).

Because fruit is in abundance during the fruit seasons and the farmers do not have cars for transportation from the gardens to the markets, the farmers just sell the fruits to the buyers who come to the village and, of course, in this way the price is quite low. Transportation is the main obstacle faced by farmers in order to gain more financial benefit from their fruit. The further the fruit gardens are from the main road, the lower the price of the fruits become. Fruits bought in the village are then distributed by buyers or collectors to local markets in Melak, Samarinda, Balikpapan and Bontang. The most profitable fruits from Engkuni-Pasek are *durian, langsat and cempedak*.

Agricultural products from Engkuni-Pasek are rice (the main product of the *uma'*), *paré*, snake bean, ganglion, sweet potato, eggplant, maize, banana, taro, ginger, chili and coconut. Some of these products are sold in Barong Tongkok every Wednesday and Saturday. These two days are the general market days (*hari pekan*) for the surrounding villages. The buyers of agricultural products in Barong Tongkok then redistribute some of the products to markets in Melak, Linggang Bigung and Tering.

Rubber, especially local rubber, is one of the income sources for villagers in Engkuni-Pasek. In the last four years, some farmers have planted superior varieties of rubber, though they have not been harvested. Almost all of the households have around 0.5-1 hectares of local rubber garden; however, only a few actively tap the rubber regularly. Rubber is tapped around 4 times a week. The coagulation process of the rubber latex takes around 4 hours, then the material is sun dried (smoked) for around 5 days before it is ready to sell. Every active rubber farmer can collect around 1-2 kg of RSS (rubber smoked sheet) per day at the current price of IDR 1,750-2,500/kg (US$ 0.175-0.250). The RSS is sold to buyers in Barong Tongkok or Melak and sometimes even further afield in Samarinda.

2.9. Development Programs

According to the informants, since the 1950s there have been only a few development projects carried out in their village. The key ones are as shown in Table 4.

2.10. Local Government Policy

Some villagers complain because the District Government does not sufficiently socialize government regulations and other policies relevant to the Village Government (*Pemerintahan Kampung*). As the Village Government does not know the regulations and policies clearly, it is a problem for the Village Government to deal with outsiders (Concession Holders, Estate and Agricultural Projects officials *etc*.) and to progress the village development program. This puts the local commu-

nity in a low bargaining position. According to some villagers, even the distinction between the responsibilities of the Village Head and those of the Customary Headman in relation to government regulations are not clear. Such problems in clarity and awareness cause inefficiency and other difficulties in forest management in the village.

As an example, a minor boundary conflict between two neighboring villages, Engkuni-Pasek and Pepas-Eheng still exists. The conflict emerged when a HPHH (Small Scale Logging Concession) was given to an outsider, Mr. Silitonga, without consulting the villagers of the two villages. As the HPHH area covered the disputed border areas of the two villages, a conflict broke out with regards to who would have the right to claim the fee from the HPHH. As the conflict escalated, the HPHH stopped its activity. The Village Heads and Customary Headmen of the two villages have asked the District Government (District Forestry Service and Land Department) to assist in solving this problem, but so far there is no solution.

According to some villagers, transparency in policy and the decision-making process remains a truly crucial necessity to be developed. Most villagers are not involved in the decision-making process, especially when dealing with outsiders (particularly companies). Villagers only become involved after problems have arisen. This means that the villagers are only involved in problem-solving, but not in decision-making itself.

Table 4. Monumental Development Projects in Engkuni-Pasek since 1950

Program	Year	Initiator / Sponsor / Donor	Note
Village Road Improvement	2001	Villagers	Done
Housing Improvement	2001	Villagers	Done
Additional Water Supply	2001	District Government	Done and still in operation
Aid Cow (*Sapi Bantuan*)		District Government-ADB	Done and still rolling on
Road Improvement between Engkuni and Mencimai-Eheng-Benung	2001	District Government	In Progress
Nurses Placement	2001	District Government	In Progress
Drinking Water Project	1997/1998	PT.KEM (Gold Mining)	Done and still in operation
Rice Subsidy	1997/1998	PT.KEM (Gold Mining)	Done
Hydroelectric power	1997/1998	GTZ-SFMP / Samarinda Polytechnics	Done though currently not functioning (destroyed by flood)
Agricultural Demonstration Plot	2001	RIO TINTO	Done and still functioning
Mice control	1980	GTZ-TAD	Done
Elementary School Building	1950	YP3R (Catholic Church Foundation	Done and still in operation - now it has become a public school (*SD Negeri*)

III. Existing Forest and Land Management

3.1. Forestland and Forest Resources

The size of the village area as well as its forest (*bengkar* / *lati*) area remains unclear. The village boundary has been mapped by SHK (*Sistem Hutan Kerakyatan*), a community-based forest management NGO in East Kalimantan. The map has not been signed up by either side in Engkuni-Pasek or Pepas-Eheng, because of the overlapping land claim. They have brought this issue to Sub-District level to ask assistance to resolve it. However, as mentioned earlier, there is still no satisfactory solution so far. The conflict arose after the small-scale logging concession (HPHH: *Hak Pemungutan Hasil Hutan*) was allowed by Bupati (the District Head) to operate in the area. Previously, there was no open conflict between the two villages. It means that the intensity of the conflict is mostly caused by either party vying for rights to timber extraction or the income generated through it, and not by the boundary line itself. Normally people do not care much about the boundary line. The traditional boundary lines are commonly not very exact either. People use roads to the *uma'* (rice fields), rivers, mountains, and big trees as general natural landmarks for boundaries. The sizes of the primary and secondary forest, agricultural sites and plantations are not clear either, as they have not been precisely mapped.

Concerning land area, in Engkuni-Pasek there are a

number of land-uses, besides dry farming fields (*uma'*), as listed below:

a. **Rattan Garden** (*Kebotn wé*): Most rattan gardens are inherited from ancestors and are located in the swamp areas or along the rivers. The biggest one is situated beside Berasatn River, along the Engkuni boundary with Temula village. The species commonly cultivated in the rattan gardens are *sega* (*wé soka*), *jahab* (*wé jahab*) and *pulut mérah* (*wé jepukng*).
b. **Fruit Gardens** (*Simpukng Munan*): Fruit gardens are mostly located close to the village (around the houses), and on the sites of old *uma'*. Besides fruit, the fruit gardens also function as "proof of land ownership" and as a means of forest rehabilitation on degraded land. Fruits commonly grown in the fruit gardens are *langsat* (*lisat*), *kapul* (*pasi*), *lai*, *durian* (*kalakng*), *rambutan*, wild jackfruit, *etc*.
c. **Honeybee Trees** (*Simpukng Tanyut*): Honeybee trees are mostly found growing in the primary forest (*lati*). Because of the forest fires in 1997/1998, the number of existing honeybee trees has decreased significantly. Species of honeybee trees include *banggeris* (*puti*), *meranti* (*lempukng*), *bengkirai* (*jengan*) and *kenari* (*jelmu'*). Although they mostly grow in the forest, the honeybee trees may also be found in fruit gardens or rattan gardens. As such, the *Simpukng Tanyut* may overlap with other land uses.
d. **Rattan Clusters** (*Simpukng wé*): Rattan clusters refer to one or a group of rattan clusters that grow naturally in the forest (forest rattan clusters). The species found growing naturally in the clusters are *pulut putih* (*wé pelas*), *semambu* (*wé tu*) and *manau* (*wé ngono*). The rattan clusters are mostly found along side the Idatn, Liwir, Lelutukng, Punai and Berasatn Rivers.

3.2. Existing Local Forest and Land Management

1) Bengkar / Lati

Bengkar / Lati is treated as communal forest. Every villager has free-access to the *bengkar / lati*. There are no restrictions placed on the harvesting of timber or non-timber forest products (NTFPs) in the area for subsistence purposes. However, the finder's right is still recognized. For instance, if somebody finds a big tree in the forest and puts a "sign" (*tana'*) on the tree, it means that nobody else is allowed to cut the tree without permission from the finder. Normally the *Bengkar / lati* area is used for hunting and fishing, NTFP Collection, and timber cutting.

a) Hunting and Fishing

There are many ways of hunting in Engkuni, either with or without hunting dogs. As the population of wild pigs and other game has declined significantly in recent years, hunting is only conducted intensively during the fruit seasons when game population sizes temporarily increase. Many game species normally come closer to the village looking for fruit, either in the nearby forests or in the fruit gardens. When using hunting dogs, the hunters usually carry spears (*belokokng*) and machetes (*éké'*). The second way of hunting makes use of a blowpipe (*potatn, soyar*) or shotgun. A shotgun is usually used at nighttime, using a flashlight to find the prey, while a blowpipe is used to kill smaller animals and birds, usually during the daytime. Sometimes the hunters also use poisonous materials, and traps (*poti, sentangok*). The species usually taken are wild pigs (*bawi*), deer (*telaus*), *rusa* (*tekayo*), porcupines (*titukng*), trenggiling (*angkih*), monkeys and some species of birds. The locations for hunting are in the primary forests, secondary forests, as well as in the fruit gardens. Lately the number of hunters in the village has decreased because hunting does not guarantee a good income.

Besides hunting, another way to fulfill the need for protein is by fishing. The tools for fishing are fishhooks (*periwih*), fishing-nets, traps (*bu'*), *jala*, *bentuas* and *pono*. The locations for fishing are in the surrounding rivers such as the Idatn, Lungau, Berokng, Berasatn, and Pangin. The fish species found in this area are *kelabau, baukng, engkokng, jelawat, susur batu', rungan, seluakng, juah* and *lempapm.* Recently, the fish population has decreased because of the increasing number of fishermen and the greater intensity of fishing. Besides household consumption, the fish are also sold. So far there is nobody in the village who has a fishpond for raising fish.

Regarding hunting and fishing, everyone in the village has the access to the forests and rivers for hunting and fishing. People who come from outside Engkuni-Pasek also have access for hunting and fishing in the Engkuni area. Permission is not necessary, so it is difficult for the Village Head or the Customary Head to monitor the activities directly. However, there are some general rules and regulations governing hunting and fishing in Engkuni-Pasek:

- Hunting is only permitted in certain designated areas.
- Hunting and fishing in a *belantik* or *poti* traps area is prohibited to avoid accidents.
- Someone who has set up a *belantik* should report to the Customary Headman and the Village Head the location of the *belantik*. The Village Head will then announce to all villagers the location of the *belantik* trap. A *belantik* owner has to put a sign at all access points to indicate that a *belantik* is set up in the area.
- Potassium, poisonous materials and electrical-shock methods are strictly prohibited for fishing.

Hunting and fishing are inherent aspects of forest management, because fish and wild animals are normally found in abundance in and around the forest areas. Therefore, maintaining the sustainability of fish and wild

animal stocks should be achieved through managing the sustainability of their habitats: the forest environment. So far, the above rules and regulations are practiced as they should be by the villagers. People also report that there no more *belantik* set up in Engkuni-Pasek, because the risk of injury is high for both people and hunting dogs. There is no indication either that poisonous materials are being used for fishing, especially by the Engkuni-Pasek villagers.

b) NTFP Collection

The NTFPs collected from Engkuni-Pasek forest areas are honey, wild rattans, and forest fruits and vegetables. Honey is harvested from the honey bee trees. These may be growing within a householder's *Simpukng Tanyut* or in the *bengkar / lati.* The honey from *Simpukng Tanyut* is principally private property, while that harvested in the *bengkar / lati* is common property. Whoever finds beehives on a tree in the *bengkar / lati* with no particular sign indicating a "finder's right" around the tree, may harvest the honey. All the Dayak ethnic groups, including the villagers in Engkuni-Pasek, observe the tradition of maintaining all honeybee trees as a sustainable resource. They never cut honeybee trees, even if the honeybee trees are found in forests which are otherwise being cleared for agricultural purposes.

Wild rattans are harvested from the *bengkar / lati* in areas known as *simpukng wé* which are considered common property. To sustain rattan growth, it is prohibited to cut the trees within the *simpukng wé*, as they provide a natural support upon which the rattans then grow. If the *simpukng we* is located close to someone's ladang (*uma'*), the ladang owner usually keeps and tends the rattan clusters contained in the *simpukng wé*, effectively as a private rattan garden (*kebotn wé*), even if the owner does not plant any additional rattans.

Wild fruits and vegetables found in *bengkar / lati* are free for anyone who finds them and wants to utilize them. There are no particular rules regulating their use and management. They can be harvested both for everyday consumption by individual households, or for sale. Wild rattan fruits, rattan shoots, *kulat* (mushrooms), *paku'* (ferns), forest banana hearts (*donokng*), and bamboo shoots (*basukng*) sell well at Barong Tongkok local market, particularly when home vegetables are limited in the market stock.

c) Timber Cutting

Before the HPHH was introduced in Kutai Barat District, there were no Village or Customary rules governing timber production in the Customary or Village Forest on a large-scale or commercial basis. Everybody was permitted to take a certain amount of timber from the forest freely without asking permission from the Village Head, for building materials or other personal purposes. Some villagers were also able to sell the timber they harvested from their own forests. As such, there were no restrictions imposed by the Village Head. Once the HPHH began logging operations in the village forest area, some villagers also illicitly cut timber within the concession without asking permission from the Village Head or Customary Headman.

To cope with this problem, the Village Head issued some rules related to forest extraction, though these rules were unwritten. In brief, the rules stipulated that everything related to forest extraction falls under the jurisdiction of the Village Head. However, as previously mentioned, the size and boundary of the Customary Forest are not clear yet, because there is no official map of the area. Boundary conflict with the neighboring village (Pepas-Eheng) is a continuing problem for Customary Forest management. In addition, a detailed concept of Customary or Communal Forest, as well as of Private Forest management, has not yet been elaborated in this village. As such, it is difficult for them to evaluate a system for forest regulation to be practiced in the future. So far, villagers only have a very general idea of managing the Customary Forest derived from tradition and previous practices.

Through their daily activities, local people normally perceive the primary forest as a communal forest. Nobody is able to claim a piece of primary forest as their own. Everyone has access to the primary forest to extract non-timber forest products and timber products in limited quantities. Once land is cleared and planted over by someone, the status of the land is no longer communal. It has become private land, and if it then regenerates to forest, it becomes a Private Forest.

Detailed rules and regulations for cutting and removing trees have not yet been developed either, and the Village Head is still recovering from the excessive timber extraction visited by the villagers in 2001 and early 2002, when timber prices were high, reaching IDR 280,000-300,000/m3 (US$ 28-30/m3). Some rattan clusters and medicinal plants for "*beliatn*" rituals and curing ceremonies were also destroyed. Villagers also had a bad experience with a logging company when the company suddenly stopped its operation in the area, leaving a huge number of logs in the Berasatn River.

In the year 2001, an HPHH, joint-operated with Mr.Silitonga as the capital owner, obtained an operational permit from Bupati and began commercial logging in the Engkuni-Pasek area. However, because the decision was made privately between the former Village Head (the late Mr.Lasan) and Mr.Silitonga without involving other villagers, it has resulted in claims and a series of conflicts concerning the fee.

A claim also came from the neighboring village, Pepas-Eheng, because some parts of the HPHH straddle the village boundary "conflict area". Areas lying along the disputed village boundary between Engkuni-Pasek and Pepas-Eheng (especially those lying within primary forest), have been claimed by Pepas-Eheng as belonging to that village. A local NGO, SHK (*Sistem Hutan Kemasyarakatan*) has tried to develop a village map for Engkuni. However, the map was not accepted by villag-

ers from Pepas-Eheng because of the overlapping of claimed land. The operation of the above-mentioned HPHH was then stopped because of the conflict, as well as because of non-transparent management in the village.

2) Dry Farming Fields (Uma')

The process of opening new *uma'* (rice fields) within areas of primary forest was established through a meeting involving all villagers. Through these discussions, the location of new *uma*' were decided, and these were distributed among groups of villagers; farmers' working groups were also formed. Presently, however, farmers have only developed rice fields within sites where *uma'* previously existed, because there is sufficient secondary forest as it is to support expansion of the *uma*'. So, meetings among villagers to discuss the location of new *uma'* are no longer conducted because every household has the authority to decide where to open their new *uma'*. The decision-makers in this case are commonly husbands and wives (the fathers and the mothers in the family). The consideration to open a new *uma'* is based on a fallow-period within the area. A longer fallow-period is preferred instead of a short one, as the land is then considered more fertile. A 5-10 year fallow period is considered sufficiently long prior to land clearance to make way for a new *uma'*.

With regard to land selection however, some traditional considerations are still used in this village, particularly relating to taboos (*jari'/nyahu'*). Some key taboos are: when a dead animal is found, a bird is tweeting noisily or beehives are found hanging from an unusual tree (*i.e.* not from a common honeybee tree) in the area, it is prohibited to open a new *ladang* (*uma'*) in that location for that year. Rules which follow the decision to establish a new *uma'* are: 1) the area be designated as a *ladang* (*uma'*), and not as a fruit garden; 2) the area must be sufficiently fertile and easy to clear, lacking dense thickets of undergrowth; 3) if a fruit tree or a honeybee tree is found, it must be properly kept and tended; 4) the area must be maintained with relatively easy to access in case of emergency.

As mentioned above, a cycle of land utilization is employed by the farmer to maintain the fertility of the land. This cycle of land use is based on how long such land has been left fallow or to regenerate into forest, as classified below:

- *Babar,* a 1-2 year fallow period.
- *Kelewako*, a 3 year fallow period.
- *Balikng bataknga*, a 4 year fallow period.
- *Urat ura'*, a 5 year fallow period.
- *Urat tuha'*, a 5-15 year fallow period.
- *Bengkar bengkalatn*, a 15 year fallow period or longer.

Although this classification is based largely on the perspective of the farmer concerned with opening up a new *uma'* in a given location, consideration is also given to indigenous knowledge of fertility indicators on certain types of land, for example:

- The presence of some plant species commonly containing water such as *isa'-isi'* (an undergrowth), caladium (*jara*), *lemperéh kajakng* (wild pandanus), wild banana.
- The presence of a black, sticky soil. This can be determined by digging a hole in the ground using a *parang* (machete). This kind of soil type is normally rich in organic litter and compost.
- The presence of big trees, such as species of *Shorea* and other members of the Dipterocarpaceae, is also an indicator that the land is fertile.

A preliminary survey needs to be conducted on the chosen land before it is opened for use as an *uma'*. The survey includes an investigation of land fertility and accessibility. The stages for making an *uma'* normally comprise the following: confirmation of boundaries together with neighbouring farmers (*ngérakng*); slashing/removing undergrowth (*nokap*); felling unwanted trees (*nowang*); chopping the branches and twigs of obstructive trees (*nutu*); drying the land (*oikng joa*); burning the undergrowth off (*nyuru*); preparation of the soil for planting (*mongkakng*); planting (*ngasak*), weeding (*ngejikut*) and harvesting (*ngotapm*).

3) Forest Fire Management

Control of forest fires forms an important part of local forest and land management. For a small-scale forest fire, the system of controlling the fire is by making a buffer strip, locally called *sekat bakar* (*ladakng*). These 10m wide strips of litter-free land (*sekat bakar*) are made voluntarily by the villagers. The work is led by the Village Head or the Customary Headman, or whoever has experience on forest fire control. Some traditional tools used to control a small forest fire are water sprayers (*senapan pocét*), *tolakng* as water tanks, wild banana trees (*jojot* or *séwét*) as beaters to beat the fire out, and gourd shells to carry water from the river. A motorized water pump (*alkon*) has also been used for forest fire prevention recently. All villagers, including men and women, must be involved in forest fire fighting. Men are in charge of heavy jobs and women of the light jobs, such as taking water from the closest river.

If someone is found to be responsible for starting a forest fire, the Village Head and the Customary Head will charge him/her. The fine could be in the form of property or cash. The value of the fine and the rules themselves are unwritten, so it seems to be flexible, depending on what is damaged in the fire. The value of a fine for a starting a fire that destroys a fruit garden will typically equal the value of the fruit garden. If it is difficult to determine who caused a forest fire, the Customary Headman performs a traditional ritual called "*Nepukng Tawar"* as a "reconciliation" ritual.

However, in the large-scale forest fires such as those that raged in 1997/1998, which devastated almost all the forest in the Engkuni-Pasek area, such fire control measures do not work effectively. It seems that the traditional modes of fire control are only effective for limited or

small-scale forest fires. The heat and the thick smoke of big fires act as major constraints to practice such strategies. The forest fires of 1997/1998 severely damaged secondary and primary forest areas in Engkuni-Pasek and surrounding areas. More than 50% of rattan gardens as well as forest rattans were burnt. Therefore, forest rehabilitation is one of the most important future measures to recover the forest area. Reforestation, based on indigenous knowledge and using domestic species, is expected by the farmers. However, the main problem for the villagers is the lack of funds to rehabilitate the burnt-over forests and rattan gardens. To address this problem, since 2000 the Forestry Service (under its Forest Rehabilitation Project) has begun providing money in the form of a DR (*Dana Reboisasi* or rehabilitation fund) up to a value of IDR 30 billion, to help regenerate certain critical lands in Kutai Barat. The people of Engkuni-Pasek have submitted proposals to this fund. However, as of February 2003, the Forestry Service had not approved the proposals, because of incomplete paperwork.

IV . Prospects for Community Participation

The forest and land management practices in Engkuni-Pasek show a sound basic foundation for a high degree of community participation in local forest management in the future. The main weak point seems to be in the management of the *bengkar / lati* as the communal forest, where a tendency towards the "tragedy of the commons" has been observed, caused in particular by the commercial timber cutting activities as described above. The availability of resources in the *bengkar / lati* is now limited both in terms of location and size, due to the severe impact of forest fires. Unfortunately, those areas of dense *bengkar / lati* which still contain ready supplies of natural resources are located in the contested boundary areas with Pepas-Eheng. This issue needs an urgent and wise settlement before any utilization and management activities can take place in these *bengkar / lati* areas.

As people are still dependent on hunting and fishing in the forest areas for their daily needs, those forest areas along the main rivers, particularly the Idaatn, Lungau, Berokng, Berasatn and Pangin Rivers, must now be managed on a communal basis as a matter of pressing concern. Other forest areas that are of high incentive as sites for communal management are those containing natural *simpukng wé,* as key localities for the growth of natural rattans, such as in the Idaatn, Liwir, Lelutukng, Punai and Berasatn River areas.

Aside from such sites for prospective communal forest management, it seems that private forests managed in combination with agroforestry systems could be beneficial in a local socio-cultural context. The local traditions of developing a *simpukng tanyut* around honeybee trees, keeping and tending natural *simpunkg wé* as a *kebotn wé*, as well as the common practice of planting mixtures of fruit trees in the *munan*, are all potential schemes for improved private forest management. The communal forest management system could be supported through the District Forest rehabilitation programs, while the private forest management systems could be supported through both the District Forest rehabilitation programs and the rubber plantation programs.

V. Conclusions and Suggestions

The PAR findings show that community participation in local forest management in Engkuni Pasek is still limited, though it is primed for further development. Seen from the perspective of the six criteria for participation in forest management (Wollenberg, 1988; Devung and Nanang, 2003), the conclusions are as follows:

1. The community has sufficient access to and control over the surrounding forest areas and forest resources, except in the contested area along the village boundary with Pepas-Eheng.
2. In principle, all community members have equal opportunity to gain benefits from the forest resources. However, timber cutting is still limited to only those being involved in logging activities.
3. The community can make its own public decisions independently, but in a number of cases the Village Head or the Customary Headman dominates the decision-making process.
4. Within the village, there is generally good cooperation among all related parties relating to the use and management of the forest and forest resources but some distrust and disintegration have also been observed in the case of the HPHH logging arrangements.
5. The existing problem-solving and conflict resolution mechanisms have been accepted by all sides at the village level, but these are not effective for settling external conflicts, such as the boundary issue with neighboring Pepas-Eheng.
6. There is considerable technical ability in the community to properly manage the forest, but it is still limited to its traditional and local uses, such as in the case of *Simpukng* and *Munan* or traditional Forest Fire Control. In other cases and in a wider context, the community still needs technical assistance from other parties.

For further development of community participation in local forest management, a number of actions need to be taken:

1. Settling the issue of the disputed village boundary with Pepas-Eheng, with an alternative compromise solution of joint use and manage of the forest in contested areas.
2. Developing detailed written rules and regulations on the use and management of the forest areas, with the first priority for the Communal Forest, assuring that all community members have equal opportunity to gain benefits from the forest resources, including timber extraction.
3. Arranging decision-making mechanisms at the village level, activating the roles of the BPK (*Badan Perwakilan Desa*) – The Village Representative

Council – as regulated in the Kutai Barat District Regulation, to ensure a more democratic decision-making process.

4. Fostering good cooperation amongst all related parties, relating to the use and management of the forest and forest resources, among village members as well as with outsiders.
5. Developing a problem-solving and conflict resolution mechanisms that can be accepted by all sides at the village level, as well as for settling external conflicts, such as the boundary conflict with Pepas-Eheng.
6. Enhancing the technical abilities of villagers to better manage the forest, focusing firstly on the efficient use of the existing resources, rehabilitation of the used resources and enrichment of the quantity as well as the diversity of the existing resources both for the Communal Forests and for individual Private Forests.

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Chapter 5.

Forest management and community participation in Muara Jawa'

Martinus Nanang

Muara Jawa' village is located beside the Mahakam River some 300 kilometers from the provincial city of Samarinda. It is accessible both by river and ground transportation. It is a large community with a population of 1562 (or 392 households). The majority of the population consists of the indigenous Dayaks of the Tonyoi sub-ethnic group (75%), the rest are indigenous Kutai, Buginese, Javanese, and Chinese. Most of the inhabitants are farmers practicing swidden cultivation. Although several logging companies have been operating in the village, few Tonyoi people have found a job with them. The PAR activities with the community involve only the Tonyoi people.

I. Village Territory and Micro Ecological Zones

a One of the processes available for gaining an understanding of village territory and microecological zone is called 'zone sketching'. We used sketching because we were technically incapable of making a precision map – a superior technique. Sketching involves very intensive discussion among members of a focus group. The discussion we conducted came up with the following conclusion: that there are a lot of degraded plots of land dispersed across the territory of the village. Although the exact size of these is unknown, it was believed that the total degraded area is very large. By 'degraded' the local people mean land which is dominantly occupied by imperata grass (*imperata cylindrica*). The main cause of the degradation is forest fire, particularly those of 1982 and 1997/8. A vast area of the degraded land is found near upland streams. This is a potential threat to the water resources.

b Intact or primary timber-producing forest is very limited. Part of the existing forest grows in a swampy area, which is common throughout the village's territory.

c A large part of the territory is marshland. The economic potential of marshlands is in timber production (mainly *meranti merah*), fishery, and agriculture.

d The areas of secondary and tertiary forest are comparatively very large and used mainly for swidden cultivation. Locals believe that the area is large enough for a sustainable cycle of swidden cultivation.

e Villagers refer to *tanah kas desa* (village land). The village land belongs to the village and is managed by the village government. However, so far, the land has not been well managed and produces nothing. Few rubber trees grow on it.

The identification of the micro ecological zones was followed up by a discussion on the issues/problems related to the zones and the way to deal with the problems. The discussion produced the following recommendations:

1) Further land degradation could be countered by taking the following measures: a) Afforestation and replanting of trees. The group admitted that the community alone is unable to realise the afforestation program (if any), because of the lack of funds, of the hard work involved, and the lack of workers. The work is dispersed, which is associated with the location of the degraded land. Financial support is instead expected from the government. b) It is also possible to develop plantation forestry crops, such as rubber, oil palm products, and traditional orchard fruits (*munan*). Here government support and HPH Bina desa (logging community development programs) are expected. c) Allowing the land to regrow naturally as forest. This means no more cutting and land clearance should be allowed in the area.
2) The scarcity of timber can be solved by: a) re-planting in the forest area; b) maintaining the existing trees by prohibiting new tree felling, avoiding and combating forest fires, and prohibiting clearing for swidden cultivation in the afforested area. c) Felling of trees should be followed by re-planting of new trees.
3) The vast marshland is considered both a source of potential and of problems. It is difficult to manage: it requires much capital, commitment of substantial labor force, and is technology - intensive. Marshlands are also prone to flooding. The local people are convinced that these problems could be solved through: a) inviting local trans-migration of workers to convert the marshland to agricultural purposes; b) preventing and stopping illegal logging; c) prohibiting swidden cultivation and any other form of land clearance

upstream; d) clearing the rivers from materials leading to flooding; and 5) planting sago palm (*rumbia*). The sago palm is useful for both food and roofing. The marshland areas close to villages proper are mostly privately owned by individuals. Only the distant areas in the vicinity of a village are common property.

4) The group also gave an idea of how to make village land more productive. This can be done in two ways: a) the village government may entrust the land to community members on the basis of a "benefit sharing" principle. Some farmers' cooperatives may easily be able to do that; b) alternatively, by way of the system of "*gotong royong*" (collaboration; working together) among community members. The product will again be used for the benefit of the whole community.

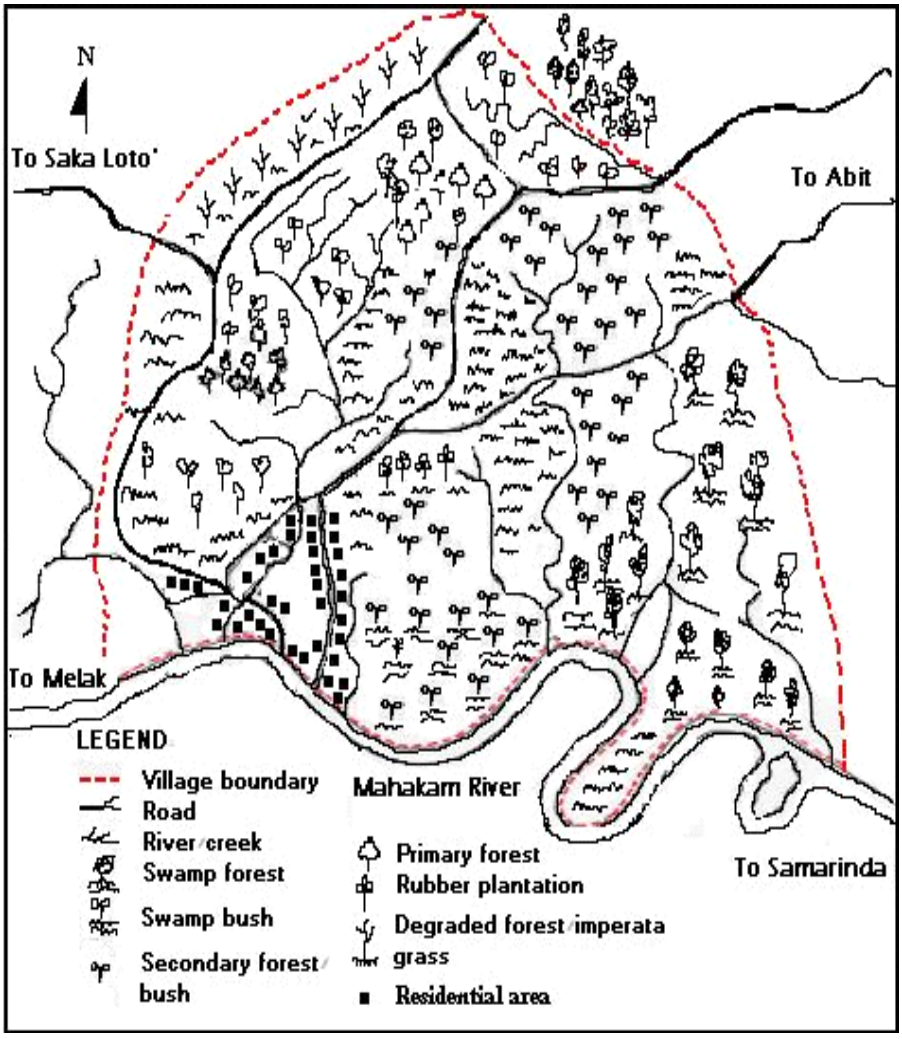


Figure 1. Micro-ecological and resource sketch map of Muara Jawa'.'

II. History

2.1 Local Rural History and History of Forest Use

The history of Muara Jawa' can be divided into four periods: Dutch colonialization, Japanese occupation, Independence to New Order, and Reform Order. The original story returns to the end of the 19th century when the village was under Dutch administration and the administration of the Kutai Kartanegara Kingdom as well. The village was established in 1905 after several families moved several times from Abit to Lu' Kepau to Lu' Pulut and finally to Jawa'[1]. The move to Muara Jawa' was under the instruction of the Dutch who did not like the isolated location of Lu' Pulut. In 1941 the Dutch opened

[1] *Lu'* (*lou* in Benua' dialect) means 'long house'. In the past, people of a community lived together in a long house. So the word lu' can mean community or village. When the Tonyoi people say *Muli' ja lu'* or the Benua' people *Uli la lou* (literally "return to the long house") they may mean to go home, go back to the community, or go back to the village.

a three-year elementary school. The school was open to the whole community, regardless of their social status.

Under the Dutch the community enjoyed an extent of autonomy under what is called *pemerintahan swapraja* (autonomous governance). This autonomy was recognized as well by the Kingdom of Kutai Kartanegara. Customary leaders were given aristocratic titles by the king (sultan) such as *Arsa, Setia, Demang, Mangku, and Singa*. The village head was called "*Petinggi*" (*Petingi* in the local dialect).

The community had its worst experience under the Japanese occupation (1942-1945). The traditional government system was dissolved, all aristocratic titles were disallowed and only the village head was still called *Petinggi*. Local economic life was seriously affected: there was no kerosene and salt, cloth was scarce and available by quota, and the cash that was available was not matched by the presence of goods to buy. The Japanese seized most (if not all) agricultural produce, which mainly consisted of rice.

After Independence (1945), the situation changed once again. Indonesia was exercising its right to self-determination. The emphasis of development was on economic expansion in which the export of logs quickly became an important source of revenue. The Forestry Act of 1967 was promulgated in this spirit of economic development. Non-mechanical logging called *banjir kap* practiced by many local people in the late 1960s was halted and logging concessions were given to big companies. In 1971 the logging company PT. Jayanti Jaya entered the area of Muara Jawa' and logged timber from the village territory. In the following year (1972), PT. Marimun Timber Industry came in. Several local people worked as laborers. PT. Jatitrin started operations in 1975. What contribution have the companies made to the community?

They have broken the isolation among villages by constructing roads connecting them. However, that road was not intended for the local people but for transporting logs. It is simply an unintended consequence that the roads are beneficial to the communities around.

In 1979 a single system of village government began to be formally applied all over Indonesia, ignoring and overturning existing traditional government system. This was based on the Village Government Act (VGA) enacted that year. The new system came into effect in 1981 in Muara Jawa'. Under the system, the village head is referred to as *Kepala Desa* and the customary leader is separated from the formal structure of village government. Thus, the customary leader is not a village official (see the section on village government).

The New Order government gave little attention to education. Although an elementary school had been established long before, a junior high school was only started in 1982 as a private school initiated by the community. The unfortunate school has had to wait for 18 years to get full support from the government until a public school was inaugurated in July 2001. A publicly organised health service only entered the community in 1993.

The village has experienced two extreme environmental disasters and numerous small ones. The severe drought of 1982 created the conditions for devastating forest fires. Fires destroyed a large portion of the village area. Drought caused harvest failure. People started to convert marshland for agriculture. The year following the fires (1983), logging companies allowed people to open up the burnt concession forest to agriculture. Planting rice in these spots resulted in abundant harvest. Learning that many people in other villages have survived the drought because they had had rubber gardens, some families started to grow rubber. The second forest fires flared in 1997/8. The impact was worse than that of the fire of 1982. This time the harvest failed totally and people lost most of their orchards (*munaan*) and rubber gardens (*simpukng*), and lots of resin in the forest. Many spring wells dried up and people walked for 2-3 kilometers to take a bath or fetch water. After the two fires, floods have become commonplace and crystal clear rivers turn milky during the rainy season. The locals feel they have reason to worry about water resources in the future.

The 32-year long New Order Regime under President Soeharto ended in 1998 following an economic crisis. After Abdurrahman Wahid took the presidential office in 1999, the political atmosphere dramatically changed. "There is more freedom now," said a community member. Many communities got the courage to demand their rights and Muara Jawa' is no exception. In 2000, a protest demonstration was organized to demand the halt of timber companies' operations in the village area if they continue not to pay compensation to the community. The protest stopped after the company paid ten million Rupiahs (IDR) as "dust compensation." Since then the company pays a monthly fee to the village.

2.2. Forest and Ecological Trends

The village's history shows that two ecological disasters have to some extent changed the local people's attitude and strategies in coping with uncertainty. Strikingly, since the forest has been largely destroyed by the fires, people's reliance on the forest has been minimized. Instead, they have tried to develop new strategies, such as growing rubber and opening up wetland agriculture by converting the marshland. This section analyzes the trends in forest cover and factors related to them, that is, population, change in the areas opened up for swidden cultivation, increase in degraded land, and rice production. The trend analysis does not use exact measurement of numbers (since technically it is impossible for the team to do so at the moment). What is important is the people's view of what has happened around them.

Figure 3 indicates that the size of the primary forest has sharply decreased within the last 40 years. It was assumed in the analysis that in 1960 most of the area was covered by primary forest (20,000 ha / 89%). Within a

decade, the size of primary forest was reduced to 67% in 1970 and 44% in 1980. The deforestation within the 20 year period was mainly caused by the exploitation of primary forest for agriculture. A sharp drop began in the 1980s when a long drought and a big forest fire raged in the area in 1982. In 1990 the primary forest cover was equivalent to 27% of the 1960 figure. The forest fire of 1997/8 exacerbated the situation. After that fire, the size of primary forest is estimated at only 4.4% of the 1960 figure.

The population size has steadily increased. In 1960 the population was about 100 people. After the advent of logging companies in 1971, the population drastically increased. Many people from outside have moved to the village as laborers for the companies. In most cases they have taken the decision to reside in the village for a long time. The significant population increase contributes to the increased demand for land for settlement and agriculture.

Box 1. Timeline of Muara Jawa' village

Date unknown	Several families moved from Abit to several places including Pulut. Establishment of Lu' Pulut.
1890 (?)	Chicken pox epidemics. People of Lu' Pulut dispersed to several places (Sungai Jabung, Okos Plain, and Kepau). Establishment of Lu' Kepau.
1897 (?)	The Dutch said that Lu' Kepau was too isolated. Need to move to a less isolated place. People moved back to Lu' Pulut.
1905	Cholera epidemics in Lu' Pulut. People moved to Jawa' and constructed Lu' Jawa', later called Muara Jawa'.
1941	Establishment of a 3-year elementary school by the Dutch in Muara Jawa'.
1942	Beginning of Japanese occupation of Indonesia. Their rule reached this remote area as well. The "swapraja" government system and aristocratic titles (*Arsa, Setia, Demang, Mangku, Singa*) given to customary leaders were abolished. The village head was still called "Petinggi." Life became harder. Japanese troops looted harvested rice from the people. The local people had to hide it in the jungle. Kerosene and salt were not available and cloth was scarce. People had money, but nothing to buy.
1945	Japanese occupation terminated. The situation got better.
1966	The advent of a Catholic mission. Four families were baptized.
1971	PT. Jayanti Jaya, a logging company, entered the territory of Muara Jawa', cut timber, and constructed a 9 kilometer long road..
1972	The advent of another logging company: PT. Marimun Timber Industry (MTI). Some villagers started work as laborers.
1975	PT. Jatitrin, also a logging company, entered the village and constructed a road connecting Muara Jawa' and Loto' village; constructed village road phase I in the northern part of the village.
1979	Enactment of the Village Government Act. New system of village government started to take effect.
1981	PT. Jatitrin built a village road phase II in the south and a soccer ground.
1982	Drought and forest fires. People failed to harvest from dry farmland. They started to convert marshland into agricultural land. The scale of forest fires was less devastating compared with the 1997/98 fire [see above]. Within this year a locally-supported private junior high school (SMP Arsa Nyaran) was established. Classes took place at the elementary school building. Construction of the school building started in 1983 and was completed in 1987.
1983	Many households (particularly from Dusun Tonoh) cultivated rice at the burnt forest as the logging company allowed it. Rice harvest was abundant.
1986	Some households started to develop small-scale rubber plantations.
1993/4	Opening of a Supporting Community Health Center with the support of the Kutai District Health Service. PT. MTI contributed health care facilities to the Posyandu (village integrated infant health care service).

Box 1. Continued

1997/8	Drought and devastating forest fires. The impact was harvest failure, loss of most of the orchards, loss of resin from the forest, and drying up of spring wells in Tonoh. People had to walk as far as 3 kilometers away to fetch water.
1998	The fall of the Soeharto regime, the New Order. The winds of freedom started to blow.
1999	Aburrahman Wahid, a moderate Islamic cleric, became president. The local people could enjoy more freedom and had the courage to protest against the logging company.
2000	The people held a protest demonstration against the logging companies by blocking the logging road passing the village. They demanded that the company should pay what they call "dust money," as an eco-compensation, because whenever a logging lorry passed by the village it brought in its trail a lot of dust. The blockade was halted after the company agreed to pay IDR 10 million per shipping of logs. In this year the company also gave two diesel generators to Tonoh and to a neighborhood association (Rukun Tetangga IV).
2001	Opening of a new public junior high school (SLTPN 03) on July 3rd, construction of a new building for a supporting Community Health Center. The old building was abandoned because of frequent flooding. PT. BIL and PT. MTI contributed four electric diesel generators

The area cleared for agriculture also increased significantly. Between 1960 and 1970 clearing of forest for swidden cultivation was rampant. This was probably because there was no sense of a land crisis; forest was abundant then. Clearance of forest kept increasing until the year 2000. But the local people accepted that this included clearance of secondary (even tertiary forest) as well. The clearance of primary forest may continue but its proportion gets smaller and smaller year by year.

Another factor analyzed is the change in the size of degraded land. By degraded local people mean land dominated by imperata grass, in which other plants hardly grow and the land is difficult to convert for agricultural purposes. Even though we have noticed a steady increase of degraded land since 40 years ago, a drastic increase can be noticed over the last 20 years, particularly after the 1982 and the 1997/8 fires. In this situation agricultural productivity has also decreased. Rice production per hectare was estimated at 100 cans (1100 kilograms) during the first two decades (1960-80) of the period, but almost unbelievably dropped to only 25 cans in 1982, 50 cans in 1990, 25 cans in 1998 and only returned to normal in 2000.

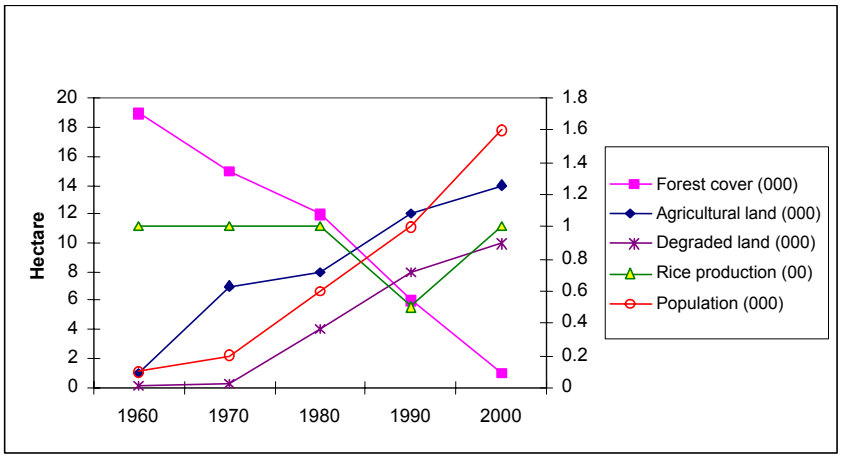


Figure 2. Trends in forest cover, agricultural land, degraded land, rice production, and population of Muara Jawa'.

These trends show that agricultural products and the forest land crisis are associated with population increases and frequent disasters.

2.3. Vision on the Condition of the Forest

In order to understand the people's perception of the condition of the forest in the past, present and future, we asked them to draw a picture comparing the condition of the forest and the numbers of the human population. In 1960 the forest was abundant with a small number of human inhabitants. In 1980, there still was a lot of forest but in 20 years (by 2000), the forest has been severely

degraded. Based on the experience over the past 20 years, particularly the recurrent droughts, they perceived that the situation within the next 10 years from the time of the focus group discussions (by 2011) would worsen.

The following picture was re-drawn by Martinus Nanang based on five pictures drawn by members of the community during a focus group held in August 2001. In the figure, the situation of 1980 is excluded.

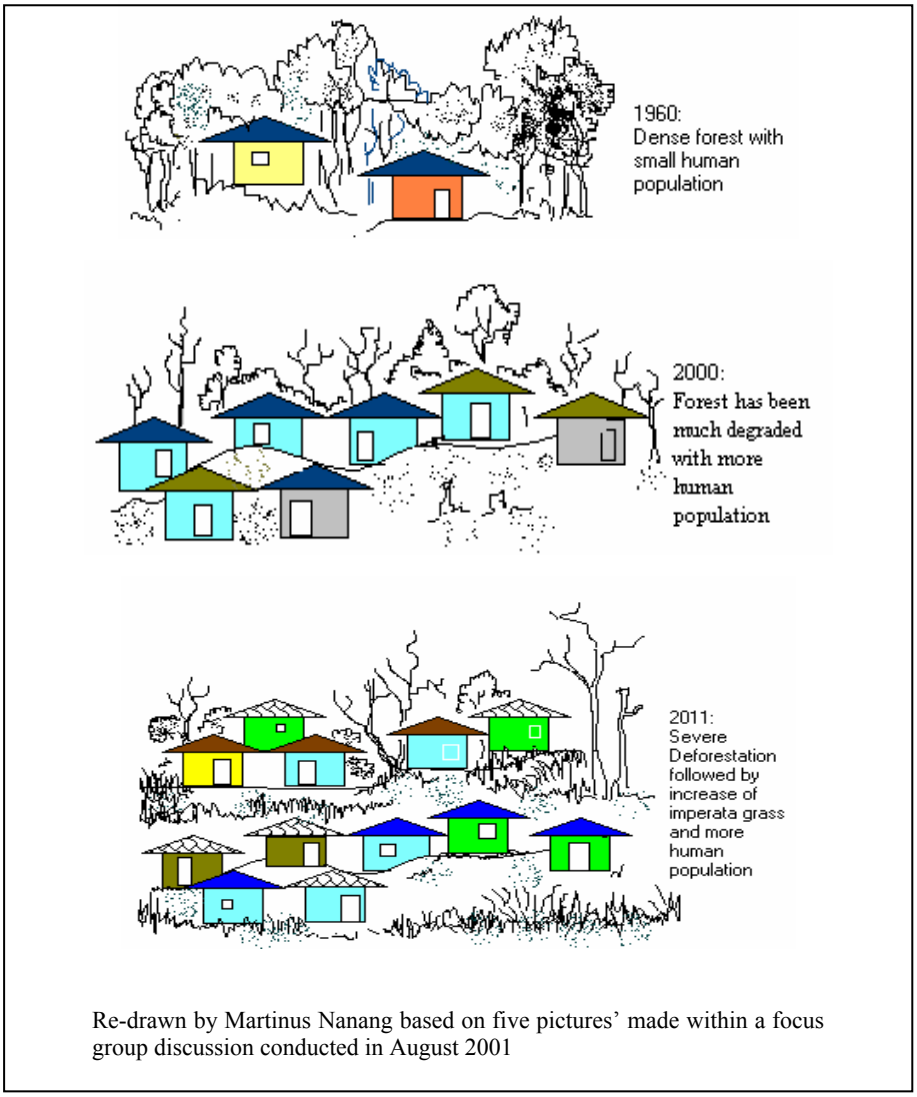
III. Views on the Forest

3.1. Ethnic Definition of Forest

The Tonyoi people recognize the forest in two ways, each of which is assigned different names. In terms of the age of vegetation they have *talutn* or forest in general. Primary or intact forest is called *hémba*, old secondary forest (>20 years old) is named *talutn batakng*, and young secondary forest is called *talutn urat*. In terms of the dominant vegetation, there is *munan* (orchard), which is a kind of agroforest dominated by various kinds of fruit trees and *simpukng* or an area dominated by a single dominant type of vegetation such as rattan and honey bee-breeding trees (*tanyut*).

3.2. Individual Definition of Forest

Our exploration of individual definitions of the forest came up with some very interesting views. We asked each person in a group of 13 to answer the following question: "What do you have in mind when you hear the word "forest"? Individual answers were displayed on the wall and discussed within the group.



Re-drawn by Martinus Nanang based on five pictures' made within a focus group discussion conducted in August 2001

Figure 3. Illustration showing people's vision of forest conditions in Muara Jawa'.'

It emerged that basically by "forest" the local people think of big trees mixed with smaller vegetation and a variety of animals. This is the ideal forest. This idea fits with the ethnic term *hémba* (primary or intact forest) mentioned above. When it comes to reality, the local people expressed their concern about the serious degree of destruction of their forest. The existence of the forest is important to animals and human beings, but it has been destroyed by illegal logging and swidden cultivation. Here the people seemed to blame themselves.

The forest is also viewed as inhabited by spirits. These spirits are considered malicious. Destroying the forest in which the spirits reside may end up in illness, even death. Therefore, particularly in the past, people have had to make offerings to appease the spirit before doing anything in the forest, including clearing for farming. Although this view still exists, it seems to have less impact on people's behavior.

3.3. Importance of Forests

1) Collection and Utilization of Forest Products

In *Muara Jawa'* identification of forest products' gathering was made by a group of men and women together. The result of this discussion is presented in Table 1. The table shows varieties of forest products, timber and non-timber, in several categories. It is important to note that only timber is an exclusive product of primary forests. Other products are either of fallowed forests alone or of fallowed and primary forests together.

Timber, rattan, honey, game, and resin have become scarce. Other products are still abundant. Unfortunately most of the scarce products are highly valued by the local people. They are also invariably collected as far as they are available.

According to the local people's accounts, only timber, rattan, sago palm (*Cycas revoluta*), rubber, honey, and fruits are in high demand at the market. Other products have limited market value or none at all. This means that most of the products are collected for domestic (household) use or consumption. Thus, the importance of these products is not primarily for cash income, but in domestic use.

Table 1. Ranking of the potential of forest products, the degree to which they are collected, and their importance as perceived by the people of Muara Jawa'

1=lowest; 10=highest

Forest products	Collected	Used	Sold	Importance for household's economy
Timber	4	3	7	10
Rattan	3	2	8	10
Resin	5	1	9	2
Honey	1	1	9	4
Medicinal plants	5	5	1	6
Sugar palm	10	10	7	10
Game (incl. birds)	5	5	7	4
Latex (rubber)	5	5	9	2
Bamboo	10	10	3	10
Sago palm	10	10	5	10
Fruits	5	5	7	10
Vegetables	10	8	2	10
Spices	8	10	4	5

2) Forest Values as Perceived by Men and Women Separately

The process of examining people's views on forest function in *Muara Jawa'* was performed with a group of men and women together and then with men and women separately. This section presents the result of the separate processes. The technique of pair-wise ranking was applied. With this technique group members were asked to identify forest functions and assign a number to each function. The function and numbers were put both on the vertical and horizontal axes and then compared with each other. The frequency of appearance of the number indicates the value of the respective function.

The exploration indicates that people are aware of the basic functions of the forest. These functions are not mutually exclusive. Therefore, individual functions listed in the tables below are simply showing the main tendency. Most of the functions (livelihood, preventing erosion and flooding, protecting water resources, providing construction material, fuel-wood, medicine, food supply and protection from heat) derive from the people's own experience of interaction with the forest. Regulating the

climate, absorbing air pollution, recreation and protecting the flora and fauna have little to do with direct experience, but are more a learned knowledge.

Although there are differences between men's and women's views, it is obvious that they agree on the economic importance of the forest (livelihood, food supply, fuel-wood, construction material). These functions get high scores in their judgment, even though the ranks assigned are different. Actually the main livelihood is still swidden cultivation. However, it is common for the indigenous population of Borneo to have diversified in their sources of income. The forest provides such income source diversity. During a food crisis, the forest offers buffer income to the local people through the opportunity for collection of wood, rattan, fruits and wild vegetables.

Both men and women also agree on the importance of the forest as a source of materials for traditional medicine. Ecological functions (preventing erosion, preventing flood, regulating climate, protecting water resources, absorbing air pollution, protecting the flora and fauna) also get similar importance in their views, but less so compared with economic functions. Annual flooding and the wide range of degraded land are a direct experience that may have shaped their view of the importance of preventing flood and erosion. The heat of the sun leads them to appreciate the importance of trees for shelter.

The forest is less important seen from religious and recreational points of view. Traditional religious rituals (rites of passage, curing rituals) use a lot of forest materials as paraphernalia. However, such rituals are today rarely performed as people have turned to modern medicine and herbal medicine. Moreover, such rituals are considered taboo by people who have converted to Christianity and Islam. The recreational function of forests is considered very much less important. For local people there is almost no desire to visit the forest simply for refreshment and relaxation.

Table 2. Summary of the pair-wise ranking of forest values in Muara Jawa'

I: low; 10: highest

Men			Women		
Point	**Rank**	**Forest function**	**Point**	**Rank**	**Forest Function**
14	I	Livelihood	12	I	Food supply
12	II	Fuel-wood	11	II	Source of traditional medicine; fuel-wood
11	III	Preventing floods; preventing soil erosion	10	III	Livelihood; protecting water resource; protection from heat
10	IV	Source of traditional medicine	9	IV	Preventing flood; construction material
9	V	Construction materials; absorbing air pollution	7	V	Protecting flora and fauna
8	VI	Protection from heat	6	VI	Preventing soil erosion
7	VII	Regulating climate/temperature	4	VII	Absorbing air pollution
6	VIII	Protecting water resource	2	VIII	Regulating climate/temperature; materials for traditional ritual
5	IX	Protecting flora and fauna	0	IX	Recreation
3	X	Materials for traditional ritual			
1	XI	Recreation			

3) Scope and Significance of Forest Functions

We analyzed the extent or range of the perceived forest functions - that is, we tried to find out whether the forest's perceived values are of only local relevance, or whether they are significant at a national or global level. The results of the investigation are presented in Table 3.

We limited our investigation to the function of local forests, i.e., forests in Muara Jawa', and asked the local people if the forest makes a useful contribution to the needs of people at increasingly broader levels: other regions, nations, and globally. The results of the group interview show that very few functions were attributed to the non-village level. Only those functions relating to sustenance of livelihoods and the provision of construction materials were considered important at the global level.

The importance of the forest in Muara Jawa' is generally realized only at the village level, and only by the villagers themselves. It is interesting that local people perceive the global community as obtaining more benefit from the forest than they do. This statement seems to be contradicting with the above statement. It is so because timber flows for years to the international market. Local people scored 3 points in terms of the value of the forest for livelihoods, but the global community scored 8; local people got score of 6 for construction material, but the global community scored of 10. The reason seems to be that over the last 30 years local people have witnessed the steady removal of timber from their area to the outside world. They know that the timber flow has created

big business opportunities for the outside world.

At the ideological level, it is clear that the forest is really important at a wider level, and important but only to a limited degree for the locals. Therefore, it can be assumed that there is a strong ideological basis which links people to the forest. This does not necessarily provide a strong basis for action, because action may depend on the real situation in both the economic and political spheres.

Table 3. Level of significance of forest functions as perceived by people of Muara Jawa'

1: lowest; 10: highest

Forest Functions	Village level	Regional level	National level	Global level
1. Preventing erosion	10			
2. Livelihood*	3	5	5	8
3. Protecting flora and fauna	5			
4. Regulating climate/air temperature	10			
5. Preventing floods	10			
6. Protecting water sources	10			
7. Absorbing air pollution	10	3		
8. Recreation	3			
9. Source of materials for traditional rituals/ceremonies	10	1		
10. Fuel wood	10	1		
11. Construction materials*	6	7	9	10
12. Medicines	3	2		
13. Food supply	5	7		
14. Shelter/protection from heat	5			

* Real production was taken as an indicator.

IV. Forest Management

4.1. Customs and Practices

As the local people have traditionally lived near the forest, most of their livelihood-related activities involve the forest. However, it is difficult to differentiate between activities which help manage resources and those which do not. To have a clear basis for a distinction, this study used the following definition: forest management is any effort or activity directed at maintaining or enhancing the quality of the forest. Another basis for this kind of analysis is the notion of rights over land and forest. It is better to start with the latter.

1) Primary Forest: a Common-pool Resource

The idea of drawing clear-cut village boundaries is new for many indigenous communities of Borneo. In the past, villages had no clear-cut boundaries[2]. However, there was an "ethnic boundary" or "community boundary," which prevented people of different ethnic groups from "illegally" encroaching into an area traditionally controlled by a certain other ethnic group. Such ethnic boundary sometimes existed among different sub-groups of the same ethnic group.

Primary forest is usually common property. Clearing the forest for any purpose (usually agriculture) and extracting any products from it is open to anybody without restriction. This posed no problem at all when the primary forest was abundant and the human population was low. However, a consequence of this system is that those who are more aggressive and more diligent, or those who work harder will benefit more from the forest. It was insisted in the past there was no excessive exploitation for individual benefit or for collective purposes. Recently, in Muara Jawa', however, the primary forest has nearly vanished and the number of people has increased rapidly. Under such conditions, the old system of the commons must be changed and new regulations introduced.

2) The Right of Claim

Private or individual claims over trees or products in the primary forest are possible, although the forest is considered common property. This is based on the principle that whoever finds a product or item first, has the right to utilize it - a form of finder's right. To claim a tree the finder should put a marking on the tree or clear a small area around the tree. This clearing is called *érakng.* An excessive claim over trees or a claim over a vast area of primary forest is prohibited. In the past, such a claim would not have been necessary in any case. Individuals are permitted to claim only a few trees or a small plot of forest land. Claims usually fixed to trees suitable for

[2] This is one of the reasons why several boundary disputes have occurred recently – historically, there have not been any clear boundaries separating the land from neighboring villages.

cleaning for house material and honey bees. Such a claim can be inherited by the next generation. Given the remaining size of primary forest in Muara Jawa' and the degree of competition over forest products, this kind of claim is today nearly impossible.

3) Hunting and Fishing

Local customs involve no prohibition on the kind of animal that can be caught. Any animals, including birds and fish, can be hunted. However, there are restrictions on the use of technology to catch the animal.

Catching fish by *tuba* (a local naturally-derived stupefying drug) must be done in agreement with the whole community and with other neighboring communities, particularly those who live along the river. The necessity for such consensus has the following grounds: 1) all communities will be affected by the poisonous *tuba*; 2) there is a widespread belief that *tuba* causes fruit trees to fail to bear fruit; and 3) that fish captured using *tuba* must be used up.

Many believe that catching fish by electrocution should be prohibited. But several people continue to catch fish in such a way.

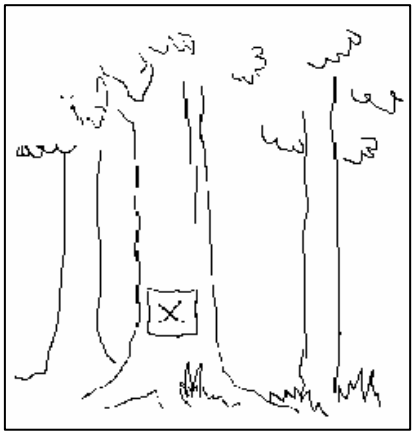


Figure 4. Recognized sign of a tree claim: only the marked tree is claimed

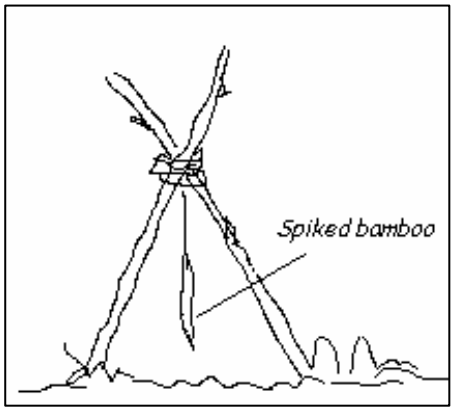


Figure 5. Recognized warning sign marking an animal *huit* trap in the forest

Catching game by *huit* is nowadays prohibited. *Huit* is a bamboo spiked booby trap used to kill large animals such as deer and wild boar. In the past, this method of trapping animals was allowed on the condition that the trap is set up far from human reach and that access points to the area where it is located are marked with a recognized sign. Nowadays it is nearly impossible to put such a dangerous trap out of the reach of human beings. Hunting by any other tools is allowed.

4) Swidden Cultivation

Common sense says that swidden cultivation is a part of the traditional forest management system. The process allows sufficient time for natural reforestation during its cycle. To some extent the view that regards swidden cultivation as traditional is correct. However, the essence of

the practice is not one of forest management, but rather of soil and land management. The swidden cycle is intended to reclaim soil fertility, reduce weeds, but not to allow forest rehabilitation. Forest growth as an unintended consequence. Therefore the swidden cycle is not a reliable way of managing the forest, particularly in the present day when the cycle has become shorter and shorter.

There are several customs relating to swidden agriculture. Everyone is free to clear a piece of primary forest and any other location over which there is no prior claim of control or ownership by other people. People are free to clear areas along a river basin insofar as this does not badly affect the quality of the river. An enclave for a *simpukng* and *munan* should be made when farmland located around the area is being cleared by burning. In order to avoid the fire spreading to other farmland or forest, people have to make a *ladakng* (fire barrier) around the farmland that will be burned. To secure ownership over a piece of farmland, even if it were to be overgrown by forest in the future, people plant fruit trees (perennial plants) in their plots, even though they may do so over only a small part of the plot.

In an interview the team was informed that in selecting the location for swidden cultivation, the locals usually consider the following criteria: a) Land fertility and density of weeds. This can be gauged from the age of the dominant vegetation. Locals prefer to clear old fallowed forest because the soil has become more fertile and the number of weeds has declined. b) Distance to the main road. Nowadays people prefer to have rice fields close to the main road, by way of which they can transport their produce, e.g. by motorcycle. The distance to the river is not as important compared to the distance to the nearest road.

These peculiarities may influence the forest in the following ways: a) As long as the majority of the people practice swidden cultivation, the threat to primary forest and to old fallowed forest will continue and hence conservation of the forest becomes difficult. 2) However, the concentration of swidden cultivation in areas next to the main roads may lead to the development of new land use patterns. The village may need to make a conscious decision on how land use patterns develop.

4.2. New Approach: Ideas and Problems

1) The Necessity for a New Approach

The focus group on forest management, after reviewing all practices and customs relating to them, concluded that:

a. Customary practices on matters relating to management and utilization of primary forest are very loose. They are hardly useful in protecting the whole forest, and effective only to protect small individual claims over trees and certain products.
b. Customary rules, which are not related to private/individual/household interests in general, are loose.

   Customary rules on matters endangering human life seem to be strict enough.

   In brief, people cannot rely solely on customary laws in their effort to sustain nature and the forest. In reality, the community has been helpless in dealing with the problem of deforestation and forest degradation.

What kind of forest management is practiced by the community? It is difficult to say that there is a clear and systematic approach to forest management. What we see is primarily a matter of utilization, not to say exploitation, of the forest. From our discussion we came up with the following aspirations:

a. People realize that current customary regulations are insufficient for an improved approach to forest management. They see a need to develop new rules, probably in the form of "village guidelines."
b. People seemed aware of the importance of forests, though not primarily for their livelihood, but for their lives as a whole.

2) Muara Jawa's Forest Stakeholders

We identified five categories of stakeholders with an interest in the forest of Muara Jawa'. These are the people of Muara Jawa', the neighboring communities, the logging companies, the government, and the university/research institutes. The most important stakeholders are the people of Muara Jawa' themselves. They need logs for the six sawmill plants operating in the village (three of these are owned by local community members), building materials, firewood, sago palm products, sugar palm products, hunting grounds; for fishing, farming, medicinal plants, and ritual materials. Often neighboring community members also take the products of Muara Jawa's forest such as sugar palm and also benefit from the clearance of forest for farmland. The interest of logging companies is in the timber produced therein. The government's interest is not so obvious to the people. They suspect that the main interest of the government is rent-seeking in essence, that is, to extract taxes from the logging companies and other forest-related activities. If there is an ecological concern, it might be simply due to the government's fear of international pressure. Universities and researchers such as IGES have an interest in facilitating the people to understand their situation more comprehensively.

The people of Muara Jawa' bear the highest responsibility to sustain their forest, followed by the government, logging companies, neighboring communities, and universities/research institutes. With regard to action, there is no success story to serve as a paragon.

3) Problems in Managing the Forest

Realizing that current management is not strong enough to save the forest, the members of the focus group began to develop new ideas. Even though a con-

crete strategy did not emerge, the participants were confronted with the list of problems and asked to rank ten using the pair-wise ranking technique. Table 3 displays the problems and the ranks accordingly. The problems were land tenure, the weakness of customary laws and institutions, unclear governmental regulation, lack of labor, lack of funds, lack of cooperation among villagers, insufficient organization, insufficient markets, and low availability of technology.

The insufficiency of customary law and institutions has been outlined above. As is always the case, customary law is subordinate to national law and not well recognized by the national legal system. The weak position of customary laws implicates the problem of land tenure, because the land ownership of the local people is based on the customary law. The land is prone to appropriation by more powerful parties such as plantation companies with support from the government. Funds are another problem although the people have not tried to calculate what is the appropriate budget for a forest management project. This is understandable as the immediate concern of the local people is sustenance. With insufficient savings or none at all, it is hard for them to undertake extra work such as forest management, especially if such management includes replanting. This implies that any forest management activities or programs should provide tangible economic benefits. Labor becomes problematic because most of the time the locals work for rather quick results.

The absence or low quality of markets is another problem if they are to grow non-forestry plants such as fruits. Fruits do not have a constant/stable market, although they can be sold occasionally and in small volume. The technological issue raised reflects the people's thought that any reforestation requires rather sophisticated technology and machinery. In fact this is not the case. Here more discussion on the subject is needed. The problem of cooperation is evident, for two reasons: 1) the community has grown to be big and therefore individual and more personal contact is rather rare. The community has developed into a rather organic and diversified entity. 2) The tradition of agricultural cooperation has gradually been eroded because many people have become more concerned about making money. Our analysis on the organizational structure and relationships indicates that there is no organization seriously dealing with forestry issues and environmental issues in general.

Table 4. Muara Jawa' forest stakeholders and their responsibility as seen by the people of Muara Jawa' (*emic* perspective).

I: Highest; V: Lowest

Stakeholder	Interest	Level of responsibility	Action taken to save and manage forest
1. People of Muara Jawa'.'	Construction materials, firewood, sago palm and sugar palm products, traditional ritual materials, natural medicine, hunting and fishing, farming	I	Developed orchard (*munan*), grew rubber, candle nut, *petai*, durian (*Durio zibetinus*), *sukun*, *sungkai*. The last five items have been unsuccessful.
2. Neighboring Villages	They extract products and opportunities from Muara Jawa' forest (sugar palm, farming, gardening), and hunting.	IV	-
3. Government	Economic interest: tax; political and ecological: fear of criticism from the outside world.	II	-
4. Logging companies	Timber	III	Reforestation project by planting *sungkai*, *Accasia mangium*, and *sengon* along the logging road (30 kilometers) about 100 meters to the left and right of the road.
5. Universities and researchers (including IGES researchers)	Helping the community to understand its situation and the forest condition as well as to improve their livelihood.	V	Research: facilitating analysis

Table 5. Pair-wise ranking of forest management problems as perceived by the people of Muara Jawa'

	1. Land tenure	2. Weakness of customary law / institutions	3. Government regulation	4. Lack of labor	5. Lack of funds	6. Lack of cooperation	7. Insufficient organization	8. Insufficient market	9. Limited technology	Rank
1. Land tenure		2	1	1	1	1	1	1 9	1	I
2. Weakness of customary law/institution			2	2	2	2	2	9	9	II
3. Government regulation				3	3	3	3	3	3	II
4. Lack of Labor					5	4	4	4	4	IV
5. Lack of funds						5	5	5	5	III
6. Lack of cooperation							6	6 8	6	V
7. Insufficient organization								7	7	VI
8. Insufficient market									9	VII
9. Limited technology										VII

Legend:

Numbers in the horizontal and vertical axes refer to the number assigned to each item in the upper and left axes. Thus 1 refers to land tenure and 2 refers to weakness of customary law/institutions. Frequency of appearance of each number indicates the relative rank among the items. Starting from the highest rank to the lowest these are respectively land tenure, weakness of customary law/institutions and government regulation, fund and credit, labor, marketing and technology, and lack of cooperation and organization.

V. Community Structure and Decision-Making Mechanisms

Community structure refers to an enduring, orderly and patterned relationship between elements of the community. First of all it is necessary to identify the community elements and distinguish between trivial and significant elements. But what would count as an 'element'? Relevant to this study is to recognize institutions as contributing patterns of organized social behavior as a significant element. Institutions have a role, a patterned role, which characterizes the community's behavior.

5.1. Relationships Among Institutions

We started the analysis by identifying existing institutions/organizations within the community (internal institutions), and institutions from outside which have a relationship to the community. For this purpose we conducted a Venn Diagram exercise.

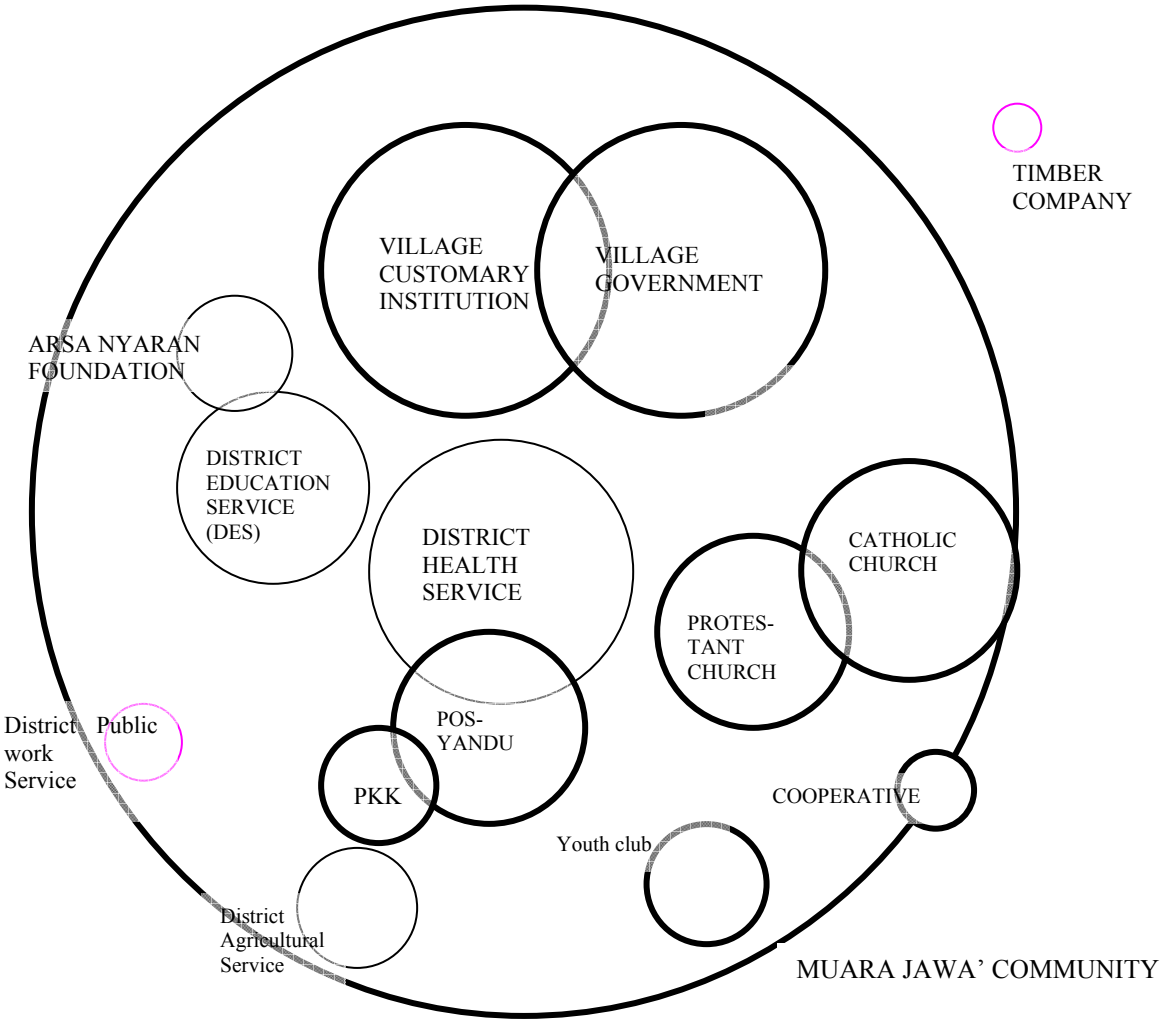
Box 2. Internal and external Institution/organization of Muara Jawa'

Internal Institutions/organizations:

- Village government consisting of village head, village secretary. Its function is to manage the vil-lage and to do administrative works.
- Village customary institutions (*Lembaga Adat*). They mainly deal with marriage related matters (in-cluding divorce) and conflict.
- POSYANDU (*Pos Pelayanan Terpadu*: integrated health care service). It provides services for children under five years old.
- PKK (*Pendidikan Kesejahteraan Keluarga* or Family Welfare Education): a women's group dealing with family welfare, including cooking, etc.
- Catholic Church and Protestant Church: deal with religious matters (Sunday services), but also help the people economically, provide charity services during hard times such as during a drought.
- *Karang Taruna* (youth club): only active in sport.
- HANSIP (Pertahanan Sipil or civil guardian). It is a government-initiated institution, but has be-come indigenized. It functions to serve the people in security matters.
- Arsa Nyaran Foundation: a locally initiated educational foundation to serve kindergartens. Arsa Nyaran is named after the late leader of the village.
- Cooperative: a credit union. It does not function well, mainly because of the lack of management skills.

External Institutions/organizations:

- District Health Service: originally Kutai District Health Service established a community health center called Puskesmas Pembantu to support the Posyandu. After the establishment of West Kutai District it comes under the auspices of West Kutai District.
  District Educational Service: the village has received support in education since the period it be-longed to the Kutai District, but more particularly under the West Kutai District.
- District Agricultural Service: helps the people in agricultural matters; recently in converting marsh-land into agricultural lands.
- District Public Work Service: so far has made little contribution to the village.
- Logging Companies: considered not important. Even though the companies have operated for decades in the village, they are put outside the community circle to show how unimportant they are. Actually the companies have contributed to some extent, but probably because the contribution is too small compared to the gain they get, they are marginal in locals' minds.



Legend:

- Circle size indicates the organization-community relationship: large: close; small: distant.
- Thick solid line: internal organization.
- Thin solid line: external organization.
- Overlapping circles mean a close relationship between the organizations.
- A circle outside the main circle indicates lack of importance of the organization.

Figure 6. Venn diagram showing the relationship among institutions in Muara Jawa'.'

Figure 7 shows the relationship of institutions/organizations, both internal and external, and their closeness to the people of Muara Jawa'. There are 9 internal organizations and two of them are considered the most important and are in reality also close to the community. These are the village government (a formal institution) and the customary village institution (which is called *Lembaga Adat*). The importance of village government lies in its role in government-related matters. It functions as a mediator between the people and the district government. Customary institutions are also considered, but mainly in matters related to marriage/family-related matters, and conflict resolution. In the last two matters the community is organized based on the customary norms.

Other significant institutions are the church (Catholic and Protestant), and POSYANDU - a health service for children run by local people which is also considered important and rather close to the people. Apart from those institutions no other significant internal institution exists in the village. Significant external institutions are those that provide services in education and health.

There is no organization directly involved or specializing in forestry matters. Then two questions arise: 1) Can any of the existing institutions be enlarged to cover forestry-related issues as well? Village government and village customary institution have the potential to do that. 2) If this question is answered in the negative, should the community establish a new institution specializing in forestry-related issues?

5.2. Village Government

As an important institution, the village government needs more explanation. For 20 years the structure of the village government has been based on the Village Act of 1979. The recent Decentralization Act No. 22 of 1999 stipulates that a village should have a "village parliament" called *Badan Perwakilan Desa* (BPD) or a village representative body (VRB). This new institution has been introduced to Muara Jawa'. The VRB is similar to the old *Lembaga Musyawarah Desa* (LMD) or village consultative body, but with different characteristics and has a more independent position vis-à-vis the village head.

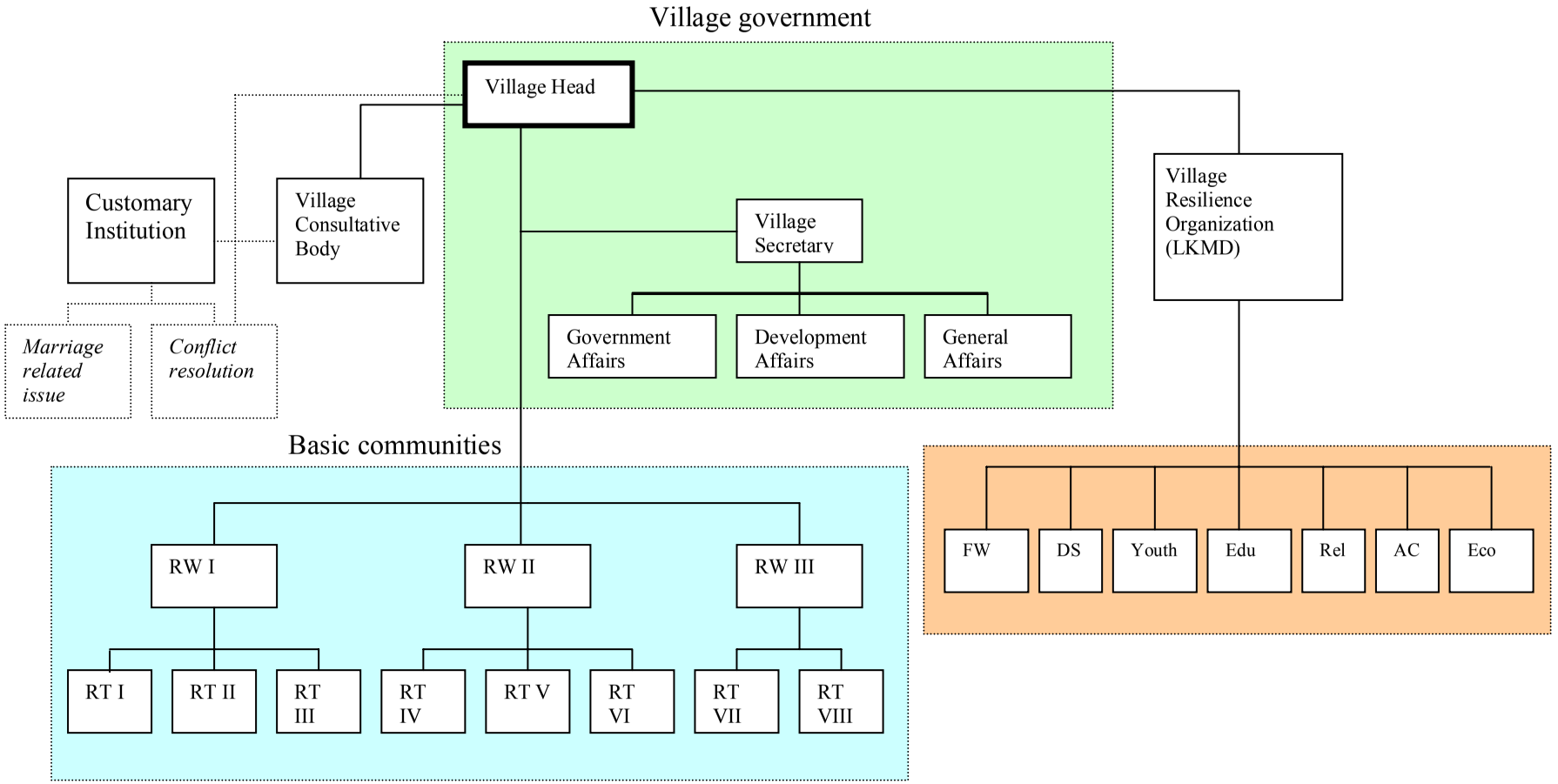
The structure of village management in Muara Jawa' is displayed in Figure 8. According to the figure, the village head, the secretary and the head of affairs are the village government or village apparatus. The LMD functions to control the government and also makes decisions. At the very base, there are smaller units of administration called *Rukun Warga* (RW) or Citizen's Associations. An RW is divided into several *Rukun Tetangga* (RT) or Neighborhood Associations. Figure 9 shows the structure of village government and management based on the Decentralization Act of 1999 and on Decree No. 64 of the Interior Minister of 1999.

The village governance structure of 1979 enabled power concentration in the person of the village head. As the head is just an extension of state government at the basic local level, such a head usually simply serves the interests of government. There used to be no formal mechanism the community could use to control the head. The new governance system tries to balance power between the head and the people. This purpose is served by the VRB. More explanation of the relationship between the VRB and the head follows in the next section.

5.3. Customary Institutions

Since the implementation of the Village Government Act of 1979, traditional village management based on customary law has been significantly 'defunctionalized'. Nowadays the *adat* is still functioning, but with less significance. It is not a part of formal village government. As mentioned before, it has two main roles: to deal with matters related to marriage and family life, including divorce, and to deal with conflict resolution within the community.

However, when the escalation of conflict goes beyond the homogeneity of the community by involving people of different ethnic groups, several problems may face the *adat* institution. In most cases local norms cannot be effectively applied to outsiders. This can be considered a weakness of the traditional norms. They are very local in the way they bind.



Legend:
RT: Rukun Tetangga (neighborhood association); RW: Residents' association (larger than RT), FW: Family welfare group; DS: Defense system; Edu: Education; Rel: Religion; AC: Arts and Culture; Eco: economy.

Figure 7. Legacy of the New Order: complex village administration showing the overwhelming power of the village head

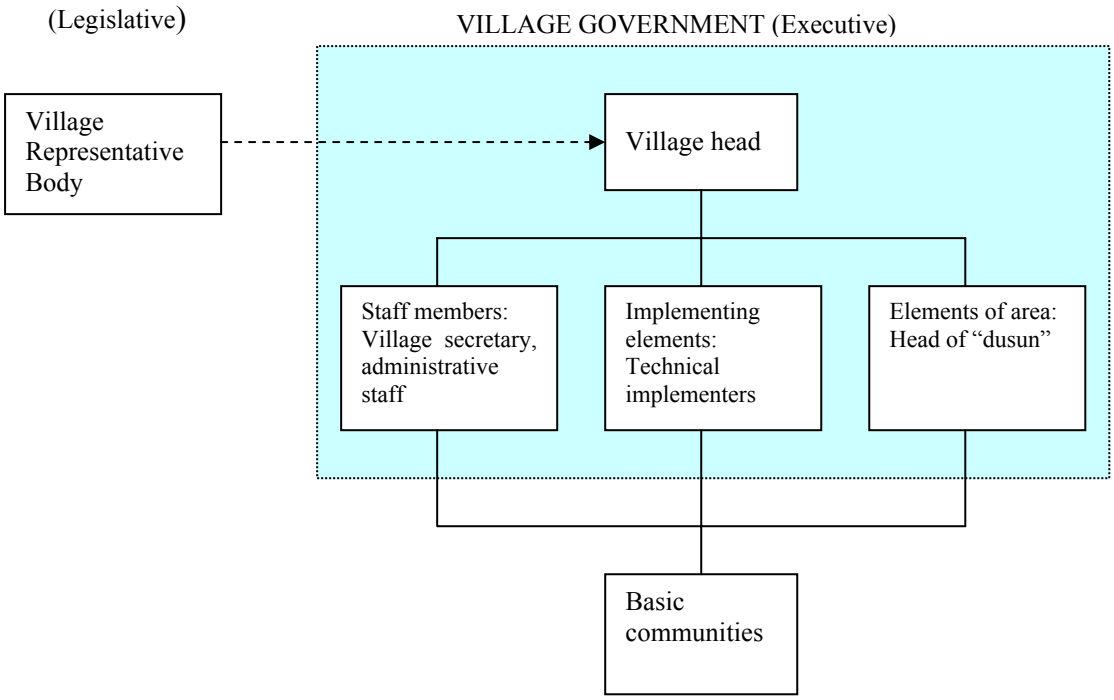


Figure 8. Interpretation of village administration and management based on Decentralization Law no. 22 of 1999 and Home Ministerial Decree no. 64 of 1999

5.4. Social Relations of Production

In the Marxist model of political economy, put simply, "when certain social groups or classes control access to natural resources and capital, they will use the power to exploit other group, forcing them to sell their labor on unfair terms to secure their livelihoods" (Sillitoe, 1998:126). Marxian political economy has two inextricably linked elements: productive resource or the means of production (land, capital, and raw materials) and disposal of the output. The social relations of production link these two and, together with the forces of production (technological processes), constitute the infrastructure. This and the superstructure (social institutions and cultural values that regulate the system) make up the mode of production. The significant point here is the existence of inequalities. This means that the social relation of production is reflected in societies' class structure.

The following analysis starts from an assumption that Marxist theory is not applicable in an egalitarian tribal society. The power structure of Muara Jawa' community is relatively egalitarian, in the sense that there is no absolute power that exploits other members of the community. Our analysis of socio-economic status (SES) through a wealth ranking practice divided the community in three SES categories. In reality, however, the highest rank is not the people who bear absolute control of resources. The access to natural resources is relatively equal with, of course, some difference in access to capital. Traditionally, the people have been the swidden cultivators.

In traditional swidden cultivation the production system is more collaborative and people never produce for mass consumption; they produce simply for subsistence. The collaborative work is usually applied during the land clearance, planting, weeding, and harvesting. Nowadays, some people may sell their labor by working for swidden farms and on any other works. However, these people are not necessarily exploited, because their SES is relatively equal to that of the employers. Some labor can even be considered as an equitable exchange of resources.

Thus, the social relations of production of the community are rather egalitarian, in the sense that there is no absolute power and domination over others' labor.

However, the presence of the logging companies in the village for more than 30 years has created some sort of capitalist-labor relationship, where common people sell their labor. The present Muara Jawa' is already in transition from the old homogeneous kinship-based community to a more diversified community. This transition makes it plausible that the traditional cooperation in the agriculture often cannot be observed in this community.

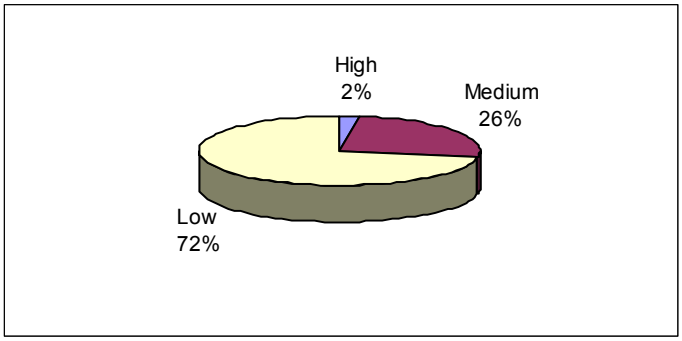


Figure 9. Distribution of Wealth of Muara Jawa' community

5.5. Community Decision-Making Mechanisms

We define community decision-making as "the process of making choices among alternative courses of action, which may have a meaningful effect (either by changing or maintaining) on the community-wide institutions" (Kammeyer in Nanang 1997). Decision-making by the village community is "the process leading to the village community's agreement or disagreement to proposals by villagers" (Nanang 1997). The study focuses on the community-wide decision-making process and ignores any form of particular decision making at group level.

We classify decision-making into four steps. These are initiation, legitimization, execution and evaluation (Nanang 1997). We added evaluation to the steps because it has to do with accountability and is thus very important to public affairs. Initiation refers to program proposal. It includes problem or opportunity identification. Legitimization is the process of making the proposed action a legitimate one for the community. It includes fixing priorities, promotion, and campaign. It entails as well the approval and rejection of individuals and groups in the community. Thus the problem is how to deal with opposing viewpoints. Evaluation refers to the process of evaluating the progress or outcome of the project or activities.

To analyze the quality of participation in the decision-making, we use the following framework. There are five levels of participation. These are informing, information gathering consultation, placation, partnership, and self-mobilization (Table 6). For this purpose configuring the structure of community decision-making is important. Then, the actual action of making decision will be explored and analyzed.

Table 6. A Typology of participation

Level of participation	Characteristics of participation
1. Informing	The local people are simply being told what has been decided and unilateral announcements are made by external agents. The communication is one-way and there is no room for negotiation. It is regarded as "nominal participation."
2. Information gathering	The local people participate by answering questions asked by outsiders. Communication flows in a one-way direction.
3. Consultation	This level entails two-way communication and the local people are consulted, but analysis and decision are made by external agents. The most frequent approaches to consultation are chaired meetings where the local people do not contribute to the agenda, public hearing, and surveys. This is just a window dressing ritual.
4. Placation	Local people may become involved in the decision-making, but the opportunity tends to arise only after a major decision has been made by external agents. They may be simply conciliated. This is regarded as "functional" or "ceremonial" participation.
5. Partnership	Local people participate in decision-making in all the processes such as appraisal/investigation, development of action plans, formation or strengthening of local institutions, implementation, and evaluation. Participation is a right, not simply designed to achieve a goal. Various responsibilities are often shared e.g., through joint committees. This is referred to as "interactive participation."
6. Self-mobilization	Independent initiatives by local people are realized while advised and supported by external agents. Local people retain control over decision and resource use; external agents facilitate them.

Source: Inoue (2003)

1) Formal Structure of Decision-making

In analyzing the decision-making mechanism we firstly explored village management structures and the information system. From Figure 8 above we can see that the village head holds control of the decision-making process. He is the head of the village government and as such an *ex officio* head of the Village Consultative Body. Two important kinds of decision are exclusively assigned by the Village Act of 1979 to the head. These decisions are named "village decision" and "village head's decision." The former is a basic or fundamental decision regarding village affairs in general. This should be made in consultation with the Village Consultative Body. The latter is a decision made by the head himself, particularly with regard to the implementation of village decisions. Here we can see that the structure of decision-making is quite pyramidal and can easily lead to power abuse.

Figure 9 shows how the new village management system was designed to adopt the principle of democracy. The head no longer holds an exclusive-pyramidal power over the decision-making process, because he is under the control of the Village Representative Body.

2) Decision-making in Practice

We analyzed the way decisions were reached on certain development activities and projects. The analysis included four steps of project development: initiation, deliberation, execution, and evaluation. Our concern was to know whether or not there is a significant participation of basic communities in the process of making decisions. We could not limit the cases to forest related activities because these are very rare. The analysis is useful in predicting the possibility for participation in forest-related activities. Table 7 presents the process of decision making in six projects/activities.

Table 7. The practice of decision-making in Muara Jawa'

Project/activities	Initiation	Deliberation	Execution	Evaluation
1. Construction of a village road	Village government initiative	All community members	Contractor: villagers simply worked as laborers	Head, but doubtful
2. Construction of Lalong River bridge	Village government initiative	Involved common villagers	Contractor: villagers worked as laborers.	Head, but doubtful.
3. Community Health Center construction	Village government's initiative	Involved common villagers	Contractor: villagers worked as laborers.	Head, but doubtful
4. Clean water project: wells' construction	Kutai District's initiative	District team in collaboration with village staffs and common people	Contractor: villagers worked as laborers	Head, but doubtful
5. Protest demonstration against a logging company	Village elders' initiative	Involved common villagers	All adult villagers involved	No evaluation
6. Irrigation	Farmers' groups' initiative	All members of farmers groups involved	All adult villagers involved	Ongoing

Initially, the village government had a very important role and at the legitimation phase common people were involved in the decision. Common people are those belonging to the basic communities at the very grassroots level. They are represented by their leaders (the RT head, RW head, and elders) who are actively involved in the deliberation. At this point, we can say that there is a significant quality to participation. However, when it comes to execution, it is difficult to assess the quality of participation, because the executioners are basically contractors (in four projects). The locals simply provide labor. It is not clear how the workers were selected. Probably this was based on their skills relevant to the work. In most cases, there was no evaluation of the project. Thereafter, the quality of participation is quite questionable. In Table 8 we present our interim evaluation of local people's participation based on the analysis of the six projects.

Table 8. Matrix of evaluation of participation in six development projects of Muara Jawa'

	Informing	Information gathering	Consultation	Placation	Partnership	Self-mobilization
Initiation	Δ	✹				
Deliberation		✹	✹	✹	Δ	
Execution			✹	✹	Δ	
Evaluation						

Legend: ✹ strong; Δ weak

VI. Conclusion

In concluding this section, several questions need to be answered: 1) How was the process of the PAR itself? How can we expect more participation from local people in the future? 2) What opportunities are there for the people to take appropriate action in managing the forest better? 3) What factors support any effort to take action towards forest management? 4) What factors may constrain their action?

6.1. Local Participation in the Research

We have tried our best to encourage local participation in the whole process. It has been successful in the sense that local people, both team members and invited community members, have been actively involved in every discussion. We have been less successful in encouraging local initiative and in finding potential leaders. In most of our activities, most of the initiative was taken by the non-local members of the team and the facilitation of group activities was done mostly by non-local members. We have been less successful in encouraging the participation of women and young people. As a limited number of people have been involved in the process, a great challenge faces the team: how to bring the idea and the further process to the whole community.

6.2. Area for Action

Based on the analysis of micro-ecological zones and the type of land ownership, two fields of possible action have been identified. Firstly, conserving the remaining primary forest. This is important not only because it is the only forest remaining, but also because it functions to conserve water resources as well. For this purpose community-wide action is necessary and social capital, in the form of collaboration and social networks, customs and rules are important. The focus will be on collective action. Secondly, there is a lot of degraded land on individual, family or household plots, which are not viable for swidden type rice cultivation. Then, it is worthwhile to think about the possibility of developing household-based actions for reforestation. The government of Kutai Barat might be able to allocate budgetary funds for this from the Reforestation Fund (*Dana Reboisas*i). When talking about reforestation, most people think about this type of action.

6.3. What Opportunities are there to Support Action?

For collective action intended to save the forest in this village, the following opportunities can be identified:

- At the initial stage not much labor and funds are required because the work will be mainly one of setting the rules and mechanisms that will be applied to the whole community. The rules will prescribe and proscribe each community member's actions (such as replanting trees) or omissions (such as letting the forest naturally re-grow by itself).
- For household-based action, the motivation to act seems to be stronger than to take collective action, especially if the action means tangible economic results in a not so distant future.
- For both collective and household-based action, we have mentioned the possibility of getting financial support from the government. However, the government reforestation fund is disbursable only for replanting.

6.4. What are the constraints and challenges for taking action?

There are a lot of constraints and challenges facing any effort to take action. Many of these constraints have been discussed by the group. They include security of land tenure, the weakness of customary law and institutions, unclear governmental regulation, lack of funds, labor, marketing and technology, lack of cooperation, and organizational issues.

Those are the constraints as perceived by the people. From our overall analysis we can add further constraints, such as:

- Unclear boundaries; the forest is still under concession to the logging company;
- Recurrent forest fires have caused people to be reluctant to take action;
- The size of the community itself may cause difficulty in organizing people;
- A mechanism to develop participation has not been

well developed;
- There is no good mechanism to ensure enduring support from external agents such as logging companies, NGOs, *etc*.

Acknowledgement

Although this report has been written by only a few people, it is the result of collaborative work between a larger number of external researchers and local members from the community of Muara Jawa'. The authore would like to express his sincere gratitude to those who have actively participated in the research work. They are Woldiana, Sasnarningsih, Markudin, Paulus Jenau, Sukri, Teruna, and Pekat.

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Chapter 6.

Forest management and community participation in Tanjung Jan

Martinus Nanang, Rujehan, Amir Riyantone, Samuel Nanang

Tanjung Jan is an old village of a Benua' community, one of the largest ethnic groups of East Kalimantan commonly known as Dayak. This particular group is called Benua' Kenohan, because they live near a lake (*kenohan* literally means lake). The village is accessible from the provincial city of Samarinda by both road and river/lake transportation.

I. Territory and Ecological Zones

Tanjung Jan covers an area of 7000 hectares. It lies at an altitude of 5-15 meters above sea level; the village receives about 1600-4100 mm rainfalls per annum. Annual temperature ranges from 23°C -31°C. A large area to the east of the village is dominated by marshland and cannot be used for cultivation, except during the dry season. Until four years ago the marshland was covered by primary forest, but forest fires in 1997/8 completely devastated the forest. People used to collect fish, snakes (for their skin), and wood from the marshland forest. To the north, the village adjoins Lake Jempang, the largest lake in East Kalimantan at an area of about 24 square kilometers; Lake Jempang is shared by many villages. The lake provides fishing grounds for the surrounding communities, including the community of Tanjung Jan. However, fishing is not the main livelihood for the people of Tanjung Jan, because they have traditionally relied on cultivation. In recent years the lake has recurrently dried up during the long dry season. People are able to temporarily cultivate the dry soil to grow rice and vegetables. Both the marshland and lake are common pool resources.

Much of the land in the village is used mainly for agriculture, both swidden cultivation and more stable cultivation of pineapple and rubber. With a population density of 55.25 (or 94.71, if the marshland is excluded) people per square kilometer, the area is no longer suitable for sustainable swidden agriculture: land has already become a scarce resource. This is the reason why the community has strongly opposed the expropriation of land by an oil palm company. Until recently, there were a lot of traditional orchards (called *simpukng*) and small plots of protected sacred primary forest, but the forest fires have destroyed all these resources. Since then the burned area of protected reserve forest has been distributed among community members and is now used to grow fruit trees, mainly durian. With the loss of the forests, the community no longer has a source of timber of its own. The loss of primary forest offers a unique challenge for our efforts to develop community-based forest management in this area.

II. History

2.1. Village History Relating to Land Use and Forests

The recent history of Tanjung Jan is characterized by a struggle for land rights. Intense conflict started when an oil palm company tried to procure land from the villagers in 1996. Conflict with the company has also caused internal conflict within the community, that is, between the proponents and the opponents of the company. A handful of people for their own sake strongly supported the company, but the majority of the villagers, under the leadership of a village elder, have tried hard to prevent the company from taking the people's land. Although the government had given strong support to the company, the village had, up until the time of our fieldwork, successfully secured its land.

However, primary forest has totally disappeared in the village area due to rampaging forest fires in 1997/8. Many villagers believe that these fires were intentionally started by the oil palm company. The fires broke out during the tensest period of conflict between the two parties. Conflict over natural resources (particularly forests) has also occurred between Tanjung Jan and Pulau Lanting, a neighboring village, in 1995.

Several development projects have been initiated by the government in Tanjung Jan. These include livestock-based projects (cows and chickens in 1998; pigs in 2000), reforestation programs (1997), and high-yield rubber plantations. However, most projects have failed owing to the absence of continuous facilitation from the government. One exception, however, is a reforestation project initiated in 2002 in Tanjung Jan under the national reforestation fund scheme, which has shown good progress.

Monotheistic religions have entered the village: Protestantism in 1975 and Catholicism in 1976. The government has paid little attention to education: a public school was built in the village only thirty years after in-

dependence (i.e. in 1978). In many other communities in the interior of East Kalimantan, Catholic missionaries make a strong contribution to education. However, the Catholic mission in Tanjung Jan has not promoted formal education.

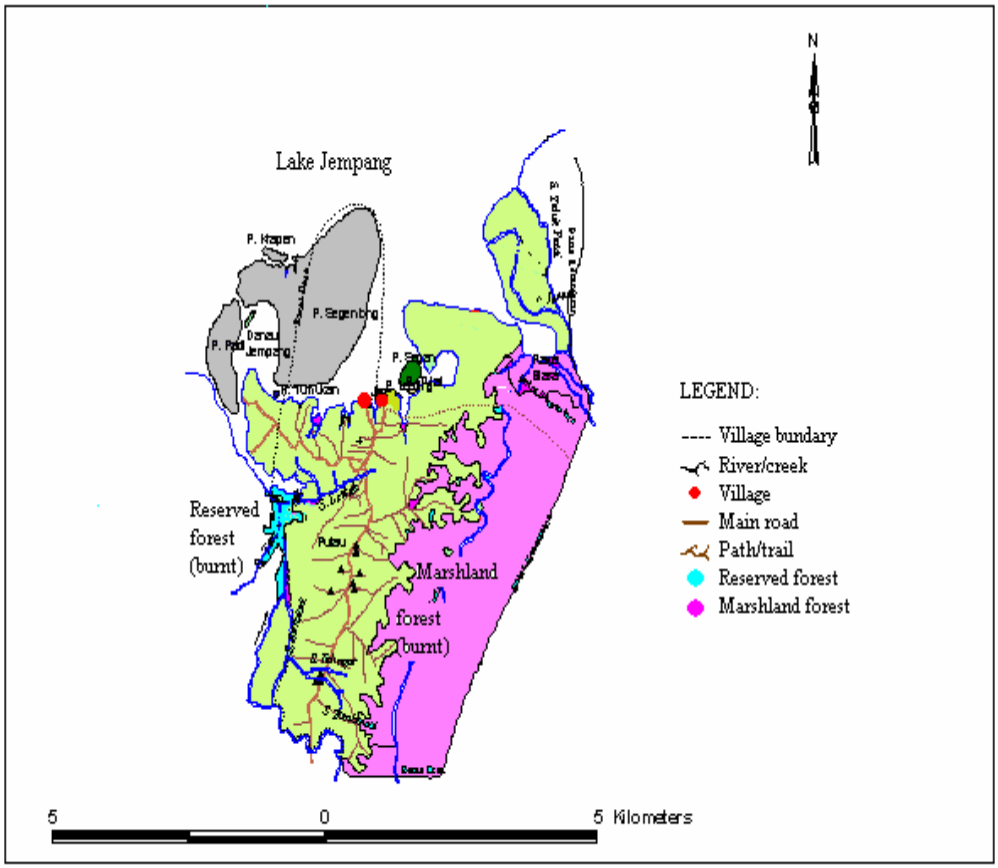


Figure 1. Territorial and ecological map of Tanjung Jan
Source: SHK Kaltim

2. 2. Forest Ecological Trends

In addition to the analysis of ecological zones in the village given above, a more detailed analysis of ecological trends was also conducted. This analysis has shown that the rate of forest clearance for agriculture has decreased since 1980 (Figure 2). This is because most of the people in Tanjung Jan now need only maintain their existing pineapple plantations. Though the population of the village has increased, the majority of people have taken to sedentary plantation agriculture in preference to swidden cultivation of cleared forestland. On the other hand, the level of land degradation has increased.

Box 1. Timeline of Tanjung Jan

Unknown date	Early history of Tanjung Jan began in Lou Pepas. An epidemic of malaria caused people there to move and build a long house (*Encama' Naha'*) under the leadership of Ongkut. The people moved again to Encama' Bayu' under Kakah Dosotn. Under Taman Séup, the people moved again to near Jempang Lake. Kuncau was the first person to clear land at the location of present-day Tanjung Jan. Since then many people have moved in and built long houses here (70 *depa* long)[1].
1830 (?)	Under the Dutch administration, Kakah Liak was elected village leader (*Petingi*). During Kakah Tegur's premiership (the 5th *Petingi*), the long house was devastated by fire. Many people moved to other areas. People who stayed constructed a new long house. Sarauda (Sara Muda) was elected new leader.

[1] *Depa* is measured by outstretching both arms. The average length of a *depa* measured by an adult Indonesian is about 175 cm.

Box 1. Continued

1942	Beginning of Japan's administration of Indonesia. The Japanese administration carried out a population census. Japanese soldiers confiscated farmer's agricultural products, particularly rice. Those who refused to give their products were beaten and tied up.
1945	Japan surrendered to the Allied Forces and Indonesia declared independence. Mr. Abe was killed at Muara Nayan. Food confiscation was halted.
1949	Chicken pox (*cacar*) epidemic. Many people died. In the same year, the *"perang-merah putih"* (or red-white war) was flaring at Pulau Lanting. This was a war between soldiers of the Kutai Kertanegara Kingdom and pseudo-troops who robbed gold.
1955	Political parties entered Tanjung Jan. At that time, people were suffering food shortages, notably salt. One political party – our informants could not recall the name, though they remembered it by its star and machete symbol – promised to distribute salt if it won the election
1968-1970	*Banjir kap* or manual logging activities. Many men went left the village to work in logging teams, mainly along the Belayan River and Bongan River, far from the village. The rate of forest clearance for agriculture declined.
1975	CV. Daya Usaha, a logging company, constructed a road from the forest to the lake to transport logs. The road was called the DU Road. Pentecostal Church (later known as GPDI or *Gereja Pantekosta di Indonesia*) started its mission in Tanjung Jan. Thirteen families joined the church. The Church encouraged the abandonment and destruction of all traditional cultural attributes.
1976	Catholic Church initiated its mission in Tanjung Jan. Many people were baptized into Catholicism. Several Protestant people also joined the Catholics. The Protestant priest accused the Catholic priest of "fishing in his location".
1977	A temporary elementary school was established by the villagers. Before this, people went to Pulau Lanting and Tanjung Isuy for basic education.
1978	Public elementary schools were established throughout the country by the government under a special presidential instruction (*Instruksi Presiden*). Schools of this kind were called SD Inpres. One such school was built in Tanjung Jan. The SD Inpres later become SD Negeri.
1982	Drought and forest fire. The area mostly affected was marshland. Many fish died. The drought also caused harvest failure. People relied on rubber and rattan production for survival. A successive three-month period of drought, though this time no forest fire. Most plant life in the dried-up lake withered.
1991	Construction of the wooden bridge connecting Tanjung Jan and Pulau Lanting.
1994	Some people from Pulau Lanting illegally cut trees within the area of Tanjung Jan village. A serious conflict between the two villages broke out. Villagers from Tanjung Jan confiscated the logs but the Police took the logs away promising to reimburse the people of Tanjung Jan. In fact the police have never paid.
1995	This year '*karet unggul*' (high-yield rubber) was introduced to Tanjung Jan.
1996	An oil palm company, PT. Gelora Mahapala, which had just started the process of land clearance in the area of Tanjung Isuy sub-district, placed a lot of pressure on Tanjung Jan village to give up their land. The reason given by the company was to construct a road from Tanjung Isuy to Muara Kedang. The people believed that it was simply a trick to get land for plantations and they emphatically refused to give over their land. However, the village headman later gave an announcement in the Church that only 2 kilometers of land around the lake actually belonged to the village. The rest (i.e. most of it) had already been given to the oil palm company. Upon hearing this news, people of the village were shocked into silence.

Box 1. Continued

1997	Long drought (7 months) and by the end of the year forest fires had started to flare. The lake became almost completely dry. This year the governor of East Kalimantan issued a decree stipulating that each household was entitled to only 2 hectares of land. The people reasserted their feelings with the oil palm company that they did not want to give up their land. The company claimed that the people did not have customary land. The company confiscated a total of 8 square kilometers of villagers' land. But the people reclaimed it by issuing a letter to the company. Later on, the people blocked the road connecting the village with Bongan, Tanjung Isuy, and other villages. This was done to prevent heavy vehicles from entering the village and because the company was suspected of causing forest fires. The government offered the people 1 hectare of marshland for agriculture.
1998	Forest fires blazed until February. The forest, including the reserved forest, was totally destroyed. The government initiated a revolving project offering livestock (cows and chicken) to the village. The project failed.
1999	The first and the most democratic general election of the so-called reform era; the PDIP (Indonesian Democratic Party of Struggle) won. However, people have not experienced any significant improvements or seen any of the politicians' promises for poverty alleviation realized. A new village headman was elected and the style of the village leadership totally changed. The new leader showed greater commitment to the people. In November, West Kutai District was established following the break up of the former Kutai District. People have not witnessed a significant impact of the new administration on their livelihoods.
2000	The government introduced pig livestock farming to the village. The project has shown good progress.
2001	A public toilet was constructed. The provincial government gave a machine that makes pineapple crackers to the village. The machine, however, has not been in operation. (Note: when the researchers checked the machine, it was perfectly functional).

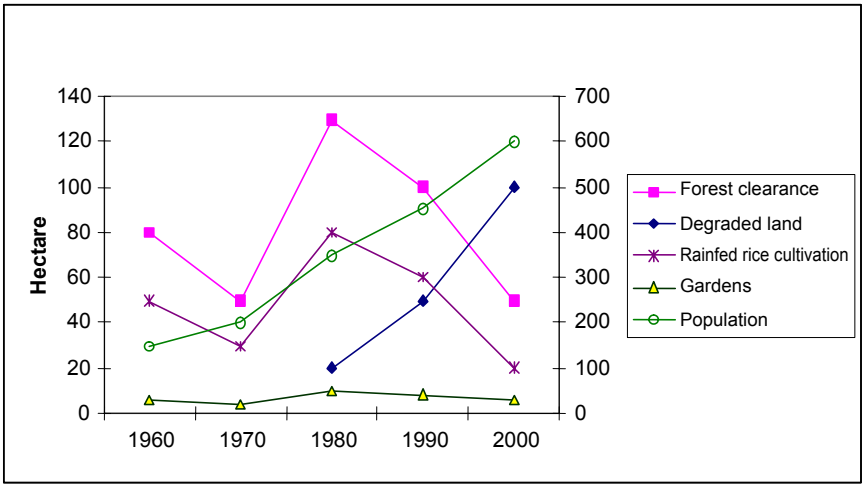


Figure 2. Trends in land use and forest condition in Tanjung Jan.

Other trends were analyzed, including extraction of forest products and agricultural and plantation production. The results are presented in Figure 3 and Figure 4.

The figures show that since 1990 there is no longer any production of logs, natural rattan, and honey. The reason is mainly due to the forest fires of 1982. Meanwhile, fish production has increased due to two reasons: (1) the burned marshland has served as a good breeding place for certain fish species and (2) a shortage of provisions from the natural forest has driven people to alternative sources of production, notable aquatic resources. Although fishing is not done on a large scale, not even in the lake, it provides an important source of food for the people, as well as being a source of additional earnings for some villagers

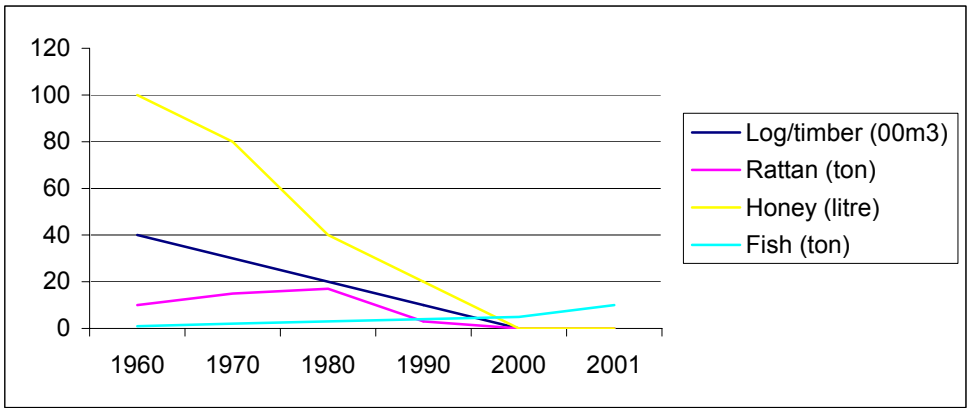


Figure 3. Trends in the production of forest products

Production of rice has decreased throughout the period under analysis (Figure 4). This is because the people have concentrated on pineapple production as a major product of the community. Seventy percent of the households own an average of 2 hectares of pineapple garden, totaling about 300 hectares. Another reason for the decrease in rice production is because of a decrease in soil fertility. Moreover the area is small and not suitable for a good cycle of swidden agriculture. Aside from relying on pineapple production, the people have also been relying on increases in production of cassava, fish, and recently vegetables. Pineapple has become the most important product and the socio-economic status of Tanjung Jan has been better off mainly due to the stable production of pineapple.

An analysis was carried out on trends in forest-based production such as timber, rattan (although rattan is also cultivated), honey and fish. Production of the first three products has decreased, following the steady degradation of primary forest until its complete lost by 1998. On the other hand, the increase in fish production is notable. This is mainly because healthy fish stocks are not entirely dependent on the presence of forest cover. Moreover, fishing is not only done in the forest swamp, but also in the lake.

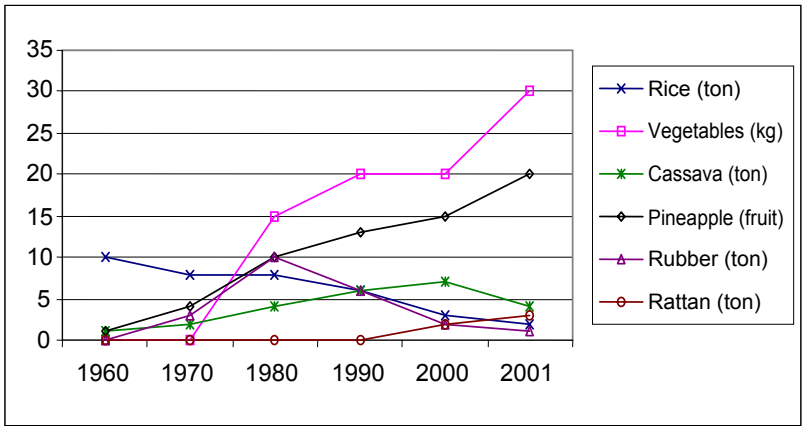


Figure 4. Trends in selected agricultural products in Tanjung Jan

2.3. Views on the Role and Condition of the Forest

Local people see and foresee changes in condition of the forest. In the past, forest was abundant, but has undergone rapid degradation and has now completely disappeared. The remaining fallowed forest will be mainly turned over to plantation in the future, in which rubber and pineapple will likely become dominant.

III. Views of the Forest

3.1. Ethnic Definition of Forest

Traditionally, the people of Tanjung Jan, as in other Benua' communities, have recognized different classes of forest. *Simpukng munan* is an area dominantly covered by fruit trees (usually cultivated varieties of trees). In English it can be called an orchard. *Simpukng munan*

also refers to any forestland, which is protected because of its trees. *Urat batakng* is an area designated for agricultural purposes. The term implies that the forest is no longer intact. *Kebotn dukuh* is an area designated for gardening, especially monoculture. *Bengkal* (*bengkar* in other Benua' dialects) refers to pristine forest. *Éway tuwélatn* refers to an area rich in biodiversity and natural resources, and is usually primary forest, which is a common pool resource. Old secondary forest owned by an individual or a family may be classified as an *éway tuwélatn* as well[2].

3. 2. Individual Definitions of Forest

Our exploration of local people's views of forests did not rely entirely on traditional definitions, although such concepts are important. Every individual in a group of 18 people was asked to write on a piece of paper their definition/view of forests. We asked that their definition should specifically answer the following question: What do you have in mind when you hear the word "forest"?

Most of the respondents wrote partial definitions for the word forest, such as: "forest is an aggregation of trees which have not been touched by human beings"('touched' here means 'exploited') or "plants and trees growing in an area protected by the state". There was also a definition that emphasized a rather holistic view of forest – that is, forests are "an area with big and small trees which are in good condition, a sustained number of animals, and the characteristics of which vary from place to place and from climate to climate". In brief, the following elements relating to forests were frequently mentioned: living plants (from weeds to big trees) and animals of various species, an expression of the state of the forest (i.e. "in good condition"), and aspects such as whether it is intact and natural. Different types of forest were distinguished, such as primary forest, bush or secondary forest, and orchards.

What is important here is that by the word "forest", what people have in mind is something "natural and undisturbed". There is almost no allusion to man-made forests, except implicitly from the word 'orchard'. This means that the dominant concept of forest is basically primary forest, which is traditionally called *bengkal*/*bengkar*.

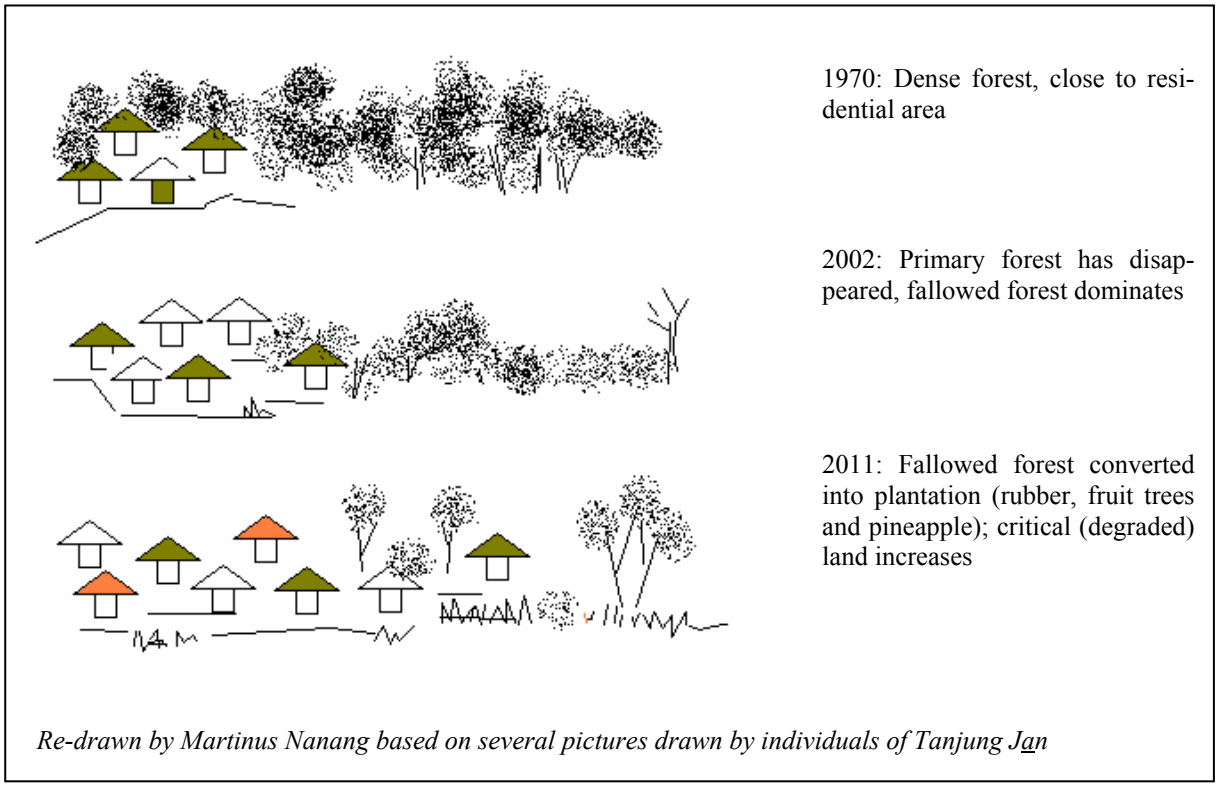


Figure 5. Illustration showing people's vision of the forest in the past, present, and future

[2] Report of lembaga Bina Benua Puti Jaji on forest management by the people of Mataliba' and Tanjung Jan (unpublished).

3.3. Importance of Forests

1) Collection and Utilization of Forest Products

In Tanjung Jan, the analysis of forest product utilization included observations of the collection and actual use of the extracted products, including their sale to earn money. There were differences between men and women in their use and collection of forest products; Table 1 indicates the similarities and differences. It shows that for men, wood for construction, fish, bamboo, medicinal plants, *doyo* (*Curculigo* spp), firewood and rattan are the most important products. However, collection of rattan and construction wood is limited, and in most cases these products are taken for individual use only. Only fish, deer, turtle and monitor lizard, snake and *doyo* are collected for cash. For women, only a few products are of commercial importance. These are *doyo*, *keniih* (*Garcinia cowa*), rattan fruits, and *kajang* or pandan (*Pandanus tectorius*). Most of them are the products of fallowed forest. It can be concluded that for the people of Tanjung Jan, the forest is very important, not mainly for cash income, but more importantly for the household-level consumption.

The above analysis reveals the importance of non-timber forest products (NTFP) over timber in Tanjung Jan. NTFPs are available mostly from fallowed forest.

2) Forest Values as Perceived by Men and Women

An exploration of local people's views on the values of the forest was conducted by using pair-wise ranking; 15 men and 5 women were involved in the process. Table 2 presents the men's and the women's views separately.

Various similarities between the views of men and women can be seen in the following aspects. (1) For both men and women, the ecological functions of forests (regulation of water source, preventing land degradation, preventing floods, preventing landslides, regulating climate, opportunities for research) are of the greatest value. The importance of the role of forests in protecting soil fertility is rooted in the fact that the soil in the village area is composed mainly of sand and is therefore of low fertility. Also, local views may have been influenced by the activities of environmental NGOs, which have emphasized the ecological importance of forests in the area. (2) For the local people, the economic functions of forests (as a source of construction materials, fuel wood, fruits and spices and as a place for hunting) seem to be less important. Indeed, during discussion with local people to identify the key forest functions, economic factors were mentioned only after a considerable amount of time had elapsed. This indicates that economic values of forests for local livelihoods are not central and are not a dominant – or spontaneous – component of attitudes towards forests when prompted. This is understandable for two reasons: in economic terms, people have come to rely more on pineapple cultivation than on any other source of income, and because the territory now consists of very limited forest cover, and what little remains is not so rich in resources.

The next section shows that the economic importance of forests is mostly related to fallowed forest. (3) Men and women also agree that religious functions are very limited and that recreational functions are virtually non-existent. In this Christian community, traditional rituals have been almost entirely abandoned, although Catholicism (the majority religion) does not directly prohibit the performance of them. Protestantism, in contrast, teaches that all forms of traditional religious ritual and other 'artifacts' are absolutely against the 'true' belief.

With respect to forest functions for health (i.e. as a source of medicine), men and women differ sharply. For men the forest is of limited value, but for women it is very valuable. The reason for the difference was not explored. However, it is noted that despite these views, local livelihoods are set against a background of real interaction with the forest. Some people possess a great deal of knowledge of forest resources, gained either from school or from other sources.

3) Scope/coverage of forest functions

An analysis of the scope of the functions of Tanjung Jan forest indicates that the forest is mainly useful for local people (Table 3). It is of limited significance at the regional level, national or global level. These views are plausible because the size of forest is small and the remaining forest is composed only of bush and fallowed forest.

Table 1. Ranking of the potential of forest products, their frequency of collection, and their importance as perceived by the people of Tanjung Jan

1=lowest; 10=highest

Men					Women				
	Forest Product	**Collected**	**Used**	**Sold**	**Importance in household economy**	**Forest Product**	**Collected**	**Used**	**Sold**	**Importance in household economy**
1.	Rattan	6	8	2	8	1. Bamboo shoot	6	10	0	3
2.	Wood (Construction material)	6	7	3	10	2. Rattan shoot	10	10	0	6
3.	Fish (from forest marshland)	10	2	8	10	3. Edible Fern	10	10	0	8
4.	Wild boar	7	5	5	5	*4. Doyo*	10	10	10	5
5.	Deer/antelope	5	2	8	5	5. Fire wood	10	10	0	10
6.	Birds	3	4	6	3	7. *Betété' (Hornstedtia scyphifera* - vegetable)	10	4	6	3
8.	Bamboo	10	4	6	10	*9. Kenih (Garcinia cowa)*	10	3	7	7
6.	Fruits	10	5	5	5	10. Rattan fruit	10	4	6	2
7.	Turtle and monitor lizard	6	0	10	6	11. Wild banana core	3	10	0	1
8.	Snake (python and *besisi*)	6	1	9	6	12. Jackfruit	2	10	0	3
9.	Palm sugar	3	4	6	3	13. *Kangkung (Ipomoea aquatica* - watery vegetable)	10	10	0	7
10.	Medicinal plants	6	1	9	6	14. *Kajang (Pandanus tectorius)*	10	3	7	5
11.	*Doyo (Curculigo* spp)	3	4	6	3	*15. Biru' (Licuala valida).*	10	10	0	2
12.	Firewood	10	10	0	10					
13.	*Kajang (Pandanus tectorius)*	2	8	2	2					
14.	Wild taro (*Alocasia* sp)	5	10	0	9					

Table 2. Ranking of forest values as perceived by men and women of Tanjung Jan

Men			Women		
Score	**Rank**	**Forest function**	**Score**	**Rank**	**Forest Function**
13	I	Regulating water resources	14	I	Preventing floods, place for swidden farming, protecting soil from erosion and degradation, preventing landslides, resources for traditional medicine, source of vegetables, water resources
12	II	Preventing the land from becoming degraded, preventing floods			
10	III	Regulating climate/air temperature, opportunities for research			
9	IV	Livelihoods	13	II	Source of construction materials and fire wood
8	V	Preventing landslides	10	III	Habitat for fauna and fish
6	VI	Source of construction materials and traditional medicines	6	IV	Source of fruits and spices, hunting
4	VII	Fire wood	2	V	Habitat for rattan
3	VIII	Hunting, source of material for traditional rituals	1	VI	Recreation, source of materials for traditional rituals
1	IX	Protecting fauna			
0	X	Recreation			

IV. Forest Management

4.1. Customs and Practices

Information on customs relating to land and forest use was gathered through interviews with several elders, including the customary leader. Their views on customary norms and practices are summarized below. It is important to bear in mind that the *adat* (or customary law) can differ widely from community to community. Therefore, the norms mentioned hereafter may or may not be applicable to other communities.

a. Pristine forest is a common pool resource. This means that everyone from the village and any other village can have access to it. There was no claim of ownership over the entire pristine forest, but limited claims over certain resources or products, such as individual trees, were common in the past. Resources or products that can be individually claimed are trees for *tanyut* (nesting trees for honeybees) such as *puti* (*Coompasia exelsa*), *jengan* (*Shorea laevis*), and *ngoi'* (*Dryobalanops* spp). Rattans and wild fruits such as *tuala* (*Durio macrophylus*), *layukng* (*Durio dulcis*) and fruit trees can also be claimed. Usually the claim was made by the first person to find the tree. A claimed resource was usually inherited by the finder's offspring. In the past there was no village boundary or the boundary was loose. This made it possible and easy for people from other villages to have access to pristine forest in the Tanjung Jan area. Since pristine forest has now vanished, however, there are no outstanding questions about the application of these rules.

b. Hunting of any kind of animal with any technology is allowed. *Poti*[3] is prohibited in nowadays because it endangers human life. *Nua*' is actually not prohibited but people no longer use this means of catching fish nowadays. In the past nua' was practiced by many people following receipt of a permit from the *manti*' (village aristocrat). The use of electrocution and chemical poisons (several people use insecticide or herbicide to kill fish) is not regulated by customary law yet. Electrocution seems to be undesirable for many people because it endangers human life and non-targeted fish. However, the village headman can tolerate the action because some people rely on catching fish for complementary income.

c. Swidden cultivation is allowed in the remaining primary forest. Anyone may open primary forest for farming without being under obligation to ask permission from the village headman. In the past there is no prohibition in clearing farmland beside rivers, but nowadays people feel a need to be more cautious in clearing forest around river, because it endangers their water resources. Before burning cleared farmland, people have to make a *ladakng* (fire barrier). If two or more areas of farmland border each other or are close together, then they have to be burned at the same time. Unfortunately, nowadays people are more egotistic. Still there are people who burned their farmland with little con-

[3] Benua' name for the *Tonyoi huit* (*See Chapter 5: Local Forest Management and Community Participation in Muara Jawa'*).

cern to others. Customary law is not effective in preventing such action, because the punishment (a fine) is light.

d. Before the raging forest fires of 1997, there was a sacred forest of about 5 hectares. This forest was village property; and each villager had the right to access it. No one was allowed to claim any resource in the forest. People believed that many spirits (both benign and malicious) live in the sacred forest and many other villages also considered the forest as sacred. People give offerings to the spirits by performing traditional rituals; the biggest ritual sacrifice that can be made is the life of pig.

Table 3. Matrix of the scope of significance of the functions of Tanjung Jan forest

Forest Functions	Village level	Regional level	National level	Global level
1. Protecting water resources	10			
2. Preventing land degradation	10			
3. Preventing floods	8	2		
4. Regulating climate/temperature	8	6	2	
5. Place for research		6		9
6. Preventing landslide	5	1		
7. Source of construction materials	8			
8. Source of traditional medicines	6	2		
9. Source of fire wood	8	1		
10. Place for hunting	5	3		
11. Place for swidden cultivation	10	3		
12. Source of materials for traditional rituals	4			
13. Habitat for animals	3	1		
14. Source of vegetables	8			
15. Source of water	2			
16. Source of fruits	10			
17. Place for recreation				
18. Habitat for rattans	3			
19. Place for gardening	10	2		

Note: Numbers within the columns are score assigned by the participants, where 1 is the lowest and 10 is the highest.

4.2. A New Approach to Land Use: Ideas and Problems

1) The Necessity for a New Approach

As has been explained above, the people of Tanjung Jan cannot rely on swidden cultivation to meet their daily needs because the area and condition of the land available to them is insufficient. As an alternative, they have developed a fairly successful small-scale household-based pineapple plantation business. The total destruction of the surrounding forest, however, creates a need for a large-scale reforestation program. To this end, we defined all parties in some way related to Tanjung Jan forest (i.e. the stakeholders), and enumerated the problems faced by the community in developing a new reforestation program.

2) Tanjung Jan Forestland Stakeholders

A focus group session was held to define the various parties that have an interest in Tanjung Jan forestland (Table 4). The parties or stakeholders were defined as the village people themselves, neighboring villages, the government, the oil palm estate company, NGOs (particularly Puti Jaji), and external researchers (including IGES).

With regard to the use of the forest, we can see from Table 1 that the immediate interest of local people is basically in fulfilling the need for construction materials (although timber is no longer available from the forest), firewood, natural medicines, weaving materials and paraphernalia used in traditional rituals, and in providing an area for hunting, fishing and farming. With support from the government the people have tried to develop non-forestry crops such as rubber, durian, mango and hairy fruit (*rambutan*). However, these efforts have failed due to inconsistent guidance from the government. People from the neighboring villages of Tanjung Isuy and Pulau Lanting are also interested in Tanjung Jan forest, particularly as land for agriculture. The area of forest attached to Tanjung Isuy has largely been devastated by the development of oil palm plantations, which has resulted in a reduction in the area of land available for ag-

riculture. Some people from Tanjung Isuy have therefore set their sights on Tanjung Jan land. Pulau Lanting is a village of migrants who do not have much access to land.

The government's interest in Tanjung Jan forest is not very clear. In the past (at least until 1998) the government was in favor of the development of oil palm estate and it has supported the plantations by urging the people to give up their lands to the company. In this case, the government's intentions are political. However, with regard to other issues, the discussion group could not identify the government's interest in the village forest. They might be economic, but the forest itself does not offer significant economic benefit to the government.

The oil palm estate company has an interest in procuring the land, not the forest. When primary forest existed, the company may have gained unintended benefits from acquiring land, because clearing forest means cutting trees. But nowadays, pristine forest has become extinct.

The discussion group also identified NGOs (particularly Puti Jaji) and researchers (including IGES) as having some interests in Tanjung Jan forest. But to them the interest is basically charitable, that is, to support the community.

Table 4. Stakeholders in Tanjung Jan forest, their responsibilities and a synopsis of their actions to date

I: high; II: medium; III: low

	Stakeholder	Interest in the forest	Responsibility to the forest	Action taken to save and manage the forest
1.	People of Tanjung Jan	Construction material, fire wood, traditional ritual material, natural medicine, hunting and fishing, weaving material (doyo), farming	I	Developed orchards (simpukng), grow rubber, candle nut, petai (?), durian (*Durio zibetinus*), sukun, sungkai (these last five items have been unsuccessful)
2.	Neighboring Villages: Tanjung Isuy and Pulau Lanting	Some people from Tanjung Isuy and Pulau Lanting have claimed areas of Tanjung Jan for farming, hunting, and collecting fire-wood.	I	-
3.	Government	Economic interest: tax (not much); political: support of oil palm estate development and associated need to clear the forest; if the community fails to manage the forest, the government has a reason to hand responsibility to other party. This is likely to be the oil palm company.	II	Reforestation project through planting durian, sungkai, rambutan, sukun, and candle nut by Kutai Kertanegara District government. All efforts resulted in failure. Reforestation under the DR fund of West Kutai administration.
4.	Oil palm estate company	Land (and timber)	I	-
5.	NGO: Puti Jaji	Facilitating the community to defend their lands	III	Community organization, providing vegetable seeds
6.	External researchers (including IGES)	Helping the community to understand its situation and the condition of the forest	III	Research: facilitating analysis

3) Problems in Managing the Forest

If the local people are to be involved in any form of forest management, what are the constraints? The constraints to managing the forest in a wise manner were discussed in a focus group discussion. Through a pair-wise ranking activity session, the group came up with the following ranking of forest management problems:

a. Extreme climate (referring to recurrent drought in the area); a lack of knowledge and skills to grow new crop species; a lack of time.
b. The poor health of many people; a lack of tools and technology.
c. A lack of funds.
d. Limited access to the forest and poor transportation.
e. Insecure access to land (customary rights are not recognized); a poorly developed market.
f. Pests.

Thus the key factors constraining wise forest management, as identified by local people, revolve around

issues of natural conditions, technology, the economic status of the villagers, funding and legal aspects.

Since the people identified a lack of time to get involved in an intensive reforestation program as a key constraint, we analyzed the seasonal calendar of the people over a one-year period. Figure 6 shows the agricultural activities and the level of rainfall. Figure 7 indicates that the people are very busy with agricultural activities at the following times of the year: March, June, July, September, October and December.

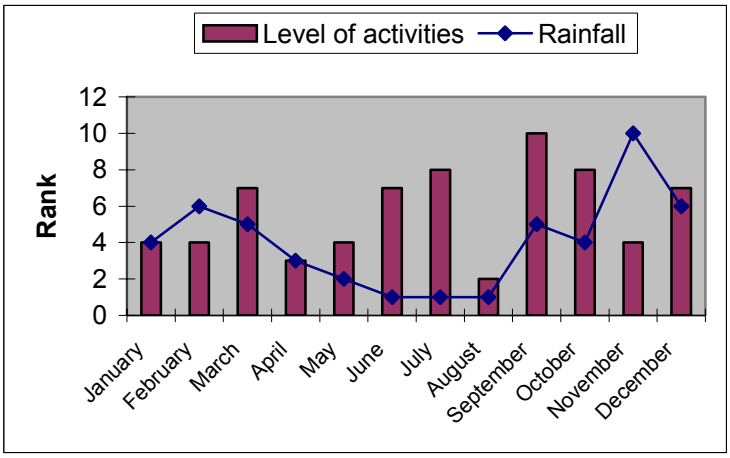


Figure 6. Level of agricultural activities and rainfalls in Tanjung Jan

V. Community Structure and Decision-Making Mechanism

Analysis in this section covers relationships between institutions, the village government, and the customary institution, and social relations of production.

5.1. Relationships Between Institutions and Organizations

An analysis of the relationships that exist between institutions was conducted using a Venn diagram exercise with a group of villagers. The institutions/organizations fall into categories covering the following five spheres: religion, education, agriculture and local economy, health, and governance. Among these, governance and religious institutes here considered very important, and have a significant influence on community matters. Since the succession of the village headman in 1999, which characterized a period of total change in village leadership to democracy, the village authorities have become very close to the common villagers. Decision-making has gradually become participatory. Village governance institutions in the diagram include the village government, the customary institution, and the village parliament or Village Representative Body (VRB), also called *Badan Perwakilan Kampung* (BPK). The sub-district administration of Tanjung Isuy has an important connection with the village government, because it mediates between the village and the district administration.

Religious institutions such as the Catholic Church and the Pentecostal Church have a dark history in their relationship with each other. Although conflict has more or less disappeared, there is still a sense of division between the two communities. The Protestants' radical treatment of community traditions is hard to accept for the Catholics, because the Catholics respect all form of tradition. Educational and health institutions are considered important. However, they do not require community-wide cooperation. Agricultural and economic institutions (cooperatives, CU, DAS, DFS) are also considered important and they, on the other hand, are at the hub of people's lives. However, two cooperatives (UB and KUD) have failed and a new credit union has just been launched with new motivation and drive. Indeed several programs organized by the DAS and DFS in the past have failed, but local people still consider them important because they still stand to gain support from the institutions in the future. The community cannot ignore the importance of government institutions.

Traders are also worth mentioning, because they have an important impact on the community. These are the people to whom the villagers sell their agricultural produce, mainly pineapple and cassava. The oil palm company, which has promised a better standard of living to the people, is not considered important at all.

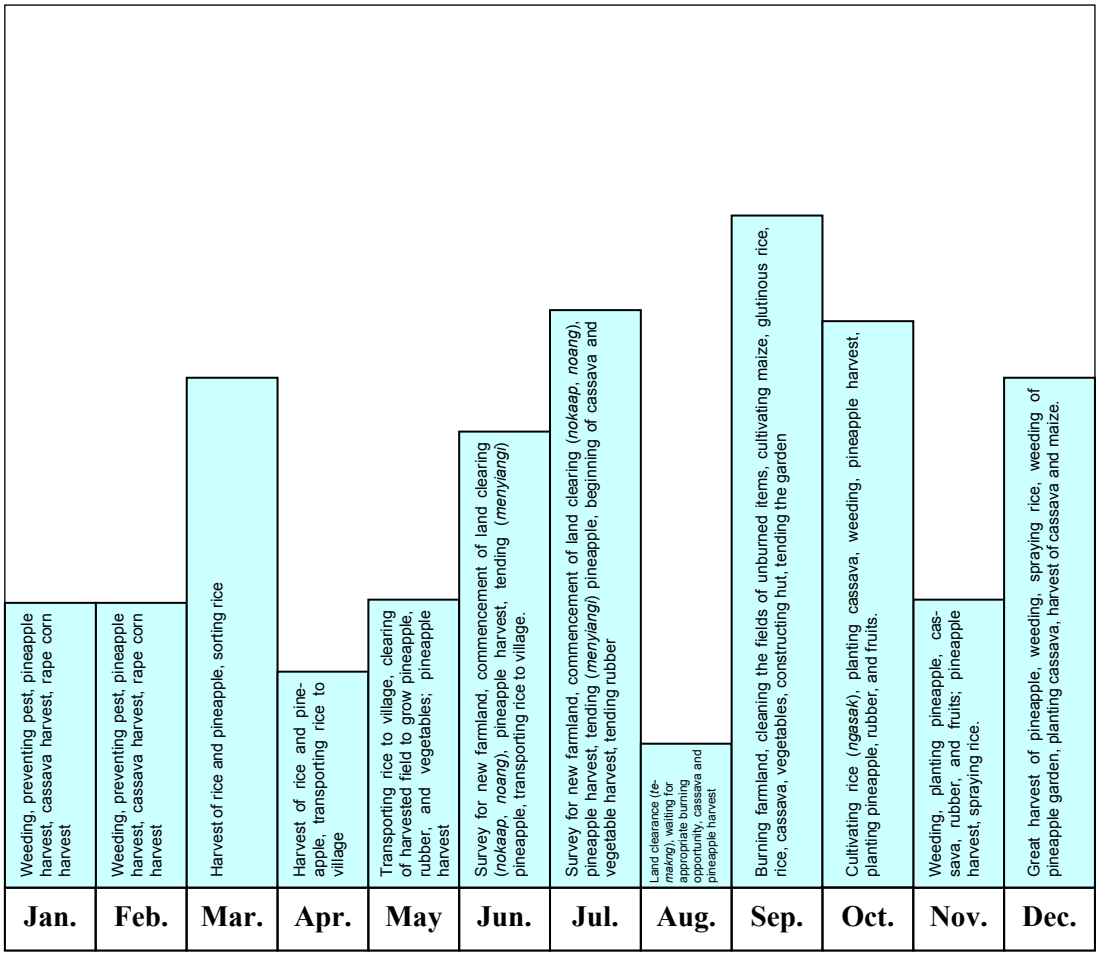


Figure 7. Seasonal calendar of agricultural activities in Tanjung Jan

5.2. The Village Government and Customary Institution

The formal structure of the village government is similar with the one in Muara Jawa' (see Chapter 5). It is therefore not necessary to explain it again here, but basically the community is divided into three RTs and the RT heads are entitled to attend village meetings.

The structure and function of the customary institution in Tanjung Jan is also similar with the one in Muara Jawa'. The *Adat* leaders are entitled to attend village meetings while the *Adat* itself has only a marginal role in village-wide decision-making. The *Adat* is not a powerful institution and in many cases it cannot compel people to observe *Adat* law.

5.3. Social Relations of Production

The power structure of the community in Tanjung Jan is relatively egalitarian, in the sense that there is no absolute power that exploits other members of the community. Our analysis on socio-economic status (SES) through a wealth ranking exercise divided the community into three SES's (Figure 9). Unlike in Muara Jawa', the Tanjung Jan community is well off. The percentage of people of the lowest rank SES is smaller than in Muara Jawa'. The higher-ranking SES's are not made up of people who wield absolute control of resources – access to natural resources is relatively equal across the community, though of course with some differences with regard to access to capital. Traditionally the people were swidden cultivators, with a more recent, gradual shift towards more stable forms of agriculture focusing on the cultivation of pineapple.

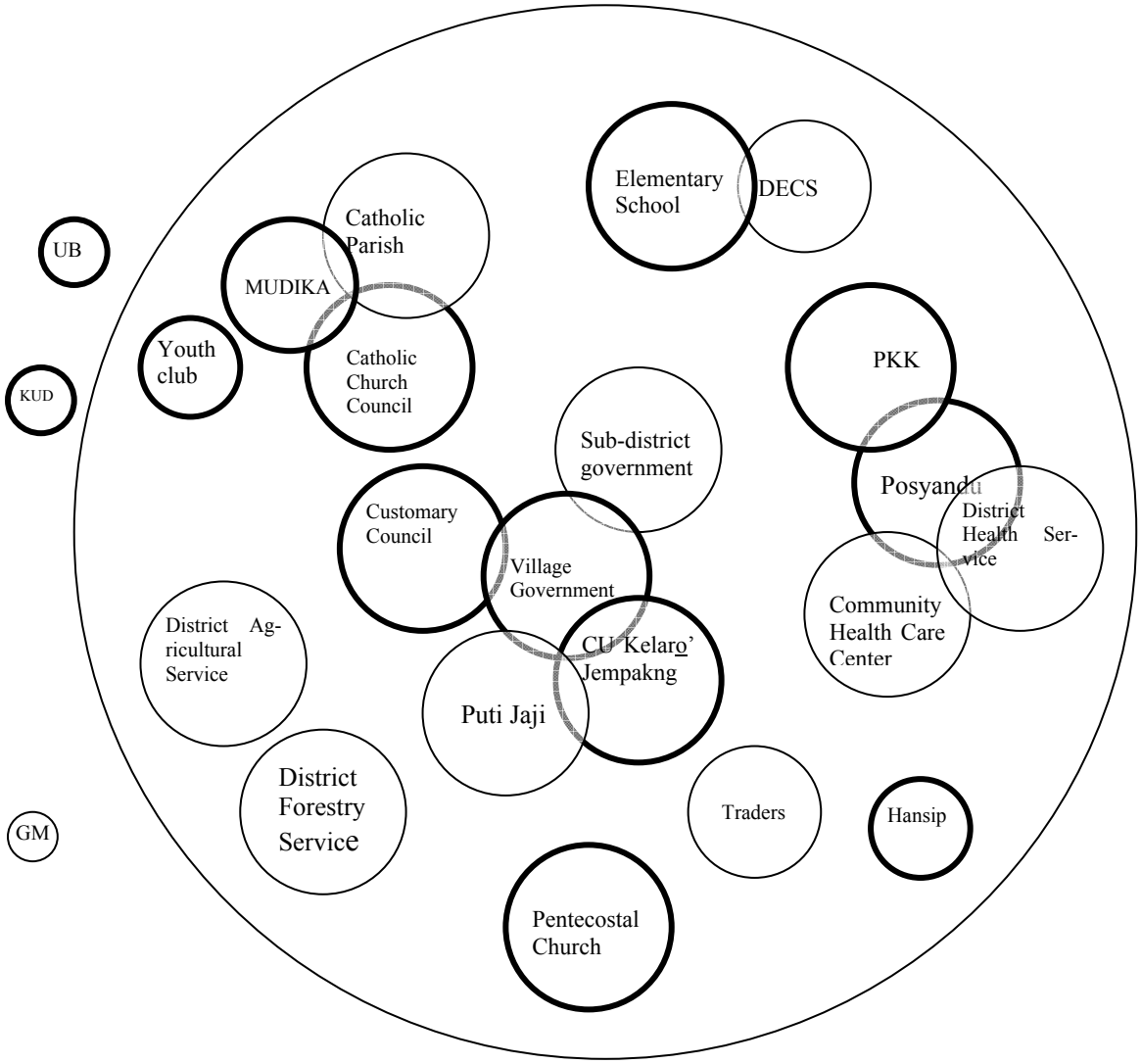
Box 2. List of Internal and External Institutions in Tanjung Jan

Internal institutions/organizations:

- Pemerintahan Desa: Village Government.
- Lembaga Adat: Customary Institution.
- PKK (Pendidikan Kesejahtarean Keluarga, Familiy Welfare Education): Women's Group.
- Karang Taruna: Youth Club.
- Mudika (Muda Mudi Katolik): Catholic Youth Club.
- Dewan Stasi: Local Council of Catholic Church.
- KUD Taka' Rama': Village Cooperative Taka' Rama'.
- UB (Usaha bersama): (literally, "joint effort") Cooperative.
- CU (Credit Union) Kelaro' Jempakng.
- Posyandu (Pos Pelayanan Terpadu): Integrated Service for Children and Infants.
- Elementary school.
- Hansip (Civil Guardian – Security).
- Pusban (Puskesmas Pembantu): the Community Health Care Center Support.
- Pentecostal Church.

External Institutions/organizations:

- Puti Jaji, an NGO.
- PT. Gelora Mahapala (GM), oil palm company.
- Catholic Parish of Tanjung Isuy.
- Sub-district government of Jempang.
- District Education Service (DEdS).
- District Health Service (DHS).
- District Forestry Service (DFS).
- District Agricultural Service (DAS).
- Traders.



Legend:

- Circle size indicates the intimacy of the organization-community relationship: large=close; small=far.
- Thick solid line: internal organization.
- Thin line: external organization.
- Overlapping circles indicate a close relationship between those organizations.
- A circle outside the main circle indicates an organization of little importance to the community.
- GM: Gelora Mahapala, oil palm company.
- UB: Usaha Bersama and KUD: Koperasi Unit Desa - cooperatives.
- CU: Credit Union.

Figure 8. Venn Diagram of institutional relationships in Tanjung Jan

In traditional swidden cultivation, the production system is more collaborative and people never produce for mass consumption; they produce simply for subsistence. This collaborative work ethic is called *pelo* or *pelo jerab*. This is usually applied during the land clearance, planting, weeding, and harvesting stages of the process. Nowadays, some people sell their labor by working for swidden farms and pineapple plantations. Many people, particularly owners of motorcycles, have sold their labor to transport pineapples to neighboring villages as well. However, these people are not necessary exploited, because their SES is not drastically different from that of their employers.

Thus, despite the transition from swidden cultivation to the stable production of pineapple for sale at market, the social relations of production in the community remain relatively egalitarian.

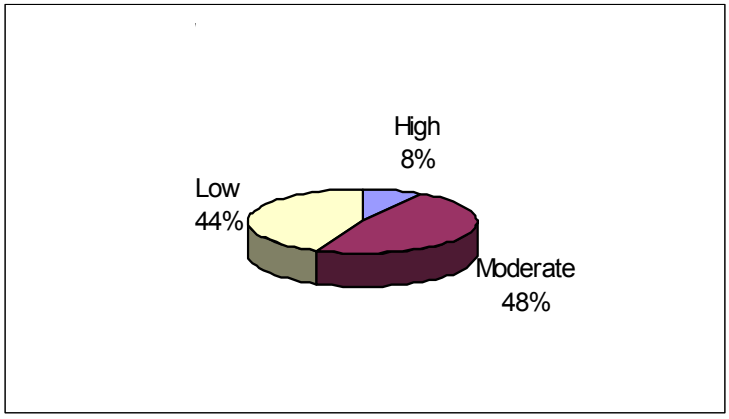


Figure 9. Wealth distribution in Tanjung Jan community

5.4. Community Decision-Making Mechanism

1) Formal Structure of Decision-Making

The formal structure for decision-making in Tanjung Jan is similar to that of the community in Muara Jawa'. It involves the village government, heads of the neighborhood association, and the customary leaders. In other words, it involves all representatives of the community.

A village parliament (VRB) system has been adopted by the village, as stipulated by the national decentralization law. However, its effect on the community could not be evaluated in our study because it was only at a very early stage of development at the time of our fieldwork in 2002.

2) Decision-Making in Practice

We analyzed the process of decision-making in nine development projects and two non-development activities, all of which involve the whole community. Our analysis was directed at revealing the degree of community participation. In practice, public decision-making has been of a democratic and participatory nature.

Five projects were initiated by the district government of Kutai (before it was split into three districts in 1999, one of which became West Kutai District). These were a high-yield rubber plantation project, two reforestation projects and two livestock projects. Four of the projects were unsuccessful and one project (the reforestation program of 2000) cannot be evaluated yet. According to local people, these failures are owing to the absence of consistent guidance and support from the government. Another reason is probably the fact that only the government initiated and planned the project. Moreover, there was unfair selection of the project beneficiaries: village officials singled out people from their own groups and their relatives for benefit. It was also obvious that the people's participation in the reforestation projects and other projects was not based on a genuine interest in reforestation, but mainly because the government had asked them to cooperate and because there was money offered to do so.

There was great community-wide participation in a potable water project and two other non-project activities. The potable water project addressed the core of the community's problem with regards to sanitation, and its benefits were really felt by the whole community. Therefore the majority of the people worked voluntarily to construct the potable water system. This was made possible with the technical support of the Dian Desa Foundation. We also noticed great community participation in a popular protest against an oil palm company, and in fighting forest fires. In fighting forest fires there was not even a prior meeting, simply the whole community participated. This indicates that when people really sense a need or are in serious danger, participation is more likely to flourish.

Construction of the two churches, however, was representative of a different phenomenon. Here participation was considered good, but it was not a community-wide activity. Thus we can also say that participation is likely to be strong when it relates to the perceived needs of a religious group.

Our assessment of the decision-making process is summarized in Table 5 and Table 6.

VI. Conclusion

6.1. Community Participation in Research

Tanjung Jan has the advantage that young people are willing to get involved in community affairs. This is different from the situation in Muara Jawa' (Chapter 5). Indeed most members of the PAR group in Tanjung Jan are young people. On the other hand, however, women are still reluctant to participate and educated people like teachers and religious leaders have not gotten involved in the process, even though they understand the activities well. What is interesting is that the village headman, and sometimes his secretary participated in meetings.

6.2. Areas for Action

We can identify potential areas for action in support of forest conservation. First of all, there is a trend in Tanjung Jan to convert fallowed forest, bush and critical lands into plantations of rubber, fruits and rattan. Already local people have cleared a piece of land for a fruit garden with the support of reforestation funds from the district government. This effort needs to be supported because it has a double function: improving the economy and sustaining the environment.

With its small territory, rapidly increasing population and the threat of possible encroachment from neighboring villages, a clear plan for land use and a concept for land delineation is deemed important in Tanjung Jan. A system to prevent further forest fires is another need that the community should address. The areas of bush and imperata grassland are prone to fire, particularly during the dry season, which recurs every year. Furthermore, conservation of the remaining forest in any form is important for the conservation of water resources. The community is in need of safe and clean water resources because during both the dry and the rainy season a supply of clean drinking water is currently a problem.

There is also a need to adapt the customary law to meet new challenges, such as potential conflict over the ownership and utilization of land and natural resources, and so on.

6.3. Potential Support for Taking Action

We noticed that improved social relations could become a great source of support from within to promote further organized action taken by the community. Moreover, the new village leadership has applied the participatory mode of making-decision. Also, the involvement of energetic young people could become a great support mechanism as well. External to the community, we noticed that an NGO has been stationed in the environs of the village for a long time and is providing necessary facilitation. As far as the government is concerned, the current district administration has been very supportive as well.

6.4. Challenges and Constraints for Taking Action

From the community's point of view, several constraints have already been listed and include extreme climate, lack of time, poor health, lack of tools and technology, lack of funds, *etc*.

In addition to these problems, our study identifies the following problems: lack of involvement of women, lack of tangible economic incentives, weak planning in collective programs, and the weakness of customary law.

Acknowledgement:

Although this report has been written by only a few people, it is the result of collaborative work between a larger number of external researchers and local members from the community of Tanjung Jan Pandan. The authors would like to express their sincere gratitude to those who have actively participated in the research work. They are Masran, Aing, Saleh, Apuk, Abraham Noah, Samlin, Ngoi, Jimmy, Benyamin, Sameon Misa, Umansyah, Erius, Milam, Murnilius, and some ladies.

Table 5. The community decision-making process in Tanjung Jan (1991-2000)

Project/activity	Initiation	Deliberation	Execution	Evaluation
1. Potable water project, 1993	Village government + community members	Village government meeting attended also by customary leader and RT heads	1. Community members worked voluntarily 2. Dian Desa Foundation provided technical support	-
3. High-yield rubber plantation, 1995	District Plantation Service of Kutai District (DPS)	DPS in collaboration with the community	Ten households involved in planting rubber without further facilitation from DPS	-
4. Reforestation project: planting *sungkai*, 1999	DPS	DPS in collaboration with the community	All households provided labor to plant the trees for daily allowance of about US$ 1.08	-
5. Reforestation: planting fruit trees, 2000	DPS	DPS in collaboration with all members of "Sungkai Jaya Group" (68 people)	All members of "Sungkai Jaya Group"	-
6. Livestock: Cow breeding, 1998	District Livestock Service of Kutai (DLS)	DLS in collaboration with village government	10 members of village government and their relatives	-
7. Livestock: Pig breeding, 2000	A group of 10 people named "Kakantn Bolupm group."	Kakatn Bolupm Group in collaboration with NGO (Puti Jaji), about 15 people	All group members	Puti Jaji together with the group members
8. Livestock: chicken breeding, 1998	DLS	DLS and staff of village government	Staff of village government	-
9. Protest demonstration against oil palm company: blockading the road, 1997	The community	Consensus within the community: elders, village government, security staff, community members	Whole community: men and women, old and young.	-
10. Fighting forest fires, 1997	The community	Community members (men and women) spontaneously rushed to the site of the fire without prior village meeting	Whole community worked for more than 9 days	-
11. Construction of Catholic Church, 1995-1999	Catholic people in collaboration with the priest	Catholic people and the priest	1. Fund: contribution from the people 2. Construction: the people worked together to provide roof, paint, *etc*. 3. Paid labor for more technical works.	Lay people and priest
12. Construction of the Pentecostal Church, 1991	The Pentecostal people and their priest	The Pentecostal people and their priest	1. Fund: self-sufficient 2. Construction work undertaken by the people 3. Technical work undertaken by paid laborers	-

Table 6. Matrix of evaluation of community participation in village activities and development projects in Tanjung Jan

	Informing	Information gathering	Consulta-tion	Conciliation	Partnership	Self-mobiliza-tion
Initiation	✹	✹	Δ			
Deliberation		Δ	Δ	✹	✹	
Execution			Δ	Δ	Δ	
Evaluation	Δ					

Legend: ✹ strong; Δ weak

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Chapter 7.

The Community of Teluk Pandan and Issues of Forest Management in Kutai National Park

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I. General Description

Teluk Pandan is a huge village almost 30 kilometers in length and about 5-8 kilometers broad. It stretches along the Bontang-Sangatta Road about 100 kilometers north of the provincial city of Samarinda. In its early phase, the village was only accessible by river and sea transportation, via the "fertilizer town" of Bontang. However, since the Bontang-Sangatta road was constructed in 1994, the area has become very accessible. The road connects the area to Bontang, and Samarinda to the South, to the town of Sangatta, Muara Wahau, and to Berau District to the North.

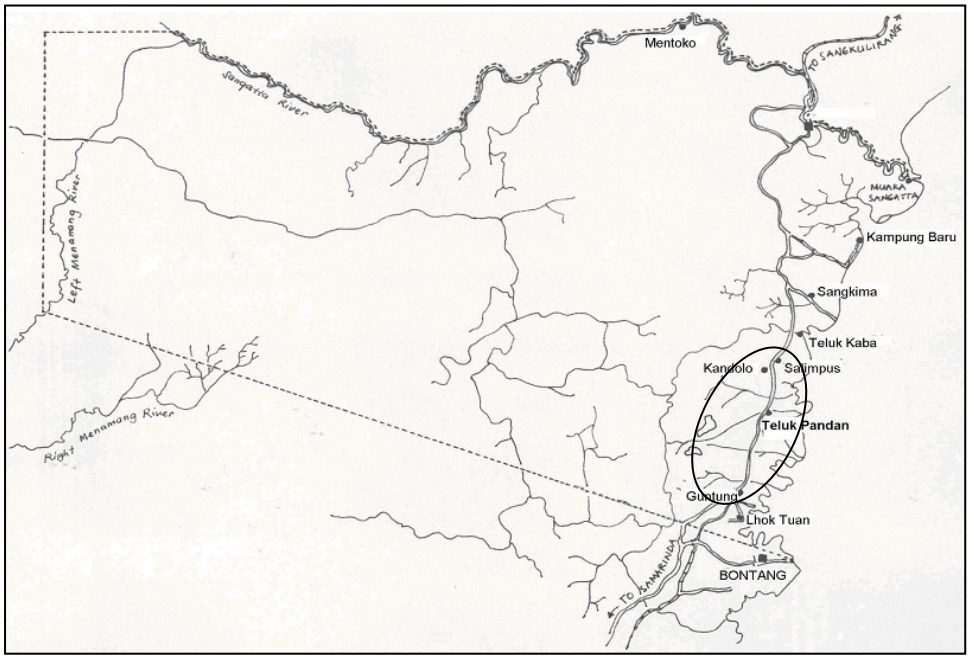
Its population is mainly made up of Buginese people, who began migrating into the area from South Sulawesi in the late 1950s. The village has been divided into seven groups of residence, called *dusun*, based on residential clusters. These are Dusun Ulu, Dusun Maranggas, Dusun Pelabuhan, Dusun Dua Boccoe, Dusun Salimpus, Dusun Kandolo and Dusun Sungai Redang. The total population as of 2001 according to the official village record was 4,623 people, with 1,002 households, 2,492 males and 2131 females. These figures make it clear that the village is quite big. The main livelihood of people living in Teluk Pandan is farming, particularly cultivation of cocoa, banana and rice. Several people are also involved in logging from which they gain an additional income.

Table 1. Population distribution of Teluk Pandan village

Dusun	Size of Population	Number of households	Male	Female
Ulu	667	195	390	277
Maranggas	1005	192	539	466
Pelabuhan	891	186	457	434
Dua Boccoe	446	53	225	221
Salimpus	786	188	447	339
Kandolo	579	132	293	286
Sei Redang	249	56	141	108
Total	4623	1002	2492	2131

Source: Village office

The village is located at the heart of the Kutai National Park (KNP). Since the official designation of the surrounding forest as a national park in 1983, the people have been in serious conflict with the KNP authorities. Until a new policy from the government of East Kutai District proposed to enclave the village area from the KNP, the conflict had been very intense, to the extent that local people were very suspicious of any outsiders, particularly government officials.



Source: Kabupaten Kutai, 1993

Figure 1. Map of Kutai National Park showing the location of Teluk Pandan

II. Village Territory, Micro Ecological Zones and Resources

2.1. Dispute Over Territory

Since it is located in the area formally declared as Kutai National Park, the area now claimed as village territory is still being disputed by the community and the government. The long standing dispute is to be solved by making an "enclave" of the village area, but the two parties disagree on where to put the boundary. Furthermore, there is a disagreement between central government and the district government of East Kutai. Before the dispute is settled it is hard to identify precisely which forest zones will be managed by whom.

The PAR team identified the following problems in the enclave issue:

1) The size of the enclave: according to the KNP Office, a fair land allocation for each household is 3 hectares plus 1000 hectares for public facility. Thus the total land allocation for 1002 households is 3,006 hectares, and the total area for the whole village is 4,006 hectares. This can be increased to a maximum of 5000 hectares, according to the KNP authorities. The current temporary enclave land area is 8,697 hectares, but the community has claimed 13,000 hectares. Thus, the gap between the expectations of the two parties is large.
2) Where to draw the boundary: since the total land area has not been agreed upon, it is difficult to draw a boundary. Moreover, there is another problem because the KNP Office wants to exclude the area west of the Bontang-Sangatta road from the enclave and include the seashore rich in mangrove forest, while the community agrees to the inclusion of the seashore but refuses to handover the western area.
3) There are different policies between the central government (Ministry of Forestry) and Local Government. First, the MOF had declared the area as a conservation area, but the East Kalimantan Provincial government declared three migrant residential areas within the conservation area as formal villages without delineating clear boundaries. Second, for the MOF, "enclave" simply means zoning the KNP. That is, the Biodiversity Conservation Act no. 5 of 1990 stipulates that there is no enclave, but that there are zones. And, according to the land use map for KNP issued by Kutai District (Rencana, 1993), the disputed territory belongs to the intensive use zone. Thus, the enclave is a part of KNP but constitutes a zone that can be used by the community. On the other hand, the local government of East Kutai no longer considers the "enclave" as part of the KNP.

Source: Pemda Tingkat II Kutai, 1993

Figure 2. Map of the planned enclave of Teluk Pandan

These problems in fact make settlement of the dispute very difficult. The East Kutai District government has decided to fence off the enclave area, which includes four villages (Sangatta Selatan, Singageweh, Sangkima, and Teluk Pandan). The perimeter fence will measure 97,889 meters, and the fencing work will involve 40 private companies. The KNP Office expects that some external party may play a role as mediator.

Since the land is still under dispute, where we refer to the 'village territory' (or 'village land' or 'area') from this point onward in this report, we simply mean the area claimed by the community, regardless of the government's claims.

2.2. The Claimed Land and Resources

The history of Teluk Pandan makes it unique compared with the other villages under study in West Kutai Districts (Chapter 2 to Chapter 6). There is no communal forest because when the migrants arrived in the area, they distributed the claimed forestland amongst each of the new households. Now what they have is individual or household property, with the whole of the surrounding territory having been claimed by the people. This resulted in the fact that each household holds responsibility over its own land and the decision to use the land is dependent on the household. The following paragraphs provide details of village resources as identified by a focus group of 14 people.

Firstly, the village has rivers which provide water for daily consumption and transportation. The quality of the river is not good for potable water, though the river actually provides enough material to develop a potable water project. The river is also a potential resource for irrigation. An irrigation project has been planned with the support from the East Kutai Agricultural Service (EKAS). A dam is being constructed. There are also three lakes, one large and two small. These lakes are potential resources for breeding fish. There are different opinions among the people regarding the ownership of the lakes. One informant said that the lakes are individually owned and that they have been claimed from the beginning. Others said that the lakes fall under the category of common property. In reality, however, private individuals own the lakes, in particular the small lakes. Nonetheless, the lakes – particularly the large one – could be developed for tourism, but problems of access and ownership should be settled first.

Table 2. Natural resources found in Teluk Pandan and their ownership.

Resources	Type of ownership
1. River	Common
2. Minerals	Private; need official permit to collect
3. Sand	Private; need official permit to collect
4. Lake	Large: common Small: private/small group, though public may be granted access to it. This view is currently under debate.
5. Coal	Common
6. Oil	Common
7. Forest (bush)	Private
8. Agricultural land	Private
9. Sea	Common
10. Mangrove	Common
11. Birds nest	-
12. Aloe wood	-
13. Marshland	Common
14. Water spring	Common
15. Salted spring	-
16. Plantation	Private

Mangrove forests are another important resource, because of the component trees themselves and because of the potential they provide for fishery development. If the area of mangrove adjacent to Teluk Pandan is included in the enclave, the villagers would want to distribute it as individual property. The Mangrove forest can also be developed for eco-tourism, but it will be difficult to do so if it is distributed as individual property. Problems of ownership should be settled first.

There are mineral deposits and sands that are valuable for building and construction also in the area. They are located on individually-owned land, but the rights to their use are not clear. They constitute mining materials and therefore the State may have a legal claim to them. In reality, however, the local people believe that those who own the land should have the primary right to use them.

Forest has vanished from the supposed 'enclave'. The KNP lies outside of the enclave, but large parts of this, too, have been destroyed by the severe forest fires of 1997/8. This situation makes it clear that questions regarding resource use and planning in the area should focus less on forest management and more on integrated land management. However, the local people have shown an indication that they are keen to secure even a limited access to KNP. One of the objectives of the present study has been to find ways in which the people may contribute to the management of KNP. As the map of KNP shows that the area around Teluk Pandan is actually designated as an "intensive use zone", access for local people seems possible. The fencing, however, will make it impossible for the people to gain access to KNP or to participate in its management.

Given that the key issue is one of land management, it is appropriate here to mention the following associated economic factors and opportunities: rice farming is a staple livelihood in Teluk Pandan; a dam and irrigation system is being constructed around the Meranggas River; mice have become a serious pest for rice production and storage; plantations of cocoa and banana are very common and popular; cocoa plantations, however, have suffered from outbreaks of diseases and the support and guidance provided by the government is insufficient; livestock farming is another alternative; there is a huge chicken farm in the village, but this is owned by a rich person from Bontang, and not by local people.

III. History

3.1. Village History Relating to Land Use and Forests

The history of Teluk Pandan is basically a history of human interaction with the land and surrounding forest. It began in 1957 when several Buginese migrant families started to clear the dense primary forest for agriculture. The influx of migrants peaked in the 1970s though it continued until very recently. People cleared the primary forest for plantations and wetland agriculture. In the late 1970s many of them engaged in logging activities by working for a commercial logging company. In 1972 the area was struck by heavy drought, and agricultural harvests failed. Luckily, however, the people had kept enough food supply from the previous year. They also had alternative sources of food in the form of maize, banana and cassava.

The situation for local people became much tougher in 1983 after the official inauguration of the KNP. Although the area of KNP had been designated as a protected area in 1936 under the Dutch administration, the migrants living in the area were unaware of its official status at that time. Only in 1982 were they informed by the Director-General of Nature and Forest Protection, the Ministry of Forestry, that the place where they lived was actually a protected area. Indeed, only after 1983 were local people subject to increasingly tight restrictions imposed by the government. Intense conflict between the people and the KNP authorities were reported in several group meetings during the course of the PAR conducted as part of the present study.

A turning point came in 1994 when the newly constructed feeder road connecting the towns of Bontang and Sangatta (hereafter called the Bontang-Sangatta Road/BSR) relieved the village's isolation and made it quite accessible to the outside world. As a result of the construction of this road, access to the major cities of Samarinda, Balikpapan and Tenggarong to the South and Muara Wahau, Berau District and Bulungan District to the North has become easier. This in turn has acted as an additional 'pulling factor' attracting more migrants to the area, regardless of the fact that the area has officially become a national park. Many people who had lived in coastal areas have moved nearer to the BSR because over land transportation and access by road have become much more convenient than routes over the sea. This is likely to be impacting on forest cover in the area and compounding the land clearance that may have resulted since the forest fires of 1997/98.

The community at Teluk Pandan was only granted official village status after 40 years of living in the area (i.e. in 1998). With this status, the community has more rights and opportunities to manage itself and villagers are no longer worried of being pushed out from the location. The planned enclave program will make their status even more stable, though access to KNP (primary forest) will certainly be restricted. But the villagers are relieved that it is at least officially recognized as a village now.

The history of Teluk Pandan shows that despite the status of KNP as a conservation area, the community has continued to grow, strengthening its status as a formal village and aggressively developing infrastructure. Now it is at the point of no return, where the existence and status of the village must be recognized and its relationship with the KNP has to be planned in order protect both the people's livelihood and the sustainability of the forest.

Box 1. Timeline of Teluk Pandan

1957	The first wave of migration of Buginese people to the area of Teluk Pandan. The first to arrive were Daeng Mappile, Bakri, Hasan (Janggo), Talome (Sandro), Supu, Daeng Massige, Daeng Masserang, Salindri. These people were Buginese from Bone, South Sulawesi. They had first moved to Sekatub (near Bontang) before coming to Teluk Pandan. The area was characterized by pristine forest and there were no native inhabitants.
1958	The first migrants brought their families and relatives to start living in the area. Land was distributed among the settlers. Each household received 35 x 250 *depa* (fathoms).
1960	Cholera epidemics. No medical service; many people died.
1961	The community was under the administration of Bontang. This year Teluk Pandan became a neighborhood unit, called Rukun Tetangga (RT). Daeng Masserang became the first RT head. Agriculture was well developed.
1970	"*Banjir kap*" logging. One enterprise was responsible for cutting trees in the area (CV. Remaja under the leadership of A. Mahmud). Many people (men) worked for this *banjir kap*.
1972	Typhoon and a long drought struck. Rice harvests failed, but people still have rice from the previous year. Alternative crops were maize, cassava and banana.
1973	Teluk Pandan was granted the status of "semi-village" under the administration of Bontang Baru village, Bontang Sub-district. Daeng Masserang was appointed as leader of the semi-village. This year rice production was abundant and much of it sold to Bontang.
1974	Mr. H. Musyafir was told of an area called Kandolo in South Sulawesi by *banjir kap* entrepreneurs. H. Musyafir sent three people, Hatse', Nawise' and Ngendre, to have a look at Kandolo. These three people went together with Rasyid, Wa' Manne, Sudding, Tile, and H. Bennu to look at Kandolo and there they cleared new land. The following year (1975), Hatse' went back to South Sulawesi and told H. Musyafir that the land had been prepared. Other people moved to Kandolo, but H. Musyafir stayed in Teluk Pandan.

Box 1. Continued

1977	Andi Mappincara came to the area and distributed land amongst 80 households. Seventy of those households were newcomers. Clearance of new forest increased sharply, but the head of Bontang Sub-district said that it was all right. There were no restrictions imposed by the government. Kandolo became a part of Sangkima village administration after negotiation with the head of Sangkima, Untung Surapati. Community life was arranged according to the traditional norms of the Buginese.
1978	Untung Surapati delegated all community administration to H. Musyafir. Istigfar Mosque was built in Teluk Pandan.
1979	Kandolo was brought under the administration of Tanjung Laut village because acccess to this village was easier than to Sangkima. Transportation was available only by river and sea.
1980	Abundant harvests of rice, maize and banana. Malaria epidemics struck. The only access to health services was to those in Tanjung Laut. Kandolo was brought under the administration of Bontang Kuala village. New RT (Matise' head) and Dusun (A. Lannaco head).
1982	Long droughts resulted in food crisis. Many people sought temporary jobs in Bontang, most with Pupuk Kaltim, the largest fertilizer factory in the province. Staff of environmental protection from the Ministry of Forestry entered the area and told the people that Kandolo belonged to a protected area (*suaka margasatwa*). The Kutai National Park was officially designated this year. Construction of An-Nur Mosque.
1983	The official inauguration of KNP brought with it new restrictions on clearing primary forest. Langade mosque was built.
1984	KNP authorities built a control post at Muara Salimpus with a poster of orangutan.
1985	PPA staff (KNP) checked every household to find if they had protected deer meat in the kitchen pans and to confiscate agricultural tools that can be used to cut trees.
1986	Total restriction of access to KNP for local people. The PPA team held a joint meeting with the people of Kandolo and Sangkima to inform them about KNP. A. Lannaco (head of Dusun Kandolo) returned to South Sulawesi and was replaced by Manna. A supporting elementary school was established in Kandolo as a filial of Bontang Kuala elementary school.
1987	The mosque of Salimpus was transferred to Kandolo.
1991	A sub-unit office of KNP was established in Teluk Pandan.
1992	Joint meeting between village community and KNP, the Provincial Forest Service, and the Agrarian Provincial Service took place in Kandolo. The people were asked to move out of the KNP area. They responded by saying that they would move out if the government paid compensation for their claimed land. The head of PPA asked the people to protect the forest from fire and from new clearance by newcomers. Because of drought large-scale forest fires flared in Teluk Kaba. Several hundreds of people strove to extinguish the fire for one week.
1993	Teluk Pandan became a "connecting village" with Sangatta Village. Village head of Sanggata was Abdul Hamid.
1994	Teluk Pandan received the status of "preparatory village" with H.M. Rustam Hs. as the head. Kandolo was split into two dusuns: Kandolo and Salimpus. Teluk Pandan was divided into four units: Teluk Pandan Ulu, Teluk Pandan Ilir, Dua Boccoe, and Maranggas. The houses of H. Kallang and H. Daeng Masserang were used as temporary village offices.
	Construction of As-Shabirin Mosque in Teluk Pandan. KNP unit office allowed the people to cut timber up to a limit of 15 m^3 for construction of the mosque; but then it confiscated the wood. Serious conflict exploded between the KNP officials and the people under the leadership of H. Baco Rombe. After the conflict the KNP office eased the restrictions. This was taken as a new opportunity by the people and new migrants to open more forest within the KNP.
	Feeder road connecting Bontang and Sangatta was made accessible for four-wheel drive vehicles.

Box 1. Continued

1995	A meeting was held again between KNP staff and local people together with the Department of Transmigration. Local people were asked to move out to Taly Sayan in Berau District. The people agreed to move out if they got compensation for their land and other properties. But the government refused to compensate.
1996	Small, unpaved road was constructed from Kandolo to the Bontang-Sangatta Road. KNP office put more pressure on the village leaders and the people to prevent them from undertaking new construction projects. "Joint operation" was implemented.
1997	Preparation for Teluk Pandan to get a full village status. Meeting between local people and Muspida II Bontang (Muspida are high-level officials of the Government, the military and the Police) to discuss issues of land distribution and ownership. The meeting failed to reach agreement: the community asked for the release of three kilometers to the interior from the Bontang-Sangatta Road which was declined by the Muspida II.
1998	Drought and devastating forest fires destroyed large areas of the KNP. On August 10th GTZ-IFF held a training session for the community on how to extinguish fire. Teluk Pandan received full village status. Andi Mappasereng was elected as village head. The Kandolo Elementary School building was enlarged. PT. Indominco (coal mining company) contributed a zinc roof for the school. The community received 20,000 seeds of cocoa from the government of East Kutai and BIKAL (an NGO). Rice seedlings were distributed as aid from PKM, an NGO in Jakarta. Meanwhile, the KNP office threatened to fine IDR 5,000,000 ($US 500) anyone who dared to construct a new house.
1999	Paving of Bontang-Sangatta Road resulted in better access to the cities of Bontang and Sangatta. Meanwhile the state electric company (PLN) laid an electric cable across the village, but the people were not allowed access to electricity by the KNP office. On the other hand, the KNP office planned to construct a new public elementary school (SDN 004). This year the rice harvests failed because of mice; cocoa plantations infected with disease.
2000	Construction of elementary school building (SDN 004) with support from the government of East Kutai District. People received 2.5 tons of rice seedlings from the government. However, harvests almost entirely failed again because of mice attacks.
2001	Meanwhile the government (KNP office) suggested a reforestation project for the burned KNP area by planting fruit trees (mainly durian, rambutan, *etc*.). Local people rejected the offer because they suspected the KNP office would claim what had planted. As much as 72,000 seeds of cocoa were given as aid to the people from the Provincial Agricultural Service. The elementary school was inaugurated, and a community health service constructed. Construction of a village office also began. KPC planned to give cocoa seeds to the people. Note: In the last three years many new migrants have come and claimed new areas within the area of the KNP along side the BSR.

3. 2. Forest Ecological Trends

This section presents and analyzes ecological and forest-related issues and trends. It incorporates information on the population, the clearance of primary forest, agricultural activities, and degraded forest land. The focus group with whom the authors discussed these issues was unable to provide exact figures. Therefore, we have used the technique of multiplied comparison. This works in the following way: the size of the population in the first year (in this case 300 people in 1960) is considered as equivalent to 1; if the population increases by a factor of, for instance, 2 over the next five years, then the population by 1965 is twice as high as it was in 1960. This calculation applies to every item of the following trend lines.

First we see a rapid increase in population size, from 300 people in 1960 to around 4000 people in 2000. This increase is followed by an increase in land clearance for residence and agriculture (from 132 hectares in 1960 to 8634 hectares in 2000). Meanwhile, we can also identify an increase in the proportion of degraded land, from 3% to 39%, as a component of the total cleared land. However, discussions with the focus group on the meaning of degraded land suggested that to local people there is actually no such thing as degraded land; there is only "sleeping land". It is the people who are degraded because they cannot manage the land well. These trends reveal how the primary protected forest has been converted for human use. Please refer to Table 3.

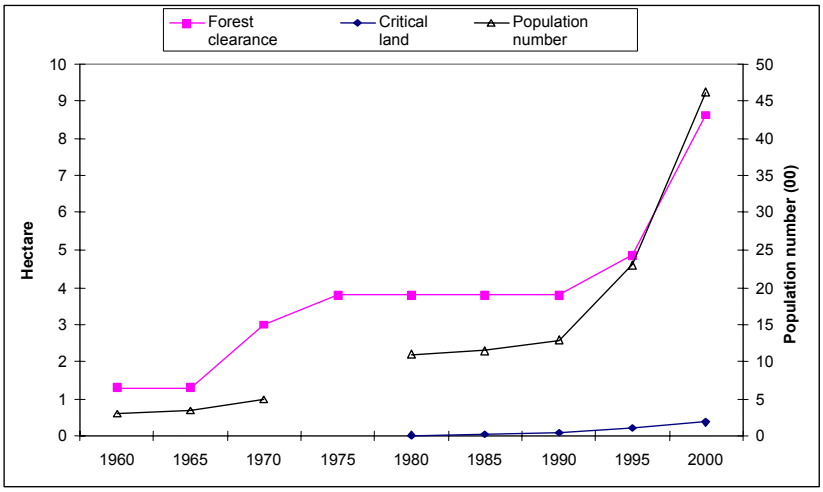


Figure 3. Trends in forest clearance and land degradation, and population increase in Teluk Pandan, 1960-2000.

We also asked to what extent the people have benefited from the land conversion. Since most of the land is used for agriculture, we analyzed trends in agricultural production from 1960 to 2000. Our data shows that production of banana had increased by 250% by 2000, as compared with 1960. Production of cocoa started in 1980, peaked in the 1980s and then decreased to just under 2 tons in 2000. The decrease attributed to weather conditions and disease. Production of rice has also been down since the 1990s because of bad weather, which has resulted in flooding and drought, compounded by the fact that there is no irrigation. In 2000 the level of rice production was very minimal, almost similar with that in the 1960s. On the other hand, we can also notice significant increases in fish, coconut, maize, citrus and coconut production. However, these products are not of major importance for the people of Teluk Pandan.

Table 3. Trends in agricultural production in Teluk Pandan, 1960-2000.

	1960	1965	1970	1975	1980	1985	1990	1995	2000
Banana*)	1	1	50	100	15	200	250	300	350
Cacao (ton)					5	15	30	60	1
Coconut (ton)						1	1	2	5
Citrus (ton)							2	2	
Rice (ton)	2	4	9	11	15	15	15	5	3
Maize (ton)	1	1	1	1					11
Fish (ton)						4	10	10	15

*) Estimates of increases as percentages, i.e. 350 means a 350 % increase as compared with 1960.

IV. Views on the Forest

4.1. Definition of Forest

According to the people of Teluk Pandan 'forests' may be defined by the following characteristics: forests are areas with flora and fauna, dominated by big and small trees, and which become a vital part of human life. They may be natural (no human intervention) or man-made (planted), large or small. Under this definition, some parts of Teluk Pandan village can be considered forest.

4.2. Spirituality of Forest

Andi Mappincara told the researchers the basic Buginese forestry philosophy. As the Buginese people have been traditionally Islamic, the philosophy is based on their Islamic creed or spiritual insight, known as *Tasawuf*. The following saying sums up the essence of their forest philosophy.

Ri pancaji Alla Ta'ala.
Umma' na Nabi Muhammad,
Ko de' gaga kaju de, nadi ulle tuo.
Pada to aju de' na ullei tuo ko de' gaga tau.

Labilla asanna rilangi'e.
Nanno rilino iyasangngi langnge'.

Nasaba' mallanga'I riyolo nappa maloppo.

This may be loosely translated as follows:

Forest is created by God.
The people of the Prophet Muhammad can only live if there is wood.
So wood cannot live without humans.

In the "Sky" (heaven) forest is called "*labilla*."
When brought down to earth, it is called "*langngade*,"
Because it grows and becomes big.

Note: "*Labilla*" literally means thunderbolt or gleam, and symbolizes the creation of the universe. "Langngade" means seed or early beginning.

This philosophy clearly emphasizes the necessity for human beings and nature (i.e. the forest) to live in harmony. It has a strong religious foundation since it arises from the very belief of their religious life, although *Tasawuf* is considered as being very local. It is not clear whether or not the majority of the Islamic Buginese of Teluk Pandan share the same view. Hence we will make a more in-depth exploration of individual views with regards to forests in the following section.

4.3. The Importance of Forests

1) Collection and Utilization of Forest Products

Although the history of Teluk Pandan is inseparable from the surrounding forest (indeed, it is the history of intensive forest exploitation), we did not explore in detail the collection of forest products, because of limited access to the KNP. What we know from the people is that until recently the people collected wood (timber) from the KNP for constructing houses and mosques. There were also unconfirmed allegations that some people still collect wood illegally from the national park. Once the fencing is erected around the park (which had not been completed during the time of the fieldwork for this report), it is not clear how the people can gain access to the forest.

Table 4. Views on forest values as perceived by men and women in Teluk Pandan.

Men's perspective		Women's perspective	
PWR score	**Forest function**	**PWR score**	**Forest function**
11	Conserving water resources	13	Conserving water resources, preventing erosion and mitigating floods
9	Regulating air temperature, preventing erosion, preventing floods; a source of medicine	12	Protecting fauna
7	Place for education and research	11	Source of livelihood
4	Source of construction/housing materials; protecting fauna	10	Source of construction/housing materials
3	Place for gardening, place for recreation	9	Source of oxygen
1	Source of firewood	8	Protection from sun heat and rain
0	Place for hunting	6	Preventing sea water intrusion
		5	Preventing erosion; recreation
		4	Source of fire wood; source of vegetables and fish
		3	Source of medicines
		1	Source of clothing material
		0	Place for hunting

PWR: Pair-wise ranking.

2) Forest Values as Perceived by Men and Women

We conducted separate exercises for men and women to explore their views on forest function or forest values. The two group exercises came up with the results as shown on the following tables.

The comparison made in Table 4 between men's and women's perceptions of forest values indicates that for both sexes ecological and economic values are very important. However, there is a gradation within the ecological and economic values. This means that not all ecological values are important and not all economic values are important. For both men and women, conserving water resources is rated as being of the highest importance. Regulating air temperature, preventing floods and erosion is important for men and women. But other ecological functions of forests, such as preventing erosion and intrusion of sea water, are less important for women and were not even mentioned by the men. Economic values got a low to moderate score among men, but scored high among the women. However, economic

functions of forests, for example as a source of firewood, vegetables and fish, are considered to be of moderate to low importance by both men and women.

Since the only forest in Teluk Pandan is actually the national park, perceptions of the ecological importance of the forest may be seen as a driving force for the people to contribute to the conservation of the national park. It is unlikely that they can derive any other benefits from the national park, since, as mentioned previously, their access to it has been restricted.

3) Scope/Coverage of Forest Function

We wanted to know whether the values of the forest are confined to the village level or if they extend to the larger world. We asked a group of 13 people to place corn seeds on four levels representing the scope of forest functions as perceived by them (i.e. to rate the extent to which various forest functions are felt at different geographical levels). The results of the exercise are presented in Table 5. According to the Table, the main beneficiaries from the forest are basically the villagers themselves, as well as those at a regional level. By 'regional' we mean that geographical level incorporating surrounding areas of forestland. Only few a few forest functions, such as protecting water resources, preventing soil erosion, place for training and education, eco-tourism and recreation, were perceived as been meaningful at national and global levels.

Table 5. Matrix of the scope of forest functions as perceived by the people of Teluk Pandan

Forest Functions	Village level	Regional level	National level	Global level
1. Water resource	10	10	5	2.5
2. Regulating climate/temperature	10	8	4	1
3. Preventing soil erosion	10	10	4	2
4. Source of wood/timber	5	3	1	
5. Place for gardening	10	5	1	
6. Source of fire wood	10	5	1	
7. Protecting animals	9	7	5	2
8. Place for training and education	10	9	8	8
9. Preventing air pollution	10	7	5	3
10. Place for tourism and recreation	5	7	9	10
11. Source of medicines	8	6	4	2
12. Source of livelihood	10	5	3	1
13. Source of food	9	7	4	
14. Place for hunting	5	4		
15. Preventing sea water intrusion and erosion	10	7		

These findings suggest that whatever happens to the forest in Teluk Pandan (i.e. KNP), the immediate impact will be important for the villagers and surrounding communities as well. As such, it is important that the people themselves should take responsibility to conserve the forest.

4) Forest Management

As mentioned earlier there is little incentive to conserve forest as private land, because most of the forestland has been converted to agricultural land. The important thing to do is to bring about wise land management. However, this study is about the forest, and so we need to investigate the possibility of the involvement of local people to help manage the national park.

Further investigation is necessary to analyze possible involvement of the locals in the management of KNP and mangrove forest.

V. Community Structure and Decision-Making

5.1. Relationship Among Institutions and Organizations

In Teluk Pandan, we used different techniques to produce Venn Diagrams. Figure 5 is a revised version of an earlier diagram that proved to be too confusing. The different techniques used in producing these diagrams show the flexibility of the PAR technique. In Teluk Pandan we categorized organizations into two categories: it terms of necessity (symbolized by circle size: large means very necessary and vice versa) and its closeness to the community. In Figure 5 we can see several circles, with their distance relative to one another indicating the distance from the center (core) or the inner circle. The innermost circle represents the heart or core of the community of Teluk Pandan. The weakness of this type of Venn Dia-

gram is that it does not show the relationship among organizations. It shows only the importance for and closeness to the people. It is basically the analysis of the function of the organizations.

The exercise revealed the seven most important organizations, that is, the organizations that the people need most. These are: the elementary school and junior high school (education); the Mosque Council (religion); Village Government and Village Parliament (governance); the Community Health Center (health); and the Agricultural Extension Service (PPL). Out of the seven organizations, there are two at the core of importance (education and religion); two are at the second layer (governance and health); one at the third layer (agriculture), and one at the fourth layer (Parliament). These positions reveal that the most important organizations are both important and close to the community (and so functioning well) or fulfilling their roles. Only the village parliament, probably because it is new, has not functioned well.

We listed eleven organizations with moderate importance/necessity for the community. Eight of them are at the second layer, indicating that they are considered close enough to the people. Finally, BTNK (KNP local office) is considered irrelevant and very far from the community. This is because of the history of conflict with the community, and because the office has not made any contribution to the community.

5.2. Village Government

As the village of Teluk Pandan is based on the same law as other villages in West Kutai District, the village government structure is also basically the same. The difference is that in Teluk Pandan the village government structure has more sections or departments (unlike in the West Kutai villages covered in other chapters, which have only three sections). These sections are General Affairs (*Kaur Umum*), (Development Affairs (*Kaur Pembangunan*), Government Affairs (*Kaur Pemerintahan*), Economic Affairs (*Kaur Ekonomi*), and others.

Since there is no single customary institution, the village government plays a central role in public affairs. It has an office with regular activities. In many other villages there is no regular office activity of village government. In Teluk Pandan the village office is open daily.

The village head is an active police officer, a *haj* and a man of aristocratic background. This means that he has strong power and is respected by the ordinary people. This means also that he has wide access to higher-level government officials. He can influence the decision-making of the whole village.

5.3. Customary Institutions

Unlike in the other villages of West Kutai District under study, in Teluk Pandan there is no customary institution known as the *lembaga adat*. Instead, it has strong religious institutions and strong figures of religious leadership. This is why the Mosque Council is considered one of the most important institutions in the village.

5.4. Social Relations of Production

A big difference between the community of Teluk Pandan and the other two communities is in the respective systems of production. Both Muara Jawa' and Tanjung Jan rely mainly on subsistent activities (mainly shifting cultivation) with supplementary non-subsistent work to earn money. The community of Teluk Pandan is not subsistence-based; it is a market-oriented community. It produces cocoa, banana, white pepper, and other agricultural produce to be exchanged at market. As mentioned earlier, cocoa and banana are two main products. In particular cocoa has contributed significantly to the economy. From cocoa many people have been able to go on a *haj* pilgrimage to Mecca.

Even though the production system is market-oriented, we have not noticed a structure of social relation of production as coined by Marx, where landowners oppress the laborers. In Teluk Pandan each household is a land owner. Some of them have very large pieces of land. They are self-producing farmers, meaning that they work their land themselves to produce agricultural produce that they sell themselves to the outside market. As self-producing farmers, these people do not particularly collaborate with members of the agricultural cooperatives. Strong cooperation can, however, be observed in the religious activities, such as in building the mosques.

5.5. Mechanisms for Decision-Making

1) Formal Structure of Decision-Making

Village-wide decisions are formally made through consultation between the Village Head, the Village Parliament, Heads of the Dusun, Heads of the RTs and respected elders. Decisions at each Dusun are made by each Dusun. In some cases the village Head will make a decision for a Dusun; but mostly the Dusun Head and other leaders should be consulted.

2) Decision-Making in Practice

In reality, as shown by our assessment of the decisions taken in ten development activities (Table 7), the dynamic of decision-making depends on the type the beneficiaries of the activities. If it is a government project, the decision usually comes from the government through the village head and the village head can make a detailed decision about the project. If the beneficiaries of the project are the whole community, such as in the construction of a mosque, the decision-making process involves the village head and community elders, including the head of the Dusuns and RTs. If a project or activity is dusun-specific, the decision is made by the Dusun Head in consultation with the prominent members in that Dusun.

Women do not get involved in public matters. There is a division of labor among men and women in the Buginese society. Women manage domestic works including

financial management; men do agricultural works. This division of labor makes men more exposed to public spheres. Leaders are predominantly men and they make the decision for the whole community. Some women participated in the PAR exercise, but in discussion they are mostly silent. Only when women are grouped separately from men do they express their ideas more freely.

The role of the Village Parliament could not be evaluated because at the time that the fieldwork was being conducted, the Village Parliament was only just being set up. We were also unable to evaluate decision-making in forest management because there are no case studies available.

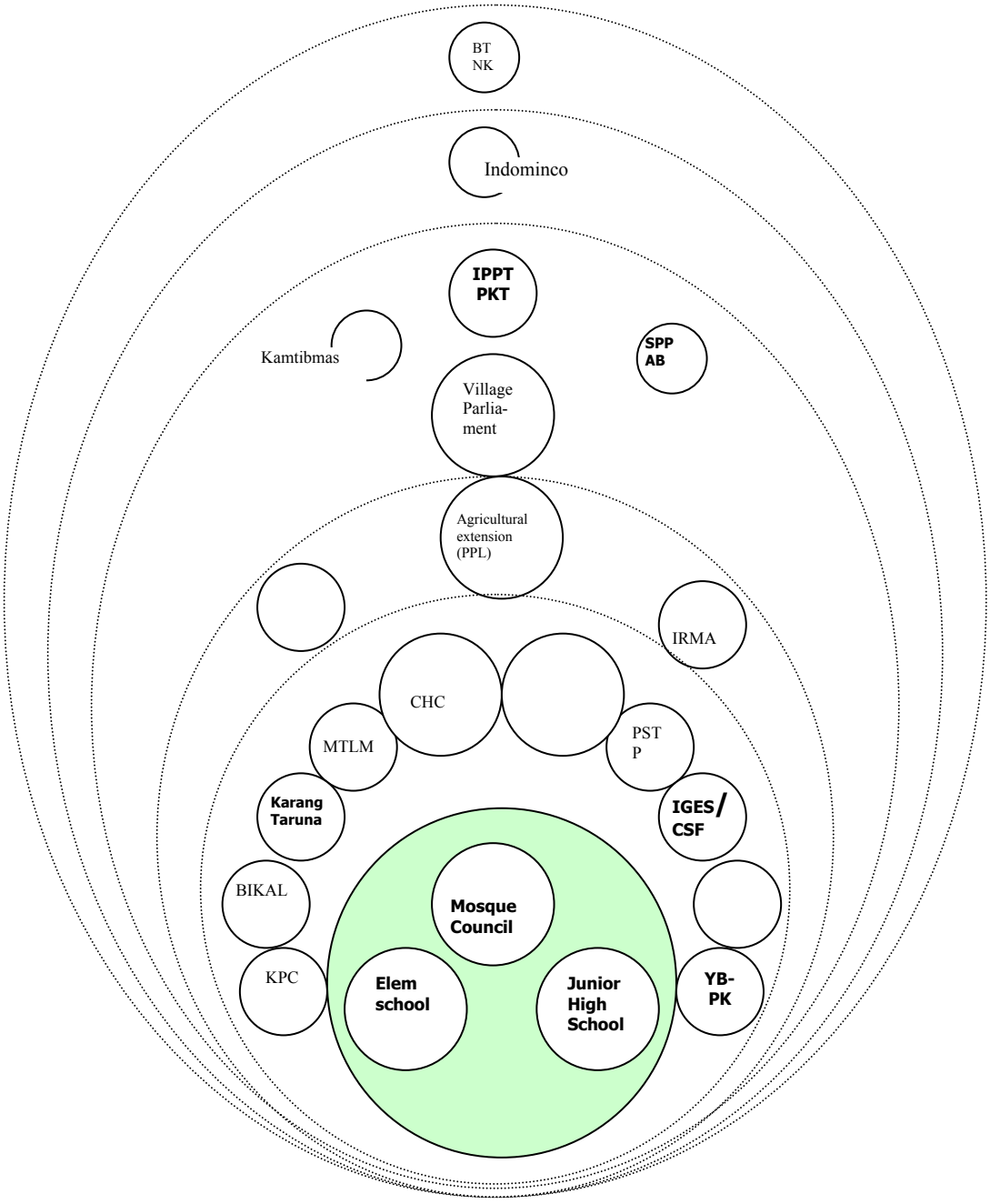


Figure 4. Venn Diagram of relationships among institutions in Teluk Pandan

Table 6. Matrix of the decision-making Process in Teluk Pandan

	Activity	Initiation	Deliberation	Execution	Evaluation
1.	Construction of road and bridge of Kandolo-Salimpus 2 km in 1993 "Pengerasan"	People of Kandolo and Salimpus Village head and community members	Dusun heads and RT heads Village head (as it's a project with support from the government)	All members of the two dusuns, men and women worked together. Project: 2002	- -
2.	Construction of Kanduung road 1 km in 1993/4. 16."Solidification"	Kanduung community Village head and community members	RT head Village head	All men Project of 2002	-
3.	Construction of Teluk Pandan-Dua Boccoe road 2 km in 1997. "Solidification"	 Village head and members of Dua Boccoe	Village head and people of Dua Boccoe Village head	+ member of Dua Boccoe community; + PT. Wijaya Karya gives contribution as requested by Baco Rombe. Project of 2002	-
4.	Construction of As-shabirin Mosque in Teluk Pandan, 1994.	H. Baco Rombe (Dusun head) and H. Rustam (preparatory village head).	Design: Abdul Muin (a community member) and mosque construction committee.	Collecting materials: community members; collecting funds: construction committee; construction work: paid persons (50%); food: female members.	Construction committee.
5.	Construction of A-Shabirin Mosque in Kandolo, 1990.	Dusun head: Manna	Construction committee consists of Pak Manna, RT heads, and community leaders.	Collecting materials: community members under leadership of M. Tahir; collecting funds: Manna and M. Tahir; construction: paid persons and community members.	Construction committee.
6.	Construction of Kindergarten building "TK-TPA Al-Qur'an", 1996.	H. Baco Rombe and H. Rustam.	H. Baco Rombe and H. Rustam with elders of Teluk Pandan.	PT. Badak (gas company) and Indominco (coal mining company).	-
7.	Construction of public hall of Kandolo and Salimpus, 1996.	H. Rustam	Heads of Kandolo, Kanduung and Salimpus	Residents of the three communities	Community elders and members (project not finished because of lack of funding).
8.	Construction of Salimpus elementary school, 2000.	Residents of Salimpus and kandolo.	Members of the two communities and schoolmaster.	Members of the two communities; Indominco constributed roof.	Community members.
9.	Construction of Langade-Salanakan road, 1 km, 1999.	H. Baco Rombe and Burhanudin.	H. Baco Rombe and Burhanudin.	Residents of Langngade and Salanakan. They worked for one week.	-
10.	Construction of Al-Jama'ah Mosque in Kandolo Luar.	Farmers Group "Karya Berkembang."	Manna and A. Lanacong.	Residents of Kandolo Luar (construction yet to be completed).	-

VI. Conclusion

The community of Teluk Pandan has grown in an area designated for conservation called KNP. The history of Teluk Pandan is characterized by exploitation of forest resources and conversion of forestland for agricultural purposes and residential use. No wonder that there have been intense conflicts between the community and the authority of the KNP who want to protect the forest from exploitation.

The village history also shows that the community has reached the status of formal village. This means that their existence is recognized by the state. They are there and should be considered as a part of the solution to the better management of the national park. The mistake that the government made in the past is that it tried to exclude the community from the solution and even to remove them from the area. As the community has to be part of the solution, a framework for their involvement is necessary.

The village economy is not dependent on the forest, but on agriculture. Agricultural land is owned by individual households. From an economic perspective, the incentive to take part in the management of KNP seems to be low. However, the people want to help manage the KNP forest if they are allowed to do so. They also welcome the fencing at the border with the national park because it gives clear line representing what is allowed and what is not allowed.

The size of the community may become a problem for coordination. It is too large as a village. For reasons of efficiency, the village needs to be split into several smaller separate villages. The positive thing is that the breakdown of the village will simplify the mechanism of decision-making. However, on the other hand, more villages will attract more immigrants into the area. This will further jeopardize the national park. Already after the forest fires new migrants came in and claimed the land within the national park as their own land.

At the completion of the fieldwork for this study, the dispute over the enclave had still not been resolved. The dispute involves contradicting opinions and interests among the community, local government and the central government (as the KNP Authority). Basically it is about land. The community needs land, the government needs the land, and the KNP also needs the land. Such a dispute can only be solved with the initiative of the government. As long as the dispute is unsettled, the problem in the relationship between the community of Teluk Pandan and KNP will not be smooth.

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PART TWO

THE FOREST AND POLITICS
: A NATIONAL OUTLOOK

The three chapters in Part Two of this report present the results of research conducted at the national level. Chapter Eight contains an overview of power and politics in forestry. It is concerned with a number of related issues, such as the relationship between the competing power bases in forestry during the era of the New Order Government and the early stages of regional autonomy or the so-called "reformation period". The chapter addresses three issues: 1) whether or not nuclei of New Order political power still influence current politics, particularly in relation to forestry; 2) the role of the military in forestry-related businesses, timber harvesting in particular, trade, and plantation; and 3) the way in which new players are being incorporated into the current situation.

Chapter Nine is about decentralization of forest policy in Indonesia and focuses on an analysis of decentralization law, No. 22 of 1999, and the law on financial balance between the central government and the local government, No. 25 of 1999. These acts exert a significant influence on the forestry sector. Decentralization in forestry itself is discussed in the analysis of Forestry Law No. 41 of 1999.

Chapter Ten focuses on legal treaties, and has three major themes: 1) the international convention on wetlands - The Ramsar Convention - which was ratified by the Indonesian Government in 1991; 2) although as a signatory of this treaty Indonesia has set a legal precedence for affecting environmental protection, in reality experience of wetland management proves that violation of the environment continues; 3) destruction of coral reefs and mangrove forests, fishing with explosives, catching protected birds, and hunting crocodile are just a few of the many destructive practices rife amongst Indonesian communities which disregard both international and national laws.

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Chapter 8.

Powers in forestry revisited: New Order, military, conglomerates, newcomers, and local community

Yekti Maunati

I. Background

This chapter is concerned with a number of related issues, but most particularly it seeks to explore the relationship between competing power bases – especially between those of the New Order allies: the military and central government, local governments, conglomerates, local businessmen and indigenous people – and forestry during the era of the New Order Government and the early stages of regional autonomy or the reform period. Specifically, we will address three main issues. First, we will aim to understand whether or not the New Order political powers still influence current politics particularly in relation to forestry. Second, we will investigate the role of the military in forestry-related business, particularly issues related to timber cutting, trade and plantations. Finally, we will try to understand the way in which new players are incorporated into the existing structures.

It has been widely discussed that under the New Order government, the central government had bestowed upon the private sector privileges to exploit the forest in the name of economic development (see Samego, 1992; Barber, 1997; Ross, 2001 and others). Often, such processes were channeled through a form of a patron-client relationship in which the bureaucrats acted as the patrons of the businessmen. Forests have contributed significantly to the national economy, especially through the export of timber. Prior to oil exports, revenue generated from timber was well known as the main source of foreign exchange. However, significant decreases in both forest potential and size have occurred. Indonesia must now pay serious attention to the issue of forest sustainability on both economic and environmental grounds.

The introduction of regional autonomy during the reform period has recently affected the condition of forestry. Local governments, especially at the regional level, have challenged the previous power holders on forestry matters. At the same time, indigenous people have been given a chance to regain their rights over forestlands whereas in the past they had been cast aside, far from their livelihoods. In stark contrast to previous times, indigenous people's wisdom in managing the forest is now being taken into consideration by local government. However, the emergence of local powers (both governmental and civil) does not automatically equate with a total weakening of the central power base. The power struggle over forestry is still underway, involving a number of different groups.

It is this vying for dominance by many different groups, or at the very least, this struggle for significant influence, that is the focus of this chapter. It is vital that the dynamic nature of this power struggle is both recognized and understood. Specifically, I will discuss the following issues: the dependency on forestry, the relation of New Order political powers to forestry in two different periods (the New Order period and today), the role of the military in forestry-related business (especially in timber cutting, trade and plantation), the marginalization of indigenous people and forest villagers, environmental degradation, the position of indigenous people in the two different periods mentioned above, the arrival of new players, and the emergence of a system of co-management in forestry.

Indonesia has depended on forestry for its economic growth, it having been the third largest sector by revenue. Since the beginning of the New Order government, there have been a succession of policies governing the exploitation of forest products. In 1967, for instance, the government implemented a "Basic Forestry Law" to bolster economic growth at a time both of economic crisis and of transition from the Old to the New Order. Apart from this, the government had attempted to attract foreign investors and had promoted timber exports by endorsing specific strategies. First came the implementation of a new foreign investment law that offered tax holidays, free repatriation of profits, and a guarantee of compensation. Second was the introduction of a law to give similar benefits to domestic firms and promote the assertive recruitment of foreign investors in the timber sector. Third, forest use royalties and taxes were made low enough to strengthen domestic logging firms so that they were able to compete with those of neighbouring countries (see Ross, 2001:166-7).

In the 1970s foreign investors, particularly from Japan, South Korea, the Philippines and Malaysia, were attracted to the forestry sector. The majority of all approved investment in this sector (58 percent at the end of 1973) was from abroad (Ross, 2001[1]). Ross (2001)

[1] Ross cited from Manning (1971) and Robison (1986).

further notes that the above policies had specifically aimed to entice foreign investors. Yet, after 1970 New Order officials started to participate in rent-seizing, by:

> Nullifying the allocation rights of provincial officials, in order to make their own rights more exclusive; dismantling the customary rights of forest dwellers, to boost the size of the windfall; and distributing timber rents to Suharto's clients in the military (Ross, 2001:171)[2].

Under the original terms of the Basic Forestry Law, there were divisions amongst several institutions:

> The forestry department could only give out timber concessions larger than 10,000 hectares. Provincial governors retained the authority to grant timber concessions of up to 10,000 hectares; District Heads (*Bupati*) could grant concessions of up to 5,000 hectares; and Subdistrict Heads (*Camat*) could grant concessions of up to 100 hectares in size (Ross, 2001:173).

By having such power, the provincial and local officials received part of the forest income. The majority of the small-scale enterprises in the forestry sector used 'a traditional, non-mechanized logging technique called *banjir kap* ("cutting during the flood")' (Ross, 2001:174). *Banjir kap* did not last long because the New Order government adopted Government Regulation No.20/1970 in which the permitted minimum concession size was 50,000 hectares and a requirement that all logging be mechanised was set. This took the edge off the provincial authority in the issue of timber concessions and sidelined the *banjir kap* operators. Local people who had benefited from *banjir kap* suffered from this new regulation. This change was explained at the time as being for the sake of economic development.

Together with the Philippines and Malaysia, Indonesia benefited from booming timber exports from 1950 to 1995 (see Ross, 2001). Forests have contributed to the national economy, especially through the export of timber. For instance, before the export of oil became important, revenue from timber was well known as the primary source of foreign exchange. Natural forests can guarantee a certain quantity of timber for a limited time, but any continuity is dependent upon the good management of these forests. Currently, there is a policy regarding the utilisation of the forest: Inoue (1994) notes that "the 1994 'Agreement on Forest Utilization Plans' (TGHK or *Tata Guna Hutan Kesepakatan*) states that Indonesia has 140.4 million ha of forested land, of which 113.8 million ha are to be maintained as forest for the future, and of which 92.4 million ha are now forest" (1994:335). He further points out that the main problem is that the extent of deforestation is large — an FAO report shows that Indonesia has been losing 1.2 million ha of forest annually between 1981 and 1990 (see Inoue, 1994:335).

Meanwhile, Kartodihardjo reports that Indonesia's state-owned forests are at around 112.3 million hectares, consisting of protected forest (29.3 million hectares), reserve forest (19 million hectares), and production forest (64 million hectares) (1999:1). However, the potential and volume of forests has decreased markedly. Since the implementation of the Logging Concession (HPH) of 1967, forestry has significantly contributed to the national economy. During the last decade, the share of the timber industry has constituted around 20 per cent of foreign exchange earnings (see Kartodihardjo, 1999:1).

In terms of the implementation of logging concessions, the New Order government had privileged particularly the private sector. The dispossession of forest villagers has been widely reported. In the process, the villagers are forcibly distanced from their main livelihoods such as gathering honey, rattan, hunting, *etc*. (see Kadok, 1995; etc.), and resettled (see King, 1993). While the idea behind such actions is one of modernizing isolated groups like the Dayak, it also acts to prevent their access to fruitful natural resources (see Djuweng, 1996).

The exploitation of the forests has been hazardous in terms of the environmental degradation caused by the relentless attempts to raise revenue. The review of forest policy and its implementation conducted by the Department of Forestry, the State Ministry of Population, Environment and Development, the Department of the Interior and The International Institute for Environment and Development in 1985 has argued that the long-term goals of national forestry and any increase in the economic and social benefits derived from forestry should only be achieved without destroying the environment.

Forest villagers are often blamed for environmental degradation, due to fires caused by them and so forth. One needs to ponder whether the forest villagers are the real perpetrators or merely the victims of degradation. The problem seems to be political in nature. Below, I discuss in detail the relationships between the implementation of forest policies, political forces and local people under the New Order government. In addition, I consider a number of points concerning the implementation of regional autonomy which has been recently introduced to contemporary Indonesia. It is clear that the new regulations are being contested both by local government and by the actions of the local people.

II. The New Order Period and Patronage

As previously stated, a multitude of government departments have at least rhetorically emphasized the importance of wisely considering the distribution of forest lands and paying heed to environmental protection of such lands. Logically, if an individual or a group violates these goals, they must be sanctioned. This position seems to be a positive sign for the future of the forests, but unfortunately the ideal and the reality are often separated by a huge gap.

Any forest policy and its implementation tend to be linked to politics. The New Order government prioritized economic development to the extent that policies relating to forests favoured businessmen instead of those people

[2] For detailed information on military see section 2.4.

who live nearby or in the forests. Forest Concession rights (*Hak Pengusahaan Hutan* or HPH) are a case in point. Below, I shall discuss the New Order government's power and control over the forest and the implementation of forest policies.

As mentioned previously, the government had focused on the most fruitful of its natural resources to spur economic growth — forestry being the third most important sector. Barber (1997) points out that in order to reinforce its power, the New Order had made use of natural resources, especially in terms of revenues. To start with, the government implemented the Basic Forestry Law in 1967 and several implementing regulations. With the introduction of this law, the state reserved the power to control forest exploitation. Samego (1992) argues that forest policies of the time reflected the idea of a total state control over all forest areas.

With its myopic focus on economic development, the New Order government sought to encourage private and foreign investment. The start of the New Order government saw pro-market policies in which the private sector was reckoned to be very important, especially as a means by which to stabilize economic and political affairs (Samego, 1992). Right up to the present, the private sector has played an important role in forestry enterprise. The New Order government has from its inception partly depended upon forest resources for its economic sustenance.

Predicated on the Basic Forestry Law, article 14, the state or a combination of state, private actors and state companies, were to manage the exploitation of state forests. The private sector was invited to play a significant role in forest management because the state itself lacked capital. The New Order government, backed up by the army, encouraged the private sector to play a part in the utilization of the natural resources (Samego, 1992). In 1970, forest concession rights (or *HPH*) were introduced through Government Regulation No 21/1970 which was proposed to promote national development and public welfare. Operational regulations, including the Indonesian Selective Cutting Plan, Forestry Fees, the Replanting Guarantee Fee, were also introduced in order for the state to maintain control over forestry. The state made further decisions about the functions of forests — government agencies such as provincial level Forestry Departments and the Directorate General of Forestry were made responsible for forest use and management. Meanwhile, policies continued to be formulated 'at the center' and all regional decisions had to follow national level policies (see Samego, 1992:199).

Policy discussion was limited to the civil and military bureaucratic elite (Samego, 1992). The government and bureaucrats' decisions and actions were rarely subject to criticism or public discussion, which risked creating a gap between policy and implementation. Besides private domestic players, many foreign investors from Malaysia, the Philippines, South Korea and the United States have participated in the forestry business. The introduction of the ideology of economic nationalism led to a prioritizing of domestic companies. Samego (1992) argues that the bureaucrats provided favourable conditions for big business and to those who were close to figures of political authority. Foreign investors also sought backing. Evidence of this include the joint ventures between well-connected businessmen, backed by the Indonesian Army Reserve Command and foreign investors (see Samego, 1992).

From the above, the capacity of Indonesian state power — in the hands of the former New Order Government — to control the economy and political affairs were clearly evident in dealing with forestry issues. However, it is important to recognise that state power is somewhat fragmented and contested even from within the state itself. For instance, many government agencies have been involved in forest management partly due to the many uses of forest resources and the sale of forest products in the international market. Competition over the exploitation of forest products sometimes cannot be avoided. The lack of co-ordination between these agencies is also evident (see for instance the Department of Forestry, the State Ministry of Population, Environment and Development, the Department of the Interior and The International Institute for Environment and Development, 1985).

There was a complex array of 'authorities' involved in the process of implementation of the government policies, including government officials, politicians, businessmen and so forth. This suggests that there may have been a far greater degree of negotiation between such powerful 'authorities' in the process of policy implementation than first thought. Samego (1992) reports on the significance of domestic players in forestry including: private businesses (mostly Chinese); army groups; the extended Suharto family; state forestry corporations; and high-ranking army generals. In timber extraction, for instance, small groups of businessmen (usually of Chinese origin) who were close to the centre of power received greater benefits than their *pribumi* business counterparts. Patron-client relationships were formed within forestry as a business. Businessmen were often dependent on their patrons, the elite bureaucrats, in order to get access to the forestry business. Patronage has been crucial in this business in Indonesia and patronage is not only applicable to Indonesia. Patron-client relationships have been widely discussed in terms of Mediterranean societies (see Gellner, 1977; Romero-Maura, 1977; Boissevain, 1977; Sayari, 1977; Zukerman, 1977) and for various parts of Asia (see Scott, 1969; Blackwood, 1997)[3].

[3] According to Scott (1977) the relationships between patrons and clients entails certain responsibilities on both sides. The patron is supposed to protect the client, while the client provides services to the patron, but beyond this there are issues of personal loyalty and moral responsibility at play in the relationship.

Gellner (1977) defines the patron-client relationship as an unequal power relation with a moral dimension. It is a long-term relationship. Gellner argues that patronage arises in the particular circumstances of 'the incompletely centralised state, the defective market or the defective bureaucracy…' (1977:4). He argues that the patron-client relationship cannot be put on a par with feudalism, kinship, or the market. He states that patronage would not be considered effective in a number of different societies, including segmentary societies, centralised bureaucracies, or market economies (1977:4). Gellner emphasises that 'politics may be patronage-prone, whereas economics are such only when they are politicised' (1977:6).

It has been widely argued that in Indonesia only a few people have had power in economic matters (see Young, 1990; McIntyre, 1990; *etc*.) and patronage has been widespread, involving the ruling group, bureaucrats and businessmen (see for instance, Budiman, 1990; MacIntyre, 1990). In Indonesia, the politicisation of aspects of the economy is common practice so that patronage clearly takes on political and economic dimensions. Consistent with Gellner's thesis, the Indonesian elite can develop systems of patronage because there is space for the abuse of power within a 'defective' state bureaucracy. MacIntyre notes that to get special facilities, individual businesspeople rely on bureaucrats as their patrons (1990:371). Patronage in Indonesia is like an interlinking chain that is not only evident at the top but also at the bottom levels of society, and always involves unequal power relations. Amongst Suharto's clients, the military organisations or officers had an important role in forestry related enterprises.

III. The Military and Forestry Related Enterprises

Robertson-Snape (1999) and Ross (2001) argue that patronage was a powerful means to securing Suharto dominant power for a long time. Ross (2001) goes on to say that Suharto was able to utilise patronage to reward followers and to establish personal loyalties. The involvement of military organisations or officers, as parts of Suharto's clients, in the forestry-related enterprises was a case in point. Ross (2001) argues that being aware of their lack of competence, Suharto supported his military clients to establish joint ventures with foreign or ethnic Chinese firms which usually have large capital and are experienced in business. Ross further says:

> Typically, individual military officers or military units would provide their foreign or Chinese partners with personal protection, along with access to the government licenses, tax breaks, contracts, and credit they received. The military officials, in turn, would gain a share of the resulting profits and skilled management for their enterprises (2001:161).

The military involvement in commercial holdings has grown from the beginning of Suharto's power. Barber *et al.* (1994) note that by the late 1960s a large number of logging concessions (HPH) had been closely connected with military organisations, including the regional military commands in Kalimantan.

In terms of military officers' participation, Ross goes on to say that joint ventures between foreign investors and Indonesian partners, including military organisations or officers were set up. Sudjarwo, director general of forestry, 'by distributing licenses and designing joint ventures', had granted 'the timber windfall to Suharto's clients and patronage institutions, and to the Suharto family itself' (Ross, 2001:176). He, for instance, had issued several concessions by the mid-1970s, particularly concessions to each of the four major services (army, navy, air force, and police), concessions for *Kostrad* (the Army Strategic Reserve Command) and *Opsus* (Special Operations), three concessions to Lt. General Sutowo, three concessions to a group of retired army officers, two concessions to the Hanurata Group (owned by two of Suharto's foundations: *Yayasan Harapan Kita* and *Yayasan Bantuan Beasiswa Yatim Piatu*), and ten concessions to P.T. Tri Usaha Bhakti, the Defence Ministry's holding company (Ross, 2001:177). Citing Robison, Ross notes that 'many of Tri Usaha Bhakti's concessions were run in partnership with the business groups of regional military commands' (2001:177).

Ross (2001) further mentions that supporting the companies that depend on subcontracting agreements or joint ventures with foreign or Chinese-owned companies had become the means for the military to run their concessions. Performing joint ventures were profitable because the commercial partner was to provide almost all of the capital, to handle the concession and to sell the timber, while the military partner made the licence available and provided a small part of the capital (see Ross, 2001)[4]. Ross (2001) further reports that the military concessions benefitted from greater impunity than other licensees during the 1970s.

Clearly, the military had an important role in this matter. Samego (1998) points to the connection of the involvement of the military in the business to push-and-pull factors. The push factor could be seen in the fact that the Indonesian government had not provided a reasonable salary for the military. On top of this, funding for the military had been low. Meanwhile, the military was also needed to protect the economic production and distribution interests owned by the government in the private sector. Especially for the Chinese businessmen, backing from the military or a 'powerful party' was crucial in running their businesses (see Samego, 1998:10).

In the late 1970s and early 1980s, most military companies moved out of the industry and Chinese businessmen replaced them. In the period, radical changes also included the establishment of sawnwood and plywood industries and the phasing out of the export of unproc-

[4] To provide an illustration of the above practice, Ross (2001) describes the case of PT ITCI (the International Timber Corporation of Indonesia), which was a joint venture between Tri Usaha Bhakti and the U.S-based Weyerhaeuser.

essed logs (see Ross, 2001). Ross (2001) further reports that a small number of Indonesian Chinese businessmen had taken over the timber industry after it was left by the military, whereas previously Chinese entrepreneurs were in a marginal position in such businesses.

The economic liberalisation measures of 1986 and 1988 brought about greater opportunities for favoured groups in society, especially 'members of the Suharto family and Suharto's Chinese cronies', to expand their businesses (see Robertson-Snape, 1999:595). In terms of forestry-related businesses, Bob Hasan was one of Suharto's Chinese cronies, who had the ability to set up wood exports businesses and determine export levels through the Wood Panel Association (Robertson-Snape, 1999:596). By 1992, Ross (2001) notes that a small number of large business groups had come to dominate the timber industry. Conglomerates controlled the forestry sector (see Barber *et al*., 1994). Barber *et al*. (1994) note that these conglomerates had been silently in partnership or in venture with powerful civilian or military political figures. Perhaps, the roles of the military officers or organisations in forestry were not the same as in the period of the timber boom, but they were still visible. Yet, McBeth (2002) reports that the army's largest holding company is involved in many commercial enterprises, including timber and plantation. McBeth (2002:21) also notes that the army's charitable foundation has about 22 joint venture companies engaged in timber, plantation, and other businesses.

To understand the recent situation, we shall illustrate the involvement of PT ITCI and the problems caused. An interview with an officer at the production division indicates that PT ITCI owns 601,750 hectares of forestland. This share is split between three companies: 50.71 percent by Persit Kartika Eka paksi (*Yayasan Angkatan Darat* – Army Foundation), 33.71 percent by PT. Bimantara (Bambang Tri H. – a son of the former president Suharto), and 14.71 percent by PT. Nusamba (Bob Hasan – a Chinese businessman). The former owner of PT ITCI was the multinational corporation (MNC) Wayernhaeuser USA. The transfer of ownership from Wayernhauser USA to ITCI (consisting of three companies, namely, Persit Kartika Eka Paksi, PT. Bimantara, and PT. Nusamba) was effected in 1981. The ownership structure has not changed from the New Order government to the reform period.

PT ITCI was granted licence No 1/1970 by HPH on January 3, 1970. In 1981, it was reoriented towards the timber industry only. By 1986 PT ITCI established plywood companies in Kenanga, Balikpapan. The reason behind this was a government regulation in which the government did not allow any company dealing with timber to trade unprocessed logs. The plywood production capacity of this company is about 117,000 cubic metres annually with a workforce of 1,300 labourers. PT ITCI itself is divided into two: a) The Forest Management Division (*Pengelolaan Hutan*) consists of five sections: Seeding (*Persemaian*), Planting (*Penanaman*), Rehabilitation (*Rehabilitasi*), Logging (*Penebangan*) and Supervision of forest villagers (*Pembinaan Masyarakat Desa Hutan*); and b) The Industrial Division which makes up the Plywood Company.

According to staff at PT ITCI, during the reform era PT ITCI has faced a lot of problems. The most important problem is that there have been many claims of "*hutan adat*" (customary forest) within the area of its concessions. Likewise, in the West Kutai district, local communities have also demanded to obtain the forest lands that have been claimed by the Air Force for a long time. The battle between local people and the military has been reported in the local newspapers (including *Sendawar* and *Kaltimpost*).

There are different versions on the ground in response to the land dispute in West Kutai. According to many in West Kutai, the military has used the land for the air forces' training and the location has been restricted for non-authorised people. A different version holds that at the beginning it was only a few people of the local community who claimed the land to be theirs, but that subsequently the numbers increased gradually. This is quite understandable in the context of Kalimantan since people rarely maintain written records.

Apart from this, it is common for the unproductive area of an *HPH* to be transferred to a certain other business. For instance, if the unproductive area contains a lake, it will be transformed into a tourist spot.

Another important issue is that the 100 km logging route that has been used as a public road, has had a negative impact, especially by damaging planted trees because many people steal logs.

Whilst the military officers or organisations and big business were given the privileges to exploit the forest resources, especially during the New Order period, indigenous people, the forest villagers or the local people have been pushed aside from their home environments.

IV. Forest Villagers and their Marginalisation

In Indonesia, forests are central to the livelihoods of the societies surrounding them. The government often treats the indigenous people living in and close to the forests in the Outer Islands (like the Dayak of Kalimantan) as if they do not exist. One should not ignore the role of nationalist influence in such processes. Often, this is related to the idea of 'primitiveness' or 'backwardness' and its association in the case of the Dayak with cultural practices such as headhunting, hunting and gathering and living communally in longhouses. Similar treatment has also been suffered by many indigenous peoples or the 'sons of soil' like the Irian Jayans *etc*. In many ways the framework for the identification of the Dayak or the Irian Jayans as primitive, is linked to the conceptualisation of the Dayak or of the Irian Jayans (and in fact all Indonesians during the colonial period) as the Other. The New Order Government in many ways continued the colonial evaluation of the 'primitive' Dayaks or Irian Jayans — only this time as the Other to its Javanese-centric self.

This sort of view has affected the way in which the government pursued 'economic development' through exploitation of forests and forest by-products, whilst ignoring the long-term inhabitants of those areas.

Said (1978) critically discusses the way in which the West has created such Otherness. He argues that whoever is the more powerful can speak for the Other. During European colonialism, this power to speak for the Other was reinforced by the notion of the 'natural' superiority of the white man and his right to rule (see Millum, 1994). This attitude of superiority was criticised by many Western scholars at the time. Nevertheless there was still a tendency to describe the non-European Other as submissive in the same way that Orientalist discourse positioned the non-European as passive and feminine (see Said 1978). In a similar vein, the British colonial notion of the Malay — as innocent and unsuited to commercial activities and thus in need of protection from the avaricious and potentially exploitative Chinese — shaped British colonial policies in Malaya.

We can see that the New Order government has operated with many parallel assumptions to those evident in the supposed European superiority in its civilising project to 'modernise' a 'primitive' group of people going as far as their resettlement. Once again a dominant group assumes the right to 'speak for' and then 'rule over' those groups in its domain who are seen as inferior or uncivilised. This is not to argue that the politically dominant approach subordinated groups in the same manner, but only to suggest that a similar logic of Otherness is applied.

The nation-state's ability to represent its people and determine their lives can result in a situation whereby the ways of living engaged in by relatively powerless local people can be designed by the state. Resettlement is clearly a case in point. Ave and King (1986) highlight this point in their study of the resettlement of the Dayak which is much the same as that of other groups targeted for resettlement. They note how government settlement programmes aimed at permanently settling the Dayak in particular places — by giving them houses and land — draw on images of the 'uncivilized' semi-nomadic lifestyle of the Dayak. For example, 'primitive' behaviour such as 'uncivilized' dress, attachment to animist beliefs, and a lack of education were seen as barriers to the state's construction of Indonesia as a 'modern' nation. Such programs conducted through the Department of Social Affairs are in many respects similar to the Dutch colonial policy of forced resettlement to other parts of Indonesia. Schrauwers outlines the colonial policy which forced highlanders of Sulawesi to resettle to 'the few alluvial plains suitable for wet-rice agriculture' between 1906 and 1908 (1998: 219).

What was behind this project? Critics observe that behind the civilizing and modernizing rationale given to resettlement, there is often a direct link to the exploitation of the natural resources. In postcolonial settings, the process of resettlement is often expressed in terms of national development. Here the 'development' of 'backward' groups is bound to the logic of national development and the impulse to exploit natural resources for this cause. For this reason, indigenous people are often relocated to areas deemed suitable for settled farming. In such a way, they can then 'develop' their own economic life (as settled farming is seen as more developed and having greater potential to link up to national and international markets than subsistence or swidden agriculture), while other parties 'develop' the natural resources of the interior. King argues that the main aim of resettlement in Kalimantan has been to eradicate shifting cultivation and to remove people from areas 'valuable in timber and mineral resources' (1993:287). Kahn notes that the new global economy needs indigenous people's land and resources, but not their labour (1995:145). In a similar vein, citing Robert Rice[5], Samego reports that the New Order government's economic ideology of control over land and natural resources replicated the ideology of both the Sukarno and the Dutch East Indies' governments (1992:131).

In addition, the Indonesian government faces a critical problem due to its long-term implementation of a forest policy based on an outmoded perspective. Citing Poffenberger[6], Messerschmidt states that this 'traditional' perspective views the forest villagers 'either as a threat to the resource, a cheap source of labour, or [as] irrelevant' (1993:36).

In the case of resettlement schemes, it is clear that the nation-state is attempting to define and determine the lifestyle of its more remote citizenry. Notions of the 'modern' versus the 'traditional' and of 'developed' versus 'underdeveloped' get reworked in order to justify the resettlement of people. To be modern - or modernised – is to relocate to a permanent settlement which transforms 'traditional' practices into more 'modern' ones, such as settled agriculture, individual housing, and it facilitates contact with a broader spectrum of Indonesian society.

King (1993) reports that in his research in East Kalimantan each family was granted two hectares of land, and in some cases, received fishponds and poultry farms. He further notes that the settlement sites were usually equipped with government offices, schools, shops and access to roads (1993:288).

The issue of forced settlement is also linked to accusations that the Dayak destroy the forest through their practice of slash and burn agriculture. However, it should be noted that the government's assessment of the facts here is somewhat questionable given that the New Order Government encouraged timber companies to destroy the forest while at the same time resettling the Dayak into compounds.

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[5] Robert Rice (1993) 'The origins of basic economic ideas and their impact on 'New Order' policies," *Bies*, Vol. 19. No.2, p. 60-82.

[6] Poffenberger M. (ed) (1990) *Forest Management partnerships: Regenerating India's forests*. Workshop on Sustainable Forestry in India. New Delhi: The Ford Foundation and the Indian Environmental Society.

The indigenous people may not always maintain silence in the face of state action against them. Inoue (1994) notes that in East Kalimantan there were three forestry revolutions — the 1970s Logging Revolution, the 1980s Plywood Revolution, and 1990s Tree Plantation Revolution.

The implementation of these kinds of policies does not question the economic contribution to the national economy, but does lead to conflict, including land disputes, due to bureaucratic ignorance concerning the indigenous people living nearby or in the forests. Conflicts arose around governmental exploitation of the forest in pursuit of the above development strategies. The Dayak have clearly been marginalized by 'development' projects, reflecting the forest policies taken up by the government. The first and foremost problem has been forest exploitation including the concessions given to the logging industry. A large number of forest areas have been exploited to increase the state's foreign exchange. Due to the exploitation of forests by the logging industry, timber rich areas were almost totally cleared. Domestic capital investment in logging from the 1980s on exacerbated the problem.

By the 1980s the golden age of logging was finished. Since then we have seen the expansion of large-scale plantations for export crops. These have had drastic implications for the Dayak. It is known that the Dayak rely on forest products, such as honey, eaglewood (*gaharu*), and rattan. They now face problems in maintaining their traditional livelihood. Logging concessions and timber estates have led to the expulsion of the Dayak from their lands and their environment has been destroyed.

Eriksen stresses that:

> Potential conflicts between indigenous groups and the nation-state are activated when the majority wishes to control resources – ecological, economic or human – in the territory of the indigenous population (1993:129).

These conflicts often encourage the rise of middlemen or brokers who mediate between indigenous people and the institutions of the nation-state. Such brokers are not necessarily newcomers; they often already exist in the system through their roles as patrons in local patron-client relationships. To an extent, these elite locals are attempting to displace other authorised non-local voices, such as local government officials, who in the past had spoken on behalf of the now clients. The local indigenous people prefer to rely on people already known to them in order to negotiate with the unfamiliar and unknown agents of the state.

Economic and political aspects are always important in any system of patronage. The emergence of brokers as negotiators between indigenous peoples and the state (or any institution for that matter) often takes place for economic and political reasons. The rise of indigenous leaders as brokers in dealing with conflicts between indigenous peoples and the state over the rights to resources, specifically land, is well-known (Eriksen, 1993:126). Feit's[7] study of the Cree Indians' confrontation with the Canadian government over land earmarked for a hydroelectric scheme highlights the very difficult political situation facing 'stateless people' (Eriksen, 1993:126). Cultural brokers often act as negotiators between indigenous groups, the state and international society (Eriksen, 1993:127), a role which also helps them achieve political power (see Roosens, 1989).

Power relations are obviously important in the process of gaining access to natural resources. In the past, indigenous people or forest villagers did not have power to control the natural resources surrounding them, but today, with the advent of regional autonomy the government needs to consider their interests; otherwise its policies may not be effective. Haba (2002), for instance, notes that the issue of *putera daerah* (inclusion of indigenous people) is significant within the context of increasing regional autonomy (discussion of this issue follows). In this context, it seems that the participation of indigenous people could determine the success of development in their regions.

Apart from the marginalisation of indigenous people, another grave consequence of forest exploitation has been environmental degradation. International concerns about environmental degradation are being voiced more and more strongly. Indonesia needs to take this issue into serious consideration.

V. Environmental Degradation: Who Is to Blame?

The degradation of forests has become a topical issue both within Indonesian and beyond its national boundaries because of the problems of increasingly visible deforestation and forest fires. From an environmental perspective, sufficient land should be kept as forest to prevent soil erosion and 'to ensure regular supplies of good quality water for the growing of food, for domestic consumption and for industry' (see for instance, The Department of Forestry, The State ministry of Population, Environment and Development, Department of the Interior and The International Institute for Environment and Development, 1985:2).

Many diverse agents, including the government with its sub-agencies, private companies, and the forest peoples themselves, appear to have different interests in and perspectives toward forests. Coordination among the various government agencies — which is necessary since the Department of Forestry's policies on forests often involve other agencies such as the Ministry of Trade, the Department of Public Works, the Ministry for Population, Environment and Development — seems to be lacking. The IIED and the Department of Forestry (Department of Forestry, 1985) mention that the amount of forest damage is largely influenced by an absence of common planning between forestry and transmigration (agriculture). This includes not only the scheduling and management of Protection and Conservation Forests, but also a re-

[7] Feit, Harvey (1985:27-60).

sponsibility to ensure that forestland is only released for other purposes when there is convincing evidence that the proposed future use is sustainable and will not lead to degradation of the resource. The lack of coordination between government agencies and the differing interests of the groups involved has added to the difficulty in managing the forests and could lead to their destruction.

In addition, the New Order government's forestry policies since 1967, which have caused a decrease in the amount of tropical rainforest, have affected global climate (see for instance Hardjono, 1994). He argues that the above issue has not been considered deeply enough and that instead the discussion has tended to concentrate on the local aspects of ecological consequences and the sustainability of forestry activities and has not taken a wider, global perspective.

Apart from forest fires, many other factors that may cause the destruction of the forest are at work, such as legal and illegal logging. Indonesian newspapers have reported on the reluctance of big businesses to replant trees after having been granted concession rights. Illegal loggers were even worse offenders than legal loggers since such people do not have a sense of responsibility to engage in reforestation. Wijaksana (2001) reports that around 60 million cubic meters of forest are destroyed annually through illegal logging. Annually, the government loses approximately Rp 30 trillion (US$3 billion) at the average price of Rp 500, 000 (US$ 50) per cubic metre (see Wijaksana, 2001:17).

Another example of environmental degradation concerns wetlands. Parlupi (2002) reports that Indonesia ratified the Ramsar Convention in 1992. However, uncertainties are still prevalent. Specifically, people often exploit wetland areas for economic reasons, including converting the wetlands for development. In Kalimantan, transmigrants are often settled in wetland areas. Parlupi (2002:17) suggests that if one wants to prevent the destruction of wetlands, an awareness of community needs to be developed. In making policies, therefore, socialisation and the involvement of local people is necessary, which in turn may encourage better communication between the different population groups and reduce the prevalence of feelings of being left behind by the local people. One should not repeat the top-down policy resulting in the marginalisation of the locals. Law enforcement is another significant aspect that could establish a greater equity and clarity. The debate over forest degradation surrounds the 'who is to blame?' debate as I mentioned earlier when swidden cultivators are often being blamed for forest fires or other forms of forest destruction.

The Department of Forestry, the State ministry of Population, Environment and Development, the Department of the Interior and The International Institute for Environment and Development (1985) report that coping with forest degradation requires lessening the use of the forests, especially by improving the economic condition of those who live in and around the forest and by means of economic development. The Department of Forestry, the State Ministry of Population, Environment and Development, the Department of the Interior and The International Institute for Environment and Development report that it is important to establish certain approaches to protect forests from being damaged 'by people who are out to eke out a living in the only way they know, by inefficient farming and the wasteful use of valuable forest products' (1985:3). From the above report, it would seem that people who live in and around the forests are the group who damage the forests. However, these departments neglected to consider the big companies that exploit the forests on such a large scale.

Government and the local people have quite different perspectives on the meaning and the purpose of the forest. According to Kadok, conflicts occur when the government hands over the management of the forests to private companies (1995:18-9). The tension between the local residents and the companies has been widely reported by local non-government organizations. Kadok (1995) states that these companies often do not respect local traditions and proceed to cut down local community fruit gardens, disrupt ancient cemeteries, and cultivate communal land. Widjono (1998) argues that the Dayak are familiar with land tenure. Lamis (1992) also provides an example of the existence of the customary law of '*tana' ulen*' belonging to the Kenyah Dayak which classifies things as either private or common property. The result of such conflicts, especially between companies and local people, is that locals are often accused of destroying the forest or of rejecting development projects (Kadok, 1995:19).

This problem is compounded by the tendency to place the blame for many of the problems on swidden cultivators. Swidden cultivators were not only widely blamed for their use of slash and burn methods, but also for the loss of crops. For instance, people often lay the blame for regular forest fires on the Dayak practice of shifting cultivation.

However, there is some evidence that the government is increasingly laying the blame for damage to the forest with more specific actors. In this case, the local users, swidden cultivators or people who live in and around the forests, are not always being blamed for the forests' destruction. Messerschmidt (1993) argues that the local forest users are knowledgeable and have a comprehensive understanding of the resources and their management. Based on studies in Nepal, India and Indonesia, he insists that local forest users should be involved in the forest management policy. Based upon research in Indonesia, Messerschmidt says:

> …Villagers were highly knowledgeable and […] the systems of forest use and management which had been developed by local initiative demonstrated highly sophisticated understandings about the complex functions of the forest, including its hydrological roles, its microclimates, its soils, and its productive capacities… (1993:41-42).

Likewise, many studies have found that the Dayak's

method of shifting cultivation is sensible and has a sound ecological base (see for example Widjono 1998). In the case of forest fires, in early 1998, there was support for the Dayak including from the former Minister of Environment, Sarwono, who stated that the Dayak were not to be blamed. Instead, he said, large companies who run plantations and use fire to clear land should be blamed for the forest fires of 1997 and early 1998. Legal suits against the big companies have proceeded very slowly however. This indicates that the companies have elite backing or are owned by the elite and are often legally untouchable. In turn, this inequity irritates the locals who are often held responsible for the fires.

VI. Competing Powers and the Shrinking of New Order Political Powers

It was mentioned above that during the New Order government, the exploitation of forests was dominated by regime cronies. The Basic Forestry Law had even allowed the central government to provide exploitation rights (*Hak Pengusahaan Hutan*) to private firms without discussing the matter with both provincial governments and *Perhutani* (see Ross, 2001:168). Ross further argues that this had basically removed the power of the regional and local officials in issuing the concessions. They were only issuing smaller concessions. This law undermined the *adat* right as well. The marginalisation of the local community in relation to the forests has occurred not only in Indonesia, but also in other countries like Cambodia (see Bottomley, 2002).

A window of opportunity for the local participation has opened especially following the adoption of a Ministry of Forestry decree no.677/KPTS-II/1998 On Community Forests (*hutan kemasyarakatan)* and no 310, 1999 On Providing the Right for Collecting Forest Products (*HPHH – Hak Pemungutan Hasil Hutan*) (see, for instance, Suramenggala *et al*., 2001) and on Regional Autonomy. Forestry-related enterprises are now run by different parties. The HPH, which are mostly larger exploited areas have been dominated by business groups associated with the New Order powers. Meanwhile, the new regulations mentioned above have expanded the opportunities for different parties to become involved in forestry, encompassing local people and small-scale businessmen. Suramenggala *et al*. (2001) report the complexity of the forestry-related enterprises following the introduction of the new regulations. They point out that the new regulations have bolstered local people's economic self-improvement by enabling them to participate in forestry related business.

In reality, the local community (*masyarakat adat*) who own the customary land (*tanah adat*) mostly have not taken this opportunity, but have given their rights to business people. In return, they receive a fee, ranging from Rp. 20-45, 000/m^3 depending on their ability to negotiate (see Suramenggala *et al*., 2001). They also report that there are often differences between one village and another in terms of the size of fees, depending especially on the ability in bargaining and on the transparency of the acts of the head of village and traditional leaders. It often happens that the companies pay the fee only to the heads of villages or to traditional leaders in order to reduce the cost of production.

According to a Dutch observer, in the 1920s the forests of Kalimantan were controlled by an array of groups, including the local people, chiefs of native jurisdictions, local Europeans, native civil servants, heads of regional administration, and institutions of self-government (see Ross, 2001). It seems that the recent situation in which local people own the forests and the local government also exercises control is not a new phenomenon. Even prior to the introduction of the Forestry Basic Law, local government had been able to freely control the forest (see Ross, 2001).

The adoption of the rule allowing regents to adopt their own decrees on forestry has been withdrawn by the Ministry of Forestry due to certain reasons. Syamsir (2002), General Secretary of The Department of Forestry, argues that the withdrawing of such a decree is due to forestry restructuring: the realization of Ministry of Forestry Decree No. 05.1/Kpts-II/2000 has brought about the overlap of logging concessions. According to the officer, this also fulfils the demand for protecting the forest.

In addition, this decree has caused problems for companies who hold logging concessions. These include: the fact that the local government does not recognise the logging concessions issued by the central government; the launching of logging concessions issued at the provincial level which has not been discussed with the central government; the regulation on levies and responsibilities issued by the local government without discussion with central government (see Syamsir, 2002). Apart from the above issues, the issue of the ineffectiveness of local government in forest protection and the downturn of the market demand for logs have also become parts of the above considerations. Syamsir (2002) notes that many districts have ignored the withdrawal of such regulations partly because they have issued several licences.

Suramenggala *et al*. (2001) find in their studies in the Bulungan district of East Kalimantan, that the recent adoption of the IPPK has given more profits to the local people instead of the larger logging concessions (known as *HPH*) launched during the New Order government. They also report that there are a multiplicity of conflicts that involve different parties, including local people, the heads of villages and traditional leaders, the IPPK companies and HPH companies. For example, in several villages in the Bulungan district, the IPPK company has asked the local community to get rid of the military who have protected the area of the HPH company claimed by IPPK, (a piece of customary land (*tanah adat masyarakat*)).

The war games conducted by the military there are funded by the HPH company and its contractor (see Suramenggala *et al*., 2001:18). The military usually be-

come involved in conflict resolution if the conflict involves three parties: the local community, the IPPK and the HPH companies. Amongst the conflict areas of logging, there are areas of HPH owned by the military, namely *Induk Koperasi Angkatan Darat* (INKOPAD) and the provincial company that have been in conflict with IPPK supported by many traditional leaders and heads of villages in Bulungan. This case has been sent to Jakarta for resolution (see Suramenggala *et al*., 2001:19).

In addition, the demand for customary land to be returned to the local people has been greater day by day in many districts after the advent of regional autonomy. To further illustrate the situation subsequent to the introduction of regional autonomy, I shall discuss the situation in East Kalimantan, especially that of the West Kutai regency. Today, the image of the Dayak as culturally distinctive is a powerful one. This image has been strengthened in the era of regional autonomy, which in turn is illustrated by the revitalisation of "Dayak traditions", especially in dealing with land ownership, and forestry. In this section I want to examine the extent to which this revitalisation of traditions as uniquely Dayak culture and traditions work to strengthen the local people.

The results of my research in East Kalimantan, especially in the West Kutai regency, with regard to the revitalization of traditions highlight several points. Due to the long-term exploitation of land and forests by large companies, villagers have limited access to arable farming land, plantation and forest products. Forest products which once supplemented their incomes are now greatly reduced due to deforestation and the restrictions they face in terms of access to what once was public forest. Logging companies as well as bird and gold mining enterprises control resources once in the hands of the Dayak. To make matters worse, there are very few opportunities for the Dayak to work in the city. One of the few paid jobs available to Dayak men is irregular, low paid work with logging companies. The Dayak travel long distances in search of income opportunities. Some men in the area migrate to find work in far off logging enterprises.

Regional autonomy has presented the Dayak with a new opportunity to regain their "missing" lands and forests. The local government at regency level has often discussed modes by which to empower the local people to get access to "their lands and forests". The local government has attempted to issue a regulation on forest management. During the period of my fieldwork, the draft of the regulation was drawn up. It had reached the stage of only requiring formal legalisation after a reading by the local parliament (*DPRD*). In the draft, a statement of "*hutan adat*" is very clear. The official in charge of drafting the regulation told me that the local government intends to facilitate local people (the Dayak) in accessing the forests surrounding them.

The process of regaining the forestland may already be realised since the local government, which is generally filled by representatives of the Dayak, understand Dayak traditions. They, therefore, have requested many competent people (including scholars and traditional leaders) to research and make evident of Dayak customary laws. The Dayak are re-learning their traditional cultures, which have been degraded by development, especially during the New Order era.

The Dayak in the interior, especially in West Kutai, have a chance to regain their land, including forestlands. Land rights associated with Benua' and the Tonyoi Dayak customary law, which were previously undermined by the government, may now be revitalised in the region. Discussions on the issue of land ownership and land use involve many groups, including scholars, NGOs and local people (mostly the Dayak) and have been initiated by local government or by non-government agents, including scholars and NGOs.

Local government has drawn up a regulation covering several points, ensuring such participation. For instance, in the draft of the West Kutai Regency Regulation on Forestry (*Rancangan Peraturan Daerah Tentang Kehutanan Kutai Barat*), it is said that people have the right to utilise the forest and forest products in accordance with the regulation; and that the community has the right to compensation if the surrounding forest is being used for one of a range of other purposes.

In addition, the local government will allow the local people to cultivate the forests for 100 years. Someone using the land or forests for commercial purposes should pay a fee to the other villagers set through an agreement. Based on this, many Dayak have earned money from logging companies even if they themselves do not cultivate the forests. The fee varies because each agreement is negotiated locally. Therefore, one area may gain higher fees than others.

There has been a variety of processes pursued to regain land and forests for the community living in and around the forests. Devung explained that in certain areas like Mamahak Besar, the people have claimed the land and forests previously controlled by *Inhutani II* (a state owned company). The Dayak have experienced some changes in relation to land ownership and land use. They were dispossessed of their lands and forests for a long time, especially under the New Order Government, which has profoundly affected their lifestyle. There has been a series of land disputes between big business and the local people. There are still some unresolved problems today.

However, for the Dayak, recent legislative changes have constituted an opportunity to regain their rights and as a result, the Dayak as a group have become stronger. This is primarily due to the fact that they have been able to utilise their 'traditional' customary law on land ownership, an institution that was severely weakened under the previous government. This revitalization of their customary law and land ownership rights is well under way. Land forests for the Kenyah Dayak are divided into two types: village reserved land forest (*tana' ulen*) and common land forest which is allocated for production or

for conservation. *Tana' ulen* is to be preserved and protected. As mentioned previously, New Order economic development undermined Dayak customary law and even obscured knowledge of their land boundaries — thus, in order to regain the *tana' ulen*, the Dayak must map out the *tana' ulen* to re-establish its boundaries and ascertain which land belongs to which village. It is also necessary to determine the borders between villages. Recognition of these customs by the local government is crucial in avoiding previous experiences. First and foremost this will prevent outsiders/businessmen to occupy the land forests with permission from the government on the grounds of economic development.

Wood notes that 'Handler and Linnekin insist that tradition is always symbolically constructed in the present, not a 'thing' handed down from the past' (1993:58). It would seem that the West Kutai government in cooperation with many others, including Dayak scholars, has been able to revitalize Dayak tradition to justify their claim for the forestlands that have until recently been controlled by large businesses and outsiders. Dayak cultures, which are distinctive and unique, have been of central importance in strengthening Dayak identity in the present time.

It seems that the competition of powers in forestry is underway, involving many groups such as local people, small-scale entrepreneurs, military-owned companies, big business and so forth. The weakening of New Order political power can be seen through the ability of the local people and the new entrepreneurs to gain access to forestry.

VII. Conclusion: Towards Co-management

Several ideas for better management of the forests have been proposed to the government. For instance, The Department of Forestry, the State Ministry of Population, Environment and Development, the Department of the Interior and The International Institute for Environment and Development (1985) have suggested that establishing an alternative strategy is crucial. Here, the argument is that while it is necessary to increase the standard of living for Indonesians in the future, this must not be done by sacrificing the quality of the environment. However, the forests have been destroyed on account of hunger and inadequate forest management. It is suggested that:

> Competition for land must somehow be reduced by the more efficient use of the land for each of the purposes for which it is used; the better allocation of land; the diversion of population from the land; the increasing of productivity of the forests and the efficiency of harvesting; and better protection to safeguard the production from lands downstream (The Department of Forestry, State ministry of Population, Environment and Development, Department of the Interior and The International Institute for Environment and Development , 1985:6).

Meanwhile, other experts argue that the involvement of local people in forestry policy-making is essential because they are knowledgeable (see Messerschmidt, 1993; Widjono, 1998, *etc*.). Messerschmidt (1993) has further argued that the old system of forest management, which has focused predominantly on commercial forestry and revenue earnings, has not protected the forest. He therefore believes that a new policy is necessary, and that it should involve forest villagers in co-managing decision-making.

Another important point is that a system where the centre of power is the sole player in policy-making is no longer effective, especially in light of the introduction of regional autonomy. Therefore, the participation of local governments both at provincial and regency levels must be considered. Regional autonomy reform itself is still somewhat vague in terms of forest management. For instance, the deputy governor of East Kalimantan has stated that many regional rulings have actually been part of the problem in the destruction of the forests' sustainability (see Wijaksana, 2001:17). Recently, to provide the locals with greater access to benefits from nearby forests, several regencies in Kalimantan have permitted every village to utilise up to 100 hectares of surrounding forest. The local government at the provincial level faces difficulties following through this order due to Regional Autonomy Law No. 22/1999 which recognises the right of local administrations to manage their own economic affairs (see Wijaksana, 2001:17).

The relationship between the central government, the local government at the provincial and regency levels needs to be regulated in order to establish new effective policies, especially on forestry. After the advent of regional autonomy, the central government cannot easily mould local government policy. In forestry policy, even though the centre should still be handling this sector, certain regencies (like West Kutai of East Kalimantan) implement their own regulations on certain aspects of forestry.

The real issue of regional autonomy is the creation a system that assures the participation of people, communities and Civil Society Organizations (CSOs) in decision making over the distribution of resources and control over government programs in the regions, instead of this being decided by the distribution of power and financial balance between the central and regional government (see *The Jakarta Post*, December 31, 2001:13). Regional autonomy has also been interpreted in different ways by different regions. This is partly due to weaknesses in regional autonomy regulations. To provide an illustration, Haris (forthcoming) argues that this stems from the uncertainty over the relation between central government and local governments (at the province and regency levels). According to the regulations, the rights associated with autonomy are given to the regency. The hierarchical relationship between regency and province administrations is somewhat problematic particularly in terms of any coordination between regencies and provincial gov-

ernments. Regencies now often resist or even reject orders from the provincial level because of their interpretation of the autonomy laws.

Another important example is the weak coordination between the central government and the regency. For instance, the central government through its agency, the Ministry of Forestry, is still in charge of forestry in Indonesia. However, in reality, certain regencies have interpreted the autonomy laws by implementing their own regulations. Soekanto notes: 'In Irian Jaya and East Kalimantan, regency administrations have issued by-laws which have allowed them to overexploit forests to boost revenues' (2001:11).

In conclusion, centralistic policy has resulted in the emergence of collusion in terms of patron-client relationships and the domination of forestry enterprises by the big business. Clearly, politics has played a central role in terms of transgressions of forest policies and their implementation. This sort of weakness from the past should not be transferred into the era of regional autonomy. Elite locals should not be the single players in the policy-making process in forestry, but rather, the involvement of local people is absolutely necessary. The local people have wisdom in managing the forest and they were indeed true 'owners' of the forest before the spectre of development destroyed their 'ownership' and rights of access to the forest. Co-management among several parties, including the central and local governments (at provincial and regency levels), together with the private sector and local people needs to be established to create policies and monitor their implementation.

Within the context of regional autonomy and policy-making, every related institution must understand that there are several layers of potential conflict, including conflict between the central government and the provinces, the province and its regencies, and between the central government and the regencies due to contradictory interests and/or different interpretations of regional autonomy itself. The emerging dispute between the province and its regencies, as discussed by Haba (2002) is because of the regencies' interpretation of the extent of their own autonomy. This causes them to reject the authority of both the provinces and the central government. Forest management is also a case in point. Ideally, to establish any policy on forest management, forestry agencies at all levels should discuss and understand different agencies' interests in advance in order to be able to negotiate and meet on the middle ground.

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Chapter 9.

Decentralization of forest policy in Indonesia

Herman Hidayat

Introduction

Decentralization is a consequence of democratization. It intends to build 'good governance' from political grass roots. Political scientists agree that the implementation of 'decentralization' to further government policies on many developmental issues such as economic issues, empowerment of local people, health, education, natural resources, *etc*., should be appropriate to local geographical conditions. In this case, the local government, which is familiar with its own local geographical conditions, can decide on a suitable master plan. On the other hand, the 'society', which is the target of local development for autonomy, can accelerate social welfare.

This paper discusses several sub-themes under the broader topic of decentralization in Indonesian forest policy: (1) the general conceptual approach and the aim of decentralization from central and local government interests; (2) the implementation of Laws number 22 and 25 of 1999(22/1999 and 25/1999); and (3) local autonomy and decentralization in a forestry context.

1. Decentralization

1.1. Conceptual Approach

The concepts of decentralization and autonomy have been widely discussed and have recently been a central issue in theoretical debates on the relation of central government with local government in developing countries. 'Decentralization' is widely used as part of social science's terminology. The problem is how to formulate decentralization based on two main perspectives, namely, political and administrative decentralization.

Parson (1961)[1] defines decentralization as the sharing of governmental power by a central ruling group with other groups, each having authority within a specific area of the state. Meanwhile, 'deconcentration' means the sharing of power between members of the same ruling group, each having authority respectively in different areas of the state. Referring to Parson's definitions of decentralization and deconcentration, Mawhood (1987)[2] agreed that decentralization is devolution of power from central to local governments. Regarding deconcentration as similar to administrative decentralization, Mawhood defines it as the transfer of administrative responsibility from central to local government.

Smith (1985) defines 'decentralization' from the political perspective as the transfer of power, from the top level to a lower level, in a territorial hierarchy. This could be a governmental hierarchy within a state, or an office hierarchy within a large organization. According to Smith, the most significant item is that the devolution of power should be a main component of decentralization, although, interestingly, the devolution of power should not be limited to just governmental structures.

Rondinelli and Cheema (1983)[3] formulate a definition of "decentralization" more widely and categorize administrative decentralization perspective inclusively. They explicitly describe decentralization as: "the transfer of planning, decision-making, or administrative authority from central government to its field organizations, local administrative units, semi-autonomous or parastatal organizations, local government, or non-governmental organizations". Based on this definition of decentralization, Rondinelli and Cheema (1983: 18-25) formulate four key issues within the process of decentralization. Firstly, 'deconcentration' means the redistribution of administrative authority within the governmental structure. Secondly, they note the importance of *delegation to semi autonomous or parastatal organizations*: this means the delegation of managerial authority and decision-making on certain issues that are specific to organizations, which themselves are not directly under governmental control. Thirdly, *devolution* means the transfer of functions and authorities from central to local autonomy. Fourthly *privatization* means the transfer of certain administrative responsibilities and authority in planning towards private organ

This description of the definition of "decentralization", which is discussed by Rondinelli and Cheema, seems to have a more comprehensive perspective as compared with Parson (1961), Smith (1985) and Mawhood (1987).

What is critical is that Rondinelli and Cheema's definition covers not only the delegation of transfer of au-

[1] For more about 'decentralization' see Parson, T, *et al*. (1961) *Theories of Sociology,* Glencoe: The Free Press.

[2] Mawhood (1987) defines 'decentralization' in *Local Government in the third World: The Experience of Tropical Africa,* Chicheser: John Wiley & Son, pp. 9. See also Smith (1985), *Decentralization: The Territorial Dimension of the State,* London: Asia Publishing House.

[3] To understand about 'administrative decentralization' perspective, see Rondinelli, Denis, Nelis and Cheema (1983) *Decentralization in Developing Countries: A Review of Recent Experience,* Washington D.C: The World Bank, pp. 18.

thority in governmental structures, but also accommodates the authority for that delegation toward non-governmental organizations and even private organizations.

2. The aim of Decentralization

In principle, it can be said that the rise of decentralization is antithetic to the idea of centralization[4]. It seems that centralization encourages us to defend the unification of political power in central governmental authority. Therefore, one of the hopes for decentralization is an increase in the "dissemination" of power and transferring of authority to the local government level. How do others define the aims of decentralization?

In general, Smith (1985) differentiates two main categories from the overall aim of decentralization, namely political and economical aspects.

The aim of decentralization from the political perspective is to enhance local government, to improve the skills and political capability of governmental apparatus and society, and also to defend national integration. This aim of decentralization "is based on the liberation idea which is importantly emphasized to build democratization of local government as a prerequisite to realizing democratization at the national level" (Yluisaker, 1959: 30). On the other hand, economically, the aim of decentralization is to improve the local government's capability to deliver public goods and services, to encourage efficiency and effectively determine economic development (Rondinelli, 1983: 4). Another scholar, Ruland (1992: 3), strongly emphasizes the social participation aspect in economic development as the main aim of decentralization. Furthermore Ruland highlights: "decentralization, as a corollary to local autonomy, is seen as a positive contribution to increasing people's participation, which would eventually lead to socio-economic development".

2.1. Aims of Decentralization from Central Government Interests

There are three main aims for decentralization according to Smith (1985), in relation to central government interests. Firstly, the so-called *political education*. The aim of decentralization is inspired by basic ideas from democratic decentralization. Tacqueville is well known for supporting this idea. His argument to justify the necessity of political education as part of decentralization is that: "town meetings are to liberty what primary schools are to science; they bring it within the people, and they teach men how to use and how to enjoy it" (Smith, 1985: 20). Another author, Maddick (1963) says that the formation of local autonomy is to create "healthy political understanding" for society, particularly in relation to state operational mechanisms. By implementing decentralization, Maddick underlines that society will study and understand various affairs on a social, economic and political level that are going on; society will be endowed with the right to support or to refuse members of local legislative representative bodies, whether they are qualified as politicians or not, and to criticize local government policy including budget allocation development.

Secondly, *training in political leadership* is provided. This aim starts with the basic assumption that local government is an appropriate means for training bureaucrats and politicians, before they reach significant levels of seniority at the national level. Therefore, through decentralization policy, it is hoped that it will be possible to motivate and encourage the rise of informed leaders at a national level. Then, by a basic understanding of this matter, Harold Laski (1931) argues: "if the members of a national legislative body have prior experience in local bodies, they would gain the feel for institutions so necessary to success".

Thirdly, is *the creation of political stability*. Supporters for this third aim of decentralization believe in realizing social harmony and political stability (Smith, 1985: 23). On the other hand, the aim of decentralization through political education and training in political leadership will finally attain political stability. Apparently, these three promises will encourage the improvement of social participation in the decision-making process at a local level, but also improve sensitivity and political capability among local government apparatus in accommodating various demands which are recommended by society. This condition will be a significant prerequisite to creating political stability. This context is appropriate to Sharpe's idea (1981:69-70). He argues: "one of the determining factors constitutes the embodiment of a stable democracy at the national level, in many instances preceded by the establishment of local democracy".

2.2. Aims of Decentralization to Local Government Interests

The aims of decentralization to local government interests are various. Firstly, to realize *political equality* and so grant access to open opportunities for society to participate in various political activities at the local level. Smith (1985: 24) states that local people can participate in the formation of political groups and concepts, for instance to be members of political parties and interest groups, to have freedom in realizing their interests and to be actively involved in the decision-making policy process. Secondly, is *local accountability*. Smith (1985:26) goes further to say that local accountability can be related to the basic idea of liberty. Therefore, he believes that through decentralization, the capabilities of local government with regard to community rights will rapidly increase. Furthermore, Ruland (1993) discusses local accountability in terms of social and economic development. In Ruland's (1993: 3) opinion: "the accountability of local government remains necessary in the process of socio-economic development. It is through the proximity of local decision-makers to their constituency that area

[4] For further information about ' decentralization' in the reformation era, see Syarif Hidayat and Bhenyamin Hoessein, " Desentralisasi dan Otonomi Daerah" in Syamsuddin Haris (eds.), *Paradigma Baru Otonomi Daerah,* LIPI: Puslit Politik, 2001, pp. 27-35.

divisions in power can be considered an additional assurance that demands will be heard and, accordingly, public services provided in line with people's needs. Moreover, the dispersal of political power through area divisions and the existence of strong self-reliance by local governments would thus guarantee a social development pattern that rests on the principle of diversity in unity".

Thirdly comes *local responsiveness*. One of the basic assumptions of the values of decentralization is that local government gets more information about various affairs facing the community. So, it is hoped that the realization of decentralization will be the best alternative to overcome and to accelerate socio-economic development in local government.

It is necessary to question the likelihood that local accountability will evolve, as done by Joel Samoff (1990). One of his criticisms is whether it is believable that the implementation of decentralization policy will afford open access to local government and the realization of self-government. In contrast, he argues, would it not be more likely that the implementation of decentralization will in fact strengthen the centralization of power in central government? The experiences of developing countries, Samoff says, show that although decentralization policy was implemented in the early post-independence periods, together with revised regulations, commonly local governments are very dependent on the central government.

3. Critical Review of the Decentralization Laws

3.1. Evaluation of Law No. 22/1999: Critical Review of the Relationship of Central Government and Local Government

The issuance of law number 22/1999 in the 'reformation era' (Era Reformasi) formed a restoration in the relationship between central and local government in Indonesia.

In fact, many observers say that Laws number 22 and 25/1999 have a federal orientation. But in reality, as Haris mentions, these laws have tended to sustain old paradigms of local autonomy, as seen in the reforms in favour of autonomy which have occurred in local districts (Daerah Tingkat II), by not paying attention to the different capabilities and diverse potential of the different districts (Kompas, 28 April 2000). Haris's criticism is reasonable because chapter 1 (e) of Law number 22/1999 explicitly states that: "decentralization is the transfer of governmental authority from the centre to the local level in the frame of a united state – the Indonesian Republic".

Chapter 1 (e) of the Law refers to the old paradigm of administrative decentralization, in emphasizing the delegation of authority and not the encouragement of the devolution of power, as is hoped for under the paradigm of political decentralization.

Conceptually, the approach of the new paradigm for 'local autonomy' is focused on the assumption that democratic ideas, justice and welfare for society do not entirely depend on the formation of government. Rather, they apparently depend on the 'political system', which guarantees a fair power distribution, accountability, law enforcement, respect for human rights, and an economic structure that is fair and empowers society, through the realization of a mechanism for '*checks and balances'*. Therefore, the gift of autonomy to local people cannot be seen as a separate agenda from the grand agenda of 'democratization' for the whole society. The logical consequence of this view could encourage an understanding as follows: (1) local autonomy should be seen as an 'instrument of democratization' defending national integration and pluralism of ethnic identities. In this context, local autonomy is not the 'purpose', but the method of democracy, necessary in order to realize justice and social welfare for the all people. (2) Local autonomy must be defined as 'autonomy' for local people, and not for local government. In this sense, the appointment of a Head of local government (*Bupati*) by a local legislative institution (DPRD) should be based on justice, fairness and democracy. (3) Local autonomy is a right of local people's groups and must be inherent in democratization. Therefore, it is necessary to ensure 'participation' of local people in the formulation of a process of policies and in the realization of local autonomy in general. (4) Local government must not be seen as 'subordinate' to central government: the relation between central and local must be seen as '*reciprocal'*. In this context, both parties need mutual assistance and must interact. (5) It is necessary to make the agenda on local autonomy more 'flexible and conditional'. In this context, the realization of 'autonomy' must be through respect for diversity, heterogeneity based on natural potential and the objective capabilities of local government.

It is clear from the above description that orientation towards local autonomy in future years will be increasingly based on 'political decentralization', not 'administrative decentralization', as occurred during the Soeharto regime. This means that the solution of the root problem does not depend on the delegation of more 'administrative authority' to local bureaucrats, but to what extent far local people through local government are able to participate in the 'sharing of power' to manage their respective capabilities. On the other hand, the key word in 'political decentralization' is how far local government is incorporated for the 'delegation of power' from central government. This is because the scope of power delegated to local government will directly determine the degree of autonomy realized by local government.

As outlined in chapter 7 of Law number 22/1999, however, the power relationship between central and local government is characterized by a strong will to sustain the centralization of power in the hands of central government. As mentioned in item 7 (1), local authority covers authority in all governmental fields, with the exception of foreign policy, defense and security, judicial, monetary and fiscal, religious and other matters. This

statement fundamentally makes political sense as its central focus is the idea of the reconstruction of the relationship of central and local government performed under Law number 22/1999. Why does such a reconstruction happen? Because this statement explicitly identifies that all governmental authority will be submitted to local government, with the exception of the 6 items listed, which will continue to belong to central government. In this context, we have to appreciate that Law number 22/1999 has a more federal nuance. On the idea of the reconstruction of the control relationship between central and local government and its federal nuance, Law number 22/1999 is seen in vague terms or even as making no sense, since, the end of chapter 7 (1), "other field authorities" are also stated as remaining the responsibility of central government. That is, the continued ownership of power by central government is not limited only to the 6 items quoted above, but also incorporates other powers that are not included at the operational law level.

For a more comprehensive enumeration of the authorities actually delegated to the local level from central government, we can look at Governmental Regulation (Peraturan Pemerintah/PP) number 25/2000. Based on Chapters 2 and 3 of PP number 25/2000, central government reserves control over 257 matters, categorized into 25 areas (see chapter 2, verses 3 and 4). Meanwhile, local government at the provincial level is granted authority over 111 items classified into 20 fields (see chapter 3, verse 5).

3.2. Critical Review and Evaluation of Law Number 25/1999

This law is about the 'financial balance' between central and local government in relation to fiscal decentralization. One of its aims is the restoration of economic efficiency, accountability, and the improvement of fund mobilization and justice[5]. Therefore, the existence of law 25/1999 in the reformation period is regarded as a "miracle" for Indonesia, in facing the demands for justice leveled by many local governments.

The issue of 'financial balance' is a determining factor in the relationship between central and local government. The injustice of central government in gaining financially from the exploitation of regional natural resources during the Soekarno and Soeharto periods, has created tension between central and local government and threatened national integration. For instance, the rebellion of *PRRI* (Indonesian Republic Revolutionary Rebellion) in West Sumatra and of *Permesta* in North Sulawesi at the end of the 1950s can be seen as historical evidence in the early period of independence in favour of "financial decentralization"[6].

But most of the corruption occurred in the Soeharto regime, when exploitation of natural resources (including forests, minerals, oil and gas, fisheries, *etc*.) from local regions and the pocketing of local incomes by central government occurred. The real situation in many provinces and for local governments was one of poverty and a lack of infrastructure in many sectors, because of the lack of a local budget. Therefore, the fall of the Soeharto regime in May 1998 was seen as a kind of "blessing in disguise" for local government to appeal to their "suffering" (*penderitaan*), since they had never received serious attention from central government until them. Local rebellion occurred in many resource-rich provinces such as Irian Jaya (Papua), Aceh, Riau, East Kalimantan, because they did not receive any income from the exploitation of local natural resources. Even Aceh and Papua society directed frank demands to central government for independence.

The conceptual approach is that the existence of Law number 25/1999 is 'evidence' of 'political will' from central government to improve the financial capability of local governments. Chapter 3 of Law number 25/1999 mentions that the 'income from resources' that local governments can realize under decentralization, is made up of th "original income of local government, a balancing fund (from central government), and other valid sources". The 'balancing fund' includes: (1) a fee derived from land taxes and construction (Pajak Bumi dan Bangunan); (2) a fee from natural resources; (3) a general allocation fund/DAU; (4) and a special allocation fund/DAK, *etc*.

With regards to its outlook for 'financial balance', Law number 25/1999 drew a mixture of views with both positive and negative perspectives.

Firstly, the weight of this law is felt particularly in its 'attention' to financial balancing, because over the past few decades such attention never existed. Secondly, this 'financial balancing' is especially pertinent for those local governments of regions rich in natural resources that are hopeful of reducing their 'dependency' on fees from central government. Thirdly, this law is perceived as an effort to build 'principles' related to financial balancing based on the redistribution of power, and on the sharing of tasks and responsibilities between governmental levels. Fourthly, the financial responsibilities of local government can be performed more 'transparently', where local legislative institutions (DPRDs) can be seen clearly to utilize all funds used by local government. Fifth, for the coordination and realization of the objectives, it is necessary for the central government to establish secretarial offices made up of members representing central and local governments. The main duty of such offices would be to recommend policies on 'financial balancing' relating to central and local government. Besides, central government should create an informative system on 'local financing' and ensure transparency so that these can become known to society.

The essence of law 25/1999 regarding the financial

[5] Regarding 'fiscal decentralization', see Richard M. Bird, *Desentralisasi Fiskal di Negara-negara Berkembang,* Jakarta: Gramedia Press, 2000, pp. 2.

[6] See Alfitra Salamm 'Evaluasi terhadap Undang-undang No. 25/1999 dan Peraturan Pelaksanaannya' (Evaluation on law number 25/1999 and its implementation) in Syamsuddin Haris (eds.) *Op Cit*, pp. 43-47.

balance between central and local government is a governmental financing system against the background of a united country, which includes a proportional financial division, democracy, justice and transparency between central and local government. In this division, central government would have the responsibility to identify potential opportunities in natural resources, conditions and local needs.

This new policy on national and regional financial balance should be able to empower and improve local economic activities and, ultimately, improve social welfare. However, real or practical successes of Law number 25/1999 have not yet been realized, because many potential development projects involving natural resources such as gas and oil, forests and minerals, have until now been dominated by central government. Table 2 below shows the new balance of funds between central and local government expected under Law 25/1999.

Table 1. The balance of funds (%) between local and central government in a variety of sectors under Law 25/1999

Income from various sectors	Central Government	Local Government
Land and buildings tax (PBB)	10	90
The Right of Financing (BPHTB)	20	80
Natural Resources (*Forestry Sector*):		
Logging Owners Funds	20	80
Forest Resources Commission Fees	20	80
General Mining:		
Fixed Contribution	20	80
Exploitation and Exploration Contribution Fees	20	80
Oil	85	15
Natural Gas (LNG)	70	30
Fisheries	20	80
Special Allocation Fund	60	40

Source: Untung Iskandar (2001), *Kehutanan Menapak Otonomi Daerah* (Forestry Sector Toward Local Autonomy). Jogyakarta, pp. 124-125.

This table shows that there are many fundamental changes introduced under law 25/1999. These changes certainly affect local finance, such as: (1) the decision on the percentage for PBB and BPHTB (Bea Perolehan Hak Atas Tanah dan Bangunan/Fee on land and construction rights) and other natural resources such as forests, minerals, fisheries, oil and natural gas; (2) the platform of DAU (*general allocation fund*) which is distributed to local government and DAK (*special allocation fund*) based on PP 104/2000 (Government Regulation); (3) the freedom of local government to seek domestic resources funds (PP 107/2000); (4) the accumulation of a local reserve fund for financing development; (5) the change in formation of APBD, which was formerly "dynamic and balancing", with regards to the budget which is probably moving into deficit; (6) the freedom for local government to manage their own finances.

Meanwhile, incomes from oil and natural gas contributed the greater part of the state's income and these sectors are still dominated by central government. In contrast, natural resource rich states such as Riau, Aceh and Papua, which contribute disproportionately to the income generated from these resources, cause "jealousy" amongst local governments. In the forestry sector, the bulk of the income is still received by central government. This is due in part to the real authority of the Forest Logging Concession (HPH) and of Industrial Plantation (HTI), which together are responsible for concessions over 6,000 hectares that belong to the Department of Forestry. Meanwhile, local government has authority to issue permits for logging in concessions of 100 - 1,000 hectares to the cooperative sector for satisfying customary forest rights. The province level could add another 2,000-5,000 hectares of forest concessions to this local figure.

Economic calculations show that Law 25/1999 has a great impact on local government APBD (*Local Budget Allocation*), where a rapid increase occurs, particularly

among local districts/provinces rich in natural resources - for example, East Kalimantan (*Kalimantan Timur*), which had a PDRB (*Bruto Regional Domestic Product*) of Rp. 5,495 billion in 1999 (which increased by 30.5% to Rp. 71,68 billion in 2000). However, of this amount, East Kalimantan received a PDB (*Bruto Domestic Product*) of just 2.1%, or Rp. 1.2 billion, in 1999. Meanwhile, East Kalimantan in 2001 received DAU (*General Allocation Fund*) for the development of infrastructure and the distribution of Migas (Oil and natural gas), and 8.5% of PDRB in 2000, an increase of more than 400% compared with its budget during the government of Soeharto. The natural resources belonging to East Kalimantan consist of forests (19.8 million hectares), minerals (coal), oil and natural gas. For example, in the fiscal year 1998/1999, East Kalimantan province received Rp. 5,345 billion in revenues from the forestry sector and Rp. 1.2 million from the PSDH (*Commission Fees of Forestry resources*) and reforestation fund. East Kalimantan applied to the Reforestation fund in 2001 for Rp. 1500 billion from the central government. This demand is very reasonable because the forestry sector annually contributes Rp. 450-500 billion to central government coffers.

The positive impact of law 25/1999 is in supporting the existence of PAD (*Local Original Income*) as a local income resource. From the perspective of local government, PAD is a resource fund derived innovatively and from local government initiatives and creates a new income source. Therefore, there are many local governments working together with local legislatures to identify new chances as local income resources. Local government creates new "local regulation" to enable more income for PAD. This is helped by the fact that the wage of local legislatures' members is based on the improvement of the income generated from PAD.

KADIN (*Indonesian Trade Association*) and its leader, Abu Rizal Bakrie, have protested that there are hundreds of PERDA (*local regulations*) acting as barriers for businesses and worsening the investment climate at the local level. Furthermore, Mr. Bakrie has said that, if these barriers are not removed by local and central governments, the recovery of national economic development may fail, because many domestic and foreign investors will be reluctant to invest their capital in Indonesia.

4. Local Autonomy and Forestry Decentralization: Discussion

What does 'forestry decentralization' mean?

It means that by the implementation of Law number 22/1999 and Law number 25/1999 the authority and responsibility regarding 'forest management' has been transferred to local government, especially to governments at the district level (*Kabupaten*). All forest land, including productive forest and conversion forest are administratively entrusted to local government. As regards national parks (*Taman Nasional*), the power of forest management belongs to central government. Apparently, by virtue of this authority, local government has the big ambition to expand their incomes. Forest decentralization covers three principal aspects: (1) decentralizing forest production as well as state forest land and customary rights forest; (2) devolving the civil service aspects of processing relating to production; and (3) increasing forest protection which focuses on conservation and ecosystem protection. Meanwhile, the area of forest in some districts is variable. Therefore, by virtue of Law number 22/1999, there is no 'hierarchical' relationship between the Department of Forestry with the Forestry Agency at a provincial level and district level.

In reality, local government is not well prepared for 'forest management' and 'forest protection'. This is because of a lack of institutional capacity building (regulation, capable manpower, organization, experience, *etc*.). Seemingly, the local government needs several years more time in order to prepare for 'forest management'. Based on personal observations over two years, since the implementation of 'local autonomy' in January 2001, East and West Kalimantan have not succeeded in realizing 'forest decentralization' yet. The central government has apparently had to take over again the authority and the delegation of power on 'forest management' up to now.

Let me now discuss the forestry decentralization process. Deforestation and forest degradation accounts for almost 2 million hectares annually, because of mismanagement in the forestry sector over the preceding three decades expressed partially through deforestation and other environmental issues. These factors lead to increased criticism and demands from the public, CGI countries and IMF (*International Monetary Fund*) to perform "decentralization" in the forestry sector. Forest management was formerly characterized by centralism and monopoly in the Soeharto government, which resulted in the degradation of natural resources.

Therefore, it can only be hoped that 'forestry decentralization' will help maintain sustainable forestry. At the field level, forestry regulation from central government is considered as "failure regulation" in forestry management. As a consequence, the perspective of local government does not necessary follow that of forestry regulations or the advice from Jakarta on points of law. Local governments believe that the responsibilities wielded by central government for more than three decades were not utilized for society's interest, but just for big Logging Concessionaire companies and their cronies. This engendered corruption in the forestry sector, because of the collusion among big businessmen with state-bureaucrats regarding wood industries in the mainstream, for instance in Logging Forest Concession (HPH), Industrial Forest Plantation (HTI), pulp and paper, though reaching downstream to wood industries such as plywood, sawmill and paper industries. This collusion impacts in the high cost of operational processes in wood industries and results in high debt for all private businesses involved, currently totaling Rp. 219 trillion (US$ 2.2 billion) in BPPN (*Na-*

tional Banking Recovery Institution) and affecting 129 companies, where 67% are in fundamental debt.

Meanwhile, there are 24 companies facing difficulties paying their debts of between Rp. 20-50 billion. In addition, there are 20 companies which have debts of between Rp. 200-1,000 billion. These 20 companies account for 35% of total debt in the sector. Three of the companies have debts of between Rp. 1,000-3,000 billion each, making up a total debt of Rp. 7,800 billion, or 35.8% of the total .

Of these 129 companies, those with debts amounting to 20.7% of the total are likely to be restructured (i.e. those companies with individual debts of Rp. 4.5 billion). This assumption is based on the validity of the permissions of Logging Forest Concession (HPH) and Pulp and Paper companies who own Industrial Forest Plantation (HTI). Wood industry companies (which do or do not possess HPH) with debts amounting to around Rp. 9.7 billion, or 44.4 % of the total, are reasonably likely face debt restructuring .

Forestry decentralization guarantees sustainable forest management in Indonesia. This statement is one of the government's commitments to CGI. But the implementation of forest decentralization must occur in such a way that local governments (*kabupaten*) are granted the authority to manage natural resources and gain responsibility to maintain a sustainable environment (based on law 22/1999). Law 41/1999 and PP 25/2000 underline that the authority of forest management at the local level belongs to local government. Central government has responsibility to manage forest protection, forest conservation and production forests across the provinces. On the other hand, provincial government has the obligation to manage large forest gardens (*taman hutan raya*) - across district areas. Since the beginning of autonomy in early 2001, the division of power in forest management did not satisfy many stakeholders, especially those in central and local government and other actors from the private and cooperative sectors. This has had the consequence of causing misdirection of power and a lack of security guarantees in forestry. The situation on the ground reveals that the decentralization process in forestry has caused local government to lose its faith in central government on forest management through the decentralization framework. Seemingly, this serious problem in the forestry sector must get priority attention. The existence of forest management in the future is dependent on local government policy.

5. To Overcome the Problems

Constantly with the spirit of reformation in many fields, forestry reformation must encourage the improvement of social and economic standards amongst local people, raise local government income, build institutional capacity in forest management, and establish 'law supremacy' among the forestry sector. Any alternatives may result in forest degradation and the shortage of raw materials for wood industries in the near future. Another factor of forest degradation is observable in East Kalimantan, because the natural forest areas have been systematically reduced as an effect of conversion of natural forest to become non-forest areas such as commercial agricultural enterprise (palm oil plantation, industrial forest plantation/HTI) and resettlement areas.

There are many primary priority forestry programs to be considered in dealing with non-sustainable forestry management under autonomy. The first is the *enforcement of law supremacy* in forestry management with justice orientation where society's interests are the main objective. Secondly, the *financial benefit* from forestry management must be widely enjoyed by central, provincial, local government and by communities that live in and around forests. Then, all stakeholders concerned with the utilization of forests must increase their awareness to maintain sustainable forest management. Thirdly, the government can help allocate a part of the production forest to be turned into 'customary rights forest' and social forests. Such 'social forestry' can be considered forest management on a small scale. The area of the social forest must be rationally appropriate to the size of the local community. The allocation may be based on natural forest productivity estimations, which indicate that each person in the community is able to manage around 10-20 hectares of natural forest with the application of a feasible silvicultural system (Interview with Maman Sutisna, conducted on March 28, 2002).

Observing this description on forest resources management, it can be concluded that the essence of forestry decentralization is to "democratize" forest bureaucracy, especially in the Department of Forestry, from central and provincial (*Kanwil*) to district (*Dinas*) levels. This democratization process principally covers good governance, transparency, participation and accountability.

In its document 'Government Commitment action in Forestry Sector' (Elfian Effendi, 2001: 7-8), the Department of Forestry identifies six main problems in the forestry decentralization process: (1) the lack of preparation in replacing central with local authorities in the forestry sector; (2) differing views of decentralization based on their respective interpretations, perceptions and representation; (3) inconclusive results from the RTRWP/K have the effect of making the arrangement process non-transparent and non-participatory; (4) politicization of forestry resource management which is opposed to sustainable principles; (5) the lack of institutional optimization at the local level (*kabupaten*) to support sustainable forest management; (6) the lack of recognition of local customary rights in forests and forest management. In fact, these six problems have not arisen suddenly through the process of decentralization, but are long-running problems that have not been identified and approached by Department of Forestry until now.

Forest stakeholders especially at the local level feel 'uncomfortable' with the opinion that "local government does not know enough on sustainable forest philosophy". This opinion is not wise because the local level has been

'accused' of being a forest destroyer during the autonomy era in order to expand "original local income" (*Pendapatan Asli Daerah*). In contrast, the Department of Forestry currently uses the formula "it is necessary to maintain sustainable forestry" in the frame of 'forestry decentralization'. But, based on local perceptions this is a centralist strategy in order to defend central power and authority in the course of the forestry decentralization process. There is a strong indication that central government uses its commitment toward CGI to defend its authority in forestry management. This means that although the arrangement of forestry authority is more focused on a district (*kabupaten*) level than a provincial one (see Law number 22/1999 chapter 10: "local government has authority to manage national natural resources and it has responsibility to maintain its environment"), central government needs to obtain "special authority" from CGI to perform six commitments in the short term. One of the phases is to ensure forestry decentralization can support sustainable forestry (see also chapter 7 of Law number 22/1999: "that the utilization of natural resources and forest conservation is the responsibility of central government"). Seemingly, if misinterpretation of the law continuously develops between local and central government, all regulations in realizing local autonomy have the potential to engender conflict among stakeholder interests, and local autonomy will fail (results of consultation with Kutai Kertanegara in Socialization PP 25/2000, 2000).

As a forestry decentralization facilitator, the Department of Forestry in fact need not be involved in the authority interaction process. The forestry decentralization process is more focused on local affairs than central ones. In the emergence of this intercourse, local government seems unprepared in forestry decentralization compared with central government.

There is misinterpretation of PP [already defined] number 25/2000 of the relationship between central and local government's power in the forestry sector. It seems that interpretations by the Department of Forestry are often "artificial" in order to preserve its greater authority than that of local government. This appears based on central government perceptions, that this "authority" is identified with power and not with responsibility. On the other hand, efforts by local governments to secure greater authority over forestry issues have increased, mainly as a result of a loss of faith in the "credibility" of the Department of Forestry to perform decentralization in the forest sector and in forest management. The Department of Forestry should replace the 'reconciliation' of Law number 41/1999 with regulations to manage local autonomy as a priority for forestry development.

In a forestry decentralization context, if every stakeholder defends only their own perceived interests, a non-productive situation for forestry development emerges. The solution is for the Department of Forestry to act as a good "facilitator" among stakeholders such as local people, businessmen, academics, *etc*., and to seek equilibrium and understanding in various "conflicts of authority" in order to obtain the best solution for sustainable forest management in the near future.

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Chapter 10.

Legal Treaties: Seeing from Indonesian Experiences

John Haba

This work discusses three major themes: 1) Legal aspects of an international convention - the Ramsar Convention - which has been assented to and was ratified by the Indonesian Government in 1991. In this way, the Indonesian Government has incorporated the convention into domestic law. However, even though Indonesia has implemented legal instruments designed to protect the environment at an official level, experience in many wetland sites proves that violation of the environment is continuing. Destruction of coral reefs and mangrove forests, the use of explosives to catch fish, capturing protected birds and hunting crocodiles are some of the many examples of environmentally destructive practices in the Indonesian community that intrinsically stand against both international and national laws. To sustain the environment (including both the flora and fauna), the central government must now implement policy change as a means of facilitating projects in rural areas. These projects should encompass two key aspects of local people's lives: 2) economic benefits of sustainable environmental management, and 3) the recognition of the land rights of local people.

I. Introduction

In the IGES Report for 2001-2002, three major international conventions were investigated particularly in the chapter 'Legal Aspects': the Ramsar Convention, the Aarhus Convention and the Convention on Biodiversity. A main task in the first Year Report was not simply to lay out the contents of these three conventions that are so vital with respect to fauna, flora, and to forests and the environment more generally, but also to review (in a general way) how the Indonesian Government has reacted to the international demands to sustain its forests and environment, by ratifying and adopting those Treaties in national law. In reporting on Year 2 (2002-2003) of IGES' work, I will focus mainly on one of the conventions - the Ramsar Convention, which has already been ratified by the Indonesian Government.

I will subsequently try to link this topic with a discussion on the variety of factors constraining implementation of the treaty. This section will be concluded by pointing out some possible recommendations for how the Indonesian Government should conduct forest conservation generally, and particularly in the areas where the sites being discussed are situated. A major logic behind my choice is that much on other Conventions has been addressed in the Year 1 Report, and they are also commonly debated among Indonesian bureaucrats, NGOs and intellectuals in relation to the Ramsar Convention. There is not, within Indonesian society, much interest in the Ramsar Convention's objectives.

In discussing the Ramsar Convention, the former Director of the International Waterfowl Research Bureau (IWRB), Michael Moser (1998-1999) once said, "the Ramsar Convention on Wetlands is the single most important tool for harnessing governmental commitment to wetland conservation around the world. For that reason, Wetlands International gives the highest priority to our collaboration with the Convention. In fact, the story is a long one". Historically, the Ramsar Convention reminds millions of people around the world of a small town on the Iranian coast of the Caspian Sea, where an international convention to encourage governments to minimize further destruction of the existing wetlands, was adopted. This Convention has since been incorporated into the national law of signatory countries. The lack of any prior positive policies or actions at the national and local level to stop damage to wetlands was considered a strong foundation inspiring Dr. Luc Hoffmann and Prof. Geoffrey Matthews (the 'founding fathers') of the Convention to build a close cooperation with various organizations leading to the introduction of the Ramsar Convention in 1971.

II. Further Development of the Ramsar Convention

We cannot even imagine the condition of wetlands today without referring to the enormous contribution of the Ramsar Convention. The implications of the Convention since its entry into force have been to help maintain wetland sites and any species found in the protected areas. Looking at the huge areas around the world that are experiencing environmental degradation, it is impossible for one single nation to carry out its mission without the collaboration of others.

Four major partners are actively related with the Treaty and are, from the beginning, working to meet its objectives. These are: Bird Life International, the World Wildlife Fund (WWF), Wetlands International and IUCN. Wetlands International in its mission also provides information, arranges conferences, gives technical and

scientific assistance to various bodies linked to the Wetlands International, to make sure that the tasks of the Convention are still workably pursued. At the regional level, cooperation between the Ramsar bodies and Wetlands is being extended to many parties across national borders. This enhances the implementation of the Ramsar Convention in Africa, South America, Europe and the rest of the Asian continent.

In Indonesia, in consideration of political demands at the international level and of the need for sustaining wetland sites, and receiving advice from various bodies within Indonesian society to keep the Indonesian flora and fauna at sustainable levels, the Government under Soeharto finally ratified The Ramsar Convention through the Presidential Decision No. 48 of 1991 on 19th October 1991.

One important tool to bringing this Convention into effect was the establishment of "An Overview of the World's Ramsar Sites", to which data is supplied that can be used to increase awareness by the contracting countries or parties. A list issued by Wetlands International documented 771 sites with around 52 million hectares in 1996. An increase in the number of sites and of participating countries is likely, if a comparison is made between these figures and the figures of sites and participating countries in 1998, when membership had grown by 25% to 114. For instance, in 1998, the overall number of Ramsar sites increased to 957 while the total cumulative area of designated wetlands reached 70.5 million hectares. This is despite the fact that since the early years of the establishment of the Ramsar Convention more attractive programs have been introduced and that there is an indication that among the participating countries themselves, the misused (and not wisely used) wetland sites for various purposes such as human settlement have caused water pollution, further degradation of fauna and flora, *etc*.

III. The Ramsar Convention and the Indonesian Case

In 1991, the Indonesian Government issued a " Presidential Decision" (No. 48 of 1991) to ratify the Ramsar Convention. The main reason behind the ratification was "to socialize the Convention to the Public" (*untuk memasyarakatkan atau mensosialisasikan Perjanjian Ramsar kepada masyarakat luas)*. In accordance with the Paris Protocol of 3rd December 1982, Indonesia (just as the other nations that have ratified the Convention) has to meet standards underscored in the Convention: recognizing the interdependence of man and his environment, considering the fundamental ecological functions of wetlands as regulators of water regimes and as habitats supporting the flora and fauna, particularly waterfowl. Underlying this was a conviction that wetlands constitute a resource of great economic, cultural, scientific and recreational value the loss of which could not be replaced. The parallel Paris Protocol underlines the aims of the Convention to stem the progressive encroachment on wetlands now and in the future. The protection of migratory waterfowl is an example of how national frontiers can be transcended in recognition of wildlife as an international resource.

It is hoped that the conservation of wetlands and their flora and fauna can be ensured by combining far-sighted national polices with coordinated international action. The vital focus of the Ramsar Convention is key habitats: marshes or water either artificial or natural, permanent or temporary, with water that is static or flowing, fresh, brackish or salinated, including areas of marine water the depth of which at low tide does not exceed six meters. On top of that, the convention covers waterfowl, i.e. birds ecologically dependent on wetlands (Rusila, 1994).

In 1990, Wetlands International initiated a Wetland Database (WDB) particularly designed for wetland management. Therefore, to meet the initiative's objectives, the Wetland Database (WDB) collected data and information on wetland areas, and can now be regarded as the most comprehensive compilation of databases on Indonesian wetlands. Based on the available information and data collection, the Directorate General of Forests and Nature Conservation (PHPA) and Wetlands International began a project entitled "An Overview of Indonesian Wetland Sites" in 1996. This project was implemented in accordance with the National Strategy and Action Plan for the Management of Indonesian Wetlands making use of every piece of data available. Volume I of the work contains information on prominent Indonesian wetland areas across the Indonesian archipelago, their distribution, status and current condition. Two years after the issue of Volume I in 1997, Volume II was also published for the public and all parties involved in this work to celebrate World Wetlands Day (*Perayaan Hari Lahan Basah Sedunia*). Volume I contains an extensive data set and information on a regional and bio-geographical basis. The bio-geographical regions covered include Maluku, Irian Jaya, Sumatra, Kalimantan, Java, Bali and Nusa Tenggara. The major difference between Volume I and Volume II is that Volume II provides more complete data and information on the wetland sites of each region, wetland habitat types, their protection status, flora and fauna and on current land-resource use.

IV. National Wetland Sites: An Overview

The present section will discuss some wetland sites in Indonesia, particularly in Nusa Tenggara (East and West Nusa Tenggara). The reason behind this choice is that Nusa Tenggara, despite including only one major site, is that it embodies the need to introduce a wider international and national community who have less knowledge of these sites compared with Kalimantan, Java, Bali and other wetland sites in Indonesia.

In East and West Nusa Tenggara, around 20 wetland sites cover a total area of 1,698,124 hectares. Within this total area, wetlands account for approximately 27,183 hectares. The main disparity between the total area and that of wetlands is due to some wetland sites including not only wetlands but also other habitats. Several wet-

land sites in Nusa Tenggara are characterized definitively as wetland such as: Danau Ira Lalaro, Danau Rana Mase and Danau Segara Anak. Therefore, most parts of these lakes are classified as wetlands as well. Other sites located for instance in Pulau Flores are categorized as protected sites, such as *Taman Nasional Komodo* and *Taman Nasional Kelimutu*; other islands to be incorporated into the classification like Pulau Sumba are not categorized as wetland sites but as other habitats (savannah and mountains). The main factor influencing the wetlands in Nusa Tenggara is topography and climate. Most of the wetland sites in Nusa Tenggara consist of coral reefs (*terumbu karang*) with mangrove forest and other coastal wetland such as seagrass beds and mudflats. Another factor characterizing the wetlands of Nusa Tenggara is the maritime system to which they belong. Table 1 describes the Nusa Tenggara wetlands sites in greater detail.

Table 1. Nusa Tenggara Wetland Sites

Site Name	Total site area (ha)	Of which designated as "wetland site" (ha)
Danau Segara Anak	1,125	1,125
Hutan Batu Gendang	10,000	n.a
Pulau Panjang	10,000	n.a
Hutan Selalu Legini	50,000	1,100
Danau Lebu (Taliwang)	1,406	1, 406
Tambora Selatan	30,000	n.a
Pulau Satonda	985	62
TN Kamodo	219,322	n.a
Danau Rene Mese	500	500
TK Kelimutu	5,340	40
Teluk Maumere	59,450	n.a
Pulau Rusa	1,500	n.a
Rawa Mangrove Mubesi	3,246	1,000
Dataran Bena	11,000	n.a
Pulai Menipo	2,499	n.a
Danau Ira Lalaro	25,000	2,200
Teluk Kupang	50,000	8,000
Total	481,373	15,533

Source: Wibowo, Prianto-Nono Suyatno (eds). 1998. *An Interview on Indonesian Wetland Sites II. Directorate General of Forest Protection and Nature Conservation* – Wetlands International Indonesia Programme, P. 49. Jakarta - Bogor.

Table 1 shows that of a total of around 575,512 hectares of wetland sites situated in Nusa Tenggara, at least 15, 533 hectares have an 'under protection' status. Analyzing the traits of each site as they are included in the WDB, those data show that is important to distinguish among functions such as biodiversity, fishery, conservation and other uses, such as hydrological, socio-economic, *etc*. General descriptions of the wetland sites are as follows.

Hutan Batu Gendang in Lombok (the capital of West Nusa Tenggara) is treated as a vital breeding site for seabirds. Teluk Kuta-Gerupuk and Lombok are seen as one of the major seagrass meadow sites in Indonesia with an area of 250 hectares, known also as a habitat for dugongs and a nesting site for sea turtles. Pulau Panjang situated in Sumbawa, West Nusa Tenggara, with an area of 10,000 hectares, is an important biodiversity and conservation site. There, we can find grassy swamps and mangrove swamps (Menteri Negara Lingkungan Hidup, 1994), needed by water birds and as fisheries. The famous *Taman Nasional Komodo* in Pulau Flores is a wetland site surrounded by mangrove forests, coral reefs, seagrass beds and small island habitats. The local crocodiles, marine turtles and dugongs are famous not only in Indonesia but also throughout the international community. The site at Teluk Maumere, Flores, East Nusa Tenggara is significant for its widely known coral reefs and is presumably the finest site in Asia. Another wetland site to be mentioned in this location is Teluk Kupang (Kupang Gulf), East Nusa Tenggara's capital, that can be treated as potentially containing various coastal wetland areas such as: mudflats, mangrove, coral reefs and sea grassbeds. Teluk Kupang is important for its migratory waders and large flocks of other migratory bird species. Furthermore, Teluk Kupang is a site valuable for its fish resources and biodiversity (Monk-de Fretes-Liley, 1997). A similar site attracting visitors is Danau Ira Lalaro and Danau Usipoka-D. Udun. These sites are endemic bird areas and simultaneously are stopover places for migratory birds like waders and the Australian pelican.

Particularly concerning water birds, Nusa Tenggara (East and West) has 21 protected sites which attract around 89 species, as has become clear from their bio-

geographical profiles. Besides being a place for water birds, Nusa Tenggara is also a stop-over site for migratory birds. According to data available in the WDB, there are 57 migratory water bird species occurring in Nusa Tenggara. Pulau Timor is the largest island that has both an Endemic Bird Area (EBA) and also the highest number of protected bird species with 32 species. In Nusa Tenggara, there are 14 wetland sites protecting the: oriental darter (Pulau Panjang), Whimbrel Teluk Kupang (Kupang Gulf) and Pulau Sumba (Sumba Island), Australian pelican (Bena mainland), little egret (Selalu Legini forest), Glossy ibis (Sumba island), wholly-necked stock (Satonda island, Maumere Gulf), rufos night heron (Menipo island), far eastern curlew (Kupang Gulf, Sumba island), white-headed stilt (Pulau panjang, Pulau Satonda), reef egret (Komodo National Park, Bena mainland), intermediate egret (South Tambora, Sumba island), *etc*.

V. Coping with the Reality

After the Indonesian Government ratified the Ramsar Convention on Wetlands especially concerning the life and existence of Waterfowl Habitat (*Habitat Burung Air*) in 1991, some action plans were established to secure wetland sites across the country. Through WDB documentation, an enormous natural heritage has been opened for classification in accordance with Ramsar standards. Documentation of sites, characteristics, species and other issues constitute a positive token not simply for the government which works alongside the international community, but also to protecting flora and fauna in Indonesia. From the data available thanks to the WDB we can take the view that Indonesia possesses some very important sites for various species of flora and fauna, that can assist its economic interest through the development of fascinating tourist sights such as adventure and nature (AN) tourism sights.

An attractive natural resource like the *Taman Nasional* Komodo in Pulau Flores, for instance, can be much better planned as a tourist site provided that there is a guarantee from the government, community, visitors and tourist enterprises of responsible protection for those sites. In terms of the Ramsar Convention and the work of IGES in its second year, here I would like to highlight two major issues and to locate them in the current Indonesian context. *First*, the political will of bureaucrats in 'socializing' and implementing the Ramsar Convention. *Second*, the best way to grasp local perceptions and the level of acceptance for government policies, particularly in protecting the environment.

VI. Political Will of the Indonesian Government

First, we need to acknowledge that politically, the implementation of an international treaty into the Indonesian legal system will have consequences for the government and for all parties involved. The acceptance of the Ramsar Convention has had two legal impacts on the Indonesian government and the Indonesian community at large that simultaneously demonstrate this in various rules, regulations and stipulations, especially in the practical implementation of those rules in the field.

More important still is the political will of the government to put those laws in place in cooperation with the local community. Particularly in forestry and the environmental sector, the failures of many programs have a close connection with the failure to empower people who live in and around the forest. In addition, bureaucrats' behavior which does not recognize the existence and capacity of the local people in coping with the existing issues and the problems surrounding them, according to where people live and labor, should be discerned as a stumbling block for the government in itself. When the Ramsar Convention was ratified, the Indonesian Government would have liked to prove to the international community a spirit of cooperation with the other signatory nations in the effort to save the global environment. Furthermore, the ratification of the Ramsar Convention also proved to the Indonesian community that an environment with all of its resources was really under the "power" and "control" of the central government (Jakarta); that possessed sufficient political force to do so.

In the legal framework, since the fall of the Soeharto regime, and even under the present government (*era reformasi and desentralisasi*), rights of drafting and ratifying laws, rules or stipulations are still mainly in the hands of the Central Government. Underlying these kinds of rights, it is crucial to persuade, encourage and involve local community members in various projects (government refers to it as "for the benefit and welfare of the local people" - in the vernacular - *Untuk manfaat dan kesejahteraan masyarakat lokal*) and to ensure that there is a sense of ownership (*perasaan memiliki*) of the people involved in those projects. Domination and rights to control the periphery could be traced back to the original ideas of "*Negara Integralistik*" (Integralistic State) or "*negara kekeluargaan*" provoked by Supomo; where the "father" (Center) plays a very important role in determining every decision taken within the "family" (the State). State-centered policy has been taken as one of the major constraints in bringing projects fruitfully to the locals. But the continuation of control and dominance in every aspect of political and legal decision-making is still in place, even though the political atmosphere and developmental paradigm in Indonesia have shifted since the introduction of the policy of regional autonomy (*kebijakan otonomi daerah*) through Laws No. 22 and 25 of 1999 in January 2001.

During the decentralization period, many rules and laws have been drafted, issued and ratified by People's Representative Councils (Dewan Perwakilan Rakyat) and by People Consultative Assemblies (*Majelis Permusyawaratan Rakyat*), particularly Law No 22 of 1999 about "Regional Autonomy" and Law No. 25 of 1999 about "Financial Balance Between Central and Local Governments; but there are also lots of problems brought about by these two new laws. To a certain extent, the transfer

of power from the centre to district and provincial levels is not yet fully implemented; and there is some overlapping of rights in handling forestry issues. Therefore, we can imagine that the ratification and full implementation of laws and rules concerning the environment will also face handicaps at the local government level.

I do not mean to suggest that the government is not paying serious attention to drafting facilitating laws in relation to other international conventions. Two assumptions clarify the major constraints causing the lateness of adopting other international conventions into the Indonesian Law system: 1) the priority of national development particularly during the economic crisis that has hit Indonesia since mid-July 1997 has resulted in more focus on the national economic programs and on recovery; and 2) Indonesia is one of many other nations with a potential power to draft and ratify laws and rules, but at the same time is the nation that has failed to comply with commitments undertaken by government. These two preliminary assumptions relate also to corrupted mentality of bureaucrats; that has pushed the nation into an uncertain future, starting from the legal sector and then permeating all sections of communal life.

VII. Local Response: A Question about the Government's Legacy

One major factor in implementing the government's policy is the lack of participation by the local communities. This is caused by (as said above) the lack of a feeling in the local community of being vitally a part of the economic or environmental plans effected in their surroundings. Laws and rules concerning local people's life and environment are over-centralistic in nature.

This is a very important issue to be solved before other laws are ratified and implemented. The major reason behind this is that too much control and power are still in the hands of Ministers and *Dewan Perwakilan Rakyat* (People's Representative Councils). This allows them to draft laws and regulations without adopting ideas from the local community. Centralized-state policy, the dominance of bureaucrats and those exercising power (particularly during the New Order regime) have created in people's minds the idea that they are only an object of governmental policy, and that only a small part of the potential benefits will be experienced by local people.

In other words, "acknowledging local people's knowledge and capacity is the best way for the government to support their development rather than undermine them" (Haba, 2003:50). In negative terms, we witness various instances of environmental degradation, which has a close nexus with forest logging concession practices which in turn also cause land slides, flooding and the dangers of disappearance of fauna and flora. Being faced with environmental catastrophes can stimulate local people not to cooperate with government in the implementation of various development or environmental projects, especially if they do not receive direct economic benefits in the process, including projects in and on wetland sites that are situated closer to their settlements. Relating the above kind of information to the effectiveness of the Ramsar Convention has been one of the documentation tasks of the WDB.

On the one hand, we are pleased with the seriousness of the Indonesian Government in setting up a plan for protecting resources. On the other hand, a couple of events addressed here show how further destruction and loss continues to happen in wetland sites under the protection of the Indonesian law.

The two examples are current practices by local people that hamper the future of existing species in East Nusa Tenggara Timur. These are the destruction of coral reefs and the capturing of parrot (*burung nurik*) and its subspecies. Despite local people's knowledge that catching fish by using explosives destroys not only the fish but also the coral reef site which fish and other species could live and procreate in. With regard to bombing fish (based on my interviews with some fishermen in Pulau Rote and Kupang), the fishermen argue, "*itulah cara paling mudah untuk memperoleh ikan*" ("…it is the easiest way to catch fish"). Such practices are common everywhere on the coastal areas of Indonesia, particularly among the fishing community, among the people who reside along the coast.

Legal action has been taken in the past and offenders have been sentenced, but economic rationale and especially the lack of responsibility in the perpetrators have caused extensive damage to coral reefs generally and wetland sites in particular. The second practice that is destructive towards species and their habitats, is the hunting and sale of certain protected bird and crocodile species to illegal exporters. For certain bird species, the sellers may be getting a hundred thousands *rupiah*. Much benefit comes from selling "*kulit buaya*" (crocodile skin) that is mostly hunted for in the swamps often located in protected wetland sites. Hunting and the sale of birds and crocodile skin not only damage those species directly targeted by the hunters, but also other fauna and flora are ruined in the process.

Why are such practices occurring, in spite of the fact that Indonesia is strictly speaking in compliance with the Ramsar Convention? And, what is more important, Indonesia's ratification was based on political will and on the self-awareness of the Soeharto regime at the time.

First, to secure other wetland sites in Indonesia not discussed in this paper, my suggestion is that the Indonesian Government must draft and ratify other relevant international conventions along with international demands, to save the country's natural resources from further destruction resulting from human practices, such as hunting birds under protection and the bombing of fish, which destroys fish species and coral reefs. Second, the method of preparing macro and micro mappings in selecting and determining "wetland sites' or other areas envisaged in the Ramsar Convention, the government should have good cooperation with both local leaders and the *adat* legal community.

Space arrangements (*Penataan Tata Ruang*) as a matter of regional autonomy require a closer cooperation between local and central government (Tunggul, 2000). This policy should be formulated between (local) people and government at all levels, while over the previous three decades space arrangements were in the hands of central and provincial governments and specifically under the authority of the Forestry Department. Prioritizing provincial and district roles in handling environmental issues seems to be 'helpful' (see Nanang & Inoue, 2000:175-191); much better than letting 'outsiders' (central government) tackle various issues at local level such as village development, empowerment of the local people, forest protection, *etc*.

Third, during the present 'regional autonomy era' when each district and province competes with every other in drafting and ratifying laws and regulations for its own economic interests (in a center versus regions scenario), laws and regulations prepared for ratification should be discussed from an early stage with representatives of the local community; such as *adat* lawyers (*Masyarakat Hukum Ada*t) and NGOs in the areas where the protected sites and species are situated. This is a very important factor in creating in local people a sense of ownership and responsibility toward the environmental and developmental programs or projects. Sardjono and Ismayadi (2000:2) state "the Government of Indonesia (GOI), especially the Forestry Department, had realized the importance of including local people in forest utilization and had included [in consideration] the social aspects in different policies (both by issuing social forestry policies and in the frame of conventional forestry programs)". A conflict often occurs because some local people are themselves also part of a 'conspiracy' not to protect the sites, even engaging in 'cooperation' with outsiders or the security apparatus to 'allow' people to catch birds or hunt crocodiles in the protected zones. Fourth, it helps to establish a small group within the local community as an 'environmental brigade' to protect the environment, and to encourage and train the locals about the function of their own natural resources. 'Socializing' each program derived from outside to local people will be helpful to save not only the birds, coral reefs, national parks, forests, lakes and other resources, but more importantly, will enhance the life of local people today and for the coming generation.

VIII. Conclusion

Examining The Ramsar Convention in depth – and also other regional and international conventions – it seems that the exact nuance of bureaucracy is ignorable. The question which might usefully be posed is about the role and contribution of the local people in every strategic policy decision-making process. Shortly, I would like to argue that the negation of local people's contribution occurs in various policies initiated by the government or by bureaucrats. Furthermore, in a broader sense, one can also consider the Ramsar Convention as a compilation of progressive ideas on wetland sites, rather than as a convention issued overnight to protect fauna and flora – though nevertheless one which had gone through discussions, debates, seminars and had cumulated changes of ideas from among scholars from around the world. The only major issue here is whether the ideas of the local community concerning the status of sites and land rights use knowledge by people closer to those (wetland) sites crystallized in the Ramsar Convention? It looks difficult to trace back all stages and procedures to gain an overall grasp about how the Ramsar Convention was initially drafted and whether or not it had absorbed grass-root ideas or not; but the 'missing' link between policy makers and local community in adopting local values and rights (as I have argued in this paper), can be resolved at the national level by issuing laws and regulations that recognize the role of the locals as well.

We have to be aware that any international convention would mostly just postulate general ideas, so it is expected that local or national governments like that of Indonesia that have adopted those treaties into its national policies must have a strong commitment to elaborate the treaty and make it suitable to local conditions – to local rights, norms and values. Viewing the situation from a political and historical perspective, Soeharto's New Order government was too centralistic in its development policy orientation. That consequently caused powerlessness in social and political institutions. By controlling power stemming from central through to local levels (this can be clearly observed in Law No. 5 of 1979 concerning "*Pemerintahan Desa*"), Soeharto and his allies did not give room to other parties that he viewed as a threat to his leadership and business interests, such as in policies on the various forestry sub-sectors, which benefited financially the New Order regime.

During his era, "top down" policy was striking and unchallenged. As a consequence, "bottom up" policy was simply a slogan and it would only be adopted insofar as it did not threaten central power. One of the many policies instigated in Soeharto's period was Law No. 5 of 1967 concerning "*Undang-undang Pokok Kehutanan*" (Basic Law on Forestry) which basically ignored the rights and existence of the local (*adat*) community. Supporting this idea, Sardjono-Ismayadi (2000:2) argues that "almost all policies and regulations, however, were still 'centralistic': 'top-down' processes and did not fulfill [sic] community forestry principles, such as acknowledging local rights, equal benefits, and actual community participations and roles". Politically, two basic needs should be addressed. They concern the involvement of people in governmental policy and in any projects realised in their surroundings and are, respectively to: "ensure their economic benefit and recognize people's land rights, including tenure rights, to earn a living relevant to their nature" (IGES-LIPI Workshop on Forestry Conservation, 2000: 8).

Relating this phenomenon in the context of Indonesian community with the Ramsar Convention, there is hope

that local people would willingly support a national law on wetland sites. Two arguments can be highlighted to 'teach' other Conventions affecting forest in Indonesia, reflecting from The Ramsar Convention and Indonesian Presidential Decision No. 48 of 1991. First, relying on the environment (including flora and fauna) is not a single most important factor in improving the living standards of the local community, but in contrast, many projects achieve little more than simply destroying the subsistence and culture of the people living close to wetland sites (cf. HPH, HTI, Social Forestry in Kalimantan and Sumatra). Losing most of the forest and ignoring local people's rights have cast a negative light on government policies that have been put into force in people's surroundings.

Second, admiring and recognizing the rights and existence of people living in or around the sites, has to be understood as one of the key factors to sustain the environment. Bombing fish, killing crocodiles, destroying coral reefs and catching birds in the restricted areas have their nexus with a range of reasons for such practices. Searching for alternative subsistence in the current economic turmoil that has hit Indonesia since mid-July 1997 and lack of government credibility to settle down the economic crisis must be viewed as a push factor for needy people not to protect the flora and fauna. Understanding the reasons why people destroy the protected sites with their natural wealth is a major step to setting up national programs designed to sustain the environment comprehensibly. This is the most vital lesson to be taken in processing and adopting new laws, whether at the international or local level.

As I mentioned earlier in this section, my work focuses mainly on the Ramsar Convention and its ratification by the Indonesian Government in 1997. The reason for the focus on only one international treaty is to deal with just one major issue that I did not investigate in last year's report. The Indonesian Government accepted the Ramsar Convention into its national law and in line with other signatory countries provides that wetland sites situated in the country are also a vital part of global biodiversity and global environmental systems. The ratification of an international treaty of this kind shows that the nation involved is becoming incorporated in the international community and is accepting its responsibility for a safe and prosperous place to live.

After the ratification of the Convention, further and concrete actions that have been taken include the entry into force of an implementing national law proven by the establishment of the "Wetlands Data Base"; which accumulates detailed information and data concerning wetland sites compiled and documented across the country. Such data is significant and helps the government as shown by the discussion of wetland sites in Nusa Tenggara; it shows that Indonesia actually has important and attractive sites containing a wealth of natural resources to be protected, or even to be used as a source of 'income' if those sites were to be arranged responsibly as tourism destinations. But purely making those sites accessible as tourist sights would bring in its tail negative consequences, such as the destruction of flora and fauna species, the illegal catching and hunting of animals that will be breaking existing and persisting national laws or regulations.

In the coral reef of *Teluk Kupang* (Kupang Gulf – including many coastal sites), the hunting and killing of crocodiles in protected zones and the catching of certain birds protected under law and their sale abroad happens rarely. These phenomena emphasize that international conventions or national law and regulation that have entered into force so far do not achieve their impact substantially. The violations described above infringe laws that have been ratified by the government on behalf of the Indonesian people as a whole. Yet, the destructive practices underlined here occur everywhere in Indonesia, suggesting that, in the future, the very existence of wetland sites in Indonesia generally, and in Nusa Tenggara in particular, is under real threat.

IX. Policy Recommendations

Relying on the above analysis, this section will be related to four major recommendations concerning both state policy and the responses of people involved in or residing close to forest and government projects. First, the pattern of approaches for determining sites (for wetland conservation or other projects) is too centralistic (center-oriented). From the very beginning, local people located near the wetland sites are not involved actively in discussing the project or program. Second, such programs would be more fruitful if people developed a sense of ownership and full understanding that the natural resources available are for the sake and lives of the current but also for the next generation. Having investigated the current conditions of the flora and fauna in Indonesia, where destruction of the environment continues, I would argue that to a certain extent, the main fault is that local people are being treated as an "object" of development rather than as an integral element of the system.

Third, various programs either nationally or internationally will exist as long as in the national context there is a guarantee provided for the livelihood (economic advantages and land rights) of all people, especially those who live in and around the protected sites or forests. Fourth, law enforcement must be fully applied to offenders who violate laws and regulations at all levels of community. Without doing so, despite international treaties and national laws that have been adopted, there will be no concrete impact in the field. In brief, between formal decision-making (structure and policy levels) and functional needs (at local level) so far there are disparities or gaps between policy idealism and factual experience as expected. As a consequence, the centre's and the provincial governments' legacies are under scrutiny, as more sites and species in this country that are under international and national laws' protection are disappearing dramatically every year.

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