

# Implications of forest utilization, conversion policy and tenure dynamics on resource management and poverty reduction

Case study from Pasir district, East Kalimantan, Indonesia

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## Summary

As one of the world's forest-rich countries, Indonesia has struggled to resolve problems of deforestation and poverty, especially over recent decades. The forestry sector has been a major contributor to the national economy over the last three decades, accounting for almost 10 percent of total gross domestic product (GDP). The cost of this, however, has been immense. At the beginning of the twenty-first century, about 60 million ha, or approximately 40 to 47 percent of the total forest area, was degraded, and annual deforestation rates were between 1.6 and 2.3 million ha. At the same time, massive forest exploitation had not contributed significantly to the livelihoods of communities living in and near forests. While most local communities are still poor, and rural areas have not developed much, conflicts among forest stakeholders – particularly between local communities and private timber and plantation companies or the government – have become more intensive and extensive. Lack of clarity over land tenure issues, failure to consider existing local systems and cultures, and the top-down approach of the central government are the main causes of this. Radical political changes in 1998, followed by the implementation of regional autonomy in 2001, created optimism about better resource management and community well-being. So far, however, the situation has not changed significantly.

The objectives of this study are to gain a better understanding of forest use and land tenure policies in Indonesia, to observe their development and trends, especially since the beginning of regional autonomy in 2001, and to use this information as the basis from which to analyse the impacts on better resource management and poverty reduction.

More detailed data and real-life information come from a case study of Pasir district, East Kalimantan. Data and information were collected and compiled from secondary data exploration/document studies in Pasir district, combined with primary data from interviews with key informants, government and non-governmental organizations and local communities. Field observations and visits to selected villages were conducted to obtain a better understanding of field realities.

The study resulted in the following important findings:

- Forests play an important role in the lives of local traditional communities, which for generations have occupied forest lands and managed/utilized the resources to meet their ecological and subsistence needs and to generate cash income for better well-being. The situation changed dramatically with Agrarian Act No. 5/1960, which gave the Government of Indonesia full authority to control, regulate and manage forest land and resources. This act and Forestry Law No. 5/1967 led to the declaration of all forest land as State forest land. This and the gazettement of forest land through the Consensus Forest Land Use Plan in 1980, followed by regional spatial planning in 1992 and the harmonization of gazettements in 1999, created a situation in which local communities have no clear rights and have lost their traditional access to land and natural resources. Many land tenure-related conflicts have erupted, and were suppressed by the government during the New Order regime (1967 to 1998).
- After gazettement of State forest areas, the government started to allocate forest land to various development activities, with the aim of increasing revenue from the forestry sector to support the country's development programme. This was done in a top-down manner, starting with capital-intensive timber exploitation in the early 1970s, followed by the development of timber processing, pulp and paper industries in the mid-1980s, and large-scale forest conversion for industrial timber estates (from the mid-1980s) and oil-palm plantation (in the 1990s). Although these activities made the forestry sector one of the most important contributors to the country's economy, the overutilization and conversion of natural forest led to the massive degradation of large forest areas, and scarcities of raw materials (timber). Little was achieved in terms of improved livelihoods for local communities, which instead ended up losing much of their existence base (land, forest products).
- The situation has worsened since the fall of Suharto in 1998 and the issuance of Act No. 22/1999 and Government Regulation No. 25/2000, which triggered autonomy euphoria across Indonesia. Provinces and districts have started to voice their disagreements and disappointments with the system, claiming more independence and rights in governing their natural resources through, for example, the issuance of permits for forest resource utilization. As a result of weak law enforcement, lack of supervision from the central government, uncontrolled legal and illegal forest logging, and the encroachment and conversion of forest land, forest destruction has accelerated and intensified over the last five years. Adherence to the slogan "Increasing local incomes for local development and improved livelihoods" has often been at a cost to the environment.

- Decreasing forest resources have increased local stakeholders' interest in managing forest areas. Oil-palm plantations are a very promising alternative because they provide cash income relatively quickly. The expansion of oil-palm plantations has accelerated over the last decade and continues to increase, mainly because of strong support from district governments and local communities. The study found that although non-timber forest products (rattan, aloe wood, honey, etc.) still play an important role in livelihoods, more and more local communities are developing oil-palm plantations on converted forest areas. In addition, district governments are making agribusiness the core for future district-level economic activities, and are reserving large tracts of land for the expansion of oil-palm plantations. In areas where existing agricultural land is already in use, such as in Pasir district, the expansion of plantations will most likely involve converting remaining forest areas, including conservation and protection areas.
- Based on an analysis of the situation, the study makes the following recommendations for better forest resource management and the reduction of land tenure-related conflict:

Improvement of policies on resource management through:

- reformulation/revision of Agrarian Act No. 5/1960;
- development of forest resource management policies with clear objectives and a long-term focus on the government's five priority programmes;
- consistent implementation of decentralization and deconcentration of authority, with lines of responsibility from central to local governments accompanied by strict law enforcement and supervision, as well as strengthened political, administrative and technical facilitation/guidance from the central government;
- encouragement and support for local stakeholders, especially district governments, in implementing existing regulations and mechanisms that can help to resolve problems at the local level.

Stronger involvement of local communities in forest resource management through:

- identifying and recognizing traditional rights and lands;
- developing appropriate community-based forest management models/systems;
- empowering local communities.

Development of integrated and collaborative resource management that secures the participation of local communities in collaborative action, while facilitating other stakeholders in increasing their social management capacity and sensitivity.

## Introduction

### BACKGROUND TO THE STUDY

Indonesia has some of the world's most extensive and richest forest resources in terms of biodiversity and economics. Forest covers about 120 million ha,<sup>43</sup> or about 60 percent of Indonesia's total land territory, mostly in the outer islands of Sumatra (18.77 percent of total forest cover), Kalimantan (31.99 percent), Sulawesi (9.52 percent) and Papua (30.99 percent) (Sardjono, 2004a).

These forests have been used for many generations by the communities living in and near them. Since the 1970s, the government too has used them more extensively to contribute to national economic development through State-owned and private companies. This has made the forestry

<sup>43</sup> Based on official figures from the Ministry of Forestry in 2003.

sector one of the most important contributors to Indonesia's economy over the last three decades. The export value of processed forest products (e.g., sawnwood and plywood) reached US\$200 million/year during the 1980s, increasing to US\$2 billion/year in the 1990s. Shortly before the monetary crisis that hit Indonesia and many other Asian countries in 1997, the forestry sector was contributing about US\$20 billion/year, or about 10 percent of total gross domestic product (GDP) (ITTO, 2001). In addition, forest industries have created millions of direct and indirect employment opportunities; the number of employees in the forestry sector increased from 113 000 in 1980, to 389 000 in 1997, when plywood production was at its highest level, before decreasing slightly to 362 000 in 2002, following the Asian economic crisis (Simangunsong, 2004).

In spite of these impressive figures, however, by the beginning of this century, about half of the natural forests in Indonesia had been destroyed or degraded to varying degrees through various kinds of forest use and conversion. In addition, forest utilization in the last three decades has done little to develop rural areas or improve the livelihoods of people living in and near forests. This is owing mainly to the overwhelming problems of unclear land tenure and local communities' lack of participation or involvement in the management and use of forest resources.

The fall of the New Order regime of former President Suharto in May 1998 radically changed the political, economic and social landscape of Indonesia, particularly with the release of Act No. 22/1999 and Government Regulation No. 25/2000 regulating the decentralization and deconcentration of authority and responsibility from the central to regional (provincial and district) governments in almost all sectors. These rulings triggered autonomy euphoria all over Indonesia. Issuance of Forestry Act No. 41/1999, which superseded Forestry Act No. 5/1967, marked the onset of reformation in the forestry sector. However, neither this new act, nor the other natural resource regulations issued in the last five years – partly in favour of local communities – have changed the situation significantly. Some individuals and groups have taken advantage of the ambiguity of the laws and regulations to abuse the system, leaving the majority of local communities still insecure over the ownership of land and natural resources.

## OBJECTIVES

The objectives of this study are to gain a better understanding of forest utilization and land tenure policies in Indonesia, to observe the development and trends of these, especially since the beginning of regional autonomy in 2001, to analyse their impact on improved resource management and poverty reduction, and to formulate proposals for the way forward.

The discussion emphasizes the issues of forest concessions and forest conversion to oil-palm plantations and their impact on the livelihoods of local communities. These issues will be discussed with reference to Pasir district in East Kalimantan, which was chosen as a study area because it illustrates all the relevant issues and developments in Indonesia's forestry sector, in the following ways:

- Pasir is one of 13 districts in East Kalimantan, the Indonesian province that is richest in forest. Its forests have been logged since the beginning of the economic development push in the 1970s. Most of its natural forests have been destroyed or are heavily degraded; all that remain are small, scattered pockets of forest, most of which are classified as conservation or protection forest.
- Pasir started to convert forest areas into oil-palm plantations earlier than the other districts in Kalimantan. This thrust has intensified since the beginning of regional autonomy.
- Local communities in Pasir district have a long tradition of using forest resources for both socio-cultural and economic purposes. Trends of forest utilization and/or forest conversion not only provide an interesting picture of the impacts on resource management and communities' livelihoods, but also reflect the importance of land tenure.

## METHODOLOGY

Data and information were collected and compiled through secondary data exploration and document studies in Pasir district (reports, project/programme documents, previous research data, etc.), combined with primary data gathered from interviews with key informants, government and

non-governmental organizations and local communities. Field observations were conducted to obtain a better understanding of field realities.

The collected data were analysed according to the study's objectives. Literature and other references were used to enrich this analysis with theoretical and empirical background.

## Forestry, land tenure and poverty

### LAND TENURE AND FOREST LAND CLASSIFICATIONS

Article 33 of the Indonesian Constitution of 1945 states: "Branches of production which are important for the State and which affect the lives of most people, shall be controlled by the State. Land and water and the natural riches therein shall be controlled by the State and be made use of for the greatest welfare of the people." This gave the Government of Indonesia authority to control, regulate and manage forest land and resources, which was reiterated in Agrarian Act No. 5/1960 (Section 2; Article 1).

In 1966, the government established the Ministry of Agriculture to manage forest land and resources according to the provisions and implementing regulations of Basic Forestry Law No. 5/1967. Based on Article 7 of this law, the Ministry of Agriculture gazetted forest land as official/State forest land. Deforested land could be included as official forest land area if it was designated for reforestation.

By gazetting the land, the government basically declared all forest land other than that in private ownership or governed by traditional community rights to be State land. Private ownership is proved by personal landownership certificates or specific institutions, a few of which the government acknowledges as being equivalent to communal permanent rights, such as customary land. Traditional community rights – as stipulated in Agrarian Act No. 5/1960 – are acknowledged only when they apply to traditional groups with functioning social structures and institutions and clearly defined traditional territories, which are officially supported by local administrative authorities. For many local communities, these conditions are practically impossible to satisfy, so their traditional and access rights to forest resources have been dramatically reduced or even abolished, especially outside Java.<sup>44</sup>

Systematic implementation of the Basic Forestry Law did not begin until 1980, with the Ministry of Agriculture's Consensus Forest Land-Use Plan (CFLUP). In 1981, the ministry issued a set of guidelines and ministerial decrees determining which forest land was to become permanent forest and which could be converted for agriculture and other uses (conversion forest). Ministerial Decree No. 680/1981 divided permanent forest land into four functional classifications: protection forest, conservation areas, production forest, and limited production forest.

The CFLUP for each province was prepared by the provincial forest service and the Regional Forest Mapping and Inventory Agency in consultation with other relevant agencies in the province. The final CFLUP approved by the Governor and the Minister included maps delineating all the forest land areas in each province according to their classifications. In 1987, according to the CFLUP, of a total 147 million ha of forest land (77 percent of Indonesia's land area), 75.49 percent was permanent forest land and 24.51 percent conversion forest. Of the permanent forest land, 19.95 percent was protection forest, 13.08 percent conservation areas, 22.44 percent production forest, and 20.02 percent limited production forest (Table 1).

The CFLUP has not been fully implemented and demarcated in the field, however. Based on Spatial Planning Act No. 24/1992, each province has developed its own provincial spatial planning

<sup>44</sup> The intensive management of forest areas in Java following the colonial-period "*Domeinverklaring*" policy was relatively successful in solving land tenure problems on the island (Simon, 1993).

(PSP), and these are not fully compatible with the CFLUP. Lack of skill, and the vested interests of sectors such as forestry, agriculture, mining and transmigration have resulted in overlapping and conflicting land allocations and uses between the CFLUP and the PSPs in many parts of Indonesia.

TABLE 1  
Forest land areas in Indonesia

	Con- serva- tion area	Pr ot ect io n for est	Limit ed prod uctio n fore st	Pro du ctio n fore st	Total perm anent forest	Prod ucti on fore st for conv ersio n	Tota l fore st land
CFLUP (1982– 1987)	19 229 498 ha	29 326 072 ha	29 437 667 ha	32 997 701 ha	110 990 938 ha	36 036 822 ha	<b>147 027 760 ha</b>
	13.08%	19.95%	20.02%	22.44%	75.49%	24.51%	<b>100.00%</b>
Synchroni- zation of CFLUP and PSP 1999/2000	20 500 988 ha	33 519 600 ha	23 057 449 ha	35 197 011 ha	112 275 048 ha	8 078 056 ha	<b>120 353 104 ha</b>
	17.03%	27.85%	19.16%	29.24%	93.29%	6.71%	<b>100.00%</b>
2003*	18 154 607 ha	29 100 016 ha	16 212 527 ha	27 738 950 ha	91 206 100 ha	13 670 535 ha	<b>104 876 635 ha</b>
	17.31%	27.75%	15.46%	26.45%	86.97%	13.03%	<b>100.00%</b>

\* Does not include the forest land in North Sumatra, Riau and Central Kalimantan provinces, totalling 11 108 308 ha.

The CFLUP was developed and applied in a top-down manner that did not involve local stakeholders, particularly local communities. Many long-established, forest-dependent communities suddenly found that their land had been declared State forest area, meaning that they lost their rights to the land and/or their traditional access to land and natural resources. As a result, many land tenure-related conflicts have erupted.

In 1999, the government synchronized the CFLUP and the PSPs. The Ministry of Forestry<sup>45</sup> began to regazette forest land areas in collaboration with local authorities, taking PSPs into account. These recalculations showed a smaller total area of forest land – of about 120 million instead of 147 million ha – 93.29 percent of which was permanent forest land and 6.71 percent conversion forest. By July 2003, the CFLUP and the PSPs had been synchronized in all provinces except North Sumatra, Riau and Central Kalimantan; a Ministerial Decree was issued stating that the adjusted boundaries are valid. Changes to forest land designation and allocation are listed in Table 1.

Once again, this exercise involved no local stakeholders, especially local communities, but only government agencies. As a result, land tenure-related conflicts have continued and increased in the five years since decentralization. Furthermore, most local communities still have no access to forest land and resources.

## FOREST MANAGEMENT AND USE

Capital-intensive timber industries were established in the 1970s, especially in the outer islands, with the aim of increasing revenue from the forestry sector to support Indonesia's development programme. Concessionaires were granted forest use permits (FUPs) to carry out extensive mechanical exploitation. Since the early 1970s, hundreds of timber companies with permits have

<sup>45</sup> The Government of Indonesia created the Ministry of Forestry in 1983 based on Presidential Decree No. 45/1983. This ministry took over full jurisdiction for forest land areas from the Ministry of Agriculture, and has sole authority to control, regulate and manage forest lands and resources in Indonesia.

exploited production forests across Indonesia; in the early 1990s there were 580 FUPs exploiting 61.38 million ha of natural forest.

Until the early 1980s, the focus of forest exploitation was the production of logs or timber, mainly for export to East Asia; Indonesia was one of the world's major tropical log exporters. This changed between 1980 and 2002, when the forestry sector experienced both rapid and increasing structural modifications resulting from changes in government policies. One of the most important of these policy changes was the introduction of a ban on log exports, which was announced in 1980 and fully imposed in 1985. This ban led to massive development of the timber processing industry, particularly for sawnwood, plywood and veneer, with the aim of reaping greater revenue from the higher prices of processed wood. Total production of sawnwood increased rapidly from 4.8 million m<sup>3</sup> in 1980 to 7.1 million m<sup>3</sup> in 1985, reaching a peak of 10.4 million m<sup>3</sup> in 1989. Plywood production also grew significantly, from 1 million m<sup>3</sup> in 1980 to 8.3 million m<sup>3</sup> in 1990, peaking at 9.6 million m<sup>3</sup> in 1997 and making Indonesia one of the world's major producers of plywood.

In the mid-1980s, the government started to promote development of the pulp and paper industries. Total production of pulp increased continuously from 0.5 million tonnes in 1985 to 3.1 million tonnes in 1997, reaching 5.0 million tonnes in 2002. Paper production also grew significantly from 0.5 million tonnes in 1985 to 4.8 million tonnes in 1997 and 7.2 million tonnes in 2002.

The rapid development of the forest industry and the continuing exploitation of timber for domestic use put massive pressure on Indonesia's natural forests and caused the degradation of large areas of forest and a scarcity of raw materials (timber). In order to secure wood supplies for the timber industry and reduce the dependency on natural forests, the government started to promote the establishment of industrial timber estates (ITEs) in the mid-1980s. Large tracts of forest land, particularly in Sumatra and Kalimantan, have been converted to ITEs; in 2003, 96 ITE concessions were developing about 4.4 million ha.

During the 1990s more intensive forest and land conversion took place with the development of oil-palm plantations (Casson, 2000; Wakker, Van Gelder and Telapak Sawit Research Team, 2000). Oil-palm was selected as a suitable crop because it is ecologically adaptable and economically productive. By the end of 2000, there were about 4 million ha of new oil-palm plantations across Indonesia.

A decade of overutilization, followed by conversion to ITEs, oil-palm plantations and other uses and accompanied by regular forest and land fires, mainly for land clearing (Gouyon and Simorangkir, 2002), have destroyed vast areas of natural forests in Indonesia. At the beginning of the twenty-first century, an estimated 60 million ha of forests were degraded, and the annual deforestation rate ranged from 1.6 to 2.3 million ha (Table 2).

TABLE 2  
Official estimates of deforestation and land degradation in Indonesia, 2000

No.	Type of land and degradation	Area affected (ha)
1.	Critical lands outside forest areas	15 106 234
2.	Critical lands inside protection forests	8 136 646
3.	Degraded forests:	
	(a) in FUP areas	11 659 109
	(b) in ex-FUP areas (State-owned enterprises)	2 591 184
4.	Logged over areas:	
	(a) in FUP areas	11 085 823
	(b) in ex-FUP areas (State-owned enterprises)	2 498 242
5.	Destroyed mangrove forests:	
	(a) inside forest areas	1 712 462
	(b) outside forest areas	4 189 512
<b>Total</b>		<b>56 979 212</b>

Source: Directorate of Land Rehabilitation and Social Forestry and Agency for Forest Planning, Ministry of Forestry, 2000.

According to Forest Watch Indonesia (FWI/GFW, 2001), 60 percent of the lowland forest on the three main islands of Sumatra, Kalimantan and Sulawesi was massively exploited between 1985 and

1997; unless conservation efforts are made, this forest will have disappeared by 2010. In Kalimantan alone, 20.5 million ha of degraded forest had already been identified at the beginning of the 1990s, 8.9 million ha of which was in East Kalimantan.

### **CONTRIBUTION OF FOREST MANAGEMENT/UTILIZATION TO LOCAL LIVELIHOODS**

Long before independence in 1945, forests played an important role in the lives of Indonesian traditional communities. In many parts of the country, forest-dependent people had occupied forest land for many generations, managing and utilizing its resources not only for their own socio-cultural and subsistence needs, but also as sources of cash income for improved well-being. According to the Center for International Forestry Research (CIFOR, 2004), about 50 million people out of Indonesia's population of more than 200 million currently live in forest areas, and 20 million in villages near forests.

The government's exploitation and conversion regime of recent decades has changed the situation for local communities in many parts of Indonesia. Rather than improving their livelihoods, massive forest exploitation has destroyed their environment and denied them access to resources. There are two underlying causes of this. First is the overwhelming problem of unclear land tenure, which was inherited from the colonial period and has not been resolved. The government has allocated forest lands in a top-down manner, ignoring the existence of local communities and their traditional rights to and rules over forest resources. Second, according to Agrarian Act No. 5/1960 and Forestry Act No. 5/1967, the control, regulation and management of forest land are solely in the hands of the government, and are based on the issuance of utilization permits to private companies (for timber and plantations) with very limited space for the participation or involvement of local communities.

The extensive utilization of forests by timber and plantation companies has not brought benefits for local communities. Some community members earn money working for the companies, but generally they are only "silent watchers" to the companies' logging and conversion activities in their traditional forests.

In response to this, and to the increasing number of conflicts since the early 1990s, the government started to insist that timber and plantation companies develop and implement Forest Village Development Programmes (FVDPs) that support and assist agrarian and non-agrarian activities in local communities. This was expected to result in companies contributing to local livelihoods.

The programmes did not meet this expectation, however. Most of the companies were not seriously concerned about the livelihoods of local communities, and implemented FVDPs only to comply with government rules. In addition, the programmes were assessed on the basis of how much money the companies allocated to local communities, and not the actual activities that were carried out. Most FVDPs did not address the needs and demands of local communities for long-term, sustainable local development, but instead created only short-term income opportunities and developed infrastructure such as houses, churches and mosques. Sardjono *et al.* (1998) evaluate the implementation of FVDPs in six large-, medium- and small-scale FUPs in East Kalimantan.

Other, more specific reasons for forest policies' limited positive impact on community welfare are given in Table 3. Because most local communities are poor, and rural areas have not developed much, conflicts between local communities and private companies are becoming more intensive and extensive. Under the very powerful and authoritarian New Order regime, these problems were suppressed by a government that favoured the private sector.

TABLE 3  
**Factors in the limited positive impact of forestry policies on the welfare of local communities**

Forestry policy/phase	Reasons for limited impact
Natural forest exploitation/FUPs Since the early 1970s	<p>Most mechanical forest exploitation activities are capital-intensive and need skilled workers (e.g., for tree felling with chainsaws and bulldozers); they are therefore beyond the capacity of local communities.</p> <p>The regulations of many companies limit the activities of local communities inside concession areas (e.g., forbid collection of forest products and shifting cultivation).</p>
Timber/wood industries Since the mid-1980s	<p>Almost all factories are located near big cities, distant from rural areas and communities.</p> <p>The modern technology used by timber companies offers few opportunities for those with higher education (especially younger generations) to participate.</p> <p>There is a lack of employment opportunities.</p> <p>Urban migration for better jobs generally leaves only children, women and old people in the villages.</p>
ITEs Since the late 1980s	<p>Negative perceptions of local communities (who are seen as lacking education, being lazy, and holding fast to traditional culture) mean they lose out when competing with migrants for jobs in tree plantation companies.</p> <p>The establishment of ITEs depends on legal aspects only (via permits from the central government).</p> <p>ITE activities do not involve local institutions and frequently overlap or conflict with local interests.</p> <p>Poor communication with local communities causes the misperception among them that ITEs cause only the destruction of potential natural forests.</p>
Rural development programme/FVDPs Since the early 1990s	<p>The concept was developed top-down and based on the misperception that local communities are the main cause of forest destruction so should be controlled and their aspirations minimally adopted.</p> <p>Replacing local communities' reliance on forest with physical facilities increases their dependence on external bodies.</p> <p>Most timber companies focus on financial and profit margin aspects, and have little concern for social issues.</p> <p>The programme was not properly integrated into the wider regional development programmes of local governments.</p>

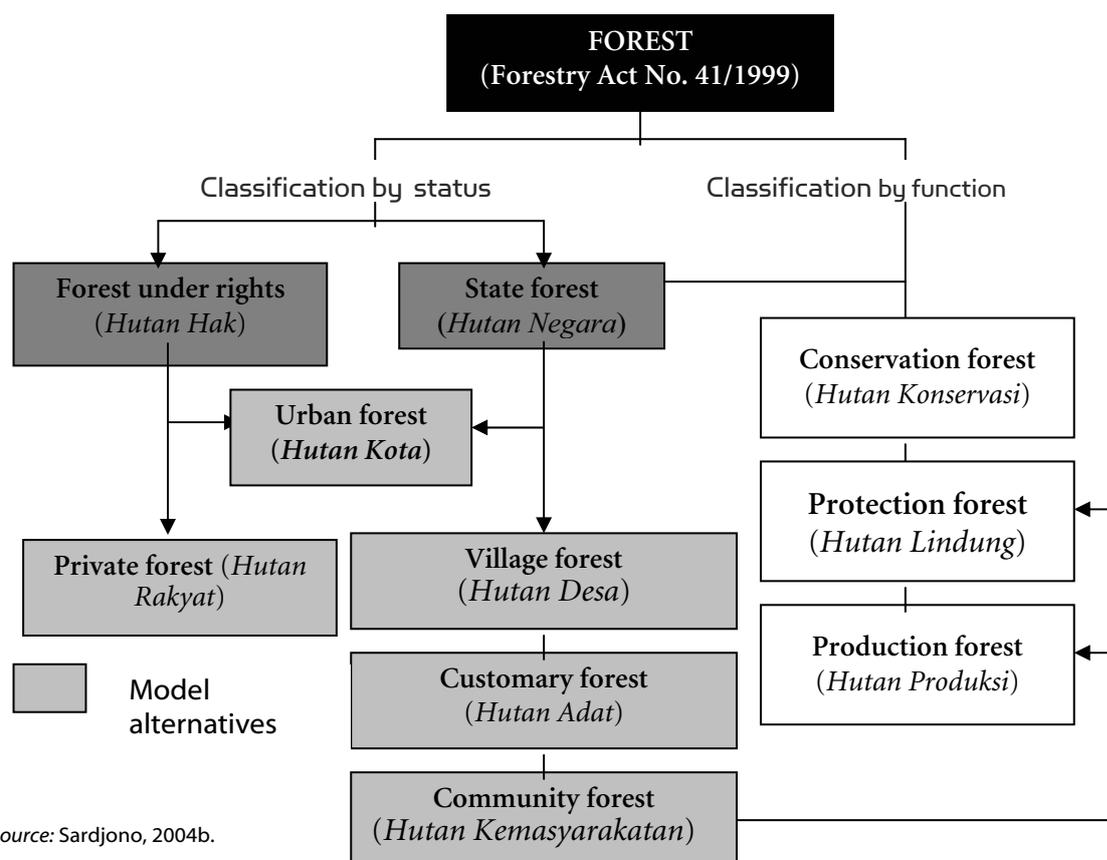
Sources: Sardjono *et al.*, 1998; Sardjono, 2004a.

### After the reform

The forestry sector reform that started in 1999 was partly a response to heavy pressure from community groups demanding change, particularly the recognition of traditional law and greater clarity about local communities' forest use rights and involvement in forest management.

The new Forestry Act of 1999 theoretically provides more space for people to participate in the management of State forests without disturbing predetermined forest functions. In addition to systems for large-scale logging (FUPs, etc.), five community-based forest management models have been developed: private forest; urban forest; village forest; customary forest; and community forest. Private forest is forest under personal/private rights, urban forest can be either private or State forest, and the other three models are all State forest; only protection and production forests have been allocated to these models (Figure 1).

FIGURE 1  
Forest management models for local community participation



Currently, the implementation of only three of these five models has the legal backing of a government regulation or a ministry decree: private forest, community forest and urban forest.

Customary and village forest have no legal basis or framework.<sup>46</sup> This is probably for three reasons: (1) the establishment of village or community forest implies recognizing local communities' rights over land and resources, which the government is reluctant to do; (2) recognizing the rights of some community groups (villages or traditional communities) would lead to other groups claiming recognition, which could reduce State control over resources that are considered important capital for the country or region; and (3) horizontal conflicts among community factions or groups could break out because land tenure is still unclear. This third reason results from the artificial development of the village as the lowest administrative and political structure of governance, based on acts No. 5/1974 and No. 5/1979. Village boundaries have been set without taking into account the traditional land boundaries of community groups. As a result, some communities have lost their traditional land, because it has been assigned to other villages, or several different groups have traditional rights over the same land and resources. In addition, since the implementation of regional autonomy, many new provinces and districts have been established by dividing existing ones. This has also led to conflicts among provinces/districts claiming the same forest resources.

The following chapter illustrates these developments with a case study from Pasir district, East Kalimantan.

<sup>46</sup> The government drafted a Government Regulation for Customary Forest in 2002, but this has not been officially issued.

# Implications of forest resource use and land conversion policies in Pasir district

## BIOPHYSICAL AND SOCIO-CULTURAL ASPECTS

Pasir district is one of 13 districts in East Kalimantan province and covers a territory of approximately 11.6 km<sup>2</sup>, of which 10.6 km<sup>2</sup> is land.

The administrative boundaries of the district are as follows:

- North: West Kutai and North Penajam Paser districts;
- South: Kota Baru district (South Kalimantan province);
- West: Central Kalimantan province, Tabalong district (South Kalimantan) and North Hulu Sungai (South Kalimantan);
- East: North Penajam Paser district and Makasar Strait.

Most of the district – 69.52 percent or about 967 100 ha – is low-lying land of 0 to 1 000 m above sea level (asl). The remaining 424 100 ha (38.48 percent) is mountainous. The highest mountain is Gunung Lumut (1 183 m asl), which has been declared a protection forest because it has a significant hydrological role in protecting several water catchments. Pasir has four water catchments: Kandilo, Telake, Big Apar and Kerang. Most soil in the district, and in other districts in the province, is acidic, low-fertility red-yellow podsole.

The climate is humid (70 to 85 percent humidity) with average annual precipitation of more than 2 000 mm. The natural vegetation is tropical rain forest, but after a decade of forest exploitation, and owing to the shifting cultivation and slash-and-burn agricultural practices of the local community, many parts of the district are now secondary forest or unproductive land, especially grassland.

The population of Pasir was 176 608 in 2004, with annual growth over the last three years of 1.2 to 2.4 percent, compared with the province's 4 percent. The population is unevenly distributed across ten sub-districts, with population density ranging from 4 to 134 people/km<sup>2</sup> (Table 4).

TABLE 4  
Population and population density in Pasir, 2004

No.	Sub-district	Area (km <sup>2</sup> )	Population (no.)	Density (people/km <sup>2</sup> )
1.	Batu Sopang	1 111.38	11 002	9.90
2.	Muara Samu	855.25	3 424	4.00
3.	Batu Enggau	1 507.26	8 643	5.73
4.	Tanjung Harapan	714.05	6 236	8.73
5.	Pasir Belengkong	990.11	20 239	20.44
6.	Tanah Grogot	335.58	45 254	134.85
7.	Kuaro	757.30	19 120	25.59
8.	Long Ikis	1 204.22	30 956	25.74
9.	Muara Koman	1 753.40	10 137	5.78
10.	Long Kali	2 385.39	21 375	8.78
<b>Total</b>		<b>11 603.94</b>	<b>176 426</b>	<b>15.20</b>

The local communities of Pasir consist of two groups: local indigenous people, called the Orang Paser; and migrants, especially from Java and south Sulawesi, many of whom came through the

government's transmigration programme. The Orang Paser are believed to be descendants of Central and South Kalimantan Dayaks, who are the indigenous people of Kalimantan (Riwut, 1979; Heriyanto, 2004).

## LAND USE AND ALLOCATION IN PASIR

Table 5 shows land-use classifications for Pasir, based on official data from the district government.

TABLE 5  
Land use in Pasir, 2005

No	Land use	%	Remarks
1.	Settlement	1.08	
2.	Agriculture	3.85	Including animal husbandry
3.	Crop estate	8.21	Mostly oil-palm
4.	Fish pond	0.37	
5.	Forest area	84.37	State forest
6.	Unproductive land	2.13	Bush, <i>Imperata</i> grassland and other bare land
<b>Total</b>		<b>100.00</b>	

Source: Annual Statistics of Pasir District, 2005.

Forest areas cover almost 85 percent (or about 980 000 ha) of the district's total land area, and are all categorized as State-owned. Only 54 percent of the forest area is designated permanent forest for protection, conservation and production. The remaining 46 percent is under local government responsibility and can be converted to different land uses, including oil-palm plantations.

TABLE 6  
Forest functions and zones in Pasir, 2005

Forest function	Forest zone	Area (ha)
Protection forest	S. Kendilo–G. Ketam	45 462
	Gunung Lumut	35 350
	Hilir S. Sawang	25 910
	Sungai Samu	10 230
	<b>Subtotal</b>	<b>116 952</b>
Nature reserves	Teluk Adang	62 402
	Teluk Apar	46 900
	<b>Subtotal</b>	<b>109 302</b>
Limited production forest	Hulu S. Toyu	36 590
	Hulu S. Kendilo	43 870
	Hulu S. Payang	22 760
	Hulu S. Sawang	42 130
	<b>Subtotal</b>	<b>145 350</b>
Production forest	Sungai Toyu	55 240
	Sungai Kuaro	128 925
	Sungai Samu	386
	S. Kendilo–S. Biu	6 690
	S. Segendang–S. Samu	65 885
	<b>Subtotal</b>	<b>257 126</b>
<b>Total permanent forest areas</b>		<b>626 730</b>
<b>Total non-permanent forest areas</b>		<b>531 664</b>
<b>Total forest area</b>		<b>1 160 394</b>

Source: Pasir Forestry Service, 2005.

These land classifications do not reflect the situation on the ground, however. Local communities have claimed many parts of the district as traditional lands, which have been regulated by traditional rights since long before they were declared State land, and even since before Indonesia became independent in 1945. For instance, Pasir Kingdom occupied areas of Pasir district and South Kalimantan since the sixteenth century (Wijaya, Effendi and Herlina, 2005), and granted many community groups and/or individuals the right to manage or occupy certain pieces of land as gifts for their services. Many community groups have occupied land communally for centuries, using natural markings as territory boundaries (Heriyanto, 2004).

Traditional communities' occupation of the land usually consisted of opening up primary forest for farmland, or hunting and collecting products in forest areas. Under communal rights, individual community members have access or use rights to land, which is supposed to be returned to communal ownership when it is no longer used (Sardjono, 2004a). However, many individual users try to occupy communal land permanently, or for as long as possible, especially since population increase has intensified the competition for resources. These users therefore cultivate valuable tree crops such as fruits and rattan on the land they occupy.

The situation became more complicated when the government declared all uncertified forest area as State forest under Agrarian Act No. 5/1960. Almost all traditional forests were taken over, and local communities lost their access to and rights over community forest. Certified rights to land were granted for only 20 years, so certified forest land was meant to be returned to the State in 1980. Many community groups in Pasir district retained their land, however, and the confusing landownership and rights regime has led to many land tenure conflicts. In 2003, creation of the new Paser Penajam Utara district on one-third of Pasir's territory in the north exacerbated the situation.<sup>47</sup> Many of the lands belonging to specific community groups or families have been divided according to the new administrative units.

## DEVELOPMENT OF FOREST RESOURCE POLICY IN PASIR

### Before decentralization

Pasir's early economic development was firmly based on its natural resources, especially the production and conversion forests that cover most of the district's territory. Following the expansion of timber exploitation in the 1970s and introduction of the FUP system, there were at least 11 timber companies operating on approximately 1.2 million ha of forest – about 60 percent of Pasir's territory – until the mid-1980s.<sup>48</sup>

Since the 1998 reforms, however, only three timber companies have been operating on a total of about 245 000 ha.<sup>49</sup> There are four main reasons for this reduction in the number of FUPs: (1) the government revoked the FUPs of most timber companies in Pasir because of unsatisfactory performance;<sup>50</sup> (2) the timber export ban of the early 1980s halted the activities of companies that mainly produced logs for export and/or did not have wood processing facilities; (3) some timber companies could not continue their logging operations because of increasing problems/conflicts with surrounding local communities; and (4) the forest area with good timber stock had declined dramatically.<sup>51</sup> Forest harvesting is no longer lucrative or economically feasible, so most timber companies – both long-established and new – have either stopped altogether or moved to other parts of Indonesia.

<sup>47</sup> The creation of new districts and provinces is a controversial issue. Some claim that it leads to better administration and boosts local economic development; others see it as helping local elite groups to gain more power and greater access to natural resources.

<sup>48</sup> More than 11 FUPs were operating in Pasir district, but as these were registered in Balikpapan they were counted as being Balikpapan FUPs. At this time, i.e., prior to its division into two districts in 2003, Pasir district covered about 2 million ha.

<sup>49</sup> In addition to the FUPs, there were also three ITE companies managing about 32 000 ha of plantation forest in Pasir.

<sup>50</sup> FUPs are granted to companies for 20 years, which can be extended for another 20 years subject to satisfactory evaluation from the Ministry of Forestry.

<sup>51</sup> Timber companies can only cut trees with minimum diameters of 50 cm (in production forest) or 60 cm (in limited production forest).

Impoverishment of the forest area and timber stock is basically a result of unsustainable and/or illegal harvesting practices by the timber companies. Many companies harvested more timber than the government allowed and/or operated in areas outside their concession boundaries (District Forest Agency, personal communication). Other large tracts of forest have been converted to oil-palm plantations (see the following chapter) and/or are used by communities for agricultural activities such as shifting cultivation and crop plantations.

Sardjono (2004c) points out that “intractable” conflicts usually arise over the accumulation of several factors, most of which are rooted in the insecurity and unfairness felt by local communities living in and near forests. The main factors leading to conflict are: communities’ loss of forest area and living space on land that is licensed as concession areas; the limiting of community activities in concession areas, particularly shifting cultivation and the collection of non-timber forest products (NTFPs) such as rattan, aloe wood and honey; lack of communication between communities and companies, owing to differences in economic orientation, education, etc., which lead to misunderstandings and distrust between the two groups; minimum benefits from the companies for local communities, both financially and in terms of employment provision, as companies prefer to recruit migrant/external workers; encroachment into local communities’ traditionally protected and sacred sites; and deforestation and its impacts on the rural agro-ecosystem, such as erosion and increased river pollution.

Table 7 describes the interaction between companies’ and local communities’ forest use – including the resulting conflict – in Tiwei and Long Gelang villages in Pasir district between 1971 and 2004. During this period, timber companies with government-issued FUPs were logging on lands that included villages’ traditional land. The local communities’ traditional rights over their land were ignored, and they received practically no direct or indirect benefits from the companies’ activities. At the time, local communities had no opportunity to protest or claim their rights, because the government backed the companies for economic reasons. When the companies started to withdraw in the first half of the 1980s, parts of the former concession areas were assigned to oil-palm plantation companies, again without consulting local communities, and ignoring their rights and needs. At the same time, however, local communities started to occupy other parts of the former concession areas, which they logged illegally. As soon as the reform process started in 1998, conflicts among local communities over the remaining forest land and resources escalated. Illegal activities, such as illegal logging, sawmills and timber trading, have also increased steadily in all types of forest, especially in logged over parts of former concession areas. Ex-FUP areas, which are legally still State forests, are effectively open-access areas for all users.

TABLE 7  
Dynamics of forest use around FUP areas in Tiwei and Long Gelang villages in Pasir, 1971 to 2004

Year	Events
1971	FUP Alas Kusuma (concession holder no. 438/Kpts/Um/9/73; with a total concession area of 135 000 ha) started to develop a corridor road for timber transportation from a log pond at Lombok River, crossing the customary lands of Tiwei and Long Gelang villages.  The company continued to develop the corridor road across the area of another concession, FUP Nata Marga Jaya (concession holder no. 661/Kpts/Um/10/79; with a total concession area of 40 000 ha), which also overlapped with the customary land of Tiwei.  Tiwei villagers claimed compensation. At the time, their bargaining position was very weak (the government supported the FUP as a source of national income) and they were compensated only for plants growing on the corridor road. The compensation (equivalent to about US\$350) was used to repair community houses.  The people of Long Gelang shifted their village to the corridor to improve access to their farmland.  FUP Alas Kusuma established its base camp in Tiwei village.
1973	To remain close to its logging area, Alas Kusuma moved its base camp to Tompuk (formerly in the area of Palembang village).
1974	FUP Inne Dong Hwa (concession holder no. 141/Kpts/Um/4/71; with a total concession area of 120 000 ha) used the corridor road, without any knowledge of the compensation to local communities.  Tiwei people moved their village to the ex-base camp of Alas Kusuma.
1979	Based on Act No. 5/1979, both villages were definitively declared villages.
1983	Following the log export ban of the Ministries of Agriculture, Industry, and Trade, the activities of Alas Kusuma and Inne Dong Hwa collapsed, because both companies focused on timber production for export.

1983	State-owned enterprise PTPN XIII mapped the area of Tiwei for the development of oil-palm plantations within the framework of a nucleus estate programme.
1984	The FUPs abandoned their concession areas.
1984 to 1986	With no maintenance, the corridor road became overgrown and was practically unused. Tiwei villagers collected the abandoned FUP heavy equipment, spare parts and other unused iron materials, selling it for about US\$0.15/kg.
1986	The local government started to develop the PIR oil-palm plantation in Tiwei.
1987/1988	Transmigration around Long Gelang, within the framework of commercial crop estate development, led to conflict. Local communities made a claim to central government because their farmlands were being taken over and converted into settlements and estates. The local government gave no compensation to the people of Long Gelang.
1992	FUP Nata Marga Jaya continued its timber operations.
1994/1995	Boundary (horizontal) conflicts broke out between the neighbouring villages of Tiwei and Long Gelang.
1997/1998	About 140 transmigrant families were settled in Tiwei village area to support the establishment of an oil-palm plantation.
1998	Illegal logging by outsiders, mostly from the nearby sub-district capital of Long Ikis (and reportedly not local people), started in the area. The illegal loggers' heavy trucks destroyed the corridor road. Following reform at the beginning of 1998, people in Long Gelang reclaimed their land that had been used for transmigration settlements and crop estates.
1999	FUP Nata Marga Jaya stopped its logging operations because there were no more commercially allowable trees to cut on its lands.
2002	The government's rehabilitation programme (through the district forestry service) distributed Jati (teak) and fruit trees to Tiwei villagers.
2004	Illegal logging activities have increased and at least three illegal sawmills have been established in the surrounding area.

Source: Heriyanto, 2004.

### After decentralization

Following decentralization and regional autonomy in 2001, the forest management system completely changed. Before decentralization, only the FUP system was implemented, and all permits were issued through the central government. Since decentralization, local governments can issue timber forest product use permits (TFPUKs), but the annual allowable cuts (AACs) for timber companies with FUPs and TFPUKs are still determined by the central government. A company that has received a TFPUK from the local government cannot operate or harvest the forest until it has received an AAC from the central government.

So far, four companies in Pasir district have TFPUKs, with very limited concession areas totalling less than 140 000 ha. Only one of these companies was granted an AAC for 2005 and so can operate. This situation is a result of the government's "soft-landing" policy of 2004, which aims to conserve the forest by reducing the number of FUP holders (especially poorly performing ones) and/or AACs. Unfortunately, data for Pasir district regarding implementation of the soft-landing policy are not available, but the policy's effect on timber companies and their AACs can be seen from the data for East Kalimantan province in Table 8.

TABLE 8  
Effect of the soft-landing policy on FUPs and AACs in East Kalimantan

Year	Number of FUPs	AACs		Remarks
		Area (ha)	Volume (m <sup>3</sup> )	
1987	79	180 537.00	13 100 000	Before implementation of the policy. The estimated volume is based on the average volume of commercial trees in East Kalimantan: 73 m <sup>3</sup> /ha.
2004	39	46 245.96	1 555 000	After implementation of the policy. The government issued nearly all of these AACs in the middle of 2004, which was considered a political move in the lead-up to the presidential election of September 2004.

Since decentralization, as well as FUP permits for log production forest, the central government has also issued a new utilization permit, called a timber use permit (TUP), for private and State-owned commercial crop plantation companies. These permits allow companies to exploit (clear-cut) remaining residual stands to establish crop plantations. TUPs are also granted for exploiting the timber in forests in mining areas and in burnt-out areas (following forest fires) – when there are still some relatively good stands that can be cut. This is known as salvage logging. In 2004, there were three TUP companies in Pasir.

In general, therefore, the decreased number of FUP holders over the last decade has not necessarily led to decreased volumes of timber being removed from the forests of Pasir. Timber is also produced by TFPUK and TUP holders (Table 9). In addition, a lot of timber has come on to the market from illegal logging activities, as described in Table 7.

TABLE 9  
Development of TUPs and timber volumes in Pasir, 2004

No.	Name/type of company	Area (ha)	Timber volume (m3)	Remarks
1.	Inhutani II/forest company	6 880	35 182	Forest in mining area (Kideco Jaya Agung) Extension permit
2.	Bintang Jaya Intercakrawala/ estate company	501	29 360	Forest area to be converted to commercial crop estate (Bintang Jaya Intercakrawala) Additional quota
3.	Bumi Mitratrans Marjaya/ estate company	6 000	217 520	Forest area to be converted to commercial crop estate (Bumi Mitratrans Marjaya) Extension permit
	<b>Total</b>	<b>13 381</b>	<b>282 062</b>	

Source: Pasir Forestry Service, 2003.

The new TUP policy created a new trend for companies to propose developing commercial crop plantations in Indonesia. Based on experiences in many parts of the country, however, implementation of the TUP system brings ecological and social problems because many TUP holders do not establish plantations after clear-cutting tree stands. They merely cut the timber and leave degraded or even bare land behind, often causing ecological damage. Some TUP holders use fire when preparing land for plantations, and this can lead to uncontrolled forest fires and haze pollution.

## DEVELOPMENT OF OIL-PALM PLANTATIONS

Pasir is East Kalimantan's pioneer district in establishing large-scale commercial crop plantations as an economic solution to decreasing forest resources. Plantation expansion started in the early 1980s and has continued to increase. In 2004, Pasir's commercial crop plantations covered approximately 74 000 ha (Table 10), mostly on converted production forest land (or non-permanent forest areas under regional spatial planning classifications). The main commodities grown on these estates are oil-palm and, less extensively, rubber, hybrid coconut, coffee, pepper and cocoa. Since regional autonomy in 2001, local governments have administered commercial crop plantations.

TABLE 10  
Development of commercial crop plantations in Pasir, 1999 to 2004

No.	Commodity	Planted area (1 000 ha)						(%)
		1999	2000	2001	2002	2003	2004	
1.	Oil-palm	56 239	56 901	62 657	64 059	56 224	58 641	79.6
2.	Rubber	14 507	14 542	13 992	13 992	6 387	6 349	8.6
3.	Hybrid coconut	9 585	9 585	9 585	9 585	4 487	4 115	5.6
4.	Coffee	4 740	4 740	4 740	4 740	3 058	3 001	4.1
5.	Pepper	665	1 747	1 785	1 810	182	188	0.2
6.	Cocoa	1 574	1 574	1 574	1 574	902	890	1.2
7.	Others	598	598	598	598	440	414	0.7
	<b>Total</b>	<b>87 909</b>	<b>89 668</b>	<b>94 933</b>	<b>96 360</b>	<b>71 680</b>	<b>73 649</b>	<b>100.0</b>

Note: The area of commercial crop plantations decreased in 2002/2003 after North Penajam Paser district was established.

Source: Anonymous, 2005.

These plantations are unequally distributed across subdistricts, with larger-scale plantations in the five subdistricts of Long Ikis (23 553 ha), Pasir Balengkong (12 071 ha), Long Kali (11 522 ha), Kuaro (10 296 ha) and Muara Engau (9 400 ha).

Between 1999 and 2004, oil-palm production increased from 337 39 to 389 337 tonnes, even though almost one-third of the district's land area was lost when Paser Penajam Utara district was established in 2003.

The situation regarding ownership of the plantations has changed noticeably over the last decade. Until the mid-1990s most plantations were owned and managed by State and private companies, but at the end of 2004, 66.46 percent of crop plantations were managed by local people under the smallholder estate scheme,<sup>52</sup> which supports more than 17 000 families, representing between 58 000 and 85 000 people (Tables 11 and 12).

Field observations and interviews show that many communities are increasingly interested in participating in the smallholder model, because it gives individuals the possibility of claiming land that was formerly State forest. Other groups of villagers, especially those with an interest in conserving customary ownership, do not support the scheme, however. They are willing to participate in oil-palm plantations as a way of increasing their family incomes, but only if the land remains under community control. These contradictory views often lead to conflicts among different community groups and/or villages.

TABLE 11  
Ownership of commercial crop plantations in Pasir

No.	Commodity	Area (1 000 ha)			Total
		Smallholder estate	Government-owned estate	Private company estate	
1.	Oil-palm	34 745	13 526	10 370	58,641
2.	Rubber	5 740	399	210	6 349
3.	Hybrid coconut	4 155	-	-	4 115
4.	Coffee	3 011	-	-	3 001
5.	Pepper	188	-	-	188
6.	Cocoa	690	-	200	890
7.	Others	414	-	-	414
	<b>Total</b>	<b>48 944</b>	<b>13 925</b>	<b>10 780</b>	<b>73 649</b>
	<b>(%)</b>	<b>66.46</b>	<b>18.91</b>	<b>14.64</b>	<b>100.00</b>

Source: Anonymous, 2005.

<sup>52</sup> Most of the smallholder estates developed by local communities are on their customary land; they form part of and are supported by larger plantation companies (District Plantations Agency, personal communication).

TABLE 12  
Local people's participation in oil-palm plantations in Pasir, 2004

No	Subdistrict	Plantation area (ha)	Participants (families)	Average managed farmland/family (ha)*
1.	Batu Sopang	299.50	104	2.9
2.	Muara Samu	110.00	31	3.5
3.	Batu Enggau	8 345.17	300	27.8
4.	Tanjung Harapan	1 070.00	36	29.7
5.	Pasir Belengkong	10 535.50	2 972	3.5
6.	Tanah Grogot	910.00	536	1.7
7.	Kuaro	8 410.06	4 043	2.1
8.	Long Ikis	22 157.14	7 640	2.9
9.	Muara Koman	381.00	256	1.5
10.	Long Kali	6 423.00	1 229	5.2
<b>Total</b>		<b>58 641.37</b>	<b>17 147</b>	<b>3.4</b>

\* Calculated by dividing the plantation area by the number of participants.

## IMPLICATIONS ON LOCAL RESOURCES AND COMMUNITIES

### Local community livelihoods

As discussed in previous chapters, the government policies for the forestry sector of the last three decades – particularly before decentralization – did not contribute much to local livelihoods.

Over the last five years, however, since decentralization and the extensive development of oil-palm plantations, the situation seems to be changing slowly. The numbers of local people involved in the oil-palm sector, and the area of oil-palm plantations in Pasir have increased significantly. This is particularly because oil-palm provides local communities with more income, more quickly than other options (timber and NTFPs), as a rough calculation of the possible income from oil-palm, based on data in Table 12, shows:

*Assuming that average production reaches 7 298 to 8 492 kg/ha at 607.72 rupiahs (Rp)/kg (Disbun Pasir, 2005), each family can earn between Rp15 080 366 to Rp17 545 648 per year (or about Rp1.25 to Rp1.50 million/month). If each family has an average of five members, the income earned is between Rp250 000 and Rp300 000/person/month. (US\$1 ~ Rp9 000 in 2004.)*

That oil-palm plantations are profitable for local communities was indicated by the fact that three of the four villages visited for this study proposed developing oil-palm plantations by converting forest areas, although NTFPs (rattan, aloe wood, honey, etc.) still play an important role in livelihoods.

Oil-palm plantations also make an important contribution to Pasir's regional GDP. In the last five years, about 80 percent of this has come from the mining and agriculture sectors (Table 13). In the agriculture sector, logs and particularly oil-palm products (oil) are the dominant commodities, representing 90 percent of the material uploaded at Pasir harbour (TKKPD, 2005).

TABLE 13  
Growth of regional GDP in Pasir valued at current prices, 1999 to 2003

Sector	1999	2000	2001	2002	2003
GDP (Rp1 000)	1 219 255 306	1 410 780 723	1 715 706 308	1 855 028 786	1 998 758 382
Population	N.A.	267 960	273 495	169 932	176 426
GDP/capita (Rp)	N.A.	5 264 893	6 273 263	10 916 300	11 329 159

N.A. = no data available.

Oil-palm plantations will obviously play a more important role for the district in the future. The local government plans to make agribusiness (and agro-industry) the core of the district's economic activities, and has reserved approximately 250 000 ha for the expansion of oil-palm plantations (TKKPD, 2005). This indicates the economically promising future of that commodity in Pasir, and the possibility of greater participation for local people.

This development will also affect the district's remaining forests, however. Because most agriculture areas in Pasir district are already being used, the expansion of plantations will probably entail the conversion of forest or logged over areas. This will intensify the destruction and degradation of remaining forest, including the approximately 226 000 ha of conservation and protection areas.

### **Land tenure conflicts**

As already described, there is much potential for land tenure conflict in Pasir owing to a longstanding lack of clarity over ownership and rights to land, particularly regarding local communities' traditional rights to land and natural resources. These conflicts did not emerge before decentralization because they were suppressed by the powerful and centralized New Order regime (1967 to 1998). During that period, although many local communities lost their traditional access to land and resources because of intensive and extensive timber exploitation, the development of ITES and the conversion of forest to oil-palm plantations, they rarely voiced their protests or objections to government policies.

After reform and regional autonomy, the socio-political situation changed and resource use became more democratic. As a result, land tenure-related conflicts between government/companies and local communities and among local community groups have increased significantly in Pasir district, as elsewhere in Indonesia. Conflicts among community groups have taken on a particularly worrying dimension, with many physical fights between community groups breaking out in Pasir in recent years. These conflicts are usually caused by unclear boundaries or the incompatible traditional claims of two (or more) community groups or villages. Conflicts have also arisen because of different interests in using the same piece of land/territory among the members of one community. The situation is exacerbated by a scarcity of natural resources and Indonesia's currently poor economy, weak governance and lack of law enforcement.

As an example, Table 14 describes the forest exploitation and large-scale establishment of oil-palm plantations in Tiwei and Long Gelang villages, Long Ikis district.

It can be concluded that forest utilization policies based on the timber management system and the conversion of permanent and non-permanent forest land to plantations have not yet led to better resource management and poverty reduction. In Pasir, intensive timber exploitation in recent decades has created extensive areas of degraded land and unproductive forest. The remaining relatively good protection forest and conservation areas are under pressure from different uses, including land encroachment and illegal logging. In 2004 alone, for example, 41 800 m<sup>3</sup> of illegal logs and sawntimber were confiscated. This is far more than the average volume of legal log production for the district between 2001 and 2003 – 36 100 m<sup>3</sup> – and approximately 15 percent of the TUPs' total timber volume for the same period (Dishut Kaltim, 2004; UPTD Kehutanan Pasir, 2005). At the same time, there have been no reports of achievements in reforestation and land rehabilitation programmes, on which Pasir spent at least Rp25.6 billion for more than 112 000 ha between 2001 and 2003.

Forest concessions have clearly not increased the welfare of local communities. Instead of experiencing a trickle-down effect, the generally very poor local communities have had to subsidize the companies (a trickle-up effect) by giving up their living space and the forests where they used to collect timber and NTFPs. Forest exploitation has attracted outsiders to Pasir, who as unemployed migrants have entered the forests to exploit NTFPs.

TABLE 14  
**Implications of oil-palm plantations on community conflict in Long Gelang and Tiwei villages**

Description	Village	
	Long Gelang	Tiwei
<b>Conflicts within villages</b>		
Causes	Some families occupying land surrounding the oil-palm plantations developed by government/company programmes do not want to participate in the programmes because of possible permanent loss of their land rights, which the government/companies will replace with small parcels of land (about 2 ha). They are willing to lend the land without giving over their rights.	Some powerful families in the village claimed that village land traditionally belonged to them. They objected to making family land communal land for oil-palm plantation programmes. The compensation paid for the land was too small.
Sources	Unclear land occupation rights under traditional law, and the recent price of land.	Unclear land occupation rights under traditional law, and the recent price of land
<b>Conflicts with other villages</b>		
Causes	Competition over strategic land (along the main roads of villages) that was proposed for use by the oil-palm plantation programme (conflict between Long Gelang and Tiwei).	Competition over strategic land (along the main roads of villages) that was proposed for use by the oil-palm plantation programme (conflicts among Tiwei, Long Gelang, Belimbing and Olung).
Sources	Land claims between users.	Land claims among users.

Source: Heriyanto, 2004.

Oil-palm plantations have been declared the district's core business and are extended to the grassroots level through small-scale programmes. This is probably a rational solution for forest degradation. Farmers participating in the plantation programmes are assured of income, so local communities are increasingly interested in establishing oil-palm plantations. On the other hand, the establishment of oil-palm plantations has also been used as a justification for obtaining TUPs to exploit remaining residual stands and convert communal land to individual ownership. Conflicts over land occupation among local communities and villages in Pasir have increased over the last five years (Table 14).

## Proposals for the way forward

The study of Pasir district presents all the issues and problems facing the forestry sector in Indonesia, including land tenure conflict, local communities' limited involvement in forest resource management, unsustainable forest harvesting practices, and forest conversion for plantation development, all of which lead to forest degradation and destruction. Although many programmes and initiatives from a wide range of stakeholders – the government, non-governmental organizations (NGOs), and international donors and projects – have aimed to improve the situation, no significant achievements have been made so far. On the contrary, the scale and intensity of forest destruction have increased alarmingly, and vertical and horizontal conflicts among forest stakeholders have been exacerbated. There are many reasons for these developments, but land tenure is one of the most important.

This chapter suggests ways forward for policies on resource management, the involvement of local communities in forest resource management, and integrated and collaborative resource management.

### **POLICIES ON RESOURCE MANAGEMENT**

The design and implementation of policies for land and natural resource management have generally been strongly influenced by economic interests that tend to marginalize both the interests of local communities and environmental issues. Land allocation and forest utilization policies through the FUP system and plantation development in Pasir provide a good example of this. In spite of their failure to improve local communities' livelihoods, and their contribution to the massive destruction of forest resources, these policies have not been significantly altered. Forest areas, even protected natural forests, are still being converted, particularly for agriculture to meet the needs of a growing population and to satisfy economic demands.

Converting and using forest land to satisfy people's needs is acceptable. The concern is that this may be an empty claim to cover the economic interests of certain individuals or groups. This would explain why so many oil-palm plantations in Pasir have been developed in primary and good secondary forest instead of in heavily degraded secondary forest, bush/grassland or other unproductive areas, where the income from log sales would have been far less or non-existent (Simorangkir and Sumantri, 2002).

The situation in Pasir has worsened since the fall of President Suharto in 1998 and the following issuance of Act No. 22/1999 and Government Regulation No. 25/2000, which triggered autonomy euphoria across Indonesia. Prior to this, everything was controlled from Jakarta, and provinces or districts could not make political decisions without the permission of central government, which had full control over natural resource management. While many of the profits of resource exploitation were diverted to the central government (including elite groups and individuals in Jakarta), many regions of Indonesia, particularly outside Java, were left undeveloped and poor.

Since 1998, provinces and districts have started to voice their disagreements and disappointments with the system, and are claiming more independence and rights in governing their own natural resources. However, many local governments drew up local regulations under the slogan of "Increasing real regional income for local development and improved livelihoods" merely to justify their own (and local communities') exploitation of natural resources, often at a cost to the environment. As a result of weak law enforcement and lack of central government supervision, over the last five years uncontrolled legal and illegal forest logging, encroachment and conversion of forest land, and other kinds of forest and natural resources destruction have accelerated in Pasir.

The underlying causes of this situation are stakeholders' vested interests in using forest resources, unclear land tenure and local communities' limited access to resources. Policies and regulations should be developed and implemented with the following considerations:

- Priority should be given to the reformulation/revision of Agrarian Act No. 5/1960 and other natural resources acts, which should acknowledge and accept the traditional rights of local communities over land and forest resources.
- This should be done in line with policies for the Indonesian forestry sector that focus on five priority programmes for the period 2004 to 2009:<sup>53</sup> (1) combating illegal logging; (2) forest rehabilitation; (3) revitalization of forestry industries; (4) development of local economies in and near forest areas; and (5) gazettement of forest areas.
- A policy for forest resource management must be developed, with clear objectives and long-term vision towards sustainable forest management. Frequent changes in government policies (particularly in Pasir) that focused on reaping as much economic benefit as possible from timber exploitation and forest conversion have resulted in the massive destruction of forest resources.
- The decentralization of authority and responsibility from the central to local governments must be implemented consistently. So far, the government has been somewhat half-hearted in its implementation of the decentralization process. Currently, for example, local governments can issue TFPUKs, but the AACs for timber companies with TFPUKs are still determined by the central government. This means that many companies with TFPUKs from local government cannot operate because they have not yet received AACs from the central government.
- The deconcentration of authority and responsibility to local governments must be accompanied by strict law enforcement and strengthened political, administrative and technical facilitation/guidance from central government, in order to minimize the risks of corruption, collusion and manipulation at the local level.
- Central government should encourage and support local stakeholders, especially district governments, in implementing existing regulations and mechanisms that can help to resolve problems at the local level. For example, the Regulation of Agrarian and Land Affairs No. 5/1999 concerns resolution mechanisms for land claims and traditional rights and gives district governments greater authority to resolve land conflicts in their territories; owing to a lack of knowledge, skills and capacity at the local government level, and to overwhelming confusion about landownership and rights, however, this regulation has not been properly implemented.

## INVOLVEMENT OF LOCAL COMMUNITIES IN FOREST RESOURCE MANAGEMENT

As described in previous chapters, Indonesia's land-use and forest policies still do not promote local community involvement. The process of allocating forest land was conducted in a purely top-down manner from Jakarta, ignoring existing local systems and failing to involve local people. As a result, villagers' traditional access to forest resources has been denied, and in many cases whole communities have been relocated to make way for logging and other activities – often with help from the police and military. Under these circumstances, it is understandable that local communities should oppose development activities in their forests. Since the 1960s, many of the conflicts related to land tenure issues in Pasir have had local people on one side and the government, companies and other parties on the other.

Forestry Act No. 41/1999 superseded Forestry Act No. 5/1967 and marked the start of the forestry sector reform process. One of the main drivers of change was the heavy pressure from community groups demanding recognition of traditional law, clearly defined forest utilization rights for local communities, and community involvement in forest management. Up to now, however, implementation of the new act has not changed the situation significantly. Some parties have taken advantage of ambiguous laws and regulations to abuse the system, leaving the majority of local communities still insecure over ownership of the land and natural resources. In addition, the livelihoods of local people have not been improved. In Pasir, for example, most people still have no

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<sup>53</sup> Based on Forestry Minister's Decree No. 456/2004 of 29 November 2004.

skills or financial resources other than those of their traditional way of life – collecting forest products and clearing forest land for agriculture.

A combination of poverty and lack of rights and access to land and natural resources has led local Pasir communities to ignore the principles of sustainable land and forest management. As in many other parts of Indonesia, communities in Pasir seem not to care about the environment because they have little opportunity to do so. People are also reluctant to support government programmes and activities, and participate only when they can derive direct and short-term benefits, which is not often the case.

The following are practical measures that can be taken to solve these problems:

- *Identification and recognition of traditional rights and lands:* No natural resource (forest) management activities can be properly implemented unless forest and landownership are clearly defined. It is very important to identify and recognize the traditional rights of the local communities in and near forest areas, particularly regarding landownership and access and use rights to forest resources. This creates the basis for proper land-use planning and allocation of development activities. So far, however, the government has not fully identified and recognized the traditional rights of local communities, and no district in Indonesia has a spatial plan that does not overlap or even conflict with communities' claims to land and forest.
- *Development of appropriate community-based forest management models/systems:* Natural resource (forest) management has to provide direct and fair benefits to local communities. At present, there are no appropriate forest management models/systems that allow local communities to control and manage forest areas and derive benefits. Although issues still need to be resolved regarding the five national-level schemes for community-based forest resource management (Figure 2), this effort is a first step towards greater community involvement in forest resource management and the development of better mechanisms for reducing land tenure conflict and poverty. Of the five schemes, the most problematic are those for village forest and community forest, because their implementation depends on developing regional regulations that are recognized and supported at the central government level. Some districts have developed their own community-based forest management systems, but most of these cannot be implemented owing to objections from the central government (Ministry of Forestry).<sup>54</sup>
- *Empowerment of local communities:* Lessons learned from the last five years of local community forest exploitation (legal and illegal) demonstrate that communities are not yet ready to use forests sustainably. Over the last five years, deforestation in Indonesia has increased at an alarming rate and intensity, and local communities have played an important role in this negative development. As well as the lack of law enforcement and supervision from central government, the main reasons for this are communities' lack of awareness, capacity and capital. It is therefore very important to empower local communities through, for example, strengthening community organizations/institutions, building the capacity of human resources, developing networks and promoting alternative income sources. Authorities at various levels should be facilitators in this. Participation of other forest stakeholders, such as local, national and international NGOs and universities, will also have a significant influence on the success of efforts.

## INTEGRATED AND COLLABORATIVE RESOURCE MANAGEMENT

Given their complexity, forest management and land-use problems cannot be solved by one party alone. Integrated and collaborative action among stakeholders is crucial. For decades, many initiatives and programmes for natural resource (forest) management and poverty reduction have been promoted and conducted by the government, NGOs, universities and international donors/projects under the slogans of “integration” and/or “collaboration”. Most of those initiatives

<sup>54</sup> For example, West Kutai district in East Kalimantan issued a Regional Regulation on Community Forests, which the central Forestry Department requested the Minister of Internal Affairs to abolish.

and programmes have, however, failed to achieve their objective of supporting better natural resource management.

Collaboration is more than just cooperation and/or coordination. Collaboration not only involves exchanging information, developing activities and contributing resources, but also needs to increase the capacity of actors/partners in order to gain collective benefits for collective objectives. Collaborative action in resource management therefore needs bilateral matching approaches (a combination of top-down and bottom-up planning) and conflict resolution.

In Pasir, as elsewhere in Indonesia, local communities are the most numerous stakeholder group, so the focus of efforts to solve forest management and land-use problems should be on involving and empowering local communities. It should also be kept in mind that empowered people will only participate in resource management if they can derive benefits from doing so. Sardjono (2004a) mentions four keys for people's involvement in resource management: (1) people are assured of having long-term (or even permanent) rights to manage the resource or its products; (2) they can participate fully in all stages of resource management (planning, organizing, implementing and monitoring); (3) resource management will bring them greater benefits, especially where activities are on their occupied lands; and (4) they are assured freedom from political or financial pressure from other stakeholders.

These requirements indicate that collaborative action needs improved natural resource policies, as well as sufficient social management capacity and sensitivity from more powerful stakeholders, such as governments and large-scale enterprises. The three proposals for the way forward made in the previous subsection lead into each other, forming the basis for an integrated effort.

## Closing remarks

The relationship between natural resources (forest) management and poverty in Indonesia is a vast subject. Not only does the country cover a huge area and have a wide range of biological and socio-cultural components, but also the complex problems faced have been politically embedded and have existed for decades, creating a vicious cycle. Decentralization and regional autonomy should enable actions to be focused locally but still be thought about nationally or even globally. The case study from Pasir district reflects the real resource and community issues that have to be managed in the field. Better resource management and poverty reduction in Indonesia depend on experimenting with new proposals and assessing the results. Optimism about the future can be great capital in managing resources for an improved future.

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