

## **FROM NEW ORDER TO REGIONAL AUTONOMY: SHIFTING DYNAMICS OF 'ILLEGAL' LOGGING IN KALIMANTAN, INDONESIA**

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### **Summary**

In recent years there has been a tendency to view the seemingly irremediable spread of 'illegal' logging in Indonesia in isolation, or as a result of disassociated and premeditated criminal acts. This paper proposes a different view of the problem by discussing the changing dynamics of the 'illegal' logging sector in the two districts of Berau, East Kalimantan and Kotawaringin Timur, Central Kalimantan. It suggests that 'illegal' logging is not a simple case of criminality, but a complex economic and political system involving multiple stakeholders. Furthermore, 'illegal' logging is not a stationary condition that can be effectively dealt with through coercive or repressive measures alone. Rather, it should be viewed as a dynamic and changing system deeply engrained in the realities of rural life in Indonesia. Regional autonomy has also created a supportive environment for the 'illegal' logging trade and allowed it to gain resilience.

**Keywords:** 'Illegal', logging, decentralization, autonomy, Kalimantan, Indonesia.

### **1 INTRODUCTION**

It has long been known that official production figures on timber output from Indonesia's forests have been far from accurate. Vague official statistics mask the real degree to which commercial activities have damaged Indonesia's forest cover, and we can only surmise and speculate about real production output obtained from the illegal logging of Indonesia's forests. According to the International Tropical Timber Organization (ITTO), production of tropical logs has been gradually declining. Between 1995 and 1999, log production dropped by approximately four million m<sup>3</sup> and plywood production also decreased by one million m<sup>3</sup> from 6.5 million m<sup>3</sup> to 5.5 million m<sup>3</sup> (ITTO 1999). However, the official decline masks a real increase in illegal logging. By comparing official roundwood production data with reported exports, imports and domestic consumption, Scotland *et al.* (1999) found an annual discrepancy of approximately 32 million m<sup>3</sup> between official roundwood production and the apparent output from the wood-processing sector for the year 1999. In the year 2000, the Ministry of Forestry and Plantations acknowledged the rise by releasing a statement saying that their data

Published in World Development, December 2002 issue Vol. 30, No.12, pp2133-2151. indicated that ‘illegal’ logging had damaged 1.6 million ha of forest between January and July 2000. This increase had caused the Indonesian government to lose some \$US 360 million in annual tax losses (*Jakarta Post* 2000). By the year 2001, illegal logging was thought to be one of the most critical threats to Indonesia’s forest capital, accounting for 50-70% of total log production (ITTO 2001).

Illegal logging can be defined as the harvesting of logs in contravention of laws and regulations. These laws and regulations were designed to prevent the over-exploitation of forest resources and to promote sustainable forest management (Callister 1992; ITTO 2001). In accordance with this definition, illegal may include logging activities in protected areas, the logging of protected species (such as Ramin), logging outside concession boundaries, extraction of more than the allowable harvest, removal of oversized or undersized trees, and harvesting in areas where extraction is prohibited such as catchment areas, steep slopes, and river banks (Callister 1992). In the current era of economic and political change in Indonesia, illegal logging may also refer to an array of extractive activities that have some degree of legal recognition, primarily as small-scale concessions allowable under the current decentralization laws, or as logging practices legitimized through district regulations. In accordance with the latter definition, some logging activities may be considered to be ‘illegal’ by the central government, but ‘legal’ according to some district governments. The distinction between ‘legal’ and ‘illegal’ is therefore blurred making it extremely difficult to define either activity.

This paper highlights some of the shifting dynamics of the ‘illegal’ timber sector in the districts (*kabupaten*) of Berau, East Kalimantan, and Kotawaringin Timur, Central Kalimantan—two of Indonesia’s main suppliers of ‘illegal’ timber. By drawing on these two case studies, we argue that ‘illegal’ logging is not necessarily a phenomenon driven by macro economic considerations (such as processing overcapacity, inefficiency, flawed pricing, rent seeking) and general socio-political ills such as patronage and corruption alone. While these are important causal factors, they do not provide a complete answer to the question of why ‘illegal’ logging has been such a vibrant, adaptable and virtually unstoppable force in Indonesia in recent years. For a key factor adding to the resilience and dynamism of ‘illegal’ logging in East and Central Kalimantan is the fact that, since the fall of Suharto in May 1998, ‘illegal’ logging has been operating in a greater variety of forms and guises. While well-

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entrenched networks of patronage and corruption remain, the decentralization process has blurred the distinction between 'legal' and 'illegal' logging by giving rise to locally sanctioned timber extraction. In other words, local governments may officially legitimate timber extraction by issuing timber permits, however they do so without any due regard for sustainable rates of extraction.

The mass media and a number of environmental non-government organizations have predominantly portrayed illegal felling as criminal acts by unscrupulous business groups and/or individuals who openly sponsor criminal acts of encroachment into protected areas, remote border regions and other inaccessible parts of the country (*Kompas* 2000a; *Kompas* 2000c; *Kaltim Post* 2000, EIA & Telapak 1999; EIA & Telapak 2000). Over-cutting or cutting out of block by HPH concessionaires and 'hit and run' operations by phony plantation companies have also been recognized as acts of 'illegal' logging (*Kompas* 2000b; Kartodiharjo 2000). However, the following discussion will show that while these forms of 'illegal' logging still exist, 'illegal' logging has also undergone several operational transformations since the onset of the economic crisis and that most of these logging activities have now been 'legalized'. This has come as a result of the fact that decentralization regulations, particularly regarding small concession schemes in the forestry sector and the ability to generate district taxes, have been successfully misused to bestow a degree of formalization, or even outright legalization, upon hitherto 'illegal' logging.

Moreover, these new forms of 'illegal' logging activities have important implications—socially, ecologically and economically—for forest policy in Indonesia. This is primarily because they usher in a new set of daunting challenges as the process of formalization obscures and effectively dissolves the distinctions between what is lawful, and what is not. The increasing complexity of the 'illegal' logging problem renders 'illegal' loggers progressively less responsive to law enforcement measures currently considered by the central government and international organizations such as the World Bank.

Before discussing the shifting dynamics of the 'illegal' logging sector in Kalimantan in further detail, we provide a general introduction to the 'illegal' logging problem in Indonesia prior to the fall of Suharto and attempt to

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explain the recent intensification of ‘illegal’ logging activities since 1997. We then go on to discuss the shifting dynamics of the sector in the two districts of Berau, East Kalimantan and Kotawaringin Timur, Central Kalimantan<sup>3</sup>. A general discussion of the social, economic and environmental consequences of ‘illegal’ logging activities in these two districts is provided before we conclude the paper.

## 2 ‘ILLEGAL’ LOGGING DURING THE SUHARTO ERA

‘Illegal’ logging, particularly by local communities, is not a new phenomenon in Indonesia (Callister 1992; McCarthy 2000; Scotland *et al.* 1999). Peluso (1992) and McCarthy (2000) have both pointed out that tensions between State and local interests over the control of forest resources in ‘outer island’ Indonesia have a history that extends back to the colonial period. The policies of the New Order merely sharpened and intensified these tensions. Under the New Order regime, all Indonesian forests were declared state forests and the outer island forests were opened to large-scale timber extraction in order to generate much needed revenue. This centralized control of Indonesia’s forestry sector followed the 1967-1970 period of a relatively relaxed policy that allowed district authorities and village communities to engage in small-scale logging activities, commonly known as *banjir kap*. The *banjir kap* period was significant in the sense that, similar to what is happening today, it allowed small-scale concessions to be issued locally (Ruzicka 1979; Peluso 1983)<sup>4</sup>. This measure was taken by the Suharto government in its early days to appease regional politicians—many of whom had military backgrounds. However, once the centralization and consolidation policy began to take effect, provincial and district timber enterprises were marginalized in favour of multinational corporations linked to central government elite and key military figures. This effectively pushed local timber operations ‘underground’, giving rise to the formation of an informal timber economy.

At the same time, conglomerates with close connections to the Suharto family and the army were able to obtain twenty year logging licenses (*Hak Pengusaha Hutan-HPH*) in order to exploit these forests. According to Brown (1999), there were 585 timber concessions covering a total of 62 million ha of forest land by the end of 1995. These concessions were primarily divided among 64 timber groups. The five largest private groups holding concessions were Barito Pacific (6.1 million ha), Djajanti (3.6 million ha), Alas Kusuma (3.4 million ha), Kayu

Published in World Development, December 2002 issue Vol. 30, No.12, pp2133-2151. Lapis Indonesia (3 million ha) and the Bob Hasan group (2.4 million ha). Together these five timber companies controlled 18 million ha, or 30% of Indonesia's total timber concession holdings of 62 million ha. In addition to this, Indonesian State Forest Corporations (*Perseroan Terbatas Industri Hutan* Indonesia: PT Inhutani) controlled 3.9 million ha of forest land, or 6% of the total forest area allocated for production. Despite controlling extensive areas of forest, these large-scale timber companies have long been harvesting timber over the Ministry of Forestry's approved level (20 million m<sup>3</sup> per annum) and obtaining timber from 'illegal' sources in order to meet growing demand. In the late 1980s, for instance, Schwarz (1990) estimated that around 2 million m<sup>3</sup> of timber was being 'illegally' removed from protected forest, conversion forest and reserve areas each year.

During the Suharto era, local people living in, or around, logging concessions received very little from HPH activities and were forced to enter into covert agreements with local entrepreneurs (known as *cukong*) and concessionaires in order to obtain some benefits. In doing so, local leaders allowed loggers to cut into community forests and local people often assisted concessionaires to log outside their boundaries, or within protected areas, in exchange for salary or rent. Some local people also became engaged in *tebangan liar* (illegal logging) by stealing logs from concession areas (Potter 1990; McCarthy 2000). The marginalisation of provincial and district timber entrepreneurs throughout the New Order period never really managed to completely eliminate well-established military-bureaucratic-entrepreneurial networks at lower administrative levels predating the HPH period. Throughout the 1970s, these networks expanded and solidified (as a result of the progressive militarisation of the New Order bureaucracy) in order to take advantage of growing international demand for Indonesian timber after timber supplies became exhausted in countries such as the Philippines (Ross 2001).

### **3 THE INTENSIFICATION OF 'ILLEGAL' LOGGING SINCE THE FALL OF SUHARTO**

Since the fall of Suharto in May 1998, political developments and changes to legislation have created conditions that have contributed to a boom in the 'illegal' logging sector (Wadley 2001; Khan 2001). This is particularly the case in the districts of Berau, East Kalimantan and Kotawaringin Timur, Central Kalimantan. The recent boom in 'illegal' logging can be attributed to a number of factors including changes arising from the economic crisis, a

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decline in law and order, regulatory changes arising from *reformasi*—a movement calling for democracy, reform and change—and the new decentralization laws. These four factors are discussed in further detail below.

### **(a) The economic crisis**

After the economic crisis hit Indonesia in mid 1997, local communities and people who lost their jobs in the manufacturing and industry sectors, began to increasingly rely on forest resources to meet their daily needs. In the era of *reformasi*, local governments have been forced to be sympathetic to local community needs and are turning a blind eye when it comes to ‘illegal’ logging activities. Moreover, the economic crisis has severely affected the operations of some of the large logging companies who were plagued with large debts. Large logging companies, such as the Kayu Mas Group in Central Kalimantan, have been forced to leave their concessions idle over the last few years and local people have moved in to these concessions to conduct so-called ‘illegal’ logging. These local people have long been denied the right to benefit from their own natural resources and now feel it is their time to profit from timber extraction.

While large-scale timber companies have suffered during the recent period of economic crisis, the devaluation of the rupiah has allowed small and medium sized sawmills to take their place. These sawmills have been able to take advantage of small investment requirements, low operational costs and an abundance of cheap raw materials sourced ‘illegally’. For instance, in the Berau district, only two large mills using band-saws were opened for production between 1998-2000, bringing the total number of large sawmills to 19 in the district. However, dozens of circular blade sawmills (*mata bulan*) sprung up throughout the area over the same time period. Despite an overall drop in international prices for timber in the key markets of Japan, Korea and China—the price for roughly sawn timber in the main trans-shipment states of Sarawak and Sabah remained attractive for Indonesian sellers (US\$250<sup>5</sup>) in the year 2000. Shipping sawn timber internally, primarily to Java, although comparatively less profitable at US\$120, was also considered to be worthwhile.

**(b) A decline in law and order**

While Suharto was in power a number of conglomerates and individuals with close connections to the Suharto family or the army, obtained large HPH (*Hak Pengusaha Hutan*—Forest Use Rights) concessions in Indonesia. The Indonesian army (TNI or *Tentara Nasional Indonesia*) was paid to protect these concessions and ensure that no-one else logged them. They also played some role in preventing excessive ‘illegal’ logging in Indonesia’s national parks by only allowing those with close connections to Suharto and the army into protected areas. When Suharto resigned, the role of the Indonesian army was significantly drawn back during the period of the Habibie government. Local communities, cooperatives, entrepreneurs and outsiders, soon realized that they no longer had to fear going into ‘forbidden forest zones’.

Our field observations included several instances of communities flouting police controls. For instance, when field work was carried out in Central Kalimantan in June 2000, a police car had been burned by loggers because the police had attempted to confiscate some of the illegal timber they were transporting. In Tanjung Puting National Park—the only protected area for orang-utans in Central Kalimantan—two NGO activists were also assaulted after they attempted to investigate ‘illegal’ logging in the park (EIA & Telapak 2000). The unstable security situation has made it difficult for NGOs to return to the area and investigate what is happening on the ground. ‘Illegal’ logging is therefore continuing within the Park while activists continue to wage a campaign against it in Jakarta and abroad.

**(c) Regulatory changes arising from *reformasi***

After the fall of Suharto in mid 1997, the Indonesian government was forced to show an intent to reform the forest sector. In an attempt to facilitate more just and equitable management of forest resources, the Ministry of Forestry and Plantations, issued instructions allowing communities residing in or near forest areas to be actively involved in forest exploitation through cooperatives, work groups, and associations<sup>6</sup>. These instructions were initially welcomed by environmental non-government organizations that had long been arguing for local communities to have a greater role in forest management and to be allowed to carry out low impact extraction activities, primarily of non-timber forest products.

Published in World Development, December 2002 issue Vol. 30, No.12, pp2133-2151. However, this idealistic formula did not work out as expected. It soon became apparent that some rural communities were not going to be content with increased access to non-timber forest products. They also wanted ownership rights to traditional forest areas as well as equal standing vis-à-vis HPH concession holders regarding the extraction of timber. Increased awareness about the value of forests among local communities arose from a marked increase in timber agents scouring rural areas to gain access to *adat* or customary forest areas. This coincided with the release of the new 1999 Forestry Act that acknowledged *adat*, or customary rights, to land/forest areas. While the acknowledgment of *adat* customary rights in the new Forestry Law was a significant step forward, it unfortunately resulted in a flurry of forest land claims in rural areas for the establishment of community based logging concessions. Simultaneously, a lot of emphasis has been placed on border delineation of claimed locations.

#### **(d) Decentralization—automoney vs autonomy<sup>7</sup>**

After the fall of Suharto, President Habibie's interim government passed new legislation on regional governance and on fiscal balance between the central government and the regional governments<sup>8</sup>. These laws were meant to give greater financial and decision making powers to local government, particularly at the district and sub-district level. Shortly after these new laws were released, the central government initiated the decentralization process in natural resource management by releasing legislation that devolved elements of authority to manage forests from the central government to the provincial and district authorities<sup>9</sup>. This legislation gave Governors and Regents the authority to issue permits for small forest concessions. Governors were allowed to grant concessions of up to 10,000 ha, and Regents were allowed to grant concessions up to 100 ha. The small forest plots granted by Regents came to be known as HPHH (*Hak Pemungutan Hasil Hutan*), and the license to collect forest resources was called an IPK (*Izin Pemanfaatan Kayu*, license to extract and use timber). This was later redefined as IPPK (*Izin Pemungutan dan Pemanfaatan Kayu*)<sup>10</sup>. HPHH were supposed to be allocated to those interested in extracting non-timber forest products from forest land using non-mechanized timber extraction, while IPK/IPPK licenses were supposed to provide the legal means for opening up, or clearing, small forest areas for community plantations.

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Within weeks of putting these policies into effect most Regent offices in the province of East Kalimantan were flooded with applications for HPHH and IPPK permits. In the Berau district for instance, IPPK permits increased from virtually none in early 2000, to more than 30 by the middle of that year for a total of over 11,000 ha. Towards the end of the year 2000, more than 100 applications had been submitted to the district government and an average of five new permits of 100 ha each were being issued every month<sup>11</sup>. In Malinau district, there were 150 IPPKs in operation by the end of the year 2000 and there were 220 IPPKs and nearly 50 HPHHs in the newly formed district of Kutai Barat<sup>12</sup>. Kutai Induk<sup>13</sup> had also issued over 200 IPPKs and around 50 HPHHs. Cumulatively these concessions already cover hundreds of thousands of hectares of forest land in East Kalimantan. Whether working as a HPH contractor or operating jointly with Malaysian timber interests, former 'illegal' loggers have been joining the HPHH/IPPK system in scores<sup>14</sup>. Community-based small concessions have thus provided a venue for the formalization of 'illegal' logging. What was once 'illegal' consequently became 'legal'.

Similarly, in Central Kalimantan, the new decentralization laws have been modified to allow the Kotawaringin Timur district assembly to issue a regulation (*Perda* No. 14) that effectively legalized 'illegal' logging in order to generate revenue through local government taxes. This new district regulation is legitimized through Article 80 of Law No. 22 that states that 'the sources of the regions revenues shall consist of regional tax income'. This has since been strengthened by the issuance of Law No. 34/2000 on regional taxes and regulations. This law enables local governments to create their own taxes through district regulations, provided they have the approval of the district assembly and socialize the idea with the local community.

#### **4 GROWING RECOGNITION OF 'ILLEGAL' LOGGING IN EAST AND CENTRAL KALIMANTAN SINCE THE FALL OF SUHARTO**

As mentioned above, 'illegal' logging is not a new phenomenon. However, since the fall of Suharto in mid 1997, district, provincial and central governments have all started to officially acknowledge its existence and to even document it in official statistics. In East Kalimantan for instance, local economic and political interests have provided the means for such recognition in the form of exceedingly lax and permissive legislative framework

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aiming to facilitate an easy inclusion of informal logging activities into the formal sector. Lax regulations usually come in the form of district regulations that vaguely outline the rights and obligations of small-scale concession operators. Invariably, these regulations concentrate on business and operational details, paying virtually no attention to the problems of monitoring or verifying logging activities. These district regulations provide no mechanism to prosecute those who violate the regulation by logging outside the 100 ha boundaries and only a few, such as the one ratified by the Pasir district assembly, mention that whoever violates the regulation will be fined. Since the fine is very small, it is unlikely to deter IPPK holders from logging outside the area granted.

However, as the trade in 'illegal' logging becomes increasingly recognized as a legitimate practice, data on 'illegal' logging has become easier to gather and document. This has made it easier for researchers and NGOs to monitor the problem. For instance field research in the districts of Berau, Malinau and Pasir districts of East Kalimantan during the year 2000 showed that there was a total of 72 sawmills operating in these three areas by May 2000. Earlier government reports had stated that there were only 30 active sawmills operating in the area in 1995 (Bappeda & BPS 2000). Together these 72 sawmills produced approximately 133,000 m<sup>3</sup> of sawn timber in 2000. However, while all of these sawmills were officially recognised, all could also be said to be 'illegal' because they lacked some of the required permits, relied on 'illegal' timber for stock, or both. Supplies of 'illegal' timber to sawmills were also secured through a network of logging camps that were operating independently, or sponsored by sawmills or timber traders. In the majority of cases, these logging groups employed manual logging techniques. In the year 2000, a total of 331 'illegal' logging camps were found in the districts of Berau (186), Malinau (31) and Pasir (114). Together these logging camps were thought to have produced a total of around 271,000 m<sup>3</sup> of timber in the year 2000, or close to a quarter of the official production (1.3 million m<sup>3</sup>) reported for the same year (Table 1). Individually, 'illegal' sawmills operating in these areas are also thought to have produced 89,000 m<sup>3</sup> of timber in Berau, 15,000 m<sup>3</sup> of timber in Malinau and 28,000 m<sup>3</sup> of timber in Pasir during the 1999/2000 period.

Table 1—Estimated 'legal' and 'illegal' log production in East Kalimantan, 2000.

Similarly, because the provincial and district governments were losing revenue from 'illegal' logging in Central Kalimantan, government officials have started to document and acknowledge its existence. Until recently, provincial and district forestry offices only kept production and export statistics on 'legal' logging activities. Official statistics released by the provincial forest department in Palangkaraya state that Central Kalimantan produced 1.5 million m<sup>3</sup> of timber products in 1998/99. However, in the year 2000 it became clear that real production was much higher than previously reported production after the provincial government began to document 'illegal' logging activities at the request of the Ministry of Forestry and Plantation estates.

In March 2000, the provincial forest department reported that there was six legally recognized mills producing plywood, 315 sawmills producing sawn timber and 22 mills producing moulding in Central Kalimantan. Together these mills consumed a total of around 1.5 million m<sup>3</sup> of timber between January 1999 and January 2000 (Departemen Kehutanan dan Perkebunan 1999). However, like the sawmills in East Kalimantan, most of these sawmills sourced their timber from 'illegal' logging operations. Moreover, the provincial government reported that there were, at the very least, 190 'illegal' sawmills operating in Central Kalimantan, excluding Barito Utara and Barito Selatan. Most of these sawmills could be found in Kotawaringin Timur, Kotawaringin Barat and Kapuas. These mills were thought to have consumed at least 155,750 m<sup>3</sup> of timber between January 1999 and January 2000 (personal communications with Kotawaringin Timur district assembly staff, June 2000). This is approximately 11% of the total timber volume consumed by official sawmills operating in Central Kalimantan between January 1999 and January 2000 (Table 2).

Table 2—Estimate 'legal' and 'illegal' production in Central Kalimantan, 2000

While this is the first time that these statistics have been collected, they are still unlikely to accurately portray the real productivity of 'legal' and 'illegal' sawmills in Central Kalimantan. The real production output of timber from Central Kalimantan between January 1998-January 1999 is more likely to be higher given that the production capacity is reported to be 2.43 million m<sup>3</sup> per year. The mere existence of these figures does,

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however, illustrate growing recognition of the importance of 'illegal' logging in overall production output and regional income.

Having now argued that there has been growing recognition of 'illegal' logging since the fall of Suharto, we shall now discuss ways in which the 'illegal' timber sector has undergone a transformation since the fall of Suharto. In doing so, we argue that 'illegal' logging is increasingly becoming a legitimate practice supported and encouraged by district and provincial governments. This transformation is illustrated by discussing the shifting dynamics of the sector in the districts of Berau, East Kalimantan and Kotawaringin Timur, Central Kalimantan.

## **5 SHIFTING DYNAMICS OF THE 'ILLEGAL' LOGGING SECTOR IN BERAU—EAST KALIMANTAN**

Berau is one of the few districts in East Kalimantan to remain intact after the original districts of Kutai and Bulungan were divided into three new districts in November 1999. Berau is located in the north-western part of East Kalimantan and now borders the districts of Bulungan, Kutai Timur and Malinau (Map 1). Since the recent division of Kutai and Bulungan, Berau has become one of the largest, least populated and resource rich districts in East Kalimantan. With a land area of about 24,000 km<sup>2</sup>, it has a population of around 100,000 people.

Map 1—The district of Berau, East Kalimantan.

While per capita income in the district is over twice the national average, the districts physical infrastructure and industrial facilities are extremely limited. Most of the roads in the district are unpaved and large segments of the urban population, particularly in the more remote sub-districts of Sambaliung and Gunung Tabur, do not have running water or electricity. Education levels are also poor. While there are a number of primary, secondary and high schools in the area, teachers have always been in short supply.

Berau's economy is centered on mineral and natural resources of which logging and coal mining are the most important industries. Together, these two industries generated close to half of the districts gross domestic

Published in World Development, December 2002 issue Vol. 30, No.12, pp2133-2151. product in the year of 1997. Two large-scale investment projects also dominate the economy. These are PT Berau Coal, which operates coalfields in the Sambaliung and Gunung Tabur sub-districts; and PT Kiani Kertas which has constructed a multi-billion dollar pulp and paper plant in the eastern part of the Sambaliung sub-district near the estuary of the Berau River. Over the last few years, the Berau regency has also tried to diversify into the agro-industry sector by putting emphasis on the development of large-scale oil palm plantations. By the year 2000, plantation permits had been issued for around 480,000 ha. However, the realization of the licensed oil palm projects has been extremely slow. At the time of writing, no more than 4,000 ha of plantations had been established.

#### **(a) 'Illegal' logging in the current era of regional autonomy**

While the Berau government has no official statistics on 'illegal' logging activities in the district, information can be easily collected in the field since the trade has become increasingly legitimized. As of May 2000, there were approximately 186 'illegal' logging operations in Berau. Most of these activities were found in the middle and lower sections of the Segah river and its tributaries. However, 'illegal' logging activities could also be found in the upper watershed area of the Kalay river, and around the coastal towns of Lati and Kasai on the Berau river. Overland roads connecting Tanjung Redeb to Tepian Buah and Berau to Bulungan and Samarinda were also found to be rife with 'illegal' logging activities. Together all of these camps are estimated to be capable of producing around 150,000 m<sup>3</sup> or timber per annum<sup>15</sup>. This is approximately 21% of the official log production reported for 1997 (698,000 m<sup>3</sup>).

During the last few years, these camps have increased in number and size and they are now tapping into legitimate logging practices. This coincides with a transformation in the sector that arose after the Ministry of Forestry released regulations allowing district governments to issue 100 ha concessions to local communities<sup>16</sup>. For these regulations have effectively created a new source of inexpensive raw timber for sawmills in the form of community timber, or *kayu rakyat*. The process is being facilitated by sawmills or independent timber entrepreneurs who survey areas around villages in order to assess their timber stocks. If survey results and inquiries with the locals are promising, they contact the village head and make a proposal in which they offer to

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provide a certain amount of money, seedlings and/or village facilities in exchange for low-priced timber. Once the agreement is sealed, the village forms village cooperatives (*Koperasi Unit Desa*) or farmer groups (*Kelompok Tani*) associations, usually with the official purpose of organizing smallholder ventures such as cocoa, coffee, and coconut plantations. These associations allow entrepreneurs to 'help' villagers open forest area that is purportedly needed for plantations. However, the plantations rarely, if ever, materialize.

Since its introduction into Berau, the IPPK scheme has been very popular and gained the support of district officials, entrepreneurs and local communities. District officials in Berau support the scheme (veiling it in the politically correct rhetoric of regional autonomy) because they are able to generate considerable amounts of revenue from it. This has been made possible by the fact that the Berau district assembly released a district regulation, No.48/2000, which states that all parties operating small concessions (IPPK) are supposed to pay a third party contribution (*sumbangan pihak ketiga*) of \$US 1 per cubic meter of timber to the district government. This tax allowed the district government to generate approximately \$US 444,000 in the year 2000. In comparison to the taxes imposed by Kotawaringin Timur, the revenue that this tax generated last year is relatively insignificant due to the fact that the tax rate was much lower than that imposed by the authorities in Central Kalimantan (see the following section for further information). Still, this modest amount constituted nearly one half of the entire gross domestic product (PAD) generated in the district that year<sup>17</sup>. The revenue generated through this scheme was also complimented by a number of informal payments originating from the initial allocation of IPPK payments and sawmill permits. For instance, an IPPK permit for 100 ha requires an unofficial contribution to the Regent's office in the amount of \$US 1,500. Each extension or addition of new area of 100 ha requires further payments. As a result, 50 permits totaling 8,300 ha generated at least \$US 125,000 in informal income last year. Revenue from sawmills<sup>18</sup> was also obtained through the issuance of SKSHH (*Surat Keterangan Sahnya Hasil Hutan*, or letter to validate forest harvesting) permits which are bought at the price of \$US 22 per cubic meter. The estimated annual production of timber by sawmills in Berau is 89,000 m<sup>3</sup> of sawn timber<sup>19</sup>. Since sawmills make arrangements with forestry officials to have SKSHH letters for only about 20% of their real production, each month the district forestry office in Berau collects around \$US 33,000 in unofficial payments from the sawmill industry.

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Entrepreneurs are supportive of the scheme because it offers considerable economic benefits and requires much less capital than HPH operations. A HPH holder, for instance, must pay approximately \$US 43 in formal and informal taxes per cubic meter of timber, while a HPHH/IPPK holder must only pay around \$US 25 per cubic meter of timber. HPH holders also invariably have to go through a great number of bureaucratic hurdles before they can obtain a permit while HPHH/IPPK holders can easily obtain their permits from district governments. The overall investment in a large scale HPH concession is also considerably higher than that required for a smaller HPHH/IPPK investment. This is because large sawmills are much more capital intensive than small or medium sized sawmills. For instance, it costs up to \$US 15,000 to make one large band saw operational (exclusive of costs related to auxiliary structures and facilities), and the initial start up cost is estimated to be in the order of \$US 70-80,000. However, the total start up costs for medium type sawmills is estimated to be in the vicinity of \$US 40,000—approximately half of that required for large sawmills.

The only obstacle that a former illegal or small company faces when considering an IPPK, is the start up capital and operational funds which, although not nearly as high as in HPH operations, are considerably larger than what is required for 'illegal' logging. One way to overcome this difficulty is to join forces with companies already possessing IPPK permits in the capacity of a supplier or contractor. HPH concessionaires are also using this arrangement to escape criticism and mounting resentment against their operations. For instance, this approach was recently adopted by a state HPH concession holder—PT Inhutani II—in the district of Pasir, as the company effectively ceased to work on its own, handing over logging operations to IPPK contractors. Another way of securing start-up capital for logging in small concessions has been through partnerships with Malaysian entrepreneurs eager to obtain cheap Indonesian timber. For example, in Malinau district, Malaysian timber financiers from the cross-border town of Tawau account for the single largest external business group (*Suara Kaltim* 2001a). Thus, the net revenue obtained from a HPHH concession per cubic meter of timber is estimated to be around \$US 59 while it is only \$US 37 for a HPH concession holder<sup>20</sup>. What is interesting about this new arrangement is that some parties, particularly army and police officers, are being left out from the unofficial payroll in the IPPK system. The IPPK system was legalized and did not therefore require as much 'protection'.

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The main beneficiaries at the bureaucratic level are the Regent's office and the district forestry office, as it costs approximately \$US 1,500 to secure an IPPK permit for 100 ha<sup>21</sup>.

Finally, local communities are willing to participate in the scheme because it offers them the opportunity to legitimately benefit from their surrounding forest resources and increase their well-being. Communities residing in or near forest areas participate in the system of small-scale timber concessions by providing forest areas for logging and obtaining fees, either per hectare of forest cleared, or per cubic meter of timber extracted. Fees per hectare are very rare and associated with clearing highly degraded forest (with little valuable timber) for what is claimed to be plantations, primarily oil palm. The most common type of fee is the one based on the amount of timber harvested. In Berau, these fees average between US\$3-4 per cubic meter. Similar fees are also found in the neighboring districts of Bulungan and Malinau (*Suara Kaltim* 2001b). In the Mahakam area, where these small logging concessions were first introduced, community fees were higher reaching approximately US\$16 per cubic meter (Casson 2001). While the income generated from these concessions is relatively small, it is nevertheless much more than local people were able to obtain from other forms of forest exploitation during the Suharto era. As communities are able to benefit from this new form of income they are becoming more vigilant about delineating village forest borders and enforcing these borders. Thus as they enter into joint venture agreements for logging, space available for freelance felling of timber has been shrinking. This increasing shortage of quality areas for conventional 'wild' logging, combined with the prospects of working through IPPK, have been the driving force behind the formalization of hitherto 'illegal' logging in Berau.

## **6 'ILLEGAL' LOGGING IN KOTAWARINGIN TIMUR, CENTRAL KALIMANTAN**

Kotawaringin Timur is the largest district in Central Kalimantan (Map 2). Located in the centre of Central Kalimantan, it has a land area of 50,700 km<sup>2</sup> and a population of around 500,000 people. The district is extremely rich in terms of its forest resources making it particularly attractive to 'illegal' loggers. According to Central Kalimantan's latest 'reconciled land-use plan' or *paduserasi* RTRWP<sup>22</sup>, 2.7 million ha of Kotawaringin Timur are classified as forest lands. This forest land constitutes more than half of the districts total land area.

Map 2—The district of Kotawaringin Timur, Central Kalimantan.

While Kotawaringin Timur is an extremely wealthy region in terms of its forest resource potential, the districts physical infrastructure and industrial facilities are limited and most of its inhabitants have subsistence livelihoods. There is only one asphalt road in the region that runs through Sampit connecting Pangkalanbun to Palangkarya. The road is in poor condition due to heavy traffic from logging trucks. While most of the villages in Kotawaringin Timur are extremely poor, Sampit, the capital city of Kotawaringin Timur, has some infrastructure. For instance, the capital city hosts a small airport where a daily flight goes through Sampit from Palangkaraya to Pangkalanbun. All of the government offices have also just been moved to new offices on the road out of Sampit to Pangkalanbun. However, while newly built, they are very basic and only a few have computers or resources. Many of the employees who staff these offices also have limited skills and poor education.

Kotawaringin Timur's local economy largely revolves around the timber and mining industry. This is evidenced by the amount of revenue generated from various sectors during the period 1994-1999. For instance over this period, \$US 1.9 million was generated through the forest sector and \$US 500,000 was generated through the mining sector. The only district to generate more income than Kotawaringin Timur through the mining sector was Barito Utara which generated \$US 2.3 million. While the plantation sector only generated \$US 110,000 in Kotawaringin Timur, the only district to generate more income from this sector was Kotawaringin Barat, which generated \$US 130,000.

**(a) 'Illegal' logging in the current era of regional autonomy**

In March 2000, a new Regent was elected in the district of Kotawaringin Timur. Shortly after being elected he formed a special *Pemda* (*Pemerintah Daerah*, or Regional Government) task force called the Integrated Service Team (*Tim Pelayanan Terpadu*). Led by the Vice Regent (*Wakil Bupati*) of Kotawaringin Timur, the team was requested to investigate 'illegal' logging in the region and devise ways to collect revenue from the trade. Specifically, the team was ordered to find out how much timber was leaving the district 'illegally'.

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On May 6 2000, the team reported that 178 ships carrying ‘illegal’ timber had been found on the Mentaya river alone. These ships were carrying approximately 77,100 m<sup>3</sup> of sawn timber. However, instead of confiscating the timber on these ships and prosecuting those responsible, the Kotawaringin Timur assembly decided that ships carrying ‘illegal’ timber would be permitted to leave ports in Kotawaringin Timur if they were carrying a paper to state that a ‘contribution for forest product retribution’ had been paid to the district income office. The letter would state whether or not they had deposited money into the Regional Capital Bank (*Bank Pemodalan Daerah*) in the name of the Kotawaringin Timur district assembly. Ship loads would subsequently be checked to verify they were carrying the load stated on their letter of receipt (*Surat Keterangan Lunas*) when they passed through Samuda—the final port on the Mentaya river.

In the year 2000, the Regent has been able to generate a great deal of revenue through this new initiative. For instance, in the three months of April, May, June 2000, the Regent was able to generate approximately \$US 2.5 million by taxing ‘illegal’ carriers of timber coming out of Kotawaringin Timur<sup>23</sup>. During this period, a total of 170,641 m<sup>3</sup> of Meranti logs were shipped out of the district ‘illegally’, but with the knowledge of the district government. When compared to the official production figures for 1998, this figure is significant. According to the Central Kalimantan provincial department of Ministry of Forestry and Estate Crops (*Dinas Kehutanan*), 1,259,580 m<sup>3</sup> of logs were officially produced in 1998 in Kotawaringin Timur (Table 3). In other words, the recorded volume of ‘illegally’ harvested logs for the three-month period April-June 2000 amounted to 14% of the district’s total legal production for that year. If we assume that the production of ‘illegally’ sourced logs continued at this pace throughout the year 2000, 511,823 m<sup>3</sup> of ‘illegally’ harvested logs would have been shipped out of the district. This constitutes close to half of the districts total legal production for the same year.

Table 3—Total log production in Kotawaringin Timur

The ability of the Regent to generate income through this new tax has increased his popularity and consolidated his political position in his own province. However, his decision to tax carriers of ‘illegal’ timber has not escaped criticism from provincial officials, legal concession holders and the central government. Provincial

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officials primarily voiced concerns about the environmental consequences of the new regulation, but were more worried by the fact that they had lost control of the way in which natural resources were being managed in the district. They also voiced concerns about the new regulation contradicting provincial and national laws and uncertainty about how much of the revenue generated would be distributed to the provincial and national levels. The Kotawaringin Timur government felt that they should retain a minimum of 80% of the revenue in accordance with the new decentralization laws. However, when field work was conducted for this study, few discussions had been held with the provincial or central governments about this issue. In fact, the central government was largely being kept in the dark about the tax and revenue obtained from it because the practice contradicted national law.

Legal concession holders have raised the most vocal opposition to the new regulation. They have complained that the new regulation will encourage 'illegal' logging in their concession areas and is unjust because they have expended large sums of money to secure these rights. They also raised concerns about the tariffs that 'illegal' carriers were charged compared to the tariff 'legal' carriers were charged. When the tax was first introduced, 'illegal' carriers were charged around US\$14 per cubic meter while 'legal' carriers were charged around US\$21 per cubic meter. They therefore requested that the tariff be the same for both 'legal' and 'illegal' carriers to ensure that they were not disadvantaged by the new tax system. The Kotawaringin Timur government responded by raising the tariff from US\$14 to US\$18 to appease the concerns of legal concessionaires (Personal communications with Kotawaringin Timur district assembly staff, June 2000).

'Illegal' timber companies and ships also raised concerns about the legitimacy of their activities and requested that the government of Kotawaringin Timur issue a district regulation (*Perda*) to legitimize the tax 'illegal' carriers were required to pay. The Kotawaringin Timur government responded positively to this request and decided to issue *Perda* No. 14 on retribution for logs and processed timber (*Restribusi Kayu Bulat dan Kayu Olahan*) to legitimize the issuance of letters to 'illegal' carriers stating they have paid a tax to the regional government.

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The decision to charge 'illegal' timber carriers was ratified by the district assembly and the Governor of Central Kalimantan in late April 2000. The Governor agreed to the regulation in May 2000, provided some of the revenue generated was distributed to the provincial and central government. The amount to be distributed was left to the Regent's discretion. When field work was carried out for this study, no decision had been made about how much of the revenue collected through this initiative would go to the central or provincial governments. In fact, the district government did not seem to be too keen about giving any of the revenue to the central or provincial government. This was undoubtedly causing both upper levels of government some concern and adding fuel to their protests against the initiative.

The regulation has also met with disapproval from the central government. In a workshop on 'illegal' logging in Indonesia held in Jakarta in late August, the Secretary General of the Ministry of Agriculture and Forestry, said that 'some Regent's are legitimizing the trade in 'illegal' timber by issuing *Perdas*. This contradicts national legislation and will not be tolerated'. The Ministry is presently looking into ways to control the situation and has indicated that it is considering legal action against Regent's that have issued regulations that conflict with national forestry laws. However, despite these threats, the central government has been given no authority under Law No. 22 to revoke district government regulations and Article 80 states that the sources of the regions revenues shall consist of regional tax income. This has since been strengthened by the issuance of Law No. 34/2000 on regional taxes and regulations. This law enables local governments to create their own new taxes through *Perda*, provided they have the approval of the district assembly and socialize the idea with the local community<sup>24</sup>. In this regulation, the central government is only given the authority to cancel the *Perda* within a period of 30 days after receiving notice of it. *Perda* No. 15, was however, released before this regulation was issued so the central government is unlikely to be able to revoke it.

In Kotawaringin Timur, local officials are adamant that they will continue to collect revenue from the trade in 'illegal' timber and they will defy the wishes of a central government that exploited the district's forest resources for over 30 years. The only change to have occurred since the central government has taken a hard line against the Regent's policies is that the district government is now more cautious about revealing how much money they

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## **7 THE ECONOMIC, SOCIAL AND ENVIRONMENTAL CONSEQUENCES OF 'ILLEGAL' LOGGING**

Having discussed the nature of 'illegal' logging in the two districts of Berau and Kotawaringin Timur, we now discuss some of the economic, social and environmental implications of these new forms of logging activities. In the following section we argue that, while an increase in community based 'illegal' logging has a number of short-term economic and social benefits, these benefits may be marginal in the long term. This is because 'illegal' logging, together with a number of other unsustainable land use practices, is contributing to a degraded environment that will not be able to sustain the livelihoods of forest dependent people in the near future.

### **(a) Economic consequences**

In the district of Berau and Kotawaringin Timur, new initiatives arising since the fall of Suharto and an attempt to decentralize power to the district governments, have allowed district governments to benefit from the recent surge in the informal timber sector. This is most obvious in the district of Kotawaringin Timur where the local government generated a considerable amount of revenue by taxing 'illegal' carriers of timber. In the three months of April, May, June 2000, the Regent was able to generate approximately \$US 2.5 million by taxing 'illegal' carriers of timber coming out of Kotawaringin Timur. In Berau, the district government has been able to generate a comparatively small amount of \$US 444,000 from IPPK concession holders due to the fact that the imposed tax rate was far lower than the rate imposed in Kotawaringin Timur. However, while less income was generated, the \$US 444,000 accounted for 50% of Berau's gross domestic product (PAD), generated within the district in the year 2000. Small concessions holders have also been able to generate a great deal of informal income through the initial IPPK application process (\$US 125,000) and from issuing SKSHH letters to sawmills (\$US 55,000).

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However, while both district governments are undoubtedly benefiting from the legalization of 'illegal' logging, the current rate of exploitation is far from sustainable. This means that these local governments will only be able to financially benefit from timber exploitation, both 'illegal' and 'legal', for the next five to ten years. They will then have to find other ways to generate district income. In both of the districts discussed in this paper, local government is hoping to convert forest land to oil palm once it has been logged to ensure that there is an established revenue generating industry once production forests have been depleted. They are therefore making efforts to attract investors to the area in the hope that oil palm will provide a key revenue source after the region's national capital has been depleted. However, while the political and economic situation in Indonesia remains unstable, investors have been reluctant to establish oil palm plantations in remote areas such as Kotawaringin Timur and Berau. World oil palm prices have also significantly declined in recent years making the oil palm sector less attractive to investors (Casson 2000). It is therefore unlikely that a viable oil palm industry will be established in these two districts before timber resources become depleted.

Moreover, at the national level, 'illegal' logging is thought to be costing the national government US\$ 2.0 billion per annum, without considering losses in terms of ecological costs (ITTO 2001). Some estimates place the total annual loss to the country from 'illegal' logging at about US\$3.5 billion per annum (EIA 2001). This is a stark increase from the US\$1.2 billion that the World Bank predicted the Indonesian government lost due to 'illegal' logging over the period 1980-1985 (Callister 1992). While some of this revenue is now going to local people and district governments, it seems likely that the great majority is continuing to fall into the hands of a privileged and well-connected elite. This situation undermines national government efforts to implement effective law enforcement and to promote sustainable forest management. It also undermines national government efforts to maintain control over district government decisions to generate tax from 'illegal' logging activities.

### **(b) Social consequences**

Similar to the economic consequences of 'illegal' logging, there are also positive and negative social consequences arising from a marked increase in the trade. On the positive side, the 'illegal' logging industry is generating a great deal of employment and income for local communities and newcomers. It also constitutes the

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focal point for a variety of small businesses, and because the work is extremely strenuous, it has a high turn over rate meaning that jobs are always available and comparatively well paid. For instance in Kotawaringin Timur, there are thought to be more than 300 'illegal' sawmills employing people on the Mentaya, Cempaga, Katingan and Seruyan rivers (personal communication with the Kotawaringin Timur head of Forestry, June 2000). Approximately 1,500 people are also thought to be employed by 'illegal' sawmills operating in Berau. While the latter figure seems fairly insignificant at first glance, such interpretation is misleading. It must be remembered that nearly 100% of the labour force are temporary workers and the turn over rate is high—on average workers do not stay in their jobs longer than 1-2 months. This means that the total labour turnover per annum could be in the vicinity of 12,000 people, out of an approximate population of 100,000 people. In a period of economic crisis, this pool of jobs constitutes an important source of part-time employment for the rural poor.

In the informal logging sector, wages can vary from a monthly wage of \$US 25 for permanent employees to \$US 100 for *barongan* (output measured work). These wages compare favourably with wages from other 'legal' forms of physical labour. They therefore attract migrants, jobless poor and subsistence farmers. With a payroll of over \$US 100,000 per month, the sector also rivals wages given in most of the district civil service departments. Moreover, in addition to direct employment in sawmills, a number of indirect work opportunities are created. Families of sawmill workers frequently reside near, or on, sawmill grounds where they perform auxiliary tasks such as cooking and laundry for small remuneration. Itinerant traders of foodstuffs and chemicals make brisk business as well. Local suppliers of fuels (gasoline, diesel) and the lubricants used in sawmills are also benefiting from the new boom in logging. Finally, since many IPPK license holders are also sawmill operators, or deliver timber to sawmills to be processed locally, their activities result in additional forms of informal payments that constitute an important source of income for other government officials, particularly the Police, Army and Forestry officials. In the district of Berau, for instance, small sawmills set aside about \$US 44,000 for security officers each month<sup>25</sup>. For a lot of them, this pool of money constitutes their main source of income, far outweighing their official government allowances. As a result, small-scale 'illegal' logging operations can be viewed as a lifeline supporting numerous segments of society in rural Kalimantan.

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However, while the 'illegal' timber sector is undoubtedly generating new work opportunities, local people can easily be exploited for their labor. Prior to 1998, local people were denied rights to exploit forest resources and they are now willingly taking the opportunity to do so while they can. The wages that local people do receive for their labor compete well with other income generating activities meaning that local people are often keen to engage in 'illegal' logging for a fee. However, they are often still reliant on middle -men to provide chainsaws and transport. This situation can cause them to be vulnerable to exploitation.

In Kotawaringin Timur, local people tend to cut down their surrounding forest and sell it to middlemen, primarily Chinese Indonesian's, who arrange for it to be transported down-river to one of many 'illegal' sawmills that have sprung up in the last few years. The timber is then sawn, primarily by Malay people, who have come to Central Kalimantan from South Kalimantan to work in the mills. These saw mill operators are attracted to the relatively high wages that this job has to offer. The work is extremely strenuous and workers are generally paid by the month according to the mill's output. While their salary can be anywhere between \$US 4-6 a day, it is often cut back by equipment breakdowns, accidents, and adverse weather conditions (personal communications with illegal sawmill operators along the Mentaya river, Kotawaringin Timur, June 2000). Most can also only endure working in the mills for six months to one year because the work is hard labor and extremely dangerous. Many workers manning the band saws lose hands as no safety precautions are taken. It is precisely for this reason that loggers often work on a temporary or trial basis when other sources of income (i.e. fishing, shifting cultivation, small scale plantations) do not suffice.

Thus, the people who primarily benefit from the 'illegal' logging of forests in East and Central Kalimantan are local Chinese-Indonesian middle-men, Jakartan and Malaysian (again mainly Chinese) buyers, and the end buyers in Japan, China, Taiwan, Hong Kong, Singapore and Europe. Unless local people can be given rights to forest land, they will not be sufficiently empowered to reverse this situation and they will be caught in a cycle of poverty. This is because many of these people continue to depend on forest resources for food, fuelwood, non-timber forest products and medicinal plants. They are also the most vulnerable to the ill effects of forest destruction, such as erosion, flooding and a decline in water quality.

**(c) Environmental consequences**

The recent rise in the informal or 'illegal' logging sector is undoubtedly having serious environmental impacts. For instance, the recent regulation passed by the Regent of Kotawaringin Timur effectively permits anyone to log wherever and whatever they like, including active and inactive HPHs, watershed areas, protected forest areas and national parks. These 'illegal' logging activities are not regulated and consequently pose a significant threat to biodiversity. 'Illegal' logging in already logged over areas may also result in many logged over forest areas being unable to recover a commercially viable volume of timber for a second cutting cycle (Scotland *et al.* 1999). A harvest well above the annual sustainable rate of 20 million m<sup>3</sup> also threatens the forest ability to regenerate and harbor biodiversity. This means that there is great potential for forest land subjected to unsustainable logging to become *alang-alang* (grassland). Such land has few ecological, social and economic values unless it can be turned into productive agricultural land.

Indonesia can ill afford to continue to mismanage its forest resources. Over the last 50 years, the nation has lost approximately 40% of its forest cover (Holmes 2000). Despite growing concern about the environmental, economic and social consequences of widespread tropical deforestation, the rate of forest loss is accelerating. In the 1980s, an average of about 1 million ha of forest per year were cleared, rising to about 1.7 million ha per year in the first part of the 1990s. Since 1996, deforestation appears to have increased to an average of 2 million ha per year (FWI & GFW 2002). Indonesia's lowland tropical forests, the richest in timber resources and biodiversity, are most at risk. They are almost exhausted in Sulawesi and are predicted to disappear in Sumatra by 2005 and Kalimantan by 2010 (Holmes 2000). The ceaseless spread of 'illegal' logging, together with agricultural expansion, large-scale commercial logging, urban development, shifting cultivation, transmigration, mining and forest fires is contributing to these unsustainable rates of deforestation.

The disappearance of Indonesia's lowland forests is of concern because Indonesia is one of the most biologically and culturally diverse countries in the world. Although the Indonesian archipelago represents only 1.3% of the earth's land surface, it contains an estimated 25% of the world's mammals, 11% of world's known flowering plant species, 15% of all amphibians and reptiles, 17% of all birds, 37% of the world's fish species, and an

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## 8 CONCLUSIONS

From the foregoing discussion, it is clear that the 'illegal' extraction and processing of timber in Kalimantan is an extensive and deeply entrenched system with economic as well as socio-political dimensions. It provides both direct and indirect income opportunities; it constitutes a focal point for a multitude of spin off businesses; and provides employment opportunities that are both flexible and well paid in comparison to conventional labor. Perhaps most importantly, the 'illegal' timber sector has progressively become institutionalized as a result of two concurrent processes. First, the legalization of hitherto 'illegal' forms of logging has contributed substantially to district budgets; and secondly, whether 'illegal' or formalized, the informal timber sector has continued to be an important source of income for both civilian as well as military bureaucracies in the districts. As such, 'illegal' logging can be viewed as a structurally important element of life in rural Kalimantan, and in some cases, it is no longer considered to be 'illegal'.

Given the above, the central government is facing a daunting task of addressing a problem that has a long history of entrenchment and possesses an operational structure that cuts across all levels of society. Stamping out corruption and instilling occupational professionalism, accountability and transparency as elements of democratic governance are all long-term prospects for which the forest can ill afford to wait. They are also unlikely to eventuate given the deeply entrenched nature of the system, and the fact that responsibility and accountability are now so diffuse as to make it difficult to target offenders.

One of the more immediate options to deal with the problem could be a fundamental restructuring of HPH operations. This would mean a fundamental redesign of the HPH paradigm in the direction of cooperative/partnership arrangements with local communities. This would have to include both economic incentives for local communities (at least as attractive as IPPKs) as well as the opportunity for them to be

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actively involved in logging operations. Formal recognition of local peoples' rights to forest resources would also have to be facilitated in order for local people to have a stake in protecting and conserving natural capital.

In the short term, it is also essential that district and national governments communicate with each other and agree on some of the legislative discrepancies arising from the decentralization process. Once this has been done, both levels of government must work together to implement good forest governance and effective law enforcement. In doing so, it may be necessary for both levels of government to provide a range of incentives to those who protect and sustainably manage forest resources. The question, as always, is implementation and political will.

Unfortunately, despite these options, the on-going process of regional autonomy in Indonesia has created conditions that are conducive to the continuation and/or further differentiation of 'illegal' logging activities. This situation has arisen because the autonomy legislation remains weak and there is a lack of clarity and consistency in virtually all aspects of forest policy and management. This, in turn, has to a large extent been due to the fact that the initial period of the regional autonomy era has been focused on political bargaining at various administrative levels, securing economic bases, and continual re-adjustment to changing circumstances. The resultant fluidity of the situation prevents consistent planning and policy-making from taking shape. The 'illegal' logging problem is therefore likely to continue until these conditions stabilize and district governments are able to adopt a longer-term perspective in policy and management.

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**Table 1—Estimated ‘legal’ and ‘illegal’ log production in East Kalimantan, 2000**

Industry	Official, legal log production		Illegal log production		Estimated real production	
	Total Unit (HPH)	Official production (M3/yr)	Total unit (camps)	Illegal production (M3/yr)	Unit	Production (M3/yr)
Berau <sup>26</sup>	8	798,000	186	160,000	194	958,000
Malinau	10	422,540	31	17,000	41	439,540
Pasir	3	74,578	114	94,000	117	168,578
Total	21	1,295,118	331	271,000	352	1,566,118

Source: *Bappeda & BPS* (2000).

NOTE: The illegal production figures are based on direct investigation of sampled ‘illegal’ logging camps in three districts. These figures do not include production from small-scale concessions.

Estimated real production was calculated by combining statistics on official log production with available statistics on illegal log production.

**Table 2—Estimate ‘legal’ and ‘illegal’ production in Central Kalimantan, 2000**

Industry	Production capacity (M <sup>3</sup> /yr)	Official, legal production		Illegal production		Estimated real production	
		Total unit	Official production (M3/yr)	Total unit	Illegal production (M <sup>3</sup> /yr)	Total unit	Production (M <sup>3</sup> /yr)
Sawmill	1,660,706	315	757,569	190	155,750	505	913,319
Plywood	495,000	6	628,325	n.a	n.a	6	628,325
Moulding	276,070	22	92,851	n.a	n.a	22	92,851
Total	2,431,776	343	1,478,745	n.a	155,750	533	1,634,495

Source: Departemen Kehutanan dan Perkebunan (1999) & personal communications with Kotawaringan Timur district assembly staff, June 2000.

NOTE: Estimated real production was calculated by combining statistics on official log production with available statistics on illegal log production.

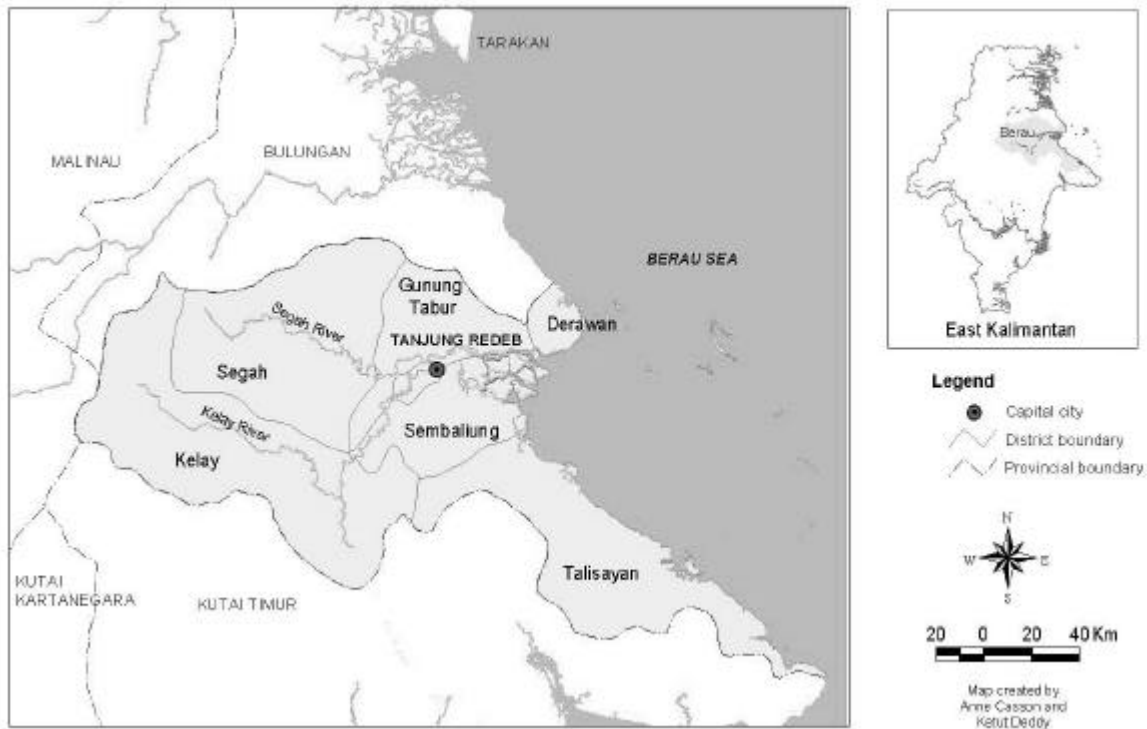
**Table 3—Total log production in Kotawaringin Timur**

Production of logs from illegal timber sources from April/June 2000 in Kotawaringin Timur	170,641 m <sup>3</sup>
Production of logs from illegal timber sources from July-Dec 2000 in Kotawaringin Timur*	341,282 m <sup>3</sup>
Estimated total production of logs from illegal timber sources April/Dec 2000 in Kotawaringin Timur	511,823 m <sup>3</sup>
Official production of logs from Kotawaringin Timur in 1998	1,259,580 m <sup>3</sup>
Expected real log production from Kotawaringin Timur for 2000	1,771,503 m <sup>3</sup>

Source: Personal communications with Kotawaringin Timur district assembly staff.

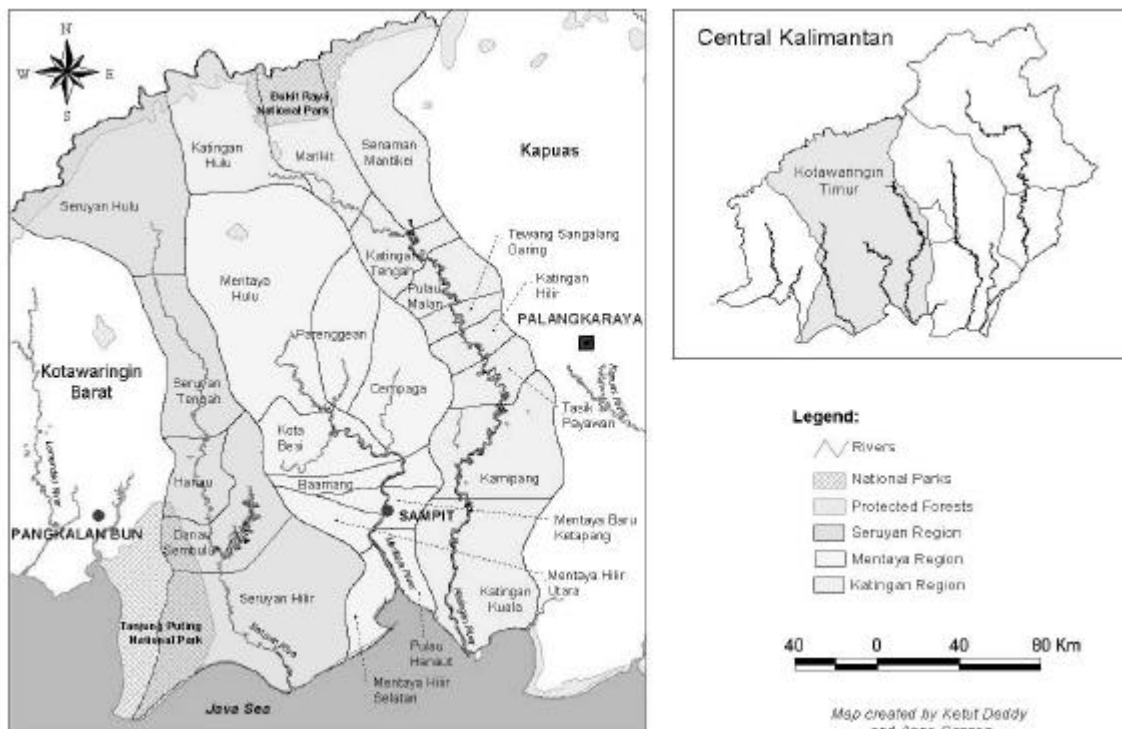
\* NOTE: This is an estimate. It was calculated by dividing the total amount of timber to come out of the region between the months of April to June by three and then multiplying this amount by six—the remaining 6 months of the year.

**Map 1—The district of Berau, East Kalimantan**



Source: Based on map data from DFID and CIFOR.

**Map 2—The district of Kotawaringin Timur, Central Kalimantan**



Source: Based on map data from DFID and CIFOR.

## ENDNOTES

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<sup>1</sup> Anne Casson is a Research Fellow in the Resource Management in Asia-Pacific Project, Research School for Pacific and Asian Studies, Australian National University.

<sup>2</sup> Krystof Obidzinski is a Doctoral candidate in the Department of Anthropology, University of Amsterdam.

<sup>3</sup> Information on the informal timber sector in Berau was collected in the year 2000 by Krystof Obidzinski, while information on Kotawaringin Timur was collected by Anne Casson during the same year. Field information has been supplemented and supported by various newspaper articles and other secondary sources. Numerous people, including government officials, local communities, timber buyers and suppliers, company representatives, academics and non-governmental organizations (NGOs) at the provincial level and in Jakarta were also consulted by both authors when field work was undertaken for this study. Both authors undertook fieldwork for this study while based at CIFOR.

<sup>4</sup> There are numerous technological similarities between *banjir kap* logging and current illegal timber operations (e.g. *kuda-kuda*). The crucial difference is that small-scale timber concessions of today employ mechanized means of exploitation.

<sup>5</sup> The exchange rate used throughout this paper is Rp 9,000 to the US dollar.

<sup>6</sup> PP No. 62/1998 and SK MenHutBun No.677/1998.

<sup>7</sup> This phrase was used by the Director of *Badan Planologi* at the Ministry of Forestry and Estate Crops when Casson discussed the issue with him in August 2000.

<sup>8</sup> Law No. 22/1999 and Law No. 25/1999

<sup>9</sup> PP No. 6 1999, SK Menhutbun No. 310/Kpts-II/1999 and SK Menhutbun No. 317/KPTS II/1999.

<sup>10</sup> In the context of establishing such small scale logging operations, the original distinction between HPHH and IPPK has lost its significance. This is because IPPK/HPHH have become a generalized means of operationalizing small-scale logging concessions.

<sup>11</sup> In early 2001, the four northern districts of Nunukan, Malinau, Bulungan and Berau in East Kalimantan, had issued approximately 500 HPHH/IPPK licenses (*Suara Kaltim*2001a).

<sup>12</sup> By mid 2000, the Kutai Barat government had given out more than 600 small-scale logging licenses.

<sup>13</sup> Now known as Kutai Kartanegara.

<sup>14</sup> Personal communications with timber brokers in Berau, Bulungan and Malinau in East Kalimantan, September 2000.

<sup>15</sup> This figure was derived through the following calculation: Daily timber production per 'illegal' logging camp is estimated at roughly 3 metres<sup>3</sup> per day (1.5 meters<sup>3</sup> per chainsaw, with each camp having two chainsaws). Considering the fact that

there are about 25 effective workdays per month when logging is actually carried out, the monthly timber production from 'illegal' logging groups in Berau should be in the vicinity of 13,950 meters<sup>3</sup>, or 153,450 meters<sup>3</sup> per annum.

<sup>16</sup> A series of regulations, not a single decision, was actually responsible for the emergence of the community based timber extraction activities. PP. No. 62/1998 and SK MenHutBun No. 677/1998 laid the groundwork for this new trend by recognizing the concept of community forests (*hutan kemasyarakatan*). Subsequently SK MenHutBun No. 310 and 317 of 1999 as well as PP No. 6 of 1999 served as the foundation for the HPHH and IPPK license system (*Hak Pemanfaatan Hasil Hutan and Izin Pemanfaatan dan Pemungutan Kayu*).

<sup>17</sup> In the year 2000, Berau's total budget was Rp 47 billion (US\$4.7 million). However, only Rp 9 billion (US\$ 900,000) was generated within the district. The remaining Rp 38 million (US\$3.8 million) came from the central government in Jakarta.

<sup>18</sup> Nearly all the sawmills in Berau are 'illegal' in the sense that they do not possess complete, or valid, permits. In spite of this, all are allowed to operate for the sake of the people (*rakyat*). It is argued that the industry generates employment, income and cheap building material for the poor and can not, therefore, be eliminated.

<sup>19</sup> This estimate is based on data obtained directly from a survey of sample sawmills in Berau.

<sup>20</sup> These log prices are based on industry standards for Red Meranti. It must be remembered that the profit margin for HPHH/IPPK and 'illegal' logging is likely to be higher given the fact that they concentrate on high value timbers for export such as ironwood. These species can fetch prices much higher than Red Meranti.

<sup>21</sup> This unofficial charge varies depending on the quality of timber stock in the area in question. In the Kutai Barat district, IPPK/HPHH licenses have been known to command prices of up to US\$ 5,000 per 100 ha (*Suara Kaltim* 2001c).

<sup>22</sup> In order to make more concrete land-use plans, the provincial government of Central Kalimantan has been formulating a modified land-use plan reconciling the Forest Land-Use Plan by Consensus (*Tata guna Hutan Kesepakatan*, TGHK) drawn up in 1982 with the 1995 Provincial Land-Use Plan (*Rencana Tata Ruang Wilayah Propinsi*, RTRWP). The 'reconciled land-use plan', or *paduserasi* is supposed to be a modified RTRWP agreed upon by both central government ministries and governors.

<sup>23</sup> The Regent's income generation performance was often compared to the poor performance of the former Regent who was only able to generate US\$ 550,000 in one year.

<sup>24</sup> The Perda must also address certain criteria. These 'good tax' criteria assert that (1) tax objects must be located in the particular local governments and possess relatively low mobility across local government boundaries; (2) the tax does not contradict the public interest; (3) the tax does not constitute a national or provincial tax; (4) the tax has sufficient revenue

potential; (5) implementation of the tax will not negatively impact the local economy; (6) development of the tax takes into consideration issues of fairness to and capacity of local residents; and (7) the tax guards environmental conservation<sup>24</sup>.

While *Perda* No. 14 clearly does not guard environmental conservation, the district government is more likely to focus on the fact that the central government has legitimized their ability to tax ‘illegal’ carriers and continue to reap the benefits.

<sup>25</sup> This estimate is based on data collected from 40 operating sawmills in Berau—13 large sawmills (with a monthly unofficial budget \$US 2780), 6 medium sawmills (with a monthly unofficial budget \$US 556) and 21 small sawmills (with a monthly unofficial budget \$US 222).

<sup>26</sup> The number of HPHs in Berau does not include the five companies that took over the PT Alas Helau concession.