

Present State of Decrease of Forest Area, Illegal Logging and Illegal Timber Export in Indonesia

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Introduction

It is a matter of common knowledge that illegal logging and illegal timber export have been increased rapidly since the collapse of the Suharto Administration in 1998. In the situation where nobody can not put the brakes on illegal logging, in 2001, Indonesian Government re-prohibited the log export which was restarted in 1998, and reduced the annual allowance amount of felled, for the purpose of extermination of illegal logging. However, these treatments seemed to have no effects, because illegal logging and illegal timber export have been further increased and the forest degradation and forest area decrease have progressed rapidly.

Recently, moreover, Indonesian Government assigned the issue right of license for forest development to local governments due to the promotion of decentralization. Then, local governments increased the issue of licenses thinking only of the increase of local finances, without considering what is the sustainable forest development, and legalized the import of illegally cut logs with their regulations. Their acts cause difficulties to distinguish legal logging and export between illegal logging and export and complicate the issue. In other words, gray zone has been expanded. In addition to it, they say that organized and large-scale illegal logging has increased, which causes further difficulties to obtain the actual state.

This time, I would like to introduce the actual state of large-scale illegal logging organizations, the change in illegal export style after the export ban again, and the relationship between the decentralization of power and illegal logging and illegal timber export, based on the field investigation performed in September 2003. Also, I would like to introduce the actual state of illegal logging and illegal timber export in Gunung Palung National Park where I visited for inspection this time. As the period of field investigation was very short, this report is based on the document data collected at that time and after the investigation, more than the hearing data in the investigation.

1. Locally Expanded Organized and Large-Scale Illegal Logging

It has been said that illegal logging is performed in various styles. "They say that the

organizations of illegal logging are many and various. However, roughly they are divided into two groups; large-scale organizations including lumbering corporations, specialized companies and foreign companies, and small-scale organizations including local residents. In the former case, according to another version, potentates of the military and local area, officials in the Ministry of Forestry, or even National Assembly members are sometimes related, so it causes difficulties to solve the problem. Also, in the case of large-scale illegal logging, they arm themselves. Therefore, when people see the scene of illegal logging or illegal timber export, cracking down by just some of officers is impossible” says Mr. Yasuhiro Yokota in “Illegal Logging Issue Review Report” (Japan Federation of Wood Industry Associations) in 2002.

As far as I know, it has been said that the illegal timber export has the following three patterns: First, Sumatra Type, Second, Kalimantan Type, and Third, Maluku-Irian Jaya Type.

It is said that the first one, Sumatra Type, is dominant especially in Riau Province, where, small-scale logging is performed mainly by local residents and the logs illegally cut are sent to the illegal sawmills with no license. Then, they are transported partly to domestic areas including Java island and partly exported to Malaysia (in particular to peninsula area), and Singapore and as far as China, as planks (they say that partly to Japan also). Also, some are exported to Europe through Medan. Recently, this pattern of illegal logging of Teak (Indian-oak) has been rapidly increased in Java island.

The second one, Kalimantan type, is the organized and large-scale illegal logging as mentioned above. The administrative organization, police and the national army relate it and official documents are forged. There, the logs are partly illegally exported to East Malaysia (Sarawak Province and Sabah Province), and partly sent to domestic mills for processing. In Sarawak Province, the number of plywood factories has increased since the end of 1980. On the contrary, the amount of felled has been reduced in the province in the 90s. Therefore, the logs have been land-transported using trucks from the north of West Kalimantan Province (Prop. Kalimantan Barat). In Sabah Province, most of the plywood factories fall in deficiency of raw materials because of the exhaustion of forest resource, so the logs are ocean- or land-transported from East Kalimantan Province (Prop. Kalimantan Timur).

The third one, Irian Jaya type, has been said that it is outlaw and disordered style and the logs are exported to East Malaysia and China, but the actual state has been unknown before.

Recently, however, the organized and large-scale illegal logging seems to be expanded

all over the country. So, illegal logging by local farmers (it has been called Sumatra type before) also seems to be included in illegal logging by such organization. It has been said as before that such organized and large-scale illegal logging is performed mainly in East Kalimantan. However, because of the exhaustion of forest resource in East Kalimantan, such illegal logging has declined. In place of it, it said that such large-scale organizations are going forward from East Kalimantan to Maluku and Irian Jaya. In particular, Irian Jaya is the key base for illegal logging and timber export to China and India and the hotels in Sorong are filled with timber merchants related to illegal logging.

Which organizations do perform currently such organized and large-scale illegal logging which has expanded all over the country, and how they do it?

(1) Structures of the Organizations

According to Mr. Agus Setyalso, such large-scale illegal logging organizations operate like a Mafia syndicate. Indonesians or foreigners provide the funds. They are called super bosses and live in adjacent countries, including Singapore and Malaysia. Their organization is like that of Mafia where there are big bosses under the supervision of super bosses. These big bosses live in large cities such as Jakarta, Medan and Batam in Indonesia, all of which are areas of contact with foreign countries. They supervise the local business and communicate and arrange further business with foreigners.

Beneath these big bosses there are regional bosses who supervise the regional business. There are also local bosses who supervise the operations at sites. They are mainly local businessmen, local government assembly associates and government administrative officers. In Gunung Palung National Park where I conducted the field investigation, they say that the local bosses in the illegal logging are businessmen in Ketapang and local government administrative officers.

When the super bosses are Indonesian (including Chinese Indonesian), we can assume that, during the economic crisis in Indonesia, they transferred the funds from Indonesia to a foreign country in time and still continue business with their human network.

The illegal logging at the site is carried out by such local bosses hiring immigrants who have settled there in pursuance of the transmigration policy, as well as local residents. For the forging of documents required for production and export, however, the village chiefs, local police officers, military personnel, and local administrative officers or, occasionally, officers of the state or central governments are involved.

Also, there are many co-workers at the different stages. They belong to bribed interest

groups. Such groups consist of local residents, local police, military personnel, local government administrative officers, local government assembly members, forest officers, and provincial government officials. It is also claimed that officials associated with the supervision of transport, custom officers, public safety officers, public prosecutors, judges and central government officers are all involved.

Furthermore, there are mediators and troubleshooters to take control of cover-up in the case of trouble. They are local police officers, military personnel, judiciary associates, members of the National Assembly and central government associates.

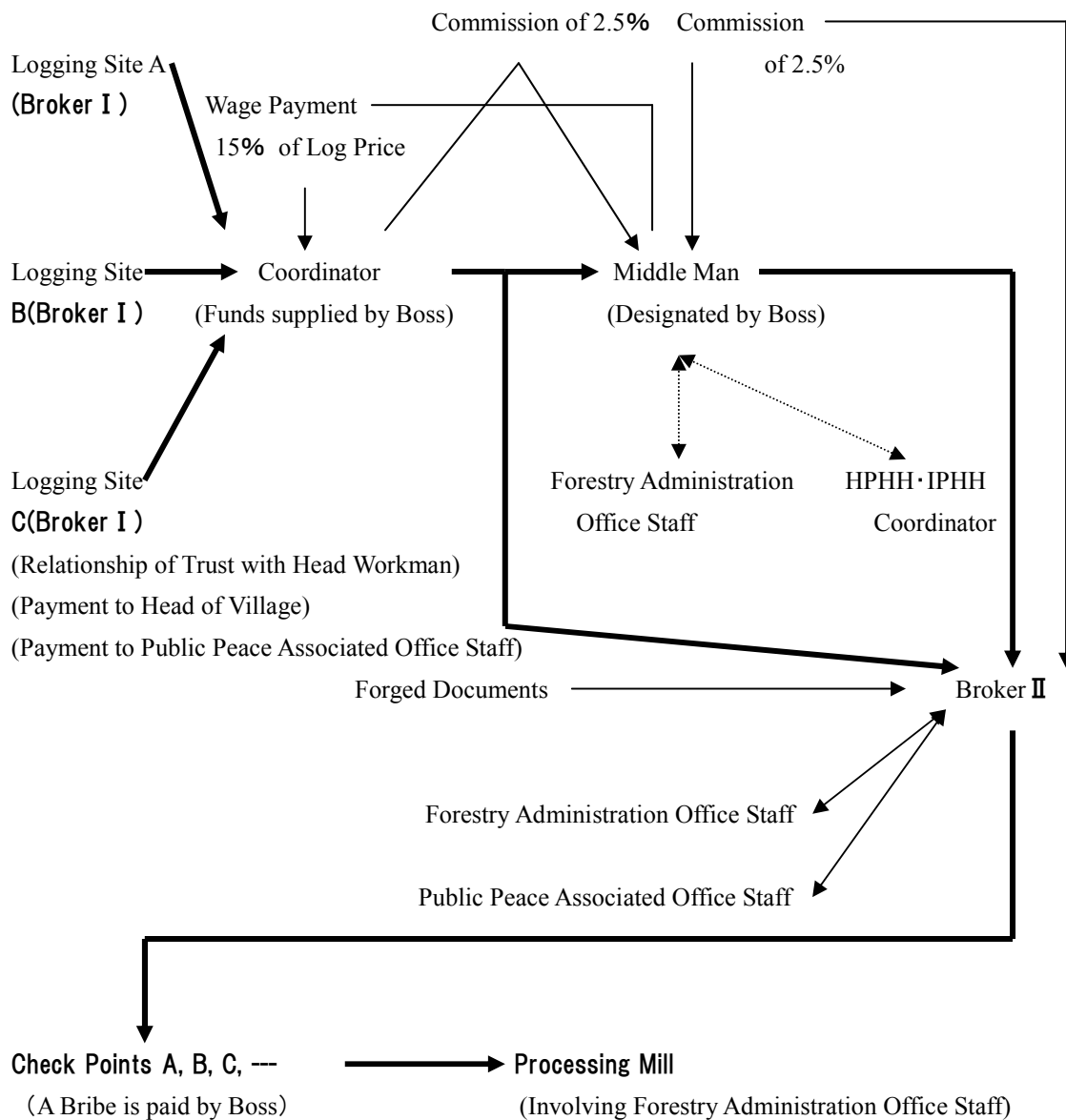
(2) Actualities of Large-Scale Illegal Logging Organizations and Distribution of Illegally Cut Logs.

Mr. Agus Sety also shows the actualities of large-scale illegal logging organizations and the distribution of illegally cut logs in Fig. 1 (n.b., partly corrected by the author). Here coordinator refers to the local bosses and middleman to the regional bosses.

The super boss provides the local residents with equipment and funds, but they are actually delivered to the local residents by the middleman (regional boss) through the coordinator (local boss). When the buyer has been identified the middleman notifies the coordinator, and pays 15% of the log price to him. The coordinator collects the logs from each logging site and makes them into rafts. At that time, the name of the owner is marked on each log.

The middleman contacts the forestry administrative officer and seeks information about which company with HPHH or IPPK license is going to turn the logs out for sale. Then he contacts the license owner of HPHH or IPPK and the coordinator in each location to search for ways to get new HPHH or IPPK license. At the same time, he prepares the transport and payment plans.

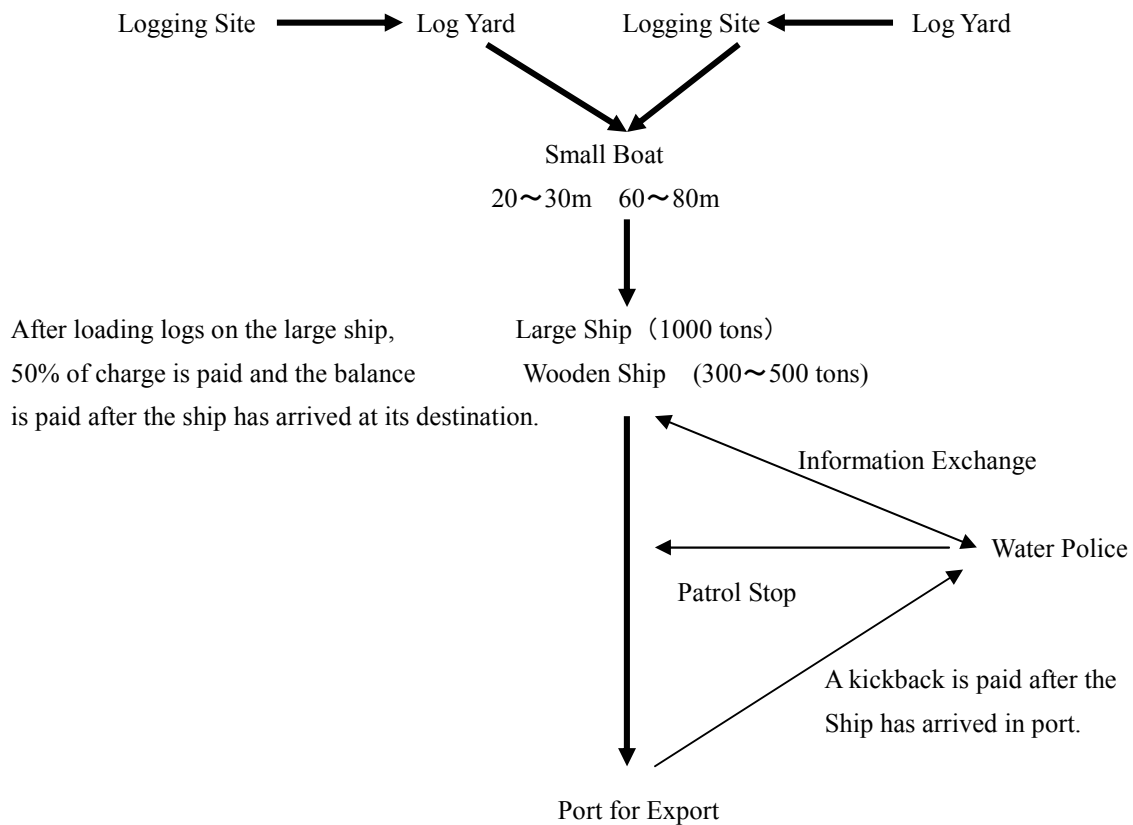
The broker II contacts the forestry administrative officers and associated public safety officers (police and military personnel) to obtain information about transport for export. At the same time he secures the forged documents. Based on information about the administration and public security law and order, the logs are passed through various checkpoints. These checkpoints are controlled by the Ministry of Forestry, and the army and police at the village level. For exporting, the checkpoints controlled by the water police, the navy and custom offices are added. The boss extends bribes at these checkpoints.



Prepared based on Mr. Agus Setyalso, "The Mirror Site of Governance in Indonesia's Forestry".

Fig.1 Actual Condition of Illegal Logging Organizations and Distribution of Illegally Cut Logs

The system of illegal exports involving ocean freight is as shown in Fig. 2. According to that, transport from the log yards (collection centers) use small boats because they have to be able to use rivers. The logs are then on loaded into a large sea-going ship. Half of the price is paid after loading on a sea-going ship and the balance is paid after the large ship arrives at the destination port. Connection with the water police is very important in the case of ocean freights so that a bribe is offered after the ship arrives at the destination port, in order to corrupt the cargo inspectors.



Prepared based on Mr. Agus Setyalso, "The Anatomy of Forest Crime in Indonesia with Reference from West Kalimantan and Riau".

Fig. 2 Export Routes of Illegally Cut Logs

(3) Prices of Illegally Cut Logs and Exported Logs

How do the prices and product cost levels of illegally cut logs compare with those of the legally cut? Examination of the production costs, log prices, profits and profit rates in 1999, in each for the legal HPH and HPHH and the illegal HPH, and illegal logging (Table. 1), shows the production cost to be 85 dollars for legal HPH, compared to 33 dollars for illegal HPH, 45 dollars for legal HPHH, and only 5 dollars for illegal logging (or what appears to be illegal HPHH). Furthermore, the log price is 90 dollars for legal HPH, compared to 39 dollars for illegal HPH, 67 dollars for legal HPHH and only 15 dollars for illegal logging (or what appears to be illegal HPHH). Thus the profit rate from illegal logging is extremely high. The profit rate is 5% for legal HPH, compared to 16% for illegal HPH, 32% for legal HPHH and 69% for illegal logging. These extremely low production costs and extremely high profits in illegal logging are quite

amazing.

Table 1. Product Cost, Price and Profit of Logs (US\$ /m3)

	Legal HPH	Illegal HPH	HPHH	Illegal Logging
Product cost	84.5	32.8	45.3	4.7
Log price	90.0	38.9	66.7	15.0
Profit	4.5	6.1	21.4	10.3
Profit rate	5%	15.6%	32.1%	68.7%

note : data is in 1999

source : The Mirror Site of Governance in Indonesia's Forestry

Next, if we consider the price of an illegally exported log, to take just one example, the price of a log transported by truck from the north of West Kalimantan to Kuching, the capital of Sarawak Province in Malaysia, is as follows (Table. 2, 3).

Table 2. Price, Cost and Profit in West Kalimantan (/m3)

	Malaysia • Ringgit	Indonesia • Rupiah
Price of Square sawn timber in Entikong	320	720,000
Transport charge Entikong → Tebedud	40	89,000
Management charge	10	22,500
Price in Tebedu	530	1,192,000
Gross profit in Tebedu	160	360,000
Payment to the broker for transport (20% × Gross profit)	32	72,000
Operation cost (10% × Gross profit)	16	36,000
Profit	112	252,000

note : data is in 1999

source : The Anatomy of Forest Crime in Indonesia with Reference from West Kalimantan and Riau

The log price in West Kalimantan is 200,000 to 350,000 Rp (rupiahs). Assuming an exchange rate of 8400 Rp/Dollar, the price is about 24 to 42 dollars, which is slightly higher than the price in Table. 1. Based on that, the price of square sawn timber will be 720,000 Rp (86 dollars) in Entikong, the log yard. When transported to Tebedu, the Sarawak border town, the price rises to 1,200,000 Rp (143 dollars) which includes 89,000 Rp (11 dollars) for transport from Entikong, and 22,500 Rp (3 dollars) for

management charges, and 360,000 Rp (43 dollars) gross margin. From this gross profit, 72,000 Rp (9 dollars) (20%) is paid to the broker and 36,000 Rp (5 dollars) (10%) for operation costs. That leaves a net profit of 252,000 Rp (30 dollars) so the profit rate on a log price of 1,200,000 Rp is over 20%.

Table 3. Price, cost and profit in Sarawak (/m3)

	Malaysia • Ringgit
Price in Tebedu	530
Transport charge Tebedu→Kuching	30
Price of Square sawn timber in Kuching	586
Log price (yield : 80%)	732
Processing charge for export	115
Products cost	847
Price	1300
Profit	453

note : data is in 1999

source : The Anatomy of Forest Crime in Indonesia with Reference from
West Kalimantan and Riau

Then, when transported to Kuching, the price rises to 1,300,000 Rp (155 dollars) = 586 RM (Malaysian ringgits). The exchange rate is 3.8 RM/dollar. If the yield is assumed to be 80%, the log price will be 732 RM (193 dollars). When the processing charges of 115 RM (30 dollars) are added, the price rises to 847 RM (223 dollars). Based on an export price of 1,300 RM (342 dollars) in Malaysia, the profit is as much as 453 RM (119 dollars). If the log price in Malaysia is assumed to be 500 RM and the yield to be 50%, the log price only reaches 1,000 RM, so the profit is larger for Malaysia when logs from Indonesia are used.

2. Decentralization of Power, Excessive Logging, Illegal Logging and Illegal Exporting

In the context of the rapid degradation and decrease of forests and, in particular, organized and large-scale illegal logging and export, there would be confusion in forest administration due to the decentralization of power.

In Indonesia, the Local Administration Law was established in 1999 (enforced in 2001). In the same year, the Central and Local Finance Equilibrium Law was also established. In consequence the vertical centralization such as, e.g., from central government to province and prefecture and from province and prefecture to village and ward, has all

been so changed that decentralization has been promoted. That meant that the significance of authorization by the local headmen and local assemblies increased. With the funds allocated by the central government, the return amount from the revenue from natural resources is decided and a general allocation system (like a local grant tax in Japan) is taken on.

In this system authorizations, except for diplomacy, national defense, finance, religion and others (including science and technology), which are still maintained by central government, have been assigned to the prefectural and city governments. The provincial governments began to take charge of the adjustment of inter-prefectural or inter-city matters, and any instruction or supervision in prefectures and cities instead of the central government. For these reasons, the influence of prefectures and cities has rapidly increased.

The local headmen had previously taken responsibility under the central government. However, because of this development of decentralization, the responsibility has, basically, passed to the local assemblies. But they do not have the right to winding up the local assemblies. On the contrary, as the local assemblies are not subject to any external supervision apart from the 5 yearly elections, it would be natural that local headmen closely watch the members of the local assemblies because they are afraid of being dismissed.

The revenue of local governments comes from self-sources of revenue (local taxes and other local fees imposed on users, etc.), balanced funds, loans and others. The equilibrium funds are divided into tax revenue (personal income tax and land and house tax, etc.) and non-tax revenue. The areas for non-tax revenue are crude oil, gas, general mining, forestry and fisheries. The allocation ratio is 80% for local governments and 20% for central government except for that of crude oil and gas. In forestry, the allocation for the forestry resource commission (PSDH: license fee) is 20% for central government, 16% for provincial governments, 32% for production prefectures/cities and 32% for other prefectures/cities. For forest logging rights fees (IHPH/IIUPH), the ratio is 20% for central government, 16% for provincial government and 64% for production prefectures/cities. In addition to that, there is special allocation for regions with specific needs, which cannot be covered by a general allocation. That is covered by the afforestation funds (DR). The allocation ratio is 60% for central government and 40% for the prefectures or cities of production.

So it came to be that local governments increased their authority in forest development; that is, in the right to issue licenses. At the same time, they gained a large portion of their own revenue from forest development.

Furthermore, the existing Indonesian Forest Law was amended and New Forest Law enforced in 1999. Its contents are as follows:

(1) For HPH (Forest Concession Right), the area that may be owned by any single company in any single province shall be limited to 100,000 hectares (200,000 hectares in Irian Jaya) and to 400,000 hectares over the whole country. For licensing rights, the license for up to 10,000 hectares in each province shall be issued by the provincial governor and license for more than 10,000 hectares, shall be issued by the Minister of Forestry after adjustment with the provincial governor.

(2) For HPHH (Forest Products Harvesting Right), the licensed areas shall be limited to 100 hectares or less each and that for a period of one year. The license shall be issued by the prefectural governor. Priority shall be placed on the interests of the local residents.

(3) For HTI (Industrial Plantation), the area shall be 300,000 hectares for pulp industry for each single case, and 60,000 hectares for construction timbers. The license shall be issued by the Minister of Forestry after adjustment with the provincial governor.

(4) For IPK/IPPK (Timber Use Right) shall be for both forest and non-forest development, and the license shall be issued by the director-general of the Forestry Utilization General Bureau or director-general of the Regional Forest Office in the subject province.

(5) Companies with currently effective HPH shall be allowed to continue their present business arrangements but when their licenses are renewed the renewed regulations shall be changed to the above. If there is any excess, or the renewal or re-issue is disallowed, such portions shall be allocated to the newly validated corporations or cooperative associations.

Furthermore, HKM (Community Forest) regulations were decided in 2001. The subject is converted forests and forests for which any license has been issued. Such forests are developed by local communities and the revenue will be a source of their income. The license is sought from the Ministry of Forestry after the district's headmen have investigated the forests in question. The license period is for 25 years. During the first 3 to 5 years (in which period provincial license is issued), a cooperative association is established and the HKM license is issued after that.

Basically, the licensing rights, except for HPH, are given to prefectural governors. However, why does such decentralization lead to the degradation and decrease of forests

and illegal logging, particularly organized and large-scale illegal logging?

When we remember the state of affairs at the collapse of the Suharto Administration, the local residents were driven into illegal logging in order to maintain their lives during the social and economic confusion. So the Sumatra type illegal logging, that is, illegal logging performed by local residents, increased. Among the big companies with HPH, furthermore, there were many companies, including Kayu Mass group in East Kalimantan, for which concessions were increased: that was in the light of increased debt and the elimination of corruption, collusion, and nepotism. There were not a few cases of local residents coming into such forests, which became hotbeds of illegal logging. At that time, they say, the army, police and local governments turned a blind eye on these activities of the local residents.

However, when the Local Administration Law became enforced, the situation was greatly changed. Local governments, in particularly prefectural governments, issued a large number of HPHH, and IPK/IPPK licenses to ensure themselves their revenue. For example, in Berau Prefecture of East Kalimantan Province, more than 30 IPPK (for areas of 11,000 ha) licenses were issued by the middle of 2000; there were applications for more than 100 licenses, and an average 5 licenses were issued per month by the end of 2000. In Kutai Prefecture, furthermore, more than 600 HPHH licenses were issued and in Bulungan Prefecture and Kutai-Tengah Prefecture, some hundreds of licenses were issued by the middle of 2001. In Nunukan Prefecture, Malinau Prefecture, Bulungan Prefecture and Berau Prefecture, more than 500 HPHH/IPPK licenses were issued by the beginning of 2001. In South Sumatra Province (Prop. Sumatra Selatan) and Jambi Province, they say, the forest areas have been greatly decreased because of such licensing. In not a small number of cases, furthermore, licenses have been issued even for protected forests. There are also many cases where the license issue was duplicated. Indeed, among the forests for which the HPH licenses had already been issued and consequently developed, new licenses were issued so that the selected logging sites were completely logged out.

Another difficulty is the many cases where the licensed areas exceed the legally specified. A further consideration is that each prefectural governor establishes his own licensing system. That will be based on the specific prefectural regulations (in some cases, an arbitrary decision by the prefectural governor himself, in others, with the approval of the prefectural assembly). They issue a lot of licenses by way of more flexible rules. The qualification checks for license issues are very perfunctory, and more importance is placed on how much the applicant pays. In East Kalimantan, they say that about 15,000,000 (1,800 dollars) to 20,000,000 Rp (2,400 dollars) is the going rate.

In this connection, the larger the payment the quicker the license is issued. It is mostly the local politicians or businessmen who are given the licenses. Members of prefectural assemblies, civil servants, and even governmental organizations are included among them, who would be prominent in the organized large-scale illegal logging.

Even when the logging is licensed, various rules may be ignored. It is common knowledge that areas designated for selective logging are logged right out and that when areas are set aside for afforestation that fact is ignored.

With this for background, the quantity of timber felled has rapidly increased along with the licenses issued by the authority of the local governments. In that connection, when we consider the log production in South Bulungan, Middle Bulungan, and North Bulungan Prefectures in East Kalimantan Province, in 2000 and 2001, the quantity with HPH in 2000 is 334,800m³, the quantity with IPK is 353,000m³, and the quantity with IPPK is 543,200m³, and the quantity with HPH in 2001 is 157,000m³, the quantity with IPK is 297,400m³, and the quantity with IPPK is 520,000m³. It shows that the quantity of timber felled with IPK and IPPK is far greater than that with HPH (Table 4).

Table 4. Log production in South Bulungan, Middle Bulungan, and North Bulungan Prefectures in East Kalimantan Province (m³)

	2000			2001		
	HPH	IPK	IPPK	HPH	IPK	IPPK
South Bulungan	180,000	0	360,000	80,000	0	275,000
Middle Bulungan	95,800	0	101,200	65,000	0	214,000
North Bulungan	59,000	353,000	73,000	12,000	297,400	31,200
Total	334,800	353,000	534,200	157,000	297,400	520,200

note : IPPKs of South Bulungan and Middle Bulungan in 2001 are on Jan. to Jun.

source : IIDF/FAO case study on trade and forest governance in Indonesia

As for export, the following is offered as an example. In East Kotawaringin Prefecture in Central Kalimantan Province (Prop. Kalimantan Tengah), in the investigation into illegal logging for profiting from the distribution of illegally cut logs in 2000, it was found that on the Sungai (River) Mentaya alone there were 178 cargo boats to transport cut logs entered and 78,000m³ of illegally cut logs were loaded on them. Because of that the Prefectural Assembly decided, under the leadership of the prefectural governor, to collect 14 dollars per m³ of the exported illegally cut logs. Then they opened an account in Regional Capital Bank and permitted exports on the basis of the transfers of money to the bank .

By this means the prefecture obtained 2,500,000 dollars from April to June in 2000, which was equivalent to 170,000m³ of cut logs. The official quantity of cut logs in 1989 in this prefecture was 1,260,000m³. When the annual quantity is estimated in the light of the above 170,000m³/three months, the quantity reaches 510,000m³, which is equivalent to half the quantity of timber felled official in this prefecture.

Companies with concessions, which have not been illegally logging, then complained that this would promote illegal logging and put them, who have been paying 21 dollars in export duty, at a disadvantage. So the prefecture increased contributions from 14 to 18 dollars. The prefecture then decided to regard the contribution as a customs duty, based on Regulation No. 14, and issue certificates of payment of custom duty to organizations making such contribution. In response, the central government demanded of the prefecture a part of any income from customs duties. However, the prefecture has paid none.

This is an example of the many problems resulting from the decentralization of production and export.

3. Influence of Log Export Re-prohibition on Illegal Export (From Logs to Processed Product)

The re-prohibition of log exports in 2001 caused illegal loggers to change from logs to processed products. The logs are chain-sawn to rectangular columns at the sites. The chief aim is to avoid the risk of crackdown during transport and so facilitate truck transportation. (Legally cut logs are marked, so that it is easy to distinguish the legally from the illegally cut logs. However, as there is no such mark on the processed output, it is difficult to identify them).

Thus the Sumatran illegally cut logs, changed from logs to processed products, are mainly transported to West Malaysia where they are re-processed and re-exported. It is said that in West Kalimantan, most logs are transported as they are to the plywood factories in Sarawak in Malaysia. However, Malaysia prohibited log imports from Indonesia in June 2002, so that they are now exported as processed products to other countries (including Vietnam and Thailand on the Indochinese Peninsula), in addition to Malaysia and Singapore. These products are then re-processed and re-exported to various other countries.

4. Illegal Logging and Exporting in Gunung Palung National Park

As there is at this time more good timber left in Indonesia's national parks than in other

places, large-scale illegal logging is performed actively in national parks, particularly in Gunung Palung National Park in West Kalimantan (the scene of my present investigations), Tanjung Putig National Park in Central Kalimantan and Bukit Tigapuluh National Park in Sumatra. In the Bukit Tigapuluh National Park, 4,000 ha of quantity were damaged between 1994 and October 1997, 8,000 ha by August 2000, and 4,300 ha by June 2002. Lowlands up to 500 m above sea level and other gently sloping areas have been damaged.

Under the Suharto Administration logging in national parks was largely prohibited. They issued logging licenses only to people who were closely related to Suharto or favored by the National Army. The National Army kept a sharp eye on intruders into the forests. However, the authority of National Army greatly declined under following Habibie Administration so the local residents, cooperatives and corporations became active in illegal logging.

(1) Outline of Gunung Palung National Park

The Gunung Palung National Park is located on western coast of Ketapang Prefecture in West Kalimantan Province and surrounding Gunung (Mt.) Palung, and Gunung (Mt.) Panti. The history of the Gunung Palung National Park started in the 1900's when Holland, their suzerain state at the time, established 60,000 hectares as special reservation area. That was continued after the establishment of an independent Indonesia. Then the park was enlarged to 90,000 hectares in the 1980s and upgraded to the equivalent of a national park. However, it was only in the 1990s that the park was actually designated as a national park.

In Gunung Palung National Park, there are coastlines, mangrove forests, wetlands and forests of Dipterocarpaceae. This park is also very important for valuable flora. In this park there are many animals; including orangutans, proboscis monkeys, tarsiers, leopards, bears and hornbills. For the orangutans, in particular, the Gunung Palung Orangutan Project was started in 1994 based on the Chaban Panti Research Camp (2,000 hectares) and it became an important field for wild orangutan investigation.

(2) Illegal Logging in Gunung Palung National Park

Logging in Gunung Palung National Park started long ago, in 1960s, when active forest development was started in Indonesia. The logging was performed by corporations (PT. Alas Kusuma, PT. Kawedar Wood Industries?) with concessions, and has continued from the 1980s to 1991. They say that the yield was not so great. However, after such corporations with their concession were wound up, their former employees supplied

funds to the local residents and continued illegal logging.

Still more recently the logging has been expanded and the scale enlarged. Particularly since November 2001, illegal logging has been transferred from the area around the national park to its center, accompanying the economic decline of this area. Moreover, it extended to the area around the Orangutan Research Project's lodgings. In that connection, according to a map (Fig. 3) obtained from the Gunung Palung National Park Administration Office, the surrounding areas of the park became an illegal logging site shaped like a doughnut.

That sort of illegal logging uses manual equipment including kudakuda (wooden horse), etc. These are expensive and previously have involved large diameter trees such as of Ramin, Meranti, Jelutong, Keladan, Bengkerai, Punak, but even inexpensive trees have recently become subject to illegal logging.

In this way, they say, about 80% of the forests in Gunung Palung National Park has been in some way damaged. Furthermore, according to a Harvard University investigation in 2001, 61,000 hectares (67%) have been damaged during the last 10 years when 6 million m³ were illegally logged.

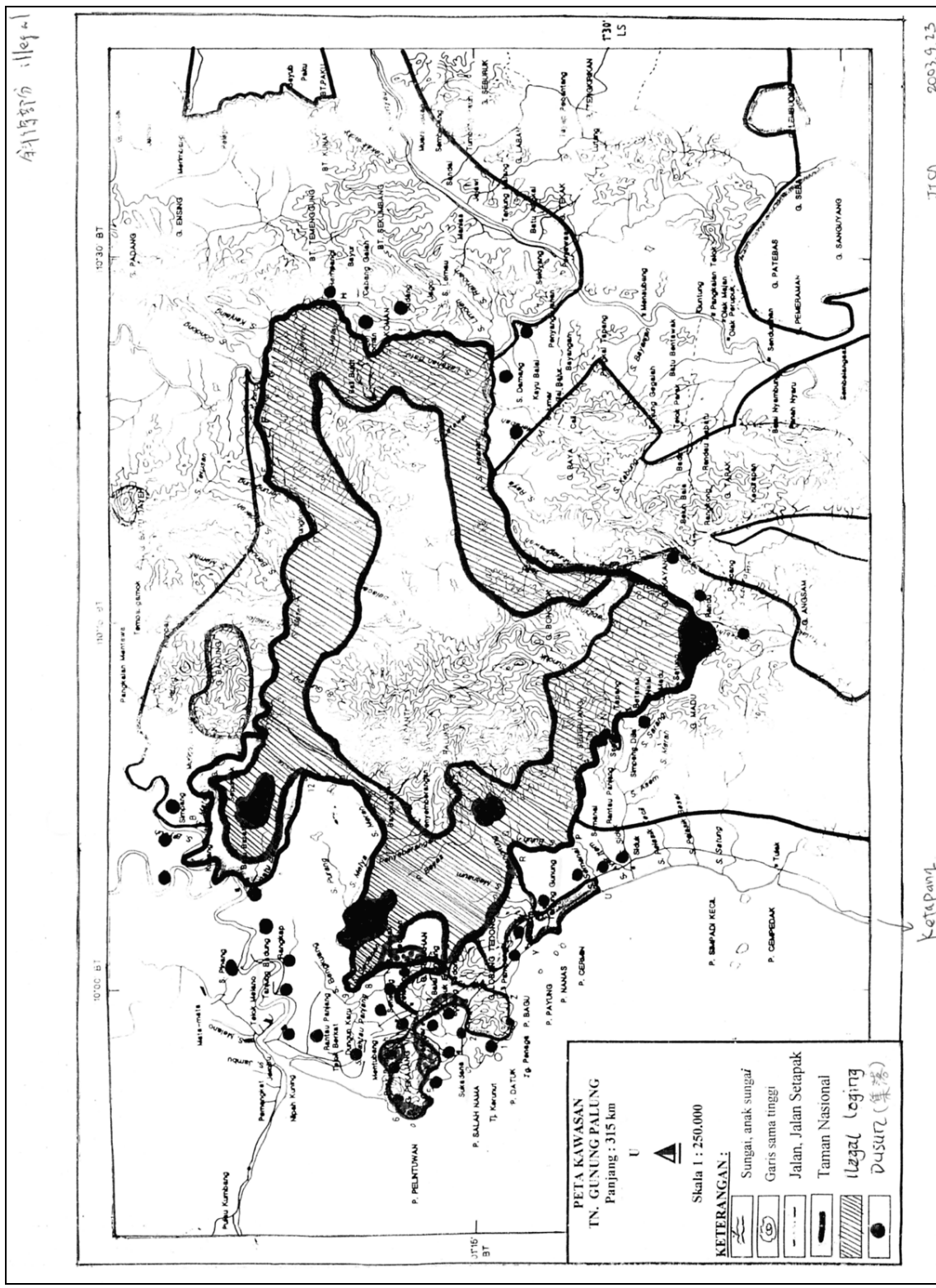


図 3. グヌン・パルン国立公園周辺地図
(公園管理事務所でもらった地図)

(3) Direct Agents of Illegal Logging

There are a lot of settlements dispersed around the National Park. They are mainly located on the western and eastern sides of the national park. The settlements with the longest history are those of the Dayaks. It is also reported that there were Malayan settlements on the hilly land along the coastline, near Sukadana. The populations and the numbers of settlements have increased since 1960 because of the increased birth rate as well as the immigration from Java due to the transmigration project. Even now residents who stress that they are Malays are dominant. There are also residents who stress that they are Chinese, Balinese, or Javanese. Newly settled residents, however, do not have the traditional rights to use the forests. Therefore, when they want to make use of the forests, they attach themselves to the companies with former concessions or they use the protected forests in the national parks.

The direct agents of illegal logging are such people as these, living in settlements around the national parks. Why did they start illegal logging?

As you drive along the coast from Ketapang, the capital of Ketapang Prefecture, the Tanjung Gunung settlement and then Sukadana settlement can be seen. That means that you have reached the area surrounding the National Park. When you go further north you see scattered settlements, created after the development of the wetland woods. Around these settlements, paddy fields are expanded which have been converted from wetland woods by using the slash-and-burn method (Photo 1). When I visited, it was in the dry season, so there was no water in the paddy fields. I saw creeks in the settlements and, here and there, small boats. In the rainy season, such creeks will become traffic routes. Bridges are constructed between the raised-floor houses and the roads. A high rise of the water level in rainy season can be expected from this view. Also, at the back of the houses, palm woods are developed and on the slightly higher slopes are rubber trees and fruit trees. On the skirt of a far mountain, which seems to be in the National Park, some swiddens are expanded, where rice is grown in dry fields and banana trees have been planted.



(Photo 1) Paddy field are expanded which have been converted from wetland woods by using the slash-and-burn method.

In these harsh locations, its people in these settlements had traditionally lived on rice, raw rubber, and fruit. However, because of the logging in the National Park by corporations with concessions and the further illegal logging, the rice yield has been reduced because of the frequent flooding in the rainy season. Also, in the 1990s, the frequent mountain fires damaged the fruit production and, since 2001, the price of raw rubber has greatly declined. In such circumstances, they inevitably had to seek for other sources of income. It is reported, because of the above reasons, that they became involved in illegal logging. However, it has caused a vicious circle. For illegal logging caused further flooding so that the local residents could not remain so reliant on rice. As a result, illegal logging inevitably became more frequent.

In the earlier stages of their illegal logging they worked out the areas nearby to their settlements. In the 1990s, however, there were frequent mountain fires so that the illegal logging area has now gone deeper in the forest, as far as 20km or more from their villages. Also, in the past, they were able to cut high quality logs within about 1 km of the river, but such logs must now be cut further away from the river. Thus, the over-all logging work-time becomes extended. At present, one logging trip takes a month; and they usually make 6 trips per year. Because the working men, including the household heads, are absent for a long time, it reduces their working in the fields. That increases their inclination to make good their reduced agricultural income by resorting to illegal logging.

Of those households in the settlements located around the National Park, the percentage of households involved in illegal logging is rather high. In some settlements, most of

them are involved in it. Now, illegal logging is important and essential source of income for such households in the settlements around the National Park.

(4) Large-Scale and Organized Illegal Logging and Local Residents

Illegal logging in these regions is divided into two types. The first is that locals with assured assets form an independent working group. They buy their own equipment, including chainsaws, with their own ready money (in most cases, however they buy their food and fuel on credit) and they make their own searches through the areas for their illegal logging. Then, on the sales side, they themselves decide whether or not to sell the logs as they are or as processed products or, instead, to sell them on the local markets. They sometimes alter the quantities for sale to meet the demands of the market.

The illegal loggers of the other type are those who work at their illegal logging under a "Tauke". The word "Tauke" comes from Chinese for "Master" or "Boss". The "Tauke" here in question is a guarantor of funds. As above mentioned, he is equivalent to a coordinator (regional boss). Poor local residents without assets are employed by these Taukes. They generally form groups of 6 and work under a single Tauke. According to staff members of National Park Administration Office, most of the local Taukes are businessmen or staff officials of administrative institutions, living in Ketapang.

After I had returned from my field work in the National Park and was drinking a glass of beer in Ketapang, 4 to 5 men persistently questioned me; asking "Where have you been to?", "Why did you come here?", "What is your job?" or "Are you a journalist?". I felt them to be very suspicious characters and quickly returned to my hotel: they could be working for some Tauke.

When local residents work in a group of 6 persons for a Tauke, the group gets paid about 150 dollars for about a month (in 1999) for expenses. However, they may want to get some of the wages in advance or borrow money to buy their own chainsaws. They may, indeed, be forced to borrow money. The interest rate on such loans is sometimes as high as 40% or more. If the local residents borrow money, it might be very hard for them to pay off the debt and so may have to continue working, which leads them to become literal wage slaves.

The wages of such people averages 2.3 dollars per day (until 1999, the present wage rate is 3 to 6 dollars), except for chainsaw operators. However, that is about 2.5 times more than the minimum wage in this region. Therefore, illegal logging brings them a large income. For chainsaw operators, the rate is about 3 to 5 times more than the above described rate. However, if they work independently and not under a Tauke, the amount

of timber per trip (i.e., for one month) will be smaller, but their income will be at least about twice as much as that from working under a Tauke, which clearly shows how much the Tauke exploits them (See Table 1).

(5) Log Yard and Distribution of Illegally Cut Logs

Some of the illegally cut logs are sawn into a square shape by chainsaws (recently this is particularly frequent). The logs and processed products are then carried to sawmills in their own prefecture or in Java. Also, some are illegally exported to various other countries. The destinations are not all that clear, but they would most often be Malaysia or Singapore. At one time it was reported that they loaded logs onto trucks and exported them through the borders between Indonesia and Sarawak, Malaysia. However, the distance from here in the Gunung Palung National Park to that border is too far, so they use ships to export the logs to Malaysia.

This trip I investigated the area along the Sungai (River) Mata which runs through the north of the National Park. I went to and returned from the area in about 2 hours by speedboat. The boat landing is at a town called Teluk Melano located at the mouth of the Sungai (River) Mata. As this is also the Ketapang ferry landing, it is also a cargo collection and distribution center. Around the port, there are small shops along both sides of the streets and the town looks like the center of its neighboring settlements.

As I went up from the mouth of the river the mangrove, nipa palm, and palm forests growing along the river gradually became fewer. I went upstream along the border of the National Park, gazing at Gunung (Mt.) Badung in my distant front. To my left and right the dense forests continued. After some while going up the winding river suddenly, on my left, an open space hit my eyes. It was a very wide log yard, on the skirt of Gunung (Mt.) Badung (Photo 2). Around about, barges are anchored and logs are loaded onto the barges with cranes, either on the barges or on the shore. According to the National Park ranger accompanying me, this is a place of shipment of illegally cut logs. These tugboats seemed to be Malaysian because the name was marked in Chinese characters. All the logs are of small-diameter with a mark of white paint on the cut end of each log (Photo 3). As shown in Fig. 1, the name of the owner should be marked on the cut end of each log, so the markings show the name of the owner.



(Photo 2) Illegally ut log-yard



(Photo3) Illegally cut logs in the barge

Upstream on the river and next to this log yard, there was a sawn log yard, which had been illegally cut (Photo 4). There was a house, with a nipa palm roof, which looked like a warehouse. There were also many buildings supposed to be accommodation for workers (Photos 5 and 6). Some were still under construction. There was hardly anybody at the log yard. However, here there are quite a number of people including young men and men in the prime of life. Some women and children were also there. It looked as though they were living with their families. This scene seems to back up the

above-mentioned claim that the illegal logging has gone deeper into the forests so that the amount of work per trip has been increased. There used to be a sawmill here, and the deserted buildings are still standing. The logs collected here had been sawn into squares at the illegal logging site, but were not sawn up into actual planks. Here, again, they loaded the work onto small boats.



(Photo 4) Camps of illegal logging



(Photo5) Illegal sawn timbers yard



(Photo 6) Loading of Illegal logging timber

The logs sawn in the illegal logging sites are formed into rafts. Upstream from the sawn log yard, there was a mooring of rafts. The rafts of sawn logs were linked, so far that I couldn't see the end of them (Photo 7). When I took pictures on the way back,

somebody shouted at me loudly, from the river bank and then chased after me with a speedboat. I remembered that my friend who works for trading company was attacked by pirates offshore from the Philippines. If the people on the boat were armed with a machinegun or so, what could have happened? The thought of it sent a thrill of horror down my spine.



(Photo 7) Rafts of cut logs(square sawn timbers)illegally

The illegally cut log yard which I investigated this time led to water transport, whereas the illegally cut logs in Gunung Palung National Park are transported to sawmills around there by land. Although there have been sawmills around there for a great many years, their number has rapidly increased due to the rapid increase of illegal logging. Most of these are illegal sawmills without licenses. They are located along the river and obtain their raw materials not merely by land transport, but also by water transport of barges and rafts.

Actually, I saw many sawmills on large sites along the river running through the city of Ketapang. However, all of these sawmills had high walls and the gates were secured by high doors, which would open and close only to admit raw materials (Photos 8 and 9). This time, when I happened to pass by one such sawmill, I saw the door open for a car loading raw material and was able to see into the site from my land cruiser. A large crane was set on the river bank to the rear, where forklifts were also in use. This crane is used to unload the raw materials and then load the processed products.

Again, on the road to the National Park, I passed by trucks that were loading logs and processed products between each other. As there is no legal logging around the National

Park, they must have been illegally cut and I suppose that they were going to be taken to some sawmill.



(Photo8) Inside illegal sawmill (we caught a glimpse of into a illegal sawmill)



(Photo9) Sawn timbers are carried into illegal sawmill

(6) Illegal Logging and the Lives of Local Residents

As already set out, many households around the National Park are involved in illegal logging, but as far as I could see from the outside, the local residents' standard of living has been enhanced. A parabolic antenna was installed in every house and many of the young men rode motorcycles. New bicycles were arranged at the shop fronts of the general stores facing the Teluk Melano port. I also saw many new buildings under construction. I was told that the amount of food imported from abroad had increased. They used homemade palm oil before. Now, however, it seems to have been replaced by salad oil.

Although we do not know the full story, when we view it from outside, the standard of living of the local residents has certainly been enhanced. This fact was seen as connected with illegal logging in the discussion with WWF Indonesia in Jakarta. And, in discussions over lunch, the ranger of the National Park Administration Office also admitted it. However, I do not think that they are on easy street. I presume that a system has been established whereby the local residents purchase such imports from abroad on credit and then diligently go for illegal logging in order to pay off the debt. When I think about it, the local groups concerned are not only the people who are directly involved in illegal logging. Their shops also benefit from illegal logging. These shops might then be included in the large-scale illegal logging organizations.

I did not actually check them in the city of Teluk Melano, but I have heard that karaoke bars, casinos, and brothels have sprung up wherever illegal logging is based and that part of their revenue must go into the bosses' pockets.

Frankly speaking, the whole local economy has been dominated by the general situation and we may say that it is controlled by the Mafia.

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