

After decentralization: the implications of small-scale logging for communities' access to forests in Indonesia

Godwin Limberg

Until 1997, Indonesia's forestry policy was highly centralized and all logging permits were issued in the national capital, very often to people well connected to the government. During this period (1980s-1999) the estimated rate of deforestation was 1.6 million hectares annually. After the downfall of President Soeharto, a whole range of political reforms occurred in a very short time, including in the forestry sector. At approximately the same time, regional autonomy was implemented, which meant that small-scale logging permits could be directly issued at district level by the district forestry service and the district head. Decentralization for the first time provided opportunities for communities to directly participate in forest management.

Small timber harvest permits (in Indonesian *Izin Pemungutan dan Pemanfaatan Kayu*) included provisions ensuring that villages received benefits from commercial timber extraction. Yet the extent of those benefits has been limited. Rent-seeking local bureaucrats, entrepreneurs and community elites at the district level have used the new opportunities to further their own interests through lucrative small-scale timber harvesting. Under these arrangements, communities receive minor cash fees, development of some village infrastructure and employment opportunities. These benefits are significant enough, however, to cause most community members to overlook fundamental issues of rights over and long-term access to forests. The local government attitude has been ambiguous: timber harvesting licenses were issued specifically for areas claimed as customary territories. This could be interpreted as an indirect recognition of communities' land rights claims. But the reality is that the local government has been reluctant to formally recognize communities' claims to forest and land.

In this article, I use the example of seven small-scale timber harvesting operations in the Malinau area of East Kalimantan (from 2000 to 2003) to describe the type and quantity of benefits communities received and the implications of this experience for future community access to forests.

Small timber harvest permits in Malinau's watershed

Malinau is a newly created district (established in 1999) located in the interior of the province of East Kalimantan on the island of Borneo. The people of Malinau are mainly Dayaks (over 18 different sub-groups,) including the largest number of Punan, formerly nomadic hunter-gatherers. Their main source of livelihood is upland agriculture and collection of forest products. The villages studied are predominantly inhabited by Dayak (Kenyah, Merap, Lundaye) and Punan.

From July 2000 to February 2001, seven companies came to agreements with villages in the Malinau watershed. Unlike previous logging concessions that were allocated by central government to big companies, the main actors in the small timber harvest permit deals were local entrepreneurs, village elites and the district government. In six out of seven villages, deals were negotiated by entrepreneurs already known to the community and who had previously acted as traders in Non Timber Forest Products (NTFP) or buyers of illegal timber. They are based in Malinau or Tarakan and have wide networks in the area. Due to their previous business, they have established patron – client relations throughout the area. These entrepreneurs mainly dealt directly with the village leaders.

Negotiations between the villagers and the entrepreneurs focused on payment of a fee per cubic meter of timber extracted, in kind benefits, and employment for community members. Beside these

benefits in the early negotiations, entrepreneurs also promised to establish cash-crop plantations, as in Bila Bekayuk, Langap, Setarap/Punan Setarap and Adiu/Punan Adiu. Later companies did not make similar promises (Sengayan, Nunuk Tanah Kibang, Tanjung Nanga). See Table 1 for benefits that were negotiated by individual villages.

Table 1: Benefits promised by small timber harvest permits to villages in the Malinau watershed (in cash and kind)

Village	Fee/m ³ (Rp)	Benefits in kind
Setarap/Punan Setarap	40,000 (4.35 US \$)	Access road, leveling of area for village expansion, village office, church, rattan plantation, irrigated rice field
Adiu/Punan Adiu	20,000 (2.17 US \$)	Access road, leveling of area for village expansion, village office, village meeting hall, health clinic, rice huller, rattan plantation
Bila Bekayuk	Fee per m ³ not defined	House for each household, village office, village meeting hall, health clinic, school, TV, coffee plantation
Sengayan	30,000 (3.26 US \$)	Village meeting hall, rice huller, 5000 sheet iron roofing
Langap	7,500 (0.82 US \$), was renegotiated to Rp. 15,000 (1.64 US \$) in 2001	Leveling of area for village expansion, truck, bush cutter, pepper plantation, rice
Nunuk Tanah Kibang	30,000 (3.26 US \$)	30 houses, village office, village meeting hall, water pump, water tank (2), bush cutter, scholarship
Tanjung Nanga	50,000 (5.43 US \$)	-

\$ 1 = Rp. 9,200 (end May 2004)

During the negotiations, agreements about the exact location to be logged were more often than not vague. Sometimes villages included verbal agreements on local employment and community control of operations, especially measuring of timber production and about the conduct of logging operations. For example, Sengayan, Nunuk Tanah Kibang and Tanjung Nanga specifically requested that the companies applied selective logging of trees with a diameter of more than 50 cm. Tanjung Nanga also requested that lesser known species be cut to increase the volume of timber extracted.

Over time, the fee per cubic meter demanded by the villages increased. From no clear promise in Bila Bekayuk, the first village where a company logged, to Rp. 50,000 per cubic meter in Tanjung Nanga, the last village. Villagers learned from each other's experience and tried to get better deals. The outcome of negotiations on the fee was influenced by access to information and the negotiation skills of village leaders. In one case villagers were surprised that the entrepreneur actually offered a higher fee per cubic meter than they had intended to ask. They also realized that they actually might have got more if they had known the amount paid elsewhere.

Entrepreneurs also used the co-optation of influential persons in the village and intimidation to reduce amounts paid. Because prominent villagers were offered personal payments per cubic meter, even a small fee would create reasonable personal wealth. Through this unofficial arrangement, companies ensured that these influential persons had a personal interest in keeping the flow of logs going.

What did villages get out of it?

As shown in Table 2, villages expected to receive substantial amounts of money, in addition to benefits in kind and employment from the small timber harvest permits. In this section we analyze how much villages actually benefited from the presence of the small timber harvest permits.

Money

Villagers complained that large-scale logging companies had never contributed to the development of the villages where they operated. The total amounts received by the villages from the small timber harvest permits is large compared to previous community development aid by large-scale logging companies or government assistance, which was only 10 million rupiah per year per village plus minor community development projects. In this light, it is not surprising that villages were very enthusiastic about the benefits they received.

Based on the initial negotiations, villagers expected high economic gains from the small timber harvest permits. After two years were they right? Table 2 shows that all villages but one (Bila Bekayuk) received quite large sums of money, especially when bearing in mind that an average household would try to be self-sufficient in rice (their staple food) and hope for some additional (but irregular) cash income. Income from tree crops (coffee or cocoa) is more stable but seldom exceeds 1.5 million rupiah (163 US \$) per year. Cash from collection of gaharu (aloewood, a valuable non-timber forest product) is potentially higher but very irregular.

Table 2: Sums paid by small timber harvest permits to villages in the Malinau watershed from 2000 to June 2003

Village	Number of households	Total amount paid (Rp.)	Average per household (Rp.) ¹
Setarap - Punan Setarap	94	640 million (69,565 US\$)	6.8 million (739 US\$)
Adiu - Punan Adiu	42	800 million ² 86,957 US\$	19.0 million (2,065 US\$)
Bila Bekayuk	52	27 million 2,935 US\$	0.52 million (57 US\$)
Sengayan	65	1 billion 108,696 US\$	15.4 million (1,674 US\$)
Langap	104	320 million 34,783 US\$	3.1 million (337 US\$)
Nunuk Tanah Kibang	36	500 million 54,348 US\$	13.9 million (1,511 US\$)
Tanjung Nanga	130	1 billion 108,696 US\$	7.7 million (837 US\$)
TOTAL	523	4,287 billion (465,978 US\$)	8.2 million (891 US\$)

1 Population data from December 2002. Information obtained per village from village head or secretary.

2 Estimate based on information that four payments were made, each payment was made after 10,000m³ had been produced at Rp. 20,000/m³.

\$ 1 = Rp. 9,200 (end May 2004).

Payments were made once every two to four months based on the volume of timber logged. The company disbursed the money to the village leader. The distribution system varied per community. Some divided the total amount equally among the number of households in the village. Some villages had different rates for different groups such as widows, students, bachelors, and sometimes even included village members working outside the village. Tanjung Nanga initially divided the money among heads of households, widows and community members working outside the village. Over time the system changed. Households received a total of between Rp. 500,000 and Rp. 2,000,000 per payment.

Villages faced several problems related to the fee payments. They had no accurate data on log production, and thus relied on statements from the company to calculate the total fee to which they were entitled. Companies sometimes used vague stories about losses of logs to reduce payments.

A second problem was that companies tended to pay the full amount to the village leaders. Due to a lack of reliable production data or other means of transparency, this payment system created suspicion among villagers.

Different sources of information indicate that various village leaders received individual payments that were not publicly accounted for. Villagers could not influence this system as these promises were made secretly. However, villagers did not protest against this arrangement as long as the money divided among the villagers was equal. People only protested if payments were late or if the discrepancy between the amount per household compared to the suspected sum received by village leader(s) was too big, as occurred in three villages. Protests were directed at the company. Villagers sent delegations to the company's office to protest and also seized heavy equipment. In one case, the village secured a higher fee per cubic meter (twice the amount of the original agreement). It is impossible to know whether this increase went at the expense of the amount paid to the village leaders or reduced the profit of the company.

Villages set aside little for public needs. Some village leaders explained that, even if they suggested that part of the money be saved or allocated to community development, the majority of villagers objected. In many cases villagers have ample experience of village leaders using village funds without discussion with or agreement from villagers, or for personal needs. This lack of transparency and accountability resulted in the villagers choosing for the "safe option": divide it all!

Most households spent their money on immediate needs such as food, medical care or luxury goods, e.g. electronic equipment. In the early days, in particular, people were easily convinced by travelling salesmen to buy a variety of goods. The travelling salesmen kept track of when the companies made payments and arrived with their goods at that time. Over time, the number of itinerant traders increased. A teacher in one village told how a family had just spent their fee on luxury items when a few days later they had to borrow money to pay for medical care for one of their children. He stated that this experience increased people's awareness of the need to be more careful in spending their money.

The perception from inside the villages and from neighboring villages is that little of the money from the small timber harvest permits has had a long lasting impact. This is confirmed by the household survey conducted in three villages, which showed that very few households have savings (at least that they are willing to report). Some of the neighboring villages might make these

comments partly out of jealousy. However, influential persons within the villages acknowledged that the small timber harvest permit money had contributed little to village development.

In kind benefits from small timber harvest permits

In all seven villages, the agreements included promises by the companies to provide a variety of infrastructural developments and, in four villages, the establishing of cash crops. Table 3 shows the in kind benefits resulting from these agreements.

Table 3: Benefits in kind for villages in the Malinau watershed from small timber harvest permits from 2000 to June 2003

Village	In kind benefits received	Unfulfilled promises
Setarap - Punan Setarap	Access road, leveling of area for village expansion, village office	Church, rattan plantation, irrigated rice field
Adiu - Punan Adiu	Access road, leveling of area for village expansion, village office, village meeting hall, health clinic, generator, rice huller	Village office, village meeting hall, health clinic, rice huller ¹ , rattan plantation
Bila Bekayuk		House for each household, village office, village meeting hall, health clinic, school, TV, coffee/betel nut/ pulp plantation
Sengayan	Village meeting hall, rice huller, 5000 sheets iron roofing	
Langap	Leveling of area for village expansion, bush cutter, rice	Truck (was returned because a high price was deducted from total amount), pepper plantation
Nunuk Tanah Kibang	30 houses, water pump, two water tanks, bush cutter, scholarship	Village meeting hall and office, scholarship only provided for short period
Tanjung Nanga	-	

¹ The company had promised to provide each village with its own village office, meeting hall, generator and health clinic. However, only one village received all facilities whereas the other village received none

Companies provided assistance for areas in which heavy equipment is needed and which are relatively expensive, i.e. road construction and levelling of village expansion area. The roads constructed, however, were necessary for timber extraction, so involved no additional cost for the companies. Landscaping around the settlement did incur additional costs and the villages had more trouble in ensuring that this assistance was provided. The construction of other village infrastructure like houses, a village office or meeting halls was partly accomplished.

There seems to have been a move from the early small timber harvest permits with many promises but few of them kept to the later ones where the percentage of promises fulfilled increased, starting with Bila Bekayuk, which did not receive any facilities and Langap, which received few in-kind benefits. The villages of Setarap - Punan Setarap, Adiu - Punan Adiu, and Nunuk Tanah Kibang received approximately half of the promised facilities. In Sengayan, the few items besides the fee payment were all fulfilled and Tanjung Nanga, with the highest fee, had no additional benefits promised. No company made any effort to establish plantations! But villagers do not seem to be too concerned about this.

Employment

Initially, villages envisaged that the small timber harvest permits would provide many opportunities for local employment, as many villagers had previous work experience in logging companies in Malaysia. During the negotiations, the entrepreneurs promised that the logging companies would provide employment for villagers. However, in three villages, people were quickly disillusioned when the companies brought in complete crews and did not provide any local employment. In two of those cases, the villagers demonstrated against the company and the company did, in the end, provide at least some employment for local people.

Villagers were also quick to learn that employment with the companies was less lucrative than anticipated. Payment rates were comparable to other parts of East Kalimantan, e.g. Rp. 2,750 per cubic meter for a chainsaw operator. However, costs of living are higher in Malinau. Secondly, some companies did not pay their employees for several consecutive months. Jobs on the side, like cutting and selling timber for local consumption, actually provided a better source of income. In one village, villagers supplied sawn ironwood to the entrepreneur, earning Rp. 400,000 per cubic meter. The logging company's tractors pulled the ironwood logs out of the forest for free. The local chainsaw operators were claiming that they could produce approximately one cubic meter of sawn timber per day. Since the entrepreneur bought several tens of cubic meters, this provided substantial additional income.

About forty people from four villages worked in logging operations as chainsaw and heavy equipment operators. The presence of small timber harvest permits provided some additional benefits, such as transport. In all villages, people regularly used company vehicles to travel to their fields, go to Malinau or to transport timber for personal use. Individuals in most villages benefited from the opportunity to saw timber for local sale. The presence of company laborers provided a temporary market for vegetables, meat and fish.

Involvement in forest management

Some villages included in their verbal agreements not only local employment but also community control of operations, especially measuring of the volume logged, the size of trees cut and the way logging operations were conducted.

Several local people were, in fact, involved in controlling the operations. However, in some cases, it was the company that paid the salaries of these people and they discouraged them from visiting the logged area too often. Even in Tanjung Nanga, where the community itself paid the salary of the community members, the company tried to discourage or obstruct them from performing their tasks. On the other hand, villagers went to the logged areas to hunt or collect forest products. During these trips, they observed the actual logging operations. However, there are no cases where reports from this informal control have led to action against the logging company if any violations were observed.

Impact on forest

Villagers observed that the logging had a significant impact on the forest. However, as Table 4 shows, villagers had little notion of how large an area was actually affected. Most estimates referred to the official acreage as assigned in the government permit. Some claimed that the impact was limited due to the application of selective logging. Yet in other villages, community members acknowledged that very few trees with diameter > 30 cm were left and that the logging operations had caused much damage to the soil. In four villages, logging operations had damaged peoples' gardens and agricultural fields without prior consultation.

Table 4: Comparison between actual and estimated acreage of forest affected by small timber harvest permit operations

Village	Acreage according to informants ¹ (ha)	Acreage according to permit (ha)	Acreage based on satellite image ² (ha)
Setarap/Punan Setarap	3,000 – 10,000	1,200	207
Adiu/Punan Adiu	1,500	1,500	532
Bila Bekayuk	n.a.	1,050	299
Sengayan	1,300	2,000	18
Langap	5,000	3,000	554
Nunuk Tanah Kibang	2,000	2,000	220
Tanjung Nanga	1,600	2,000	121

1 During a visit in June 2003, between one and four village leaders were asked to estimate the forest area logged by small timber harvest permits

2 Interpretation of January 2003 Landsat satellite image

Table 4 shows that, according to an assessment based on satellite images, the area actually affected by the logging operations is significantly smaller than the concession area allocated to the small timber harvest permits. This information contradicts the general view that small timber harvest permits impacted forest over an area larger than their official assigned concession due to a lack of control by government agencies. In the case of Malinau, three main factors influenced the operations of the small timber harvest permits, minimizing their impact. First of all, in the Malinau watershed, timber is still readily available at short distances from the logging roads previously established by logging concessionaires. Secondly, many small timber harvest permits used second-hand heavy equipment in (very) bad condition, virtually prohibiting major logging operations due to the high frequency of equipment breakdown. Thirdly, during this period the timber price was very low, further forcing the small timber harvest permits to minimize costs to maintain their profit margin. An additional problem small timber harvest permits faced was the rugged terrain in Malinau, which has already slowed down forest exploitation over the last twenty years.

Further ground validation of the areas affected by logging proved that some caution is needed when relying on satellite images to estimate the total forest area affected. The survey revealed that some of the areas that were logged early on (in 2000 – 2001) did not show up on the satellite image.

Although the immediate impact on the forest over the last two years is relatively small, small timber harvest permits have further extended the road network in a substantial part of the Malinau watershed. On the satellite image (Landsat January 2003), main and log roads accounted for an average of 69% of the still visible impact on the forest. This expansion of the road network creates opportunities for future forest exploitation.

In June 2003, village elites and community members involved in small timber harvest permits tended to downplay the negative impacts of the small timber harvest permit operations on the forest. This was after the small timber harvest permits had stopped logging and many villages were negotiating new deals with companies in the hope that logging and the flow of fee payments would continue. In November 2002, the district head of Malinau informed all small timber harvest permits that their permits would not be extended. During this transitional period, entrepreneurs tried to obtain new permits to convert small timber harvest permits into logging concessions (known as Izin Usaha Pemungutan Hasil Hutan Kayu (IUPHHK), with a maximum acreage of 50,000 ha per concession). The entrepreneurs also approached the villages to get their support for continued logging in their village territory. We know at least three cases in which the villagers thought that

downplaying the impact might increase the chances of new permits being granted. At the same time, in villages that received limited benefits or villages without small timber harvest permits, people tended to be more outspoken about the negative impact of logging operations on the forest's condition.

Impact on territory

At an early stage, villages recognized that small timber harvest permits only wanted to operate in village territories that were undisputed. Thus in order to be able to attract a small timber harvest permit, villages had to settle any outstanding conflict over village boundaries. In some cases, this condition was positive and stimulated neighbouring villages to come to boundary agreements.

In other cases, it actually aggravated disputes over territory and resource control. In these villages, the discussions concerning distribution of benefits and control over certain parts of the village territory became increasingly heated over time. In one case, one of the reasons given for early termination of logging operations was because no agreement could be reached between the two villages.

It is still too early to draw conclusions about how far the issuing of small timber harvest permits has influenced access to and rights over certain areas. The small timber harvest permits were issued for logging in customary (*adat*) territories, so it could be interpreted as an indirect recognition by the district government of claims by the communities. The local government so far has been hesitant to deal with the question of recognition of traditional rights because there are many different ethnic groups and different interpretations of *adat*. On the community side, there are no examples so far where the issuance of small timber harvest permits was used as an argument to strengthen their claim over a certain territory.

What lessons have been learned?

Short-term gain versus long-term interest

The period during which small timber harvest permits were granted was one of rapid change and great uncertainty. The district of Malinau had just been established, regional autonomy was to be implemented, authority over forestry policy was being debated and the district government's view on issues such as tenure, *adat* and community involvement in forest management was not clear. This situation of uncertainty provided little incentives for villages, and especially village leaders, to be too concerned about long-term interests. For example, it is still not clear whether the district government will recognize village tenure based on *adat* claims. It is quite possible that it will follow a centralized system of resource control and allocation similar to that prior to decentralization. An additional factor was that the companies put pressure on villages to come to an agreement quickly. In many cases, short-term gain prevailed over long-term interest.

How to make agreements

Villagers were aware that written agreements with the companies were essential. However, due to a lack of experience and maybe optimism about the companies' trustworthiness, the agreements that were drawn up were ambiguous. For example, they did not specify the size of buildings or sites to be leveled nor the schedule or conditions for payments. The ambiguity in the written agreements provided ample opportunities for the companies to interpret promises to their advantage. Many companies suggested that the villages should finalize the agreement with a notarial deed, supposedly to provide a stronger legal basis. However the villagers never questioned whether or not they knew how to use the notarial deed to take legal action if necessary. Eventually, the notarial deed was never used to take action against a company, despite the fact the certain promises had not been fulfilled by the time the company had ceased operation.

Support for communities

During this phase of rapid change, villages had few opportunities to seek information or support to consider alternative economic options or draw up contracts. There are very few non-governmental organizations (NGOs) active in Malinau district. One NGO was actually accused of being a broker for a logging company. The district government still had limited capacity during the initial stages and often only joined one brief visit to the community accompanying company staff. Thus, villagers had little option to seek assistance at times when they needed it. Companies normally also put (time) pressure on villages, further reducing their opportunity to consult other parties concerning important issues.

Community empowerment

Initially, villages had the impression that their role in small timber harvest permits was crucial. It was the first time businessmen had contacted villagers and that they could directly bargain. The letter of agreement between a community and the company seemed crucial in the permit procedure. The possibility to have community members controlling logging operations further added to the feeling of empowerment. However, after the initial euphoria, villagers quickly realized that their role was actually marginal and difficult to enforce.

Once villagers realized this, they concentrated on obtaining as many tangible benefits as possible. Their main concern was to receive the cash payments. Although villages had little means of controlling logging operations, they had one powerful tool with which to force the companies: stopping logging operations through road blocks or confiscating heavy equipment. Some villages tried to enforce agreements through negotiation or by letter but to little avail. Based on previous experience, they then relied on demonstrations.

Learning curve

The experience in the Malinau watershed shows that villages quickly learn from the experiences of neighboring villages. As mentioned above, the level of per cubic meter payment gradually went up. The negotiation process also became more sophisticated: better defined agreements, including a village meeting to discuss the offer made by the company in the negotiation procedure, keeping lists of villagers attending meetings to show wide support for the agreement. Villages quickly adjusted their negotiation techniques with the companies. Initially they tried to enforce agreements through dialogue by village leaders with company personnel or sending letters to the company with copies to the district government. Because these methods yielded little result, villages used road blockades or threats of road blockades to ensure that the company responded quickly.

What does this mean for the future?

Villages want to have a say in managing the forest in their direct surroundings. The experience with small timber harvest permits has increased villages' desire to be involved in negotiation processes. However, small-scale entrepreneurial logging does not enhance community management. The role of the villages is restricted to giving permission to access their territory, while control remains with the district government. The negotiation process should not only focus on benefits villages obtain from forest exploitation in their territory but also address forest use and management issues.

Villagers have shown to be quick learners in dealing with the small timber harvest permits. Additional information on existing regulations could assist in reducing conflicts and improving implementation. For example, villages could be provided with information on standard benefits or silviculture practices that logging companies have to apply. The villages then might be more confident in checking logging operations in the forest and reporting on violations of

regulations. More information at village level might avoid unrealistic expectations from the villages and thus reduce potential sources of conflict.

Many problems at village level relating to small timber harvest permits can be traced back to a lack of reliable information and transparency. Greater transparency might seem to be against the interests of the village elite. Experience shows that villagers have no problem if people involved in the management of forest exploitation get additional benefits as long as their distribution is acceptable.

When asked about the positive aspects of small timber harvest permits, the villagers first mention economic gains. The opportunity for villages to gain directly from forest exploitation has changed their perception of the value of forest resources. For future forest management systems, it will be important to balance the short-term economic gain that villagers have become used to without compromising long-term options.

If no mechanisms are created to resolve conflicts quickly and adequately, villagers may continue to rely on demonstrations. Villages have become disappointed with existing mechanisms for dealing with conflict, and started to rely on a more radical way of solving problems. To avoid escalation, effective alternative mechanisms have to be put in place.

During the two years of small timber harvest permit operations in the Malinau watershed, the direct impact on the forest was relatively small. It was more a lucky combination of factors that contributed to this than a well-designed and implemented forest management policy. Changing circumstances, such as the depletion of timber sources elsewhere or a dramatic rise in timber prices can quickly result in a rapid, uncontrolled exploitation if no system of checks and balances is developed. The expansion of roads has opened up new areas with high volumes of timber that will continue to attract interest for forest exploitation and increase pressure on forest resources.

In the meantime, forestry policy and permit issuance has been recentralized, the central government arguing that there has been too much abuse and uncontrolled logging. In Malinau, no new logging activities have started since the small timber harvest permit operations ceased. But there are also no new developments concerning the land and forest rights of indigenous people. It remains to be seen how the situation will evolve. For now, we can only speculate: the local government could ally itself with the communities to dispute the recentralization of forestry policy. However, the local government is still concerned about the problems it will face when dealing with the claims (and overlapping claims) of different ethnic groups. Their other, and maybe main concern, will be that - for its budget - the local government is almost completely dependant on central government, so it is unlikely to step too much out of line with central policies. The present "break" in forest exploitation in Malinau could provide a good opportunity for the local government and communities to rethink and discuss issues such as collaboration around forest management, community access and rights to land and forests.

Godwin Limberg M.Sc. is a Dutch agronomist who has worked since 2000 as a consultant for the Center for International Forestry Research (CIFOR) in East Kalimantan, Indonesia. The research on which this paper is based is part of CIFOR's long-term multidisciplinary research in the Malinau Research Forest that addresses the question of how to achieve long-term forest sustainability for a "large forest landscape" by integrating social, ecological and silvicultural aspects.