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# Reduced Emissions from Deforestation and Forest Degradation (REDD) in East Kalimantan, Indonesia: Barriers and Advantages to Project Equitability

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## REDD in Indonesia and the Role of Communities

The Intergovernmental Panel on Climate Change (IPCC) claims that tropical deforestation accounts for 18% of annual global carbon dioxide emissions (IPCC 2007). REDD (Reduced Emissions from Deforestation and Forest Degradation), a framework to improve tropical forest management and conservation for the purposes of climate change mitigation, has therefore emerged as a major component of global climate change discussions. Indonesia, because of the extent and carbon density of its forests as well as its high rates of deforestation, is a major emitter of greenhouse gas emissions to the atmosphere (PEACE 2007). As a result, Indonesia has received significant attention for the potential use of its forests for global climate change mitigation.

REDD has the potential to provide significant benefits to forest-dwelling communities (Brown, Seymour, and Peskett 2008; Luttrell, Schreckenberger, and Peskett 2007). Despite this potential, some researchers have identified a major tradeoff between efficiency and equity in the future for REDD (Chhatre and Agrawal 2009; Seymour 2008). Projects that work intimately with business and government interests at the expense of forest-dwelling communities will likely have a greater efficiency in terms of carbon conserved per dollar spent. This is true in many contexts for 3 reasons. Firstly, forest-dwelling communities in many countries of the tropics have poor land tenure and land management claims (Boyd, Gutierrez, and Chang 2007; Lambin and Geist 2003). Secondly,

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governments and businesses control large tracts of land in the tropics, which may serve to make REDD projects on government and business-controlled land more cost effective than small, community-based projects (Seymour 2008). Thirdly, developing and implementing successful community-based REDD projects can be extremely difficult and complex (Blom, Sunderland, and Murdiyarso 2010).

## Research Objective

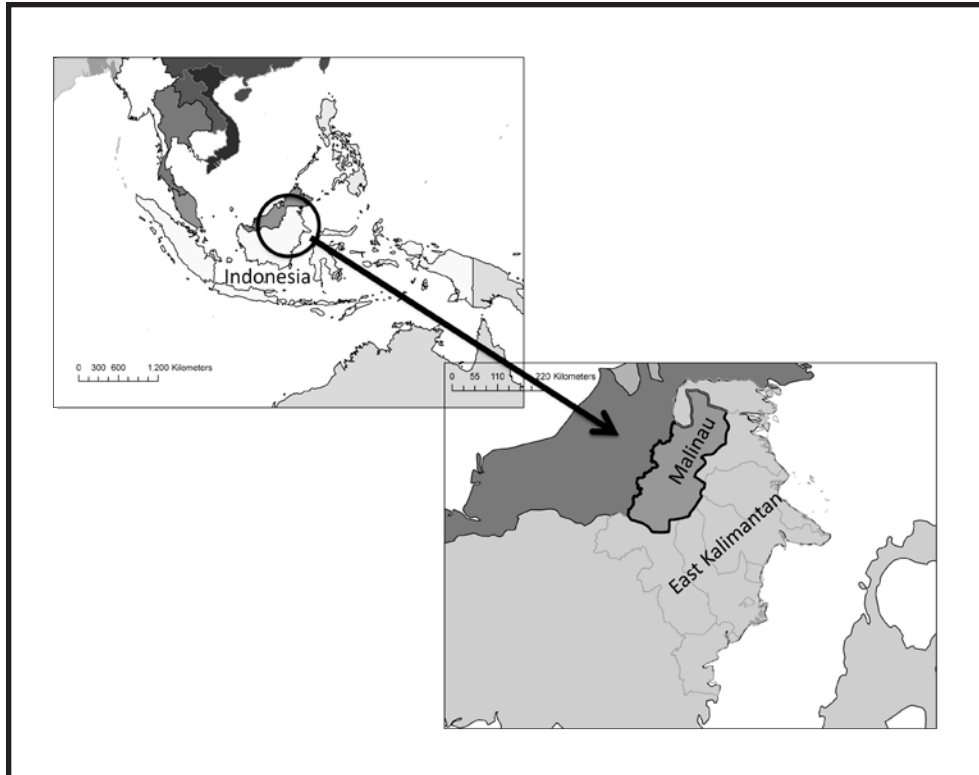
During the summer of 2009 I conducted research on REDD in Indonesia. The objective of this research was to identify, in a representative context, the likely barriers to and advantages of the inclusion of forest-dependent communities in the implementation and design of REDD.

## Study Site

The study site for my field research in Indonesia was Malinau district, located in East Kalimantan province on the island of Borneo (Figure 1). Malinau district is inhabited by at least 18 ethnic groups, most of whom claim indigenous ethnicity (Moeliono and Limberg 2009). Despite widespread deforestation throughout Borneo over the past 20 or more years, 90% of Malinau (~3.62 million hectares) remains forested (Malinau District Government 2007).

Pressure currently exists for deforestation in Malinau, particularly for the establishment of oil palm and *Acacia mangium* plantations (Sandker, Suwarno, and Campbell 2007). As a result, Malinau's forests have received attention for REDD pilot project. One carbon project developer has attempted to move forward with a REDD project in a tract of primary forest straddling the watersheds of the Malinau and Mentarang rivers (Global Ecorescue 2007) (Figure 2). This forest is referred to as Long Ketrok protected forest by the Malinau district government.

Much has been written about the



**Figure 1.** Location of East Kalimantan and Malinau district (shown by arrow within East Kalimantan) in Southeast Asia and Indonesia.

consequences of the process of decentralization that occurred in Indonesia following the fall of the Suharto dictatorial regime in 1998 (McCarthy 2004; Larson 2005; Moeliono, Wollenberg, and Limberg 2009). Following decentralization, district governments (including the Malinau District Government) were given the authority to grant forest concessions (called IPPK) and companies were required to negotiate terms with local communities prior to the start of forest operations. Since decentralization, local ethnicities have come to occupy many positions of power. The current distribution of power among ethnicities is largely a product of colonial-era policies, wherein the Dutch favored some ethnicities (i.e. the Merap) over others (i.e. Punan) (Moeliono and Limberg 2009). Despite the fact that many indigenous ethnicities are highly represented, the district government continues to be unresponsive to the needs of local, indigenous communities (Rhee 2009).

## Methods

I conducted interviews in Bahasa Indonesia with village residents, as well as interviews in a mix of Bahasa Indonesia and English with ministers in the Malinau District Government and workers for REDD-implementing organizations. Village interviews were conducted in 5 villages that surround, manage and claim parts of the Long Ketrok Protected Area (Figure

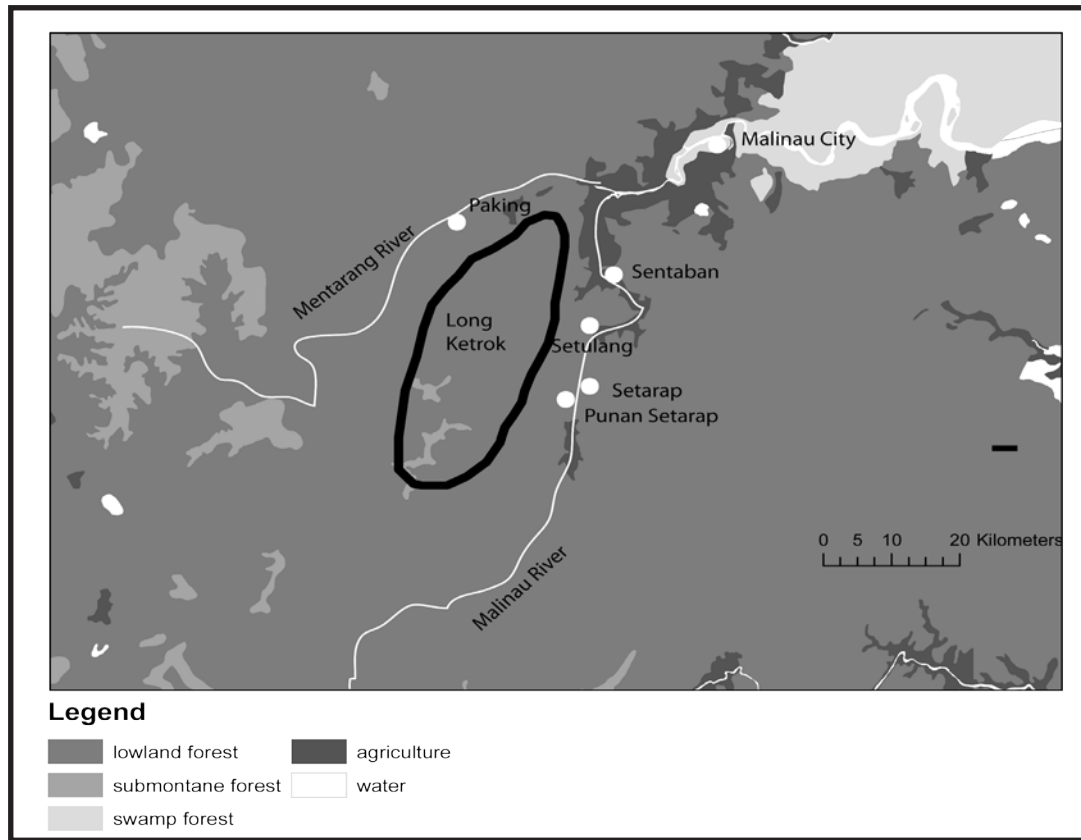
2, Table 1). The total number of community interviews was 45. I attempted to interview men and women, village leaders and other residents, as well as a mix of ethnicities.

## Constraints/Barriers to Equitable REDD

### *Land Tenure Disputes*

In the district government, officials refer to the study site as Long Ketrok and consider the area to be under district government control. However, at the local level the name Long Ketrok is unknown and villagers believe individual communities control this area. Communities use this area for hunting and the collection of rattan, wood resins, medicine, and food. Despite the importance of access to Long Ketrok for local communities, the Minister of the Malinau Department of Forestry claimed that access to the site area would be restricted for anything other than ecotourism if REDD were to begin in the area. At the same time, many villagers consider their continued access to forest products from the primary forest a deal breaker in their decision to support REDD.

Land tenure conflicts between neighboring villages are another potential source of conflict that



**Figure 2.** Study site within Malinau district, East Kalimantan. White dots mark villages where interviews were conducted at community level, except for the white dot to the upper right which marks the location of the district capital, Malinau City. The area outlined in black is approximately the extent of the primary forests of Long Ketrok. This area has been identified as a potential REDD site and is currently managed and claimed by all five communities, in addition to at least two other villages.

could be exacerbated by REDD. Incompatibility between customary land tenure and the tenure systems used by the government is a major source of these conflicts (Scott 1998). Nowhere is this more evident than in the disputes surrounding the land claims of Setulang. Setulang is a relative newcomer to the Long Ketrok area and expanded its boundaries through agreements made with the district government, not with the other villages in the area. Therefore, its claim to this area is considered to be illegitimate by neighboring villages. This land tenure conflict was frequently brought up during interviews, largely out of frustration with Setulang’s rapid expansion and with the perception that outsiders (CIFOR in particular) facilitated this expansion. Despite the possibility for conflict exacerbation, the Minister of the Department of the Environment in Malinau predicted that Setulang would receive more REDD compensation than other villages.

### **Compensation Distribution Problems Within Villages**

While problems arising from compensation distribution between villages could act as a barrier to effective and equitable REDD in Long Ketrok, compensation problems within villages could be equally problematic. Many village residents in Sentaban and Setarap claimed to worry about conflicts arising within their villages over the distribution of compensation from REDD. Not surprisingly, these villages are also villages where major intra-village conflicts exist between ethnicities and between village leaders and non-leaders (Table 1). Intra-village distrust is largely the result of experience with compensation from small logging concessions. In villages that received logging revenues, compensation mishandling was widespread (Limberg 2009). In Setarap, distrust and jealousy among ethnicities was so widespread that

**Table 1.** Data showing the demographics, livelihoods, accessibility and measures of likelihood of future conflict for the five villages where interviews were conducted during my fieldwork.

Village name	Paking	Punan Setarap	Sentaban and Long Kenipe	Setarap	Setulang
Year established	1985	2004	?	1909	1967
2001 number of families	176	24	40	61	209
2001 Population	322	168	186	258	841
2001 Area (km <sup>2</sup> )	85.47	83.81	172.86	87.13	85.47
Number of villages in village area	3	1	3	1	1
Access	Metarang River	Malinau River	Road	Malinau River	Road
Travel distance from district capital (hours)	3	2.5	1	2.5	1.5
Major ethnicities	Mixed	Punan	Abai, Lundaye, Punan, Kenyah	Lundaye, Kenyah, Punan	Kenyah
Eco-tourism support from district	Yes	No	No	No	Yes
Major sources of income	Agriculture, timber revenues	Agriculture	Agriculture	Agriculture	Agriculture, Eco-Tourism, Conservation
Future additional sources of income	Eco-tourism, timber	Oil Palm, Acacia mangium plantations	Oil Palm plantations	Oil Palm, Acacia mangium plantations	Bottled water
Current Land Conflicts	None	Setarap	Setulang	Setulan, Punan Setarap	Setarap, Punan Setarap, Sentaban
Current intra-village conflict	No	No	Yes	Yes	No
Previous IPPK Concession?	Yes	Yes	Yes	Yes	No

the majority of Punan residents decided to start their own village on the other side of the Malinau River to strengthen their claims to traditional land. Ill feelings regarding this dispute are still prevalent in the village of Punan Setarap. If villages are given a major participatory role in REDD, then government officials and implementing organizations will likely choose to deal exclusively with village leaders for the sake of greater efficiency. Village leaders must handle compensation transparently and fairly in order to prevent intra-village conflict.

### ***Deforestation rates are not the result of decisions made at the village level***

Community participation in natural resource management has never been institutionalized in Indonesia because Indonesia's top-down approach to forest management is not compatible with community-based resource management (Nanang and Inoue 2000). In order for communities to manage their own forests, they must have the decision-making power to do so. Despite attempts at decentralization, the Indonesian national government retained control over particularly profitable industries, and Indonesia's

decentralization has always been characterized by institutional overlap and confusion (Larson 2005). Therefore, unless the entire system of top-down forest management is reconfigured, decisions that determine land use and management over large scales will continue to be determined without the input of communities. Residents in Paking village claimed that they believed that REDD could happen, but that it was the government and companies that cut the forest, not the villagers. Nearly all villagers interviewed claimed that the village would not clear their primary forest even if REDD does not happen. This suggests that, at least initially, the most effective and efficient destination for REDD funding may be the district government or companies, not the villagers themselves. However, these company and government-focused projects raise issues regarding project equitability and governance (see Conclusions section).

## **Advantages to Involving Communities in REDD**

### ***Establishment of a Future Constituency for Conservation***

Interviewed residents in every village valued the conservation of forest for a variety of reasons, including the provision of forest products, regional climate moderation and the preservation of cultural identity. In many instances, villagers were highly supportive of initiatives to conserve forest and preferred compensation for conservation to compensation for logging, mining or plantations. One particularly pro-conservation advocate in Sentaban, when asked about her expectations regarding compensation said, "I don't worry or care about compensation. I want the forest for my grandchildren." A resident of Punan Setarap claimed, "Villages that have forest are cooler. People in villages that have lost their forest are sick."

The Long Ketrok area is one region where REDD could be used to gain a long-term, supportive constituency for forest conservation. Indeed, many of these villages claim that they have been conserving forest for centuries. The Kenyah people of Setulang refer to their system of conservation as Tane Olen and claim that this system has a history that dates back through their oral tradition (Figure 3, Iwan and Limberg 2009). If REDD were to be done without the participation and compensation of forest-dependent communities, REDD and conservation could come to be viewed as another form of resource appropriation.

In this case, REDD would be similar to national timber and mining concessions that bypass the rights of local communities for the sake of greater project efficiency.

### ***Is Pro-business/government REDD really efficient?***

Without community support, REDD projects would be vulnerable to project disruption by uncompensated communities. As one Setarap resident claimed, "I don't worry about our village not receiving compensation because if we do not receive compensation the project will not work. We will end the project." This situation could lead to higher enforcement and monitoring costs that reduce efficiency, or to complete project failure.

From a development perspective, the inclusion of communities could serve to actually increase efficiency. Most village residents claimed that they would like their village to be compensated with development projects, instead of monetary compensation. The most common suggestions were to compensation in the form of medical or educational supplies or buildings. An inclusive REDD project could promote community development across multiple sectors, while also serving to ensure local support for REDD.

## **Conclusions**

The way in which Reduced Emissions from Deforestation and Forest Degradation (REDD) is implemented as an institution in relation to previously existing institutions will likely have a major impact on its eventual success. The governance situation in Malinau is characterized by institutional confusion, corruption and distrust at every level of government. To simply graft REDD onto currently existing institutions will probably have very little impact on forest management practices. In fact, such a move could even serve to exacerbate current conflicts, corruption and resource expropriation. On the other hand, REDD could be a transformative institution that promotes good governance and cross-sector collaboration. The ability of REDD to do so is dependent on the ability of implementers to draw on lessons from previous attempts at institutional transformation (Cashore et al. 2007; Levin, McDermott, and Cashore 2008).

As mentioned previously in this article, a trade-off between efficiency and equity in REDD will likely be an important characteristic of REDD (Seymour 2008; Chhatre and Agrawal 2009). Some

researchers, including myself, believe that there is a moral obligation for REDD to significantly improve the lives of forest-dwelling communities (Brown, Seymour, and Peskett 2008; Luttrell, Schreckenberg, and Peskett 2007). If REDD is to be implemented in a way that ignores the warnings and requirements of local communities then REDD is probably not worth implementing at all.



**Figure 3.** 4 meter (>13 feet) DBH Dipterocarp tree (*Shorea meranti* spp.) in Setulang's Tane Olen forest, which forms part of Long Ketrok Protected Forest.

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