

## **Policy Options for Effective REDD Implementation in Indonesia: the Significance of Forest Tenure Reform**

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# Policy options for effective REDD+ implementation in Indonesia: the significance of forest tenure reform

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## SUMMARY

Indonesia, which contains the third-largest area of tropical forest in the world, is currently exploring policy options for the effective implementation of REDD+, the global initiative to reduce emissions from deforestation and forest degradation. This article analyses the major questions regarding the effective distribution of benefits on the basis of three village case studies in Kutai Barat district in the province of East Kalimantan. The case studies demonstrate that companies are unlikely to take up compensation payments for stopping large-scale activities that cause deforestation and forest degradation, due to high opportunity costs. REDD+ finance may be more effectively used to reward small-scale dispersed activities that enhance carbon stocks, such as those already happening under Indonesia's community nursery programme. The analysis indicates the necessity for forest tenure reform, and in particular recognition of customary forest tenure through communal titles, which is more advantageous than the transfer of individual titles to households.

Keywords: REDD+, Indonesia, forestry, tenure reform, customary rights

## Options de politiques pour une mise en exécution efficace de la REDD+ en Indonésie: signification de la réforme de la tenure forestière

M. SAITO-JENSEN, T. SIKOR, Y. KUNIAWAN, M. EILENBERG, E.P SETYAWAN et S.J. KUSTINI

L'Indonésie, qui contient la troisième des plus grandes zones forestières du monde, explore en ce moment des options de politique pour assurer une mise en exécution efficace de la REDD+, l'initiative globale pour réduire les émissions provenant de la déforestation et de la dégradation forestière. Cet article analyse les questions majeures liées à la distribution efficace des bénéfices, en se basant sur trois études-cas dans des villages du district du Kutai Barat dans la province du Kalimantan de l'Est. Les études-cas démontrent qu'il est improbable que les compagnies prennent en charge les paiements compensatoires pour arrêter les activités à grande échelle responsables de la déforestation et de la dégradation forestière, du fait du haut coût des opportunités. La finance de la REDD+ serait utilisée plus efficacement pour rétribuer les activités à petite échelle parsemées, qui renforcent les stocks de carbone, tels que celles déjà incluses dans le programme de pépinières communautaires indonésien. Cette analyse indique la nécessité d'une réforme de la tenure forestière, et, en particulier, d'une reconnaissance de la tenure forestière habituelle par les titres communaux, laquelle est plus avantageuse pour le transfert des titres individuels aux foyers.

## Opciones políticas para la implementación efectiva de REDD+ en Indonesia: la importancia de la reforma de la tenencia de terrenos forestales

M. SAITO-JENSEN, T. SIKOR, Y. KURNIAWAN, M. EILENBERG, E.P. SETYAWAN y S.J. KUSTINI

Indonesia, un país cuya área de bosques tropicales es la tercera mayor del mundo, está examinando en este momento sus opciones políticas para la implementación efectiva de REDD+, la iniciativa global para reducir las emisiones derivadas de la deforestación y la degradación forestal. Este artículo analiza las cuestiones principales relativas a la distribución efectiva de beneficios, sobre la base de tres estudios de caso de aldeas del distrito de Kutai Barat en la provincia de Kalimantan Oriental. Los estudios de caso demuestran que es poco probable que las empresas accedan a recibir pagos en compensación por detener las actividades a gran escala que causan la deforestación y la degradación de los bosques, debido a los altos costos de oportunidad. Los fondos de REDD+ se pueden utilizar de manera más eficaz para recompensar actividades dispersas de pequeña escala que aumenten las reservas de carbono, como las que ya están teniendo lugar bajo el programa de viveros comunitarios de Indonesia. El análisis indica la necesidad de una reforma de la tenencia de terrenos forestales, y en particular del reconocimiento de la tenencia forestal consuetudinaria por medio de títulos comunales, lo que es más ventajoso que la transferencia de los títulos individuales a los hogares.

## INTRODUCTION

Indonesia is of central interest to global REDD+ efforts because it contains the third-largest tropical forest in the world after Brazil and the Democratic Republic of Congo (FAO 2010). Forest covers an estimated 94 million ha,<sup>1</sup> making efforts to conserve and increase forest carbon stocks an important part of Indonesia's action to lower its greenhouse gas emissions. In September 2009 the President of Indonesia, Susilo Bambang Yudhoyono, announced a target of 26 per cent reduction in national emissions by 2020, with 41 per cent to be achieved in the forestry sector, particularly through REDD+ (Ministry of Forestry 2010a).

In 2012, the government of Indonesia developed a national REDD+ strategy (Indonesia REDD+ Taskforce 2012). The strategy provides overarching strategic guidance for the implementation of REDD+ within the country. The strategy includes policies and measures to tackle deforestation and forest degradation, a national approach to safeguards, benefit sharing and forest monitoring systems. As regards benefit sharing, the strategy notes that "all parties with rights over the area of the REDD+ programme/project/activity location have the right to payment" (page 32). The strategy also explains that benefit sharing entails 1) the clarification of land rights (tenure) status, 2) the identification of potential regional income loss, 3) the identification of stakeholders who contribute to carbon absorption functions and 4) the provision of payments on the basis of results.

While the strategy provides general guidance on benefit sharing, two major questions remain regarding the effective implementation of REDD+. These questions are the foci of the present article. The first relates to the kinds of activity that may be eligible for payments. REDD+ payments can be targeted to affect decisions causing deforestation or forest degradation (Luttrell *et al.* 2012). REDD+ in Indonesia may target payments to cover opportunity costs of logging, oil-palm and mining operations as the primary activities causing deforestation and forest degradation. REDD+ payments may also be used to reward activities that contribute to carbon sequestration, such as the conservation and sustainable management of forests. This option would allow Indonesia's REDD+ activities to include other types of actors engaged in forest management, such as local communities. The second question is whether REDD+ initiatives ought to go beyond the mere clarification of tenure and strive for formal recognition of local communities' customary rights to forests. According to the Forest Peoples Programme (FPP 2012), between 80 and 95 million people in Indonesia are estimated to depend on forests for substance and income, most of whom have made customary claims to forests and lands.

Looking beyond Indonesia, the evidence suggests that REDD+ may benefit from taking a community-based approach. Based on a study of 80 communities in 10 countries

in Asia, Africa and Latin America, Chhatre and Agrawal (2009) argue that community control over forests tends to lead to better forest conditions. It is also argued that because local communities are generally *de facto* users of forests they may not support sustainable forest management if they do not perceive that REDD+ offers tangible benefits (Resosudarmo *et al.* 2012). Hence recognition of communities' rights to resources is seen as an important strategy, not only for promoting sustainable forest management but also for improving their forest-based livelihoods (Larson 2011, Sikor 2010, White 2011).

However, recent research also cautions against blanket endorsement of community management. This is both because local communities are highly variable in size, social composition and resource endowment, and because community control over resources has resulted in resource deterioration in some instances (Agrawal and Gibson 1999, Saito-Jensen and Nathan 2011, Sikor and Tran 2007). For instance, a case study of Joint Forest Management (JFM) in India, where communities were given *de jure* rights to manage forests, showed variable outcomes in terms of the degree to which resources were conserved and communities benefited from the allocation of *de jure* rights to forest-derived benefits (Saito-Jensen and Nathan 2011). *De jure* rights are typically framed by policies, laws and regulations that define which actors have the formal rights to benefit from particular resources (Ribot and Peluso 2003). In addition, other studies suggest that giving communities *de jure* rights to resources does not necessarily enable them to benefit from them; conversely, the lack of *de jure* rights does not necessarily prevent accessing resources (see Sikor and Tran 2007). For instance, local communities with *de jure* rights may be unable to obtain the benefits to which they are formally entitled if powerful outsiders refuse to share benefits. On the other hand, local communities may be able to exercise *de facto* rights (for example, customary claims) to benefit from resources even without the allocation of *de jure* rights. Thus researchers have called for attention to *de facto* as well as *de jure* rights, in order to understand how the distribution of both can affect forest management over time.

Building on these arguments, this article explores the major policy options for effective REDD+ implementation in Indonesia. We identify key actors involved in making *de jure* and *de facto* claims on forests and how they use forest. We also examine changes in the distribution of *de jure* and *de facto* rights among these key actors and analyse changes in forest management over time. We then explore the linkages between changes to *de jure* rights and forest management.

The article begins with a brief review of the major causes of deforestation and forest degradation in Indonesia and a discussion of the allocation of *de jure* rights related to forests. The article then describes three case studies of villages in the Kutai Barat district of East Kalimantan province, where forests have been under growing pressure from concessions.

<sup>1</sup> This figure comes from FAO (2010) and is hotly contested. Estimates of Indonesia's forest cover differ greatly depending on the organisation undertaking the measurement and the definition of 'forest' used (see Indrarto *et al.* 2012).

For the first two case-study villages, Penarung and Batu Majang, the article analyses customary claims and practice in controlling and using forest resources and investigates how different forest-derived benefits have been distributed among villagers. It then turns to an examination of how the allocation of concessions within the village areas has impacted current use of forest and land resources. For the third case-study village, Linggang Melapeh, the article presents a benefit distribution initiative called a community nursery programme, introduced by the Ministry of Forestry (MoF). Specifically, it analyses how this initiative may help to increase forest carbon stocks while simultaneously generating benefits for villagers. The insights gained from these three villages provide powerful evidence of the importance of forest tenure reform for effective REDD+ policy implication in Indonesia.

#### DATA COLLECTION AND METHODS

The villages of Penarung, Batu Majang and Linggang Melapeh were purposely selected to exemplify different forest tenure situations. Since WWF Indonesia has had long-term on-going collaboration with the three villages, basic data about the villages were available. This included the number of households, the size of village land, information about different types of concessions, and land-use maps. Fieldwork conducted between February 2012 and January 2013 mainly focused upon verifying the available data through participatory mapping and on understanding different stakeholders' perceptions of existing tenures and the benefits local communities derived from different land uses. The fieldwork consisted of transect walks and semi-structured individual and group interviews with all major local stakeholders such as village chiefs, individual households and concessionaires.

#### DYNAMICS OF DEFORESTATION AND FOREST DEGRADATION IN INDONESIA

According to FAO (2010), about 20 per cent of Indonesia's forest cover disappeared between 1990 and 2000 with an average annual loss of 1.9 million ha. Although the speed of deforestation declined between 2000 and 2010, it continued at an annual rate of 0.5 million ha (*ibid.*). The activities driving deforestation and forest degradation vary, but can largely be attributed to commercial and illegal logging, and to oil-palm development and mining activities (Brockhaus *et al.* 2011).

Since the late 1960s Indonesia's government has promoted commercial logging in support of national economic development (Barber 1998). Logging areas expanded significantly with growing global demand for timber products such as plywood, sawn timber, pulp and paper (Padoch and Peluso 1996, Potter 1991). According to Nawir *et al.* (2007), by 1990, 557 logging companies managed a total of 59 million ha of forest area. This 'green gold' era peaked in the mid-1990s, just before economic crisis and political upheaval hit the country in 1998 (Barr 2001).

Even though commercial logging has declined since the peak years it remains a significant force in the degradation of Indonesia's forest today. Immediately after the end of the Suharto regime, the central government transferred the power to grant small-scale logging concessions to district governments, as part of wider decentralization reforms. The district governments took advantage of their greater autonomy in forest management and issued thousands of small-scale concessions (Barr *et al.* 2006, Brockhaus *et al.* 2012, Galudra *et al.* 2011, McCarthy 2004). This led to rapid deforestation and forest degradation across the nation (Resosudarmo 2003, Yasmi *et al.* 2006). Due to the alarming rate of deforestation, the central government has since reasserted control over forest management, including decisions to allocate logging quotas and the issuance of permits for timber extraction (Luttrell *et al.* 2014, Wollenberg *et al.* 2006). In recent years there has been a notable decline in both the number of logging companies and the area under concessions. According to the Ministry of Forestry (2010b), the number of logging companies had dropped to 263, managing 22 million ha of forest area.

While logging has gradually declined, the rapid expansion of oil-palm and mining operations now constitutes a major threat to remaining forests and may present a challenge to REDD+ implementation. The government has promoted palm oil and coal as cash commodities since the early 1990s. By 2010, the total area under oil palm plantation had expanded to 8 million ha (Ministry of Agriculture 2010), making Indonesia the largest producer of crude palm oil. By 2013, the Ministry of Forestry had also issued permits for exploratory mining on 2.7 million ha of forest and use-permits for mining for an additional 0.4 million ha of forest (Ministry of Forestry 2013).

#### ALLOCATION OF *DE JURE* RIGHTS REGARDING FORESTS

All land in Indonesia is officially classified as either forest or non-forest areas. According to the Ministry of Forestry (2010c), approximately 70 per cent of the entire country (133.5 million ha) is designated as forest area. This does not imply that all areas classified as forest are actually covered by forest, or that there is no forest in non-forest areas.

The designation of land as forest areas provides the Ministry of Forestry with direct control over the classified areas and with the ability to allocate lucrative timber concessions. Ministry control was reduced with the decentralization reforms between 1999 and 2004, as the power to grant small-scale concessions was transferred from central to district government (Brockhaus *et al.* 2012, Galudra *et al.* 2011, McCarthy 2002, Wadley and Eilenberg 2005). However, from 2002 onwards the Ministry successfully revoked the power of district governments to allocate logging quotas and issue permits for timber extraction and reasserted its control over forest areas (Luttrell *et al.* 2014).



Since 2001 district governments have been granted the authority to issue permits for estate crop and mining concessions in land classified as non-forest areas (Galudra *et al.* 2011, Luttrell *et al.* 2012). District governments and politicians have shown strong interest in issuing such permits, partly because they generate local tax revenues and partly because they generate a lucrative illicit income for government officials and community leaders (Indrarto *et al.* 2012).

The distinction between land classified as forest and non-forest areas also has implications for the recognition of customary forest tenure. Even though Indonesia's Constitution states that 'the state recognizes and respects customary law communities and their traditional rights',<sup>2</sup> the 1999 Forest Law subjects customary forest tenure to the state regulations and severely restricts opportunities for recognizing customary tenure. Article 1.6 states: "Customary (Adat) forests are state forests located in indigenous peoples' territories". The Forest Law further states that customary forest tenure is valid only as long as it does not contradict statutory law, stipulating that local communities can use customary forest for subsistence only. These provisions are different from those of the 1960 Basic Agrarian Law, which recognized customary land tenure as a separate category from state and private ownership of land in Sumatra, Kalimantan and Papua. However, a recent ruling by Indonesia's Constitutional Court in May 2013 may have important implications for the future recognition of customary forest tenure. This ruling removed customary forest land from state land and thus invalidates the limitations imposed by the 1999 Forest Law.<sup>3</sup> The guidelines for implementing the 2013 ruling are still unclear, however, and whether and how the Ministry of Forestry will abide by the court ruling remains to be seen. In an official letter to governors and district heads in Indonesia dated July 2013, the Ministry of Forestry states that the Ministry will continue to make classifications of customary forests.<sup>4</sup>

In spite of these legal changes, the distinctions between forest and non-forest and the official recognition of customary forest tenure are often of limited practical consequence. On the one hand, the Ministry of Forestry and district governments grant legal recognition of customary territories and tenure only in exceptional cases, despite the fact that the Basic Agrarian Law and Forest Law potentially recognize customary tenure. One reason is found in local communities' difficulties in fulfilling certain legal requirements to prove their rights (Indrarto *et al.* 2012, Wollenberg and Kartodihardjo 2002). But perhaps a more important factor is that the Ministry and district governments have few incentives to allocate legal rights to customary communities, since this may cause problems with issuing permits for lucrative plantation or mining concessions (Engel and Palmer 2006, Indrarto *et al.* 2012). On the other hand, district governments have taken significant liberties in issuing permits for concessions

in forest and non-forest areas without seeking the required Ministry approval (Indrarto *et al.* 2012). This has occurred for different reasons, including the confusion created by the use of different land-use maps and data by different government agencies, the lack of clarity about the power and responsibilities of government agencies, and district governments' failure to follow national regulations. Nevertheless, this *de facto* ability of district governments to issue permits indicates their substantial power in land-use decisions on the ground.

Thus there are powerful forces causing deforestation and forest degradation in Indonesia. Companies demand concessions for logging and aim to convert forest to oil-palm plantations or open-pit mines. In response, district governments grant these concessions to raise tax revenues and generate illicit personal income (Indrarto *et al.* 2012). Indonesia's REDD+ programme has sought to address these drivers of deforestation and forest degradation in different ways. In May 2009, for example, the Government of Indonesia co-signed a letter of intent with the Government of Norway promising a two-year moratorium on the allocation of new concessions on peatland and primary forest (Solheim and Natalegawa 2010). However, the evidence suggests that the moratorium has been largely ignored in several parts of Indonesia (Edwards and Laurance 2011). The government also established the National REDD+ Task Force, under the President's Office. This task force published the National REDD+ Strategy in June 2012. The major policy options identified in the Strategy are the subject of the following analysis.

#### THE SETTING: KUTAI BARAT DISTRICT IN EAST KALIMANTAN, INDONESIA

Kutai Barat district is located in the western part of East Kalimantan province (see Figure 1). Dayak groups, particularly Benuaq, Bahau, Kenyah and Bentian, constitute the majority of its population. Villagers have claimed customary rights to land and forest for generations and have distributed these rights among themselves.

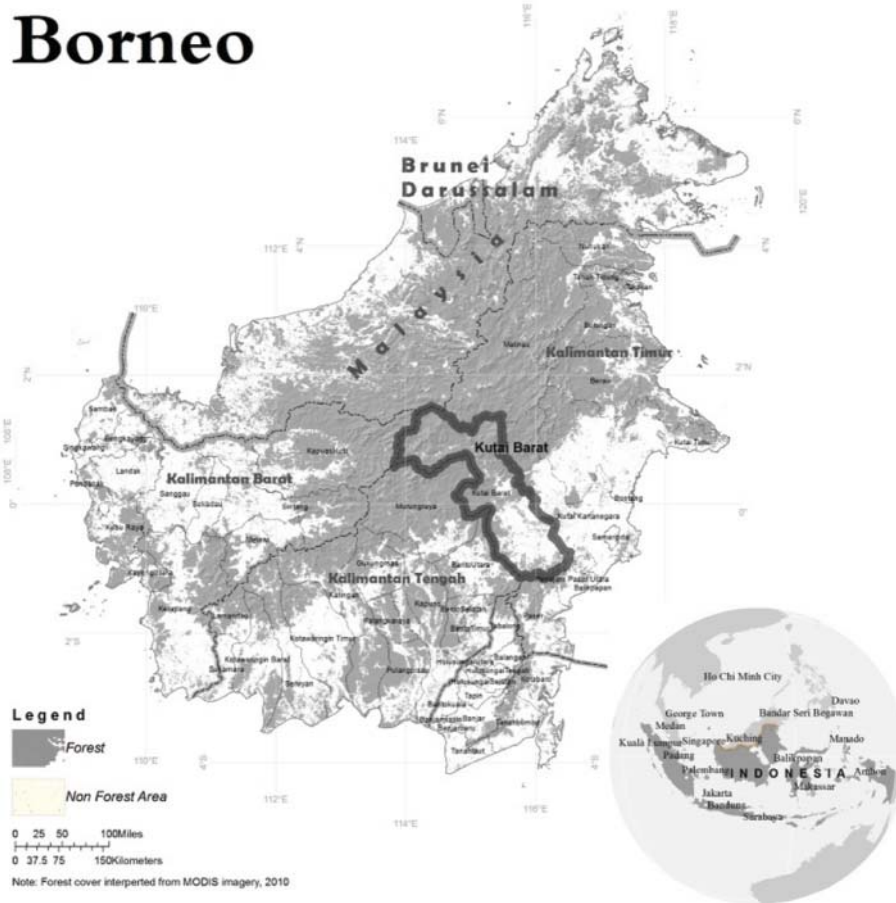
At present it is estimated that 2.2 million ha (67 per cent of the land) in Kutai Barat are under concessions including for logging (1.4 million ha), agro-industrial plantation, mainly of oil palm (0.6 million ha), and mining (0.5 million ha) (WWF 2012). These numbers indicate a mounting threat to local communities' customary use of forest and land due to the expansion of the concessions into village territories (Goenner *et al.* 2007). Almost all villages in the district are surrounded by concession areas. This is also the case for two of the three villages covered in this study, Penarung and Batu Majang. In Penarung, 4 000 ha of non-forest area are currently allocated as concessions to mining and oil palm companies. In Batu Majang, a concession for a total of 59 000 ha within the forest

<sup>2</sup> Article 18 B (2) of the second amendment to the 1945 Constitution.

<sup>3</sup> Constitutional Court Ruling 35/PUU-X/2012, 16<sup>th</sup> May 2013.

<sup>4</sup> See letter SE 1/Menhut-II/2013 on Constitutional Court's Decision No. 35/PUU-X/2012 issued by the Ministry of Forestry.

FIGURE 1 Kutai Barat District in East Kalimantan



Source: WWF Indonesia (2012)

area, covering the whole village area, has been granted to a logging company.

In 2012, Kutai Barat district joined the community nursery programme introduced by the Ministry of Forestry in 2011 as part of the government's REDD+ one billion trees programme (Ministry of Forestry Regulation No. 61/Menhut-II/2011). Although national in scope, this programme is implemented at the district level by the district forestry service. By providing grants of IDR 50 millions to village cooperatives, the programme aims to plant a billion trees to reduce emissions from the forest sector (USD 5 622 at the exchange rate of January, 2011). To receive the grant, villagers are required to form a cooperative of at least 15 members that will plant a minimum of 50 000 seedlings of timber or fruit tree species. The Ministry has adopted performance-based payment to ensure successful implementation of the programme. The grant is disbursed in three instalments based on the demonstration of achievement; i.e. the number of seedlings planted in the nurseries. The district forestry service makes the first, second and third disbursements on the condition that the cooperative achieves the target production of a total of 10 000, 40 000, and 50 000 seedlings respectively.

About 30 villages in Kutai Barat have enrolled on the community nursery programme. Most are located within easy reach of the district forest office. In Linggang Melapeh

villagers have set up three cooperatives to participate in the programme.

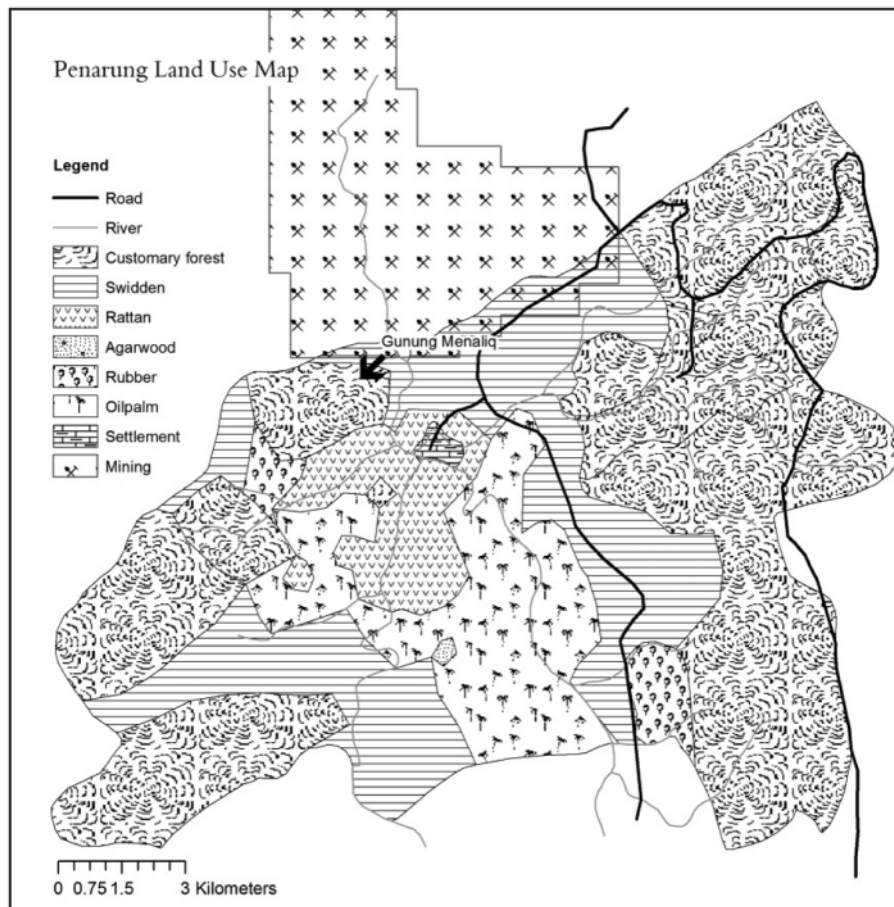
The three case-study villages in Kutai Barat offer important insights for REDD+ implementation in Indonesia.

#### **Penarung village: mining and oil palm concessions**

Penarung village comprises 82 households inhabited by the Benuaq-Bentian ethnic group. The average monthly household income is IDR 3–3.5 million (USD 331–386 at the exchange rate of January 2012) (Castella *et al.* 2012). The village area covers 23 300 ha, including forest area (14 700 ha) under the jurisdiction of the Ministry of Forestry and non-forest area (8 600 ha) under the jurisdiction of the district government.

Since they first settled there approximately 100 years ago, villagers have used land and forest in both forest and non-forest areas on a customary basis but they have never received legal title (see Figure 2). Over the generations, they have developed a shared understanding of what land belongs to which household, although disputes occur among the villagers at times. Households practice rotational cultivation of rice, vegetables and fruits on the land, collect timber, firewood, and non-timber forest products around their houses or in their agricultural fields, manage mixed fruit, vegetable and rubber plantations and protect naturally-regenerating forests in

FIGURE 2 Land use in Penarung village



Source: WWF (2012)

fallow land. They also protect a 460 ha patch of forest called Gunung Menaliq, inhabited by ancestral spirits. To ensure effective forest protection the villagers have formed a group with around 50 members.

Villagers' customary use of land and forest was first interrupted in the 1980s, when the Ministry of Forestry granted a company a concession for a timber plantation. In 1995, the central government granted another concession affecting villagers' land, this time to a mining company. The mining concession included 2 800 ha in the non-forest area that the villagers considered part of customary village territory, and which was used by 31 households for rice production and as fallow land. The company offered an average fee of IDR 10 million (USD 4 367 as per the exchange rate of November, 1995) per ha to the customary landholders as compensation. Because of the high level of the compensation the villagers willingly leased their lands to the mining company.

In 2010, a third company arrived in Penarung with an oil palm project. A plantation company obtained a location permit for 2 000 ha of village land in a non-forest area. The company offered compensation equivalent to IDR 1.5 million (USD 160 at the exchange rate of January, 2010) per ha for the loss of trees. It also invited the villagers to work on the oil palm plantation as supervisors of migrant workers for a daily wage of IDR 45 500 (USD 5 at the exchange rate of January,

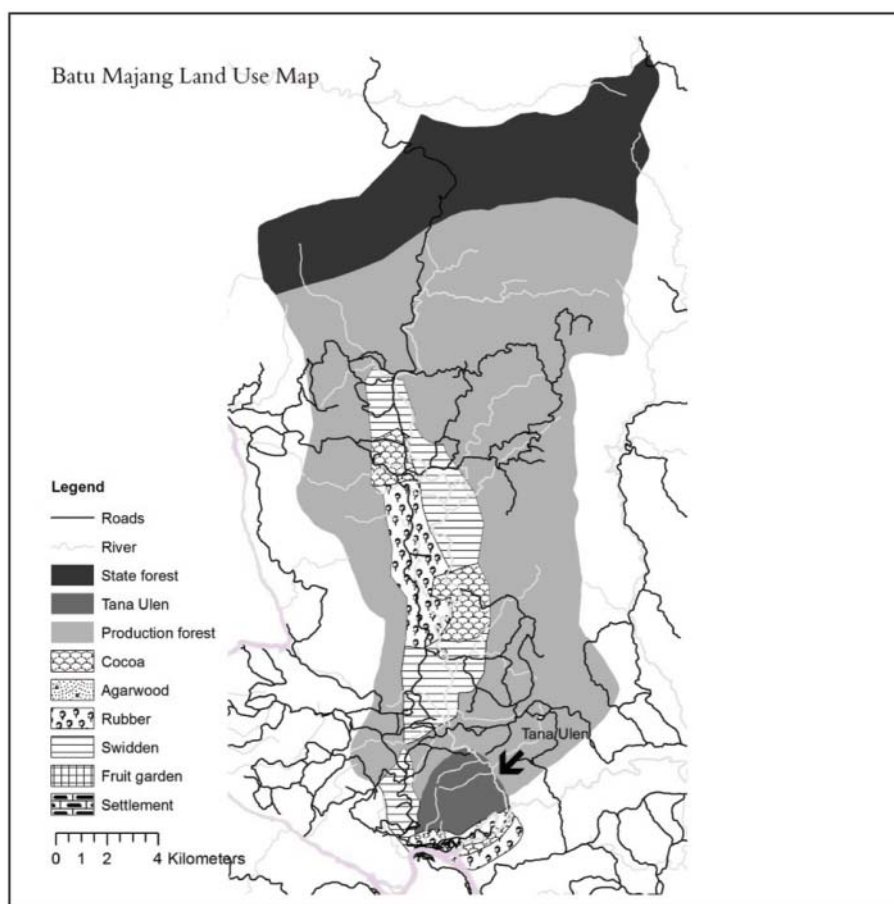
2010). Furthermore, it promised the villagers that it would leave 20 per cent of the concession area in their hands as required by government regulations (Ministry of Agriculture Reg. No. 26/OT 140/2/2007).

This time the villagers were divided about the benefits of leasing their land to the oil-palm company. Of the 82 households holding customary rights to the land, 60 agreed to lease the land for 30 years in order to receive the promised economic benefits. The rest refused to give up their land, due in part to their concern about the negative ecological impacts of the plantation and in part to their dissatisfaction with the level of compensation. Consequently the company was only able to acquire a total of 1 200 ha by the end of 2012, falling short of its target of 2 000 ha.

In 2012, yet another mining company came to Penarung with an expression of interest in exploiting a coal deposit beneath the customary Gunung Menaliq forest. Villagers were again divided about whether or not to lease the land to the company, in this case because of the religious and environmental values they attach to this part of the forest. Some villagers reasoned that the forest provided the village with vital social and environmental values, while others, particularly younger ones, complained that protecting the forest would impose unreasonably high costs on the village and insisted on selling it to the mining company. In December 2012, villagers



FIGURE 3 Land use and classification in Batu Majang



Source: WWF (2012)

finally decided not to lease any land to the mining company. This collective decision has not stopped the company making further efforts to persuade villagers, e.g. by increasing the amount of compensation offered.

The data from Penarung indicate that neither the central nor district governments consider villagers' customary rights when granting concession permits. Even so, concessionaires acknowledge the villagers' customary rights in that they consult them prior to beginning their operations in the field and offer them compensation. The concessionaires largely determine the amount of compensation, although villagers can indirectly negotiate the rate by refusing to lease their land. The insights from Penarung also suggest that compared with individual possession, collective possession of land puts local communities in a more powerful position, particularly in the case of socially cohesive communities such as Penarung. When land is in collective possession and when communities possess functioning rules and processes for collective decision-making, concessionaires cannot buy off individual villagers or play them off against one another.

#### **Batu Majang: a village within a logging concession**

Batu Majang village has 265 households belonging to the Kenyah ethnic group. The average monthly income of IDR

4–4.5 million (USD 441–496 at the exchange rate of January 2012) per household is slightly higher than that of Penarung (Castella *et al.* 2012) whereas village area is slightly smaller, covering around 22 000 ha. The village was first recognized by the government in 1982, although villagers have inhabited this area since early 1900s. The major access route to the village is by riverboat, which is also the principal means of transportation to schools, health clinics and markets. As in Penarung, for the past four decades, the villagers of Batu Majang have practiced shifting cultivation of rice, vegetables and fruit and harvested forest products beside their houses and in agricultural fields, as a main source of their income. Today they claim the land and forest as their customary possession. In contrast to the villagers of Penarung they do not recognize individual rights to land or forest but hold them in common. Moreover, the entire area of land claimed by the village falls within a forest area under the direct control of the Ministry of Forestry.

In 1980, the Ministry granted a 59 000 ha concession to a logging company, which included the entire area claimed by the villagers of Batu Majang. The villagers demanded that the company recognize their customary rights to the land they are settled on and use for agriculture as well as to their forest. Further, they insisted that the company should protect a particular patch of community forest (commonly called



*tana ulen* in Indonesia), which villagers considered a vital source of clean water. On the basis of the concession granted by the Ministry, the company could have proceeded without consulting Batu Majang.<sup>5</sup> However, it accepted the villagers' demands, allowing them to continue cultivating their agricultural fields and to use the forest around their houses and fields as before. The company also allowed villagers to cut trees in the concession area and offered to transport logs for them, as long as the villagers only used the trees for domestic purposes and acquired permission from the company in advance.

Besides allowing customary uses of the forest and land to continue, the company offered Batu Majang a variety of other benefits. Between 1995 and 2003 it paid every villager, children included, an annual compensation fee of IDR 200 000–300 000 (USD22–131 at the exchange rates of November, 1995 and January, 2003) for the value of the trees felled in the area. The company also provided the community with various social and developmental services including weekly transportation service to agricultural fields in pick-up trucks, daily boat transportation to schools on the other side of the river, free local health clinic services and scholarships for village students.

There are various reasons why the company responded proactively to villagers' requests. First, as the company managers readily admitted, they simply wanted to avoid conflict. Second, over time they became aware of regulatory requirements, in particular the 1991 Forest Village Community Development Decree, which requires logging companies to support the economic development of communities in and around concession areas, and later, rules requiring concessionaires to respect and delineate customary and village land in concession areas (Forestry Law No. 41/1999 and MoF Reg No. 38/Menhut-II/2009). Third, the company's code of social responsibility committed it to the making of collaborative relations with villagers.

However, in recent years villagers have noticed a decline in the provision of social and developmental services. The company no longer provides health clinics and frequently cancels the transportation services. The company manager explained that the decline is the result of a significantly reduced company budget for social development due to the financial crisis. The decline in services may also be caused by the cessation of logging operations in the area, reducing the company's incentive to invest money and resources in good relations with the community.

### **Linggang Melapeh: the community nursery programme**

Linggang Melapeh is a Dayak village with ample access to non-forest land. Rubber trees are an important source of income, as one hectare of rubber-tree plantation generates IDR 600 000–4 500 000 (USD 66–496 at the exchange rate of January, 2012) per month, depending on the quality of the latex and the market price. In consequence, villagers are

relatively well off. The village landscape reflects the community's fairly intensive use of the land for agriculture: rubber farms, fruit orchards and agricultural fields are interspersed with fallow land in various stages of forest regeneration.

In 2011, Linggang Melapeh villagers formed three cooperatives with 15 members each, as required by the national community nursery programme. Each cooperative purchased fertile soil, polybags and containers for the seedlings, and collected rubber-tree seedlings, timber species from forests around the village and fruit-tree seedlings (e.g. durian). These were put into polybags and containers to be grown in nursery farms. In all three cooperatives, rubber-tree seedlings constituted around 80 per cent of the seedlings because of the profitability of rubber and due to villagers' experience with the species. Fruit trees and timber species made up the remaining 20 per cent. Not all of the wood-species seedlings survived due to the difficulty of growing them in the nurseries.

By the end of the project period in December 2012, two cooperatives working under the community nursery programme had achieved their final target of 50 000 seedlings. Altogether, the cooperatives had produced a total of 140 000 seedlings, sufficient to reforest around 300 ha of land. They planned to distribute the first seedlings to their 45 members, requiring each to plant at least 500 seedlings of a species of their own choice on their own land, which was mostly in the non-forest area, and to share the remaining seedlings with other villagers. The district forest agency agreed to take over any seedlings remaining for the reforestation of forest-area land. Their ultimate contribution to reforestation will become clear in the coming years.

## **DISCUSSION: POLICY OPTIONS FOR REDD+ IN INDONESIA**

The three case studies provide important insights into effective REDD+ implementation in Indonesia, where concessions are the dominant instrument for the management of land and forest and where community nursery programme is being implemented nationwide. The three cases offer insights about two questions of particular importance for the successful implementation of REDD+: what kinds of payment are most effective, and is payment sufficient or does it need to be accompanied by forest tenure reform?

### **Rewarding small-scale and dispersed enhancement of carbon stocks**

The first question concerns the kinds of payment that might be offered under the national REDD+ programme. The two main alternatives are compensation to companies for foregoing large-scale logging or forest conversion, and rewards for small-scale, dispersed activities that increase forest carbon stocks such as the community nursery programme.

<sup>5</sup> This changed in 2009 with Regulation No. P5.

The first option, paying compensation to cover opportunity costs, is unlikely to work in the context of Indonesia since the opportunity costs of the logging, palm oil and mining industries are prohibitively high (UN-REDD Programme 2012). The high profits to be made from palm oil and mining are reflected in the compensation payments that the concessionaires offered to the villagers at the study sites. For instance, villagers in Penarung received compensation of USD 4 367 per ha from the mining company. This implies that even if REDD+ compensation were offered to villagers, the villagers may choose to sell or lease their land to a concessionaire rather than accept the REDD+ payment. Considering the profits from palm oil and mining, concessionaires could easily raise the level of compensation they offer to exceed potential REDD+ payments. It would also be difficult for Indonesia's REDD+ programme to offer sufficiently competitive compensation to concessionaires, particularly those active in the mining and oil-palm sectors.

As regards the second option of rewarding local actors through REDD+, the case of the community nursery programme demonstrates the effectiveness of performance-based payment in motivating villagers to meet programme targets. Thus, three cooperatives under the programme in Linggang Melapeh produced 140 000 seedlings with a total government financial support of only USD 16 866. This corresponds to an investment of USD 56 per ha for conserving forests, which compares very favourably with the compensation amounts required for the cessation of logging, oil palm plantation and mining (ranging from an annual payment of USD 22 to a one-off payment of USD 10 000 (see Table 1)).

The insights gained from Linggang Melapeh highlight the need to support carbon-enhancing activities that are economically attractive to villagers. Tree-based livelihood activities, such as rubber plantations and agroforestry, may generate high economic returns for villagers and simultaneously enrich carbon stocks. In Linggang Melapeh, villagers refused the development of an oil-palm plantation because they preferred to retain the more profitable rubber plantation on their land to selling their plots. In Kutai Barat, the rubber plantation generated an economic return of USD 66–496 per month per ha compared to oil-palm plantation, which provided only a one-off payment of USD 160 per ha. Further, rubber has a long history in Kutai Barat, while the oil palm is new to the villagers. By retaining the rubber plantation they can continue to pass their customary land to their descendants, a possibility

that may well be lost, if the land is leased to a palm-oil company.

The obvious conclusion is that Indonesia's REDD+ programme should use at least some portion of results-based payments to reward small-scale dispersed activities that increase forest carbon stocks. Although the reforestation activities of a single village are inherently small-scale, in the aggregate villages can make a significant contribution to conserving or increasing forest carbon stocks. Thus, community-based reforestation holds the potential to make an important contribution to REDD+'s reforestation goal and to improve villagers' awareness of the importance of REDD+. Obviously, support for villagers' activities does not replace the importance of addressing large-scale logging and forest conversion. Here we argue simply that the most effective use of REDD+ finance may be to reward small-scale dispersed activities rather than offering it as compensation to companies engaged in large-scale logging and forest conversion. The problems of large-scale logging require different instruments, such as moratoriums on concessions.

#### The significance of forest tenure reform and the advantages of communal tenure over individual titles

The case studies from Penarung and Batu Majang demonstrate that the absence of *legal* rights has created opportunities for concessionaires to gain access to land, which villagers claim as their customary territory. Villagers hold little or no influence on district government and local politicians' decisions about the allocation of concessions.

Yet, irrespective of the type of concession, concessionaires in both cases felt practically obliged or, at least, well-advised to acknowledge villagers' customary claims and obtain their consent to some degree. The levels of compensation offered to the Penarung and Batu Majang communities varied according to the types of concession (see Table 1). In Batu Majang, the logging company followed the 1999 Forest Law, which recognizes only customary usufruct rights to trees. Accordingly, it compensated villagers only for the value of timber cut within their customary territory. At the same time, however, it provided the village with social and developmental services based on its own corporate social responsibility policy. In Penarung, the concessionaires acknowledged customary land ownership but paid varying amounts of compensation. The mining company paid the

TABLE 1 Compensation for various types of concessions in Kutai Barat

	Values measured for compensation	Compensation amount
Logging	The value of lost timber	USD 22–131 per person per annum Various developmental services
Mining	The value of underground deposits	USD 1 000–10 000 per ha depending on the volume of underground coal deposit
Palm oil plantation	The productive value of agricultural land	USD 160 per ha Employment opportunities for customary land owners 20% of plantation areas reserved for communities' profits

customary landowners compensation of up to USD 10 000 per ha for the potential value of underground coal deposits in Kutai Barat, while the payment offered by the oil-palm company was much lower, at USD 160 per ha.

From the outset, villagers found themselves in a weak position regarding decisions on the allocation of concessions as well as appropriate levels of compensation. In worst case scenarios, a concessionaire can exclude villagers from customary lands with neither consent nor compensation, simply because there is no strict sanction against such actions (Colchester *et al.* (2006)). But even when compensation is provided to a community, a seemingly appropriate one-off or time-bound payment may not be sufficient to compensate for long-term opportunity costs. In response to this realization, several cases across Indonesia have shown that affected communities are becoming more assertive in regard to company intrusions on their customary lands. Prolonged public protests with NGO support can also end up forcing companies to the negotiation table (Afrizal 2013, Potter 2009).

The case studies of Penarung and Batu Majang, too, highlight the need to recognize customary rights. This is important, in order to strengthen villagers' position both when claiming rights from district government, which is often too ready to forego forest conservation for the generation of short-term financial gain, and from the Ministry of Forestry, which tends to prioritize the interests of large logging companies over those of villagers. Aside from supporting demands for an equitable share of the benefits derived by concessionaires who use customary territory, improved recognition of customary rights may also enhance villagers' ability to defend local forests against outsiders more generally. To the extent that customary rights are recognized, villagers will find themselves on a more level playing field with companies and government agencies. As exemplified by the case of Linggang Melapeh, they may even attract government support for community forestry.

However, the recognition of customary forest tenure through individual titles may also lead to further deforestation and forest degradation. Individual rights are relatively easier to sell to concessionaires than communal ones, whose management is subject to collective decisions. When individual title owners are met with sufficiently high offers of compensation, they may decide to sell or lease their land. In fact, as the case of Penarung has shown, the majority of villagers who owned private land accepted a one-off compensation payment from oil-palm and mining companies, which they considered an attractive source of income. In contrast, the village rejected the sizeable payments offered by the coal-mining company because their decision about the land lease required the consensus of all villagers.

In order to reduce the vulnerability of much customary land to large-scale land conversion, forest tenure reform in Indonesia may thus be well advised to prioritize recognizing communal rather than individual customary rights. In addition, tenure reform could subject the transfer of legal titles on the condition that such rights are not transferrable to other parties.

## CONCLUSION: EFFECTIVE IMPLEMENTATION OF REDD+ IN INDONESIA AND BEYOND

This article has explored major policy options for the effective implementation of REDD+ in Indonesia. In particular, it has examined the types of activities that REDD+ payments can potentially finance and their relation with the question of forest tenure reform. The insights gained from Kutai Barat district in East Kalimantan highlight the benefits of using REDD+ payments to reward small-scale dispersed activities, which increase carbon stocks such as reforestation, and point to the significance of providing legal recognition for customary forest tenure, particularly through communal titles. In contrast, companies are unlikely to take up offers of compensation to discontinue large-scale activities that cause deforestation and forest degradation due to their high opportunity costs.

These conclusions coincide with the recommendations included in Indonesia's National REDD+ Strategy. The National REDD+ Task Force has come out in strong support of tenure reform and providing payments for a broad set of local activities. In addition, the Indonesian Ministry of Forestry has initiated a community nursery programme as the first initiative explicitly linked to the implementation of REDD+. Where this study departs from the REDD+ Strategy is in its emphasis on the legal recognition of customary rights through communal rather than individual titles. Communal titles, we have argued, put local communities in a stronger position to fend off competing claims than individual ones. They may also support communities in the assertion of cultural values against individual financial calculations. Where communities attach high symbolic values to forests, communal titles may thus prevent individual villagers from selling newly-acquired rights to companies whose activities contribute to large-scale deforestation and forest degradation.

The insights gained from Kutai Barat also have important implications for effective REDD+ implementation beyond Indonesia. They support the growing momentum of forest tenure reform in tropical countries, particularly the statutory recognition of customary tenure. Many tropical countries experience sharp discrepancies between customary and statutory forest tenure. These discrepancies can be overcome only by recognizing customary rights and authority over forests. Communal titling is likely to play a significant role where collective traditions of forest management are strong, i.e. where local communities hold forest in their collective possession or local institutions exert authority over forests (cf. Sikor and Tran 2007). Similarly, companies and other actors whose activities result in deforestation and forest degradation on a large scale are unlikely to accept compensation as a reason to discontinue their activities, not only in Indonesia but also in other tropical countries. In the aggregate, rewarding the small-scale dispersed activities of villagers may turn out to be a highly effective strategy for increasing forest carbon stocks.



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