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**REDD (Reducing Emissions from
Deforestation and Forest Degradation):
Mitigation, Adaptation and the
Resilience of Local Livelihoods**

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Abstract

This paper discusses the policy and implementation context of the REDD (reducing emissions from deforestation and forest degradation) demonstration activity in Ulu Masen in the province of Aceh, Indonesia. It is argued that the slow endorsement of the demonstration activity by the Indonesian government may be due to mistiming in relation to the regulations on REDD projects and to diverging interpretations of the law that grants special status to the province of Aceh on the management of forests. In spite of a number of measures designed to curb legal and illegal logging and improve local livelihoods, the project faces challenges such as effectively reducing the demand for timber for reconstruction purposes in Aceh. If the demand for timber continues unabated, it is likely that leakage (the possibility that the attempt to reduce emissions in Ulu Masen may lead to increased emissions elsewhere) will become a problem. It is also observed that while the proponents of this project have undertaken consultations at different levels, there is still a need to improve consultations with local communities on the design and implementation of the project to ensure local understanding – and ownership – of the project's goals and activities.

This Policy Series presents papers in a preliminary form and serves to stimulate comment and discussion. The views expressed are entirely the author's own and not that of the RSIS Centre for Non-Traditional Security (NTS) Studies. The paper is the result of research conducted under the Asia Security Initiative programme on internal challenges supported by the MacArthur Foundation. Visit www.asicluster3.com to find out more about this initiative. More information on RSIS Centre for NTS Studies can be found at www.rsis.edu.sg/nts.

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Biographies

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Introduction: Background and Methods

Forest communities have been at the centre of debates about the content and implementation of mitigation and adaptation strategies in the face of climate change. These communities are vulnerable to both the impacts of climate change and the impacts of strategies to deal with climate change. This paper explores one such strategy – reducing emissions from deforestation and forest degradation (REDD) – to examine the kinds of vulnerabilities that can confront forest communities and identify the approaches to mitigation which enhance rather than undermine social resilience.

Concerns over the difficulties of measuring and ensuring real, permanent emission reductions from avoided deforestation prevented it from being included in either the United Nations Framework Convention on Climate Change (UNFCCC) or the Kyoto Protocol. It was also feared that the inclusion of natural forests in a carbon credit trading system under the Clean Development Mechanism (CDM) established by the Kyoto Protocol would push down carbon prices and delay thus the transition towards a low-carbon society (O'Connor 2008). Nonetheless, since the Kyoto Protocol was adopted in 1997, it has become increasingly recognised that deforestation and forest degradation contribute significantly (roughly 17 per cent) to the emission of greenhouse gases (GHG) (IPCC 2007a; Nabuurs et al. 2007).

During the 11th Conference of the Parties to the UNFCCC in 2005 (COP11), the parties – following a submission from Papua New Guinea and Costa Rica on behalf of the coalition of rainforest nations – agreed to initiate a process to address the issues related to reducing emissions from deforestation in developing countries.¹ Two years later, based on the results presented by the working group on deforestation, the COP13 called for “policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries” (UNFCCC 2008a).² The COP further encouraged the parties to “explore a range of actions, identify options and undertake efforts, including demonstration activities, to address the drivers of deforestation relevant to their national circumstances, with a view to reducing emissions from deforestation and forest degradation and thus enhancing carbon stocks due to sustainable management of forests” (UNFCCC 2008b).

Indonesia is a leader in global efforts in designing and testing activities related to REDD. It is allegedly the world's third largest emitter of carbon dioxide (CO₂) after China and the United States, but whereas in those two countries the bulk of emissions is due to energy consumption (74 per cent and 96 per cent respectively), in Indonesia the loss of forests is responsible for 85 per cent of the country's total CO₂ emissions (PEACE 2007). In anticipation of the COP13 in 2007, Indonesia began to ponder REDD implementation strategies through the Indonesia Forest Climate Alliance, which is led by the Ministry of Forestry and supported by the World Bank, Australia, the United Kingdom and Germany. The government of Indonesia is cognizant of the fact that if the country is successful in halving its deforestation rate – estimated to be around 1.87 million hectares (ha) per year

¹ At the time, the coalition included Bolivia, Central African Republic, Chile, Congo, Costa Rica, the Democratic Republic of Congo, Dominican Republic, Nicaragua and Papua New Guinea.

² This decision is known as the Bali Action Plan.

between 2000 and 2005 – the potential annual revenues from REDD lie between USD 2.5 billion and 4.5 billion (MoFor 2008a).³

This paper focuses on the REDD demonstration project in Ulu Masen in the Sumatran province of Aceh.⁴ It suggests that this activity could face difficulties in gaining the endorsement of the government of Indonesia because of problems with the observance of existing regulations and diverging interpretations of the law that grants special status to the provincial government regarding the management of forests. In spite of a number of measures designed to curb legal and illegal logging and improve local livelihoods, the project faces several implementation challenges such as effectively reducing the demand for timber for reconstruction purposes in Aceh. There is also a need to improve the process of consultation with local communities and their involvement in the design and implementation of the project.

This paper is structured in seven sections. In the second section, the demonstration activity of Ulu Masen is briefly described. In the third section, REDD is framed within the concept of payments for environmental services (PES), and the framework conditions that need to be met for the implementation of REDD are discussed. The fourth section looks at the procedures that the Indonesian government has drafted for the endorsement of REDD demonstration activities and discusses how the project stands in relation to these procedures. The fifth section looks at and discusses the challenges faced by the implementation strategy proposed for the project. Section six discusses the similarities and differences that the project bears with integrated conservation and development projects (ICDPs) and discusses as well some of the potential advantages that the project may have over conventional ICDPs. Conclusions are drawn in the last section.

The Ulu Masen Demonstration Activity

The island of Sumatra is particularly important with regard to efforts in designing and testing REDD activities⁵ since deforestation and forest degradation account for approximately 56 per cent of all emissions from the country's deforestation from both dryland and peat swamp forests (MoFor 2008a: 32–5). The Sumatran province of Aceh is host to one of Indonesia's first REDD demonstration activities – the demonstration activity of Ulu Masen, which is proposed by the provincial government (Nanggroe Aceh Darussalam) in collaboration with Fauna and Flora International (FFI) and Carbon Conservation Pty. Ltd. The Ulu Masen project is planned for implementation between 2008 and 2038. Over this period the project will seek to develop and test carbon finance mechanisms to reduce legal and illegal logging,

³ Such amounts of financial resources surpass, several-fold, any financial assistance received before by Indonesia's forest sector. For example, according to the Food and Agriculture Organization of the United Nations (FAO 2000), between 1987 and 1992, there were about 70 donor-assisted projects with a total support value of USD 342 million.

⁴ The methods used for this study include a review of primary, secondary and grey literature as well as interviews with staff of Indonesian NGOs (6), international NGOs (4), local government officials (3), central government officials (2), and leaders of local communities (4). Interviews with leaders of local communities include: the Head of Indigenous People Forum of Aceh Jaya, the Secretary of the Syarikat Mukim Aceh Jaya, the head of the Sarah Raya village and the head of the Pase Geulima village.

⁵ REDD activities involve (among other tasks) determining carbon stocks and emission baselines, and developing scenarios of emissions with and without the project. They also include establishing a land use plan outlining what activities can take place and where, as well as designing strategies to deal with local communities.

conserve biodiversity and contribute to the area's sustainable economic and social development. In an area of approximately 750,000 ha, the project aims to reduce deforestation by 85 per cent by means of land use planning tools (including reclassification of forests) as well as by increasing monitoring and law enforcement, restoration, reforestation and through sustainable community logging. The process of land reclassification is seen as an essential tool to turn logging areas into permanent protection forests and community managed, low impact, limited-production forest areas (PDN 2007).

There are several reasons for focusing on this demonstration activity:

- The province of Aceh holds the largest contiguous forest area in Sumatra (PDN 2007).
- Action to protect the forest and create sustainable livelihoods – key components of social resilience – is urgently needed since there is a high incidence of poverty in villages near to forest areas (EoA 2009); according to project proponents some 130,000 persons live in communities adjacent to Ulu Masen (PDN 2007).
- The province went through several decades of civil war that had a profound impact on the institutional framework for the management of forest resources. Of particular importance is the Special Autonomy Law of 2001 which endows the province with 80 per cent of revenues generated by the forest sector.⁶
- A traditionally weak forest governance poses a considerable challenge to Ulu Masen's REDD project (PDN 2007), since large tracts of forests became accessible to logging in the wake of the termination of hostilities.
- The difficult context in which this demonstration activity is embedded can provide valuable lessons for the design and implementation of future REDD projects.

General Conditions and Challenges for REDD

The agreed emission reduction targets for the first commitment period of the Kyoto Protocol (that is, until 2012) are considered insufficient to stabilise the atmospheric concentration of GHG so as to limit temperature increase to 2°C and thus prevent, in the words of the UNFCCC, a “dangerous anthropogenic interference with the climate system”. Without the inclusion of forests in the measures to curb GHG emissions, it is considered unlikely that the targets set in the Kyoto Protocol can be met, since deforestation and forest degradation account for roughly 17 per cent of all anthropogenic CO₂ emissions (IPCC 2007b; Eliasch 2008). Reducing deforestation and forest degradation is thus regarded not only as a necessary climate change mitigation measure but also as a relatively cheap way to reduce GHG (Stern 2007; Grieg-Gran 2008). Under the current UNFCCC negotiations, there seems to be consensus that REDD activities should include forest conservation, sustainable forest management as well as enhancement of carbon stocks.⁷ Essentially, REDD proposes a mechanism of financial rewards for developing countries that voluntarily engage in forestry activities that effectively prevent or reduce GHG emissions. Payments issued under such a mechanism are performance-based, as they will be contingent on the credible (demonstrable) reduction of deforestation, forest maintenance and/or enhancement of carbon stocks. REDD is therefore a payment for an environmental service (Wunder 2005; Angelsen and Wertz-Kanounnikoff 2008).

⁶ See: Special Autonomy Law on Nanggroe Aceh Darussalam (NAD) Law No. 18 or 2001. http://www.kbri-canberra.org.au/s_issues/aceh/aceh_specautonomy.htm

⁷ Enhancing carbon stocks includes afforestation and reforestation which are part of the Clean Development Mechanism (CDM).

Much of the discussion on REDD revolves around how to establish reference emission levels, monitor forest cover and account for carbon stocks,⁸ as well as the likely finance and carbon trade mechanisms.⁹ However, there is also a pressing need to ponder policy measures, governance reform and fair benefit sharing schemes (Scheyvens et al. 2008; Sunderlin et al. 2009), because without strong and comprehensive policy, legislative and governance frameworks, it is unlikely that REDD can be successful on the ground (CPF 2008).¹⁰

Many of the direct and indirect causes of deforestation are outside the forestry sector, hence policy coordination across sectors (that is, forestry, agriculture, mines, infrastructure) is essential to effectively address deforestation and forest degradation and to establish an enabling environment for REDD. Therefore a coherent and strong policy and institutional framework that fosters land use planning and the improvement of forest governance are key to addressing both the direct and the underlying causes of deforestation (Contreras-Hermosilla 2000; Fischer et al. 2004; Nabuurs et al. 2007: 566; Eliasch 2008; Karsenty 2008; Martin 2008; Scheyvens et al. 2008; Cotula and Mayers 2009). These issues were on the policy and academic agenda long before REDD became a buzzword,¹¹ and addressing them continues to pose a considerable challenge. The failure to coordinate policy (and thus extra-sectoral drivers of deforestation) as well as ongoing poor forest governance are major stumbling blocks to several decades of efforts – national and international – to curb deforestation (Sunderlin and Atmadja 2009). Moreover, efforts to deter forest loss are often at odds with agricultural and logging interests that prefer business as usual; and within a context of weak policy, and low institutional and implementation capacity, these interests prevail over advocates of policy and institutional reform and improvements in land use planning processes (Koh and Wilcove 2007; Pearce 2007; Schwartzman et al. 2007; Stone 2007; Fitzherbert et al. 2008; FoE 2008).

Similarly challenging will be the meaningful engagement of indigenous and local communities – in both the design and implementation of REDD activities – as it will be necessary to recognise traditional tenure rights and knowledge, and establish transparent and fair benefit sharing mechanisms, including the allocation of carbon rights (Humphreys 2008; Macchi et al. 2008; Scheyvens et al. 2008; Cotula and Mayers 2009; G.W 2009; Streck 2009). In spite of the repeated calls for the inclusion of local and indigenous communities in REDD related efforts, there is mounting evidence of the lack of meaningful local participation in the design and implementation of REDD (Griffiths 2007; Dooley et al. 2008; DTE 2009; Global Witness 2009). This suggests that it will require a great deal of political will to undo a number of practices that marginalise local communities from accessing forest resources, such as fortress-like forest protection models that drive eviction and expropriation of local communities, zoning of forest lands – by governments and non-governmental organisations (NGOs) – without proper consultation with local communities, violations of customary land and territorial rights, land speculation and land grabbing (Griffiths 2007).

⁸ See for example: Brown et al. (2007), Faloony et al. (2007), Gibbs et al. (2007), Mollicone et al. (2007), Ramankutty et al. (2007), Murdiyarsa et al. (2008), Wertz-Kanounnikoff et al. (2008).

⁹ See Karousakis and Corfee-Morlot (2007), Tavoni et al. (2007), Angelsen (2008), Canadell and Raupach (2008), Hagem and Westskog (2008), Johns et al. (2008), Laurance (2008).

¹⁰ See: “Sustainable management of forests and REDD+: Negotiations need clear terminology”. 2009. Food and Agriculture Organization of the United Nations (FAO). <http://www.fao.org/forestry/18938-1-0.pdf>

¹¹ See for example: UN (1992), Repetto (1993), Adger and Brown (1994: Ch. 5), (Pearce 1996).

The engagement of indigenous and local communities in the design and implementation of REDD is important for at least two reasons: first, because there needs to be a common understanding of what REDD is about and, second, because local actors are key stakeholders in the process of maintaining and improving forest governance (Ostrom 1990). Moreover, the UNFCCC's Ad-hoc Working Group on Long-Term Cooperative Action (AWG-LCA) argues that one of the safeguards which should be carefully considered when designing the architecture of REDD+¹² is to "respect the rights and knowledge of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples" (UNFCCC/AWG-LCA 2009).

Indigenous and rural communities' livelihoods will be affected (either positively or negatively) by REDD depending on how it is designed and implemented, as forests provide these populations with goods and services relevant for both subsistence and commercial purposes. REDD activities designed and implemented without consulting local communities – and thus failing to properly account for local needs – are less likely to render positive outcomes for either local communities or REDD (Leach and Leach 2004; Schwartzman et al. 2007). Therefore, communities will need accurate information about REDD; they need to know what REDD is about, what their participation will be and what costs and benefits they can expect from their engagement.

According to the United Nations REDD Programme, REDD demonstration activities need to be implemented through 'free prior informed consent' (UN-REDD 2009). 'Free' means that there should be no coercion, manipulation or intimidation of local communities. 'Prior' implies that local communities have been sought out well in advance of the authorisation and/or the beginning of any activities, and that the processes provide enough time for consultations with such communities. 'Informed' means that local communities have knowledge of (at least) the nature, size, duration, pace, reversibility, scope and areas of the proposed activities; that they know the reasons why the project/activity is being proposed; and that they have access to a preliminary assessment of the possible economic, social and environmental impacts (including potential risks as well as fair and equitable benefit sharing in a context that respects the precautionary principle). It also means that they know who are likely to be involved in the execution of the proposed project (including community members, private sector staff, research institutions, government employees, etc.) and that they understand the procedures that may be involved.

Consultations are to be undertaken in good faith. Hence, appropriate solutions to existing or potential conflicts should be sought in an environment of mutual respect and in full and equitable participation. Local communities should be able to participate through their own freely chosen representatives and customary (as well as other) institutions. Consultations should include a gender perspective, as well as the participation of children and youth. The process of consultation must accommodate the possibility of the withholding of consent.

¹² The difference between REDD and REDD+ is that REDD refers only to 'reducing emissions from deforestation and forest degradation', whereas REDD+ includes 'enhancing carbon stocks'. The concept of REDD+ was formally introduced at the 29th meeting of the Subsidiary Body for Scientific and Technological Advice (SBSTA) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Poznan in December 2008 (Holloway and Giandomenico 2009). Throughout this paper, REDD is used as a synonym of REDD+.

Norms for Endorsing REDD Activities in Indonesia: Divergent Policy Approaches and Hurdles towards the Endorsement of Ulu Masen

According to the ‘Regulation of the Minister of Forestry on the Implementation of Demonstration Activities on Reduction of Emissions from Deforestation and Degradation’, the government, represented by the Minister of Forestry, is in charge of endorsing the implementation of REDD demonstration activities based on the assessments provided by the Working Group on Climate Change of the Ministry of Forestry (MoFor 2008b).¹³ The assessment of the feasibility of a demonstration activity is based, among other criteria, on: status and location of the area; form and period of cooperation foreseen for the activity; estimation of activity values; risk management and plan of revenue distribution (MoFor 2008b; 2009b). Based on this evaluation, the Minister approves or rejects the proposed activity.

High-ranking officials of the Ministry of Forestry interviewed for this research expressed the view that the Indonesian government could not endorse Ulu Masen as a REDD demonstration activity as it has not been properly submitted for official endorsement.¹⁴ This position of the Indonesian government is partly attributable to the premature development of the demonstration activity on the part of the project proponents, who began developing the project prior to the release of the endorsement regulations. The final project design note states that the project had been submitted to the Working Group on Climate Change for review and that the project proponents were thus expecting support and endorsement from the government of Indonesia.¹⁵ The final project design note (audited by the Climate, Community and Biodiversity Alliance, or CCBA) was resubmitted to the CCBA in December 2007 (PDN 2007), and was later validated for the CCBA (for 5 years) by SmartWood in February 2008 (SW 2008). However, the ‘Regulation of the Minister of Forestry on the Implementation of Demonstration Activities on Reduction of Emissions from Deforestation and Degradation’ was issued only in December 2008, and the Decree that created the Working Group on Climate Change was issued in January 2009. Therefore, on the basis of the premature development of the demonstration activity of Ulu Masen, government officials argue that the government of Indonesia could not have been reviewing the project as claimed in the project’s design note, as the regulations to evaluate and endorse such activities were not yet released.

On the other hand, the lukewarm response of the government of Indonesia towards Ulu Masen may also be attributed to a lack of legal certainty as to who is the legal owner of the carbon rights (Clarke 2010). In such a situation, the government may prefer to wait until the carbon property rights are clearly settled before endorsing a demonstration activity in which

¹³ The Government’s role is derived from the COP13 decision on REDD, which states that “demonstration activities should be undertaken with the approval of the host party”, where “the host party” is understood as the country (UNFCCC 2008b: 2/CP. 13).

¹⁴ Nur Masripatin, Director of the Centre for Social Economy and Policy Research, Forestry Research and Development Agency (FORDA); and Wahjudi Wardojo, former Secretary General of the Ministry of Forestry Indonesia, and currently senior advisor to The Nature Conservancy on international forest carbon policy. Personal communication.

¹⁵ The project proponents probably based the expectation of an official endorsement on the fact that the Ulu Masen demonstration activity is linked, and builds on, another project previously endorsed by the Indonesian government (the World Bank’s multi-donor fund grant for the benefit of the Republic of Indonesia), and whose implementers are the Leuser International Foundation and Fauna and Flora International (WB 2006a; PDN 2007). Nonetheless, Indonesian officials regard the Ulu Masen demonstration activity as a separate issue.

it is not a direct proponent.¹⁶ The lack of support is also fuelled by an agreement signed between Carbon Conservation Pty. Ltd. and Merrill Lynch to sell carbon credits¹⁷ since – according to Indonesian officials – any such financial transaction (dealing internationally with Indonesian natural resources) requires the additional endorsement of the Indonesian Ministry of Finance as well as the Ministry of Foreign Affairs.¹⁸

This situation is further complicated by political questions of authority over forest resources. After almost 30 years of civil war, the province of Aceh obtained special autonomy status in 2001 (Law No. 18/2001) by which, among other things, the central government re-negotiated with the provincial government the share of revenues from the exploitation of Aceh's natural resources. The award of increased autonomy for provincial governments is seen as a trade-off that the central government was willing to take in order to keep the unity of the Indonesian Republic as a response to violent separatist movements – notably those in Aceh, Papua and East Timor (Barr et al. 2006). Thus, the Acehnese provincial authorities went on to receive 80 per cent of the income generated by the forestry sector, and the central government, 20 per cent. Later, the Law on Governing Aceh (LOGA, Law No. 11/2006) transferred even more powers to the provincial government, granting it more authority to manage, plan, implement and supervise the exploration and exploitation of its natural resources (EoA 2009). Apparently because of these institutional reforms, the Acehnese government believes itself empowered to deal with and take charge of REDD demonstration activities. But whereas the reforms may give the Acehnese government *de jure* management rights over forests, it is actually the central government who maintains *de facto* control over the forest in Ulu Masen. Actually, approximately 80 per cent of the forest in Ulu Masen is under the control of the central government.¹⁹ Furthermore, in addition to the regulations already enacted for REDD, Indonesian laws endow the Ministry of Forestry with strong decision-making powers over the production, protection and conservation of forests, including the management and utilisation of forest environmental services.²⁰ Moreover, even though the Law on Governing Aceh corroborates Aceh's special autonomy status and establishes a separation of power between the national and the local government, it is unclear how disagreements between Aceh and Jakarta will be addressed, particularly when the Law on Governing Aceh does not coincide with the provisions of the Ministry of Forestry (Wennmann and Krause 2009).

¹⁶ The Ministry of Forestry issued a decree in May 2009 (MoFor 2009a: P.36/Menhut-II/2009) in which it outlined the distribution of revenues from carbon between the government, communities and project developers. In April 2010, the Ministry of Finance rejected the decree on the grounds that it is against the constitution (Simamora 2010).

¹⁷ See: "Carbon finance transaction of the year: Ulu Masen avoided deforestation carbon financing". 2009. *Environmental Finance*. July–August.

http://gmi.ml.com/commodities/pdf/gg_Environmental_Finance_Awards_Carbon_Deal_of_Year.pdf

¹⁸ Nur Masripatin and Wahjudi Wardojo. Personal communication.

¹⁹ Lesley McCulloch, Eye on Aceh. Personal communication.

²⁰ See: Law on Forestry (No. 41/1999). http://www.dephut.go.id/INFORMASI/UNDANG2/uu/Law_4199.htm
See also: the Government Regulation No. 6/2007 on "Forest arrangement and formulation of forest management plan as well as forestry exploitation". <http://faolex.fao.org/docs/pdf/ins75584.pdf>

Challenges to the Implementation Strategy of the Ulu Masen Demonstration Activity

The need for consultation

The proponents aim to implement the project through a participatory process by inviting all levels of government and civil society to contribute to the design and implementation of the project's activities. The project design document assigns a key role to the districts and mukims²¹ which – by virtue of Aceh's special autonomy law – play a crucial role in the management of the land and its natural resources. Whereas the project proponents have indeed undertaken efforts towards consulting with local communities, interviews undertaken for this study show that while communities tend to agree with the goal of protecting the forest in the long term, there is also concern about the recognition – and protection – of traditional community rights over natural resources. Local communities have a limited understanding of the project's implications for their livelihoods in the short and the long term, and therefore, of the benefits they may stand to obtain. Likewise, communities have a limited understanding of their rights and responsibilities within the project. This suggests that the criteria of 'free prior informed consent' are not being strictly followed. The interviews indicate that the project needs to intensify communications with local communities, and explain its goals as well as how it is going to protect – or contribute to recognising – local community rights and livelihoods. Likewise, it needs to convey to local communities what the outcomes will be, and particularly, what benefits they can expect. To the local communities, these issues are not clear. The validation report undertaken by SmartWood for the CCBA (SW 2008) also found that the proposed project does not explain clearly the kinds of processes and efforts it will use to include and reach out to individual actors and wider sectors of villages. It is interesting also that best practices in community involvement is not a compelling criterion for project approval by SmartWood; it is an optional measure.

Illegal logging

Illegal logging has been traditionally a significant source of income for farmers in Ulu Masen.²² It is estimated that in Aceh Jaya before the tsunami approximately 30 per cent of farmers depended on income from illegal logging (WB 2006a). In the communities adjacent to the Ulu Masen forest, the number of farmers earning an income from illegal logging is estimated to be somewhere between 2,000 and 3,000 in 61 mukims (PDN 2007). Therefore, it will be crucial for the project to enable alternative income sources significant enough to offset the (relatively low) benefits villagers obtain from engaging in illegal logging.²³ Illegal logging is very selective – targeting high value species – and allegedly villagers undertake it through non-mechanised methods. It is well known that timber barons are often behind illegal logging and sponsor it at the village level; if villagers do not wish to participate, then others are found who will (EoA 2009). There is also fear among villagers of reporting illegal

²¹ A mukim is an indigenous local administrative governance institution traditional to Aceh. In Aceh, a mukim is a subdivision of a sub-district encompassing several villages with common ethnic and cultural background. Mukims are managed by a religious leader who also has secular functions (PDN 2007: 2). The mukim also exists in Malaysia and Brunei, where it represents a sub-district.

²² There is, allegedly, no historical data on timber volumes extracted illegally (PDN 2007: 14).

²³ The Ulu Masen project description note (PDN 2007: 17) explains that incomes from legal logging operations are low (for example, a full-time chainsaw operator would earn about USD 272/month, whereas a transporter using buffalo earns around USD 622/year). Eye on Aceh (EoA 2009: 10) makes similar observations.

logging, because local authorities (the police and/or the military) act in collusion with timber barons (EoA 2009).²⁴

Land reclassification and local access to forests

Since some of the measures to reduce (legal and illegal) deforestation include land reclassification and fostering low impact community forest management, the project will face the challenges of differentiating between illegal logging at the village level that is a result of local initiative – for subsistence purposes – and illegal logging that is managed by timber barons. The challenge lies in regularising the former for low impact community forest management, and identifying and stopping the latter. An evident challenge for the process of land reclassification lies in avoiding the exclusion of communities from accessing the forest. Having access to the forest and obtaining recognition of traditional use rights is one of the main concerns of the villages around Ulu Masen, especially considering the fact that land grabbing in Aceh, in areas where property rights are unclear, has a decades-long history (EoA 2009). This is an issue the project proponents cannot afford to overlook, otherwise the project is bound to face local resistance instead of local involvement.

Improving forest governance

The project proposes to reduce illegal logging through a number of measures such as enhanced enforcement through the improvement of synergies between law enforcement and other relevant agencies. This will be a difficult task considering that at the provincial level a number of government agencies have overlapping mandates and compete against one another over the management of forest resources, creating a lot of confusion about their roles, namely, who is responsible and accountable for what. This governance conundrum has enabled a system of corruption that is often regarded as more powerful than the formal system. The ability and the political will at the provincial level to improve forest governance in Aceh is, however, low (EoA 2009).

To improve forest governance, the project will also seek the establishment of community agreements and the creation of employment for local people as wardens to conduct forest monitoring and patrolling. However, unless the payouts received by those involved in illegal logging – especially the end dealers who make extremely high profits – can be effectively cut and the payoffs of observing the rule of law improved, the prospects of involving villagers in monitoring and patrolling are not very promising. It remains to be seen whether recognising customary rights over forests provides an incentive powerful enough for villagers to engage in forest protection and turn their back on illegal activities. For this to happen, institutional and organisational reform that effectively dismantles corruption and patronage will be necessary.

²⁴ Such mechanisms of corruption, where authorities and logging interests act together, are not a problem exclusive to Aceh. They have been observed and documented in other countries (Ibarra 2003; Ibarra et al. 2008). These mechanisms, in an environment of weak forest governance, can be very effective in making the payoffs of following the rule of law extremely low for local actors.

Addressing the demand for timber

Besides fostering sustainable community forest management, the project also proposes an array of integrated activities to improve local livelihoods such as forest conservation and restoration, accelerated tree planting, and the establishment of orchards, mangroves and fruit farms. The project proponents foresee that the reduction of timber supply as a consequence of a decline in the logging of natural forests will increase the price of timber. They also assume that increasing the supply of other goods (through the increased availability of timber from forest plantations and from accelerated tree planting; through increased supply of other goods from orchards, mangroves, fruit farms; and through community forest management) will have a neutralising market effect that will tend to offset leakage, that is, the possibility that the attempt to reduce emissions in Ulu Masen may lead to increased emissions elsewhere (PDN 2007: 52). This assumption raises a number of questions considering that it envisages increasing the supply of several goods including timber, but fails to address the demand for timber.

To induce the market neutralising effect of a timber supply shortage, timber must be sourced from either forest plantations (assuming the same, or similar, timber quality is readily available) or from logging other natural forests,²⁵ steps must be taken to reduce the demand for timber, or a combination of those measures instituted. The assumption of the market neutralising effect of increasing the supply of different goods to counteract the shortage of a single specific one will stand only if the increased supplies of alternative goods are good substitutes for the timber that is being extracted from natural forests. The project developers recognise that the forests of Aceh are rich in hardwood species which usually earn the highest prices in the logging trade – both legal and illegal (PDN 2007: 20). Thus, it is hard to envisage how increasing the availability of other goods – such as mangroves and fruit farms – will achieve a neutralising effect on the market for high value timber. Additionally, the project description note (PDN 2007) does not give a clear account for the time lag that is likely to arise between the period in which the timber supply is reduced, and the moment at which forest plantations will be able to supply the excess demand for timber (assuming they will be able to deliver similar species and timber quality). Production cycles involved in forestry require several years, or even several decades. Therefore, if forest plantations cannot supply the excess demand in the short term, and if the demand for timber remains unabated, the timber shortage will drive a price increase that will keep logging (both legal and illegal) profitable, providing a strong incentive for logging to continue in and/or around Ulu Masen, which spells leakage for the project.

Under real world circumstances, it seems unlikely that the demand for timber in Aceh can be effectively reduced, and so contribute to a real market neutralising effect. After the termination of hostilities and before the December 2004 tsunami, the number of logging licences increased by 150 per cent. Whereas the maximum allowable cut for forest concessions was 47,000 m³ in 2005, in 2006 (that is, after the tsunami) this figure rocketed

²⁵ Logging in natural forests would be an alternative if there is potential for their sustainable management, but this is not the case for Indonesia. According to the World Bank (2006b), the annual industrial demand for round wood is about 60 million m³, whereas the sustainable yield from natural forests is about 8–9 million m³ per year, and the sustainable yield from forest plantations (which are insufficient and perform poorly) is about 3–4 million m³ per year. The gap between the demand and supply of round wood is filled through the conversion of natural forests to other land uses.

to 500,000 m³ in response to the increased demand for timber for reconstruction.²⁶ Since the tsunami, the province has seen a dramatic increase of both legal and illegal logging, as well as of land clearance and applications for permits for land clearance (PDN 2007; EoA 2009). In response to the runaway logging, the governor of Aceh declared in 2007 an indefinite moratorium on logging. Nevertheless, as long as the demand for timber for reconstruction continues, this can only lead to logging being undertaken elsewhere and/or increased illegal logging.²⁷ The enforcement of the moratorium is made more difficult by “competition and confusion between central, provincial and district authorities; conceptual and technical problems with regulations at all levels; and a lack of human resources” (EoA 2009).

Enabling alternative livelihoods

The Ulu Masen project foresees using carbon finance to assist alternative productive activities such as orchards, mangroves, fruit farms and coffee plantations, thus reducing the use pressures on natural forests (from activities such as illegal logging and the conversion of forests to plantations). Whereas some of these activities will surely contribute to securing livelihoods for subsistence purposes, there also seems to be the intention of assisting the development of certain activities – for example, coffee production and sustainable community logging – towards an entrepreneurial level, which is key to enabling alternative livelihoods. Developing productive activities for commercial purposes at the community level faces two main challenges. First, viable marketing channels must exist; and second, local entrepreneurship (know-how) must be either available or developed. In the case of community forestry, it remains to be seen whether adequate market conditions – for example, the reduction of information asymmetries and access to certification and legal buyers – can be established. The right market conditions are necessary if communities are to improve their income through sustainable logging beyond what the traditional – and well-established – marketing channels (that is, logging companies, timber barons and illegal logging) allow. In the case of other productive activities such as fruit farms, it is not clear what their market potential is, as such potential can only be approximated through feasibility studies. Local entrepreneurship, if available, offers an optimal starting point for the establishment of alternative livelihoods; but usually this kind of human capital is not available in impoverished areas, and can take years – if not generations – to build (Pandit et al. 2008).

Similarities and Differences with Integrated Conservation and Development Projects

The REDD demonstration activity proposed for Ulu Masen resembles, in many ways, the so-called ICDPs. ICDPs have traditionally used a holistic approach, but have been primarily focused on conservation. Implemented by governmental agencies and/or NGOs, ICDPs seek to create alternative income sources for communities through environmentally friendly commercial activities. They thus require investments in alternative production modalities, as well as in local institution- and capacity-building, while seeking to gain the goodwill of local stakeholders through benefit transfers. A number of flaws have been documented for ICDPs such as payments and/or technical support being issued to communities without them delivering the expected results (weak contingency), and a tendency for communities to develop a dependency on project developers through paternalistic interventions (Ferraro and

²⁶ According to Eye on Aceh (2009), the actual annual timber volume required for reconstruction amounts to some 700,000 m³.

²⁷ See: Renner, M. 2007. “Aceh Governor imposes logging ban”. Worldwatch Institute. July 2. <http://www.worldwatch.org/node/5179>

Simpson 2000; Grieg-Gran et al. 2005; Wunder 2005; 2006). Many ICDPs have failed in meeting donor expectations because of high transaction costs, few positive conservation outcomes and small financial benefits for local communities (Gutman 2003; Roe and Elliot 2004; Sunderland et al. 2008). Nonetheless it has also been documented that ICDPs do stand a chance of achieving positive outcomes when conservation, poverty reduction and institutional capacity-building are consistently undertaken by project developers (Vermeulen 2004; Hammill et al. 2005).

Like ICDPs, the REDD demonstration activity in Ulu Masen has a holistic approach, envisaging forest protection and community development. It is being proposed and implemented by the provincial government, an international NGO and a private enterprise. It seeks to create alternative income sources for communities through environmentally friendly commercial activities requiring investments in alternative production modalities, and it also requires local institution- and capacity-building. The project foresees the establishment of a financial strategy (that is, community development funds, alternative livelihood funds and community based forestry funds) that will support these activities during the project's 30-year life span. This could lead to innovative solutions, provided that the funding, technical assistance and any payments issued to local actors participating in the demonstration activity are truly contingent on the verifiable establishment and maintenance of land uses that will effectively deliver REDD results. If the activity is implemented along such lines, that is, corresponding to the principles of a PES scheme, then it will stand out from traditional ICDPs. This will also give it an opportunity to avoid flaws associated with ICDP projects (like designing paternalistic interventions).

The long time horizon of the project gives it a rare opportunity to build local entrepreneurship. If conditionality is consequently followed, there is a real chance of implementing the activity without creating dependence of local stakeholders on the project. On the other hand, the project poses a challenge for the provincial government. Whereas the autonomy status is a positive development towards local empowerment over the management of natural resources, it is apparently not a sufficient condition to guarantee good forest governance. It will be challenging for the provincial government, as it will have to reform from within, by re-assigning clear mandates to its different agencies, reducing overlaps in responsibilities and curtailing the mechanisms that foster corruption. Corruption exists because it delivers large payoffs to those participating. Reducing – or in the best of cases, eliminating – such payoffs will be crucial in affirming the provincial government's credibility and its political will to effectively address deforestation and forest degradation.

Conclusions and Recommendations

The REDD demonstration activity in Ulu Masen faces a number of challenges such as obtaining official endorsement, engaging the effective involvement of local actors and reducing the illegal logging which is underpinned by weak forest governance but which is also a traditional source of income for villagers. These challenges tend to reduce the optimism one may have over the innovations the project can offer as described in the previous section. Actions taken by the Acehnese government, such as declaring a moratorium on logging, are encouraging and show political will towards reducing deforestation, but a lot more needs to be done. Effective reduction of deforestation will only be possible within a context of inter-sectoral policy coordination (particularly between the forestry, agriculture and mining sectors) and organisational reform that establishes clear

responsibilities and accountability. Moreover, credible implementation mechanisms need to be established on the ground.

Additional institutional and organisational reform is necessary beyond the existing autonomy status given to Aceh. If illegal logging is to be curtailed, and forest governance sensibly improved, reform of the province's institutions and organisations will be necessary. Otherwise, the project will have to look to the massive hiring of forest wardens and patrol units, and the demonstration activity will end up implementing a command-and-control strategy. From the past, we know that the implementation of such strategies by protection projects not only excluded local communities from accessing forests but also faced challenges in controlling illegal logging.

The reduction of timber supply is a major issue in an area that faces considerable reconstruction needs. To expect to offset a timber supply shortage through the increased supply of several goods (imperfect substitutes for timber from natural forests) is not realistic. The authors are by no means disregarding the efforts towards creating alternative livelihoods, but want to point to the fact that the project needs to properly address the demand and supply of timber.

The weak involvement of local communities signals that the criteria of 'free prior informed consent' are not being given priority in the process of design and implementation. Therefore, there is a risk that local actors may end up with little or no bargaining power over the development and implementation of the project, and thus the benefits they could potentially obtain would tend to be reduced. In the specific case of land reclassification, if consultations with local communities are weak, their voice will be correspondingly weak. The final land reclassification will probably not reflect their main concerns and they may thus lose access to resources important to them. The consequence of this would be either indifference towards the project – in which case local forest governance would not be significantly improved through local engagement – or resistance towards the implementation of the project. These are outcomes that project developers should not risk if deforestation emissions are to be reduced in a way that strengthens the resilience of local communities rather than increases their vulnerability.

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