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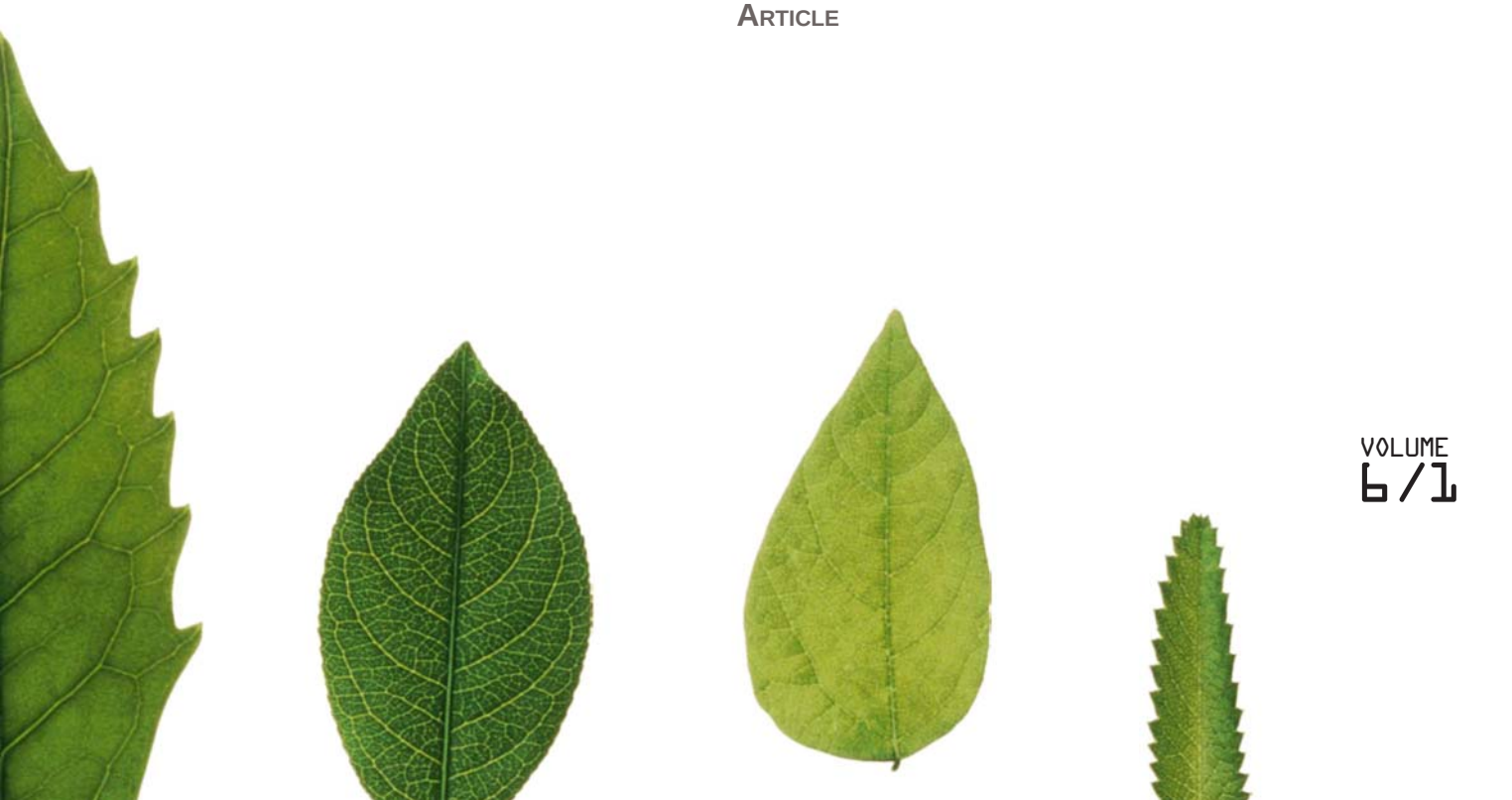

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Article

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1 BACKGROUND

There is now widespread acceptance that reducing emissions from deforestation and forest degradation (REDD) in developing countries, or one of its variants[1], must form part of a post-2012 international climate agreement. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) has estimated that deforestation and degradation account for 17 per cent of global anthropogenic greenhouse gas emissions.[2] Thus to achieve the UN Convention on Climate Change (UNFCCC) overall objective and stabilise greenhouse gas levels to prevent dangerous anthropogenic interference with the climate system, REDD must form part of international climate change mitigation efforts.

High-level reviews, including the Stern Report[3] and Eliasch Review[4], further highlight not only the immediate necessity to address climate change mitigation through REDD, but also the relative low cost of such an approach. Therefore scientists and policy experts almost universally agree that meeting the necessary emission reduction targets of 25-40 per cent below 1990 levels by 2020, cannot realistically occur unless REDD is brought within the international climate change framework. Therefore the question regarding REDD now appears not whether it will form part of global climate change mitigation, but how and in what form?

In late 2009 UNFCCC negotiators participated in the fifteenth Conference of the Parties (COP15) in Copenhagen. These negotiations focused on the successor agreement to the Kyoto Protocol and canvassed how REDD will operate and fit within the post-2012 climate regime. Despite significant hype, what appeared a reasonable level of political will and unprecedented international attention, the conference failed to achieve a satisfactory outcome. Rather than a legally binding post-2012 agreement, an 'accord' – drafted by a select few countries – was adopted and signed by 28 nations. Instead of being accepted as a formal UN document, the Accord was merely noted by the UNFCCC COP. While the Copenhagen Accord did make reference to REDD[5], referring to the 'immediate establishment of a mechanism including REDD-Plus', as it fell outside the official UNFCCC process, uncertainty abounded as to how such a mechanism would be established in practice and how the funds committed would be managed. As a result, Copenhagen was largely seen as a failure both for REDD and the broader climate change framework.

Prior to COP15, REDD shaped up as the potential success story; a possible 'green wash' in the event that a broader post-2012 legally binding agreement could not be secured. Momentum through the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) on a draft REDD text were relatively well-advanced, consensus had been reached on key areas and while divergence between parties remained, it appeared possible that the draft text could form the substance on a REDD agreement at Copenhagen.

Yet while Copenhagen resulted in minimal progress, negotiations hit a deadlock and as a result an

1 Current UNFCCC negotiations demonstrate momentum towards what is termed 'REDD-Plus'. Broader than reducing emissions from deforestation and forest degradation, REDD-Plus also encompasses conservation and maintenance of forest carbon stocks through sustainable management of forests, as well as afforestation and reforestation. While the final scope of REDD-Plus activities under the UNFCCC framework is yet to be determined, it is important to bear in mind that the concept has evolved considerably since 2007 and REDD-Plus mechanism will most likely include some or all of the elements detailed above. As this paper analyses a project set up when REDD was receiving most attention, this term will be used throughout with distinctions made where necessary.

2 Intergovernmental Panel on Climate Change, IPCC Special Report on Land Use, Land Use Change and Forestry, 2001, available at http://www.ipcc.ch/pdf/special-reports/spm/srl-en.pdf

3 N. Stern, *The Economics of Climate Change: The Stern Review* (Cambridge: Cambridge University Press, 2007).

4 J. Eliasch, *Climate Change: Financing Global Forests – The Eliasch Review* (London: Earthscan, 2008).

5 Article 6, Copenhagen Accord, Draft Decision -/CP.15, Conference of the Parties to the UNFCC, Fifteenth Session, Copenhagen, 7-18 December 2009, Doc. No. FCCC/CP/2009/L.7 (2009).

unfinalised draft decision on REDD was presented to the COP. Negotiations continued at a ministerial level with little results.[6] Post-Copenhagen analysis lays the blame for the lack of progress on REDD on the insurmountable disagreement over key areas and the breakdown of the broader UNFCCC process.[7] Despite the failure to deliver a UNFCCC-mandated REDD mechanism, Copenhagen did result in increased recognition of avoided deforestation as a mitigation strategy. Its reference in the Copenhagen Accord further demonstrates that since REDD's initial UNFCCC recognition in the 2007 Bali Road Map of 2007, REDD has now entered mainstream climate change discourse.

The Bali Road Map, as well as laying the foundation for UNFCCC negotiations and policy debate on REDD, also provided the basis to initiate a number of 'demonstration activities'. These aim to provide practical lessons on project design, implementation and financing to shape the REDD architecture, complimenting the technical and methodological debate that has dominated REDD discussions thus far. One such project, currently being implemented in Aceh, Indonesia, is of particular significance. Lauded as the 2008 'carbon finance transaction of the year' and the first avoided deforestation project to be verified according to the Climate, Community and Biodiversity (CCB) standards, the Ulu Masen project is at the forefront of efforts to link REDD to private sector carbon finance. Indonesia further has the world's highest deforestation rate and a social and political context that sheds light on many of the complex issues that REDD projects must navigate through to achieve substantial emission reductions. As such, the Ulu Masen project warrants detailed analysis, particularly in relation to the main remaining areas of contention over how an UNFCCC mandated REDD mechanism will operate. These issues include whether a national or project-based approach should be adopted, whether funding or market-based approaches are more effective and how equitable outcomes can be assured.

The practical challenges discussed in this paper are not unique to Indonesia but indeed demonstrate, based on concrete experience, both the potential opportunities and risk areas of REDD. The objective of this paper is therefore to analyse the current REDD debate within the broader climate change framework and provide practical insights for the development of the UNFCCC REDD mechanism. To fully appreciate how lessons from the Ulu Masen Project can contribute, the Project is analysed within the current climate change law and policy context. Accordingly, section two provides an overview of forestry and climate change developments, including the status of current negotiations. Section three provides brief background to the Ulu Masen Project and section four provides detailed analysis of several key legal and policy issues in the REDD debate as they apply to the Project.

2 DEFORESTATION, LAND DEGRADATION AND CLIMATE CHANGE

2.1 The Links between Tropical Rainforests and Climate Change

It is now increasingly clear that tropical rainforests play a vital role in climate stabilisation and maintaining the earth's environmental balance.[8] The trees, plants and terrestrial soils in tropical rainforests sequester vast amounts of carbon, making them 'sinks' of central importance to climate change mitigation. Deforestation – defined as the permanent removal of forest cover – negates this, with significant amounts of the stored carbon released into the atmosphere, generally through logging or burning. Forest degradation – defined as gradual changes that negatively affect forest production capacity – also releases carbon but on a more gradual basis and often due to forest thinning or decay. Tropical rainforests are further invaluable ecological

6 K. Dooley, Forest Talks Still at Standstill as Copenhagen Ends without an Agreement, Forest Watch Special Report, EU Forest Watch Copenhagen Special Issue, January 2010, available at http://www.natureandpoverty.net/uploads/media/fwcopenhagenupdate.pdf

7 *Id*.

8 *See* Eliasch, note 4 above.

and social assets that perform a wide range of ecosystem services, including the protection of biological diversity and watersheds, erosion prevention and maintaining soil fertility.[9] This essay focuses on REDD as it pertains to tropical rainforests in developing countries. Although other forms of forest have significant climate change mitigation functions and may come under a future UNFCCC sanctioned REDD scheme, the narrower approach allows for more specific analysis.

Throughout history deforestation has provided key resources for economic growth such as land for agriculture and timber for construction. Today is no exception, with countries across the world deforesting the last remaining tropical rainforests in aid of economic development. The Food and Agriculture Organisation (FAO) Global Forest Resources Assessment estimated that between 2000-2005 12.9 million hectares of tropical rainforest were lost annually.[10] Varying degrees of degradation affected a further 7.3 million hectares. The extent of deforestation is so great that according to the IPCC the forestry sector is the third largest source of greenhouse gas emissions after the energy supply and industry sectors.[11]

Yet addressing deforestation and degradation is crucial not just to mitigate climate change but also to protect the vital environmental services that forests provide. Moreover, the social, cultural and economic functions of forests also need to be appreciated with millions across the world depending on forests, either directly or indirectly, for their livelihoods. The importance of forests for indigenous communities has further been extensively documented.[12] Achieving widespread climate change mitigation through REDD therefore requires a holistic approach which takes account of the economic activity related to forests and the social impact of reduced forest access that often results from efforts to curb deforestation.

While the scientific community has long recognised the significant impact of land use, land use change and forestry (LULUCF) on climate change, law and policy-makers have lagged behind. The UNFCCC – the primary source of international climate change law – canvasses emissions reductions in general terms, providing few specific references to forestry. Thus forests fall under the definition of a 'sink' under the UNFCCC (art 1.8), and deforestation and degradation can be considered a 'source' of greenhouse gas emissions (art 1.9). As the Convention stipulates that policies to deal with climate change should deal with all sources and sinks (art 3.3), reducing deforestation is envisaged as a mitigation activity. Reduced emissions in the forestry sector are referenced within the UNFCCC but only in relation to policy issues such as technology transfer (art 4(1)(c)) and sustainable management and conservation of sinks and reservoirs (art 4(1)(d)). Accordingly, while no specific REDD provision is included, general UNFCCC provisions regarding the establishment of national inventories of anthropogenic emissions, as well as measures to limit emissions and enhance sinks apply equally to the forestry sector.

Although REDD is not explicitly recognised under the UNFCCC, the general role of forests in climate change mitigation is acknowledged. This provided the basis to address deforestation more comprehensively under the Kyoto Protocol. Adopted in 1997 and coming into force in 2005, article 3.3 of the Protocol requires Annex I parties (generally considered industrialised countries) to account for and use net changes in emissions from human-induced LULUCF – limited to afforestation, reforestation and deforestation since 1990 – to meet their binding emission reduction commitments. Thus for Annex I parties, emissions from deforestation must clearly be included when addressing their Kyoto targets.

Similar to the UNFCCC, general Kyoto Protocol provisions regarding the commitments of Annex I

9 Tom Griffiths, Seeing REDD? Forests, Climate Change Mitigation and the Rights of Indigenous Peoples and Local Communities (UK: Forest Peoples Programme 2008).

10 Food and Agriculture Organisation, Global Forest Resources Assessment 2005: Progress Towards Sustainable Forest Management (Rome: Food and Agriculture Organization, 2006).

11 R.K. Pachauri and A. Reisinger eds., Climate Change 2007: Synthesis Report (Geneva: IPCC, 2007), available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm.

12 *See* Griffiths, note 9 above.

parties also apply to deforestation. Thus policies to protect and enhance sinks must take account of sustainable forest management practices (art 2.1(a)(ii)). Further, subsidies and taxes in emissions producing sectors that run counter to the objective of the UNFCCC should be phased out (art 2.1(v)). Also, all parties are required under article 10 to take steps to measure national inventories of emissions by sources and removals by sinks, including those related to the forestry sector.

Although all Protocol signatories are required to include deforestation within emissions inventories, the more important issue of establishing a mechanism to achieve REDD in developing countries was excluded. As the vast majority of tropical rainforest is in non-Annex I developing countries, the Kyoto Protocol effectively prevented REDD from contributing to UNFCCC emission reductions in the 2008-2012 commitment period. While establishing a mechanism to achieve and regulate REDD was on the agenda during the 1997 Kyoto Protocol negotiations, it was excluded from the final agreement primarily because the technology to estimate forest carbon stocks, monitor deforestation and calculate emissions reductions was not considered sufficiently advanced.[13]

2.2 Development of the REDD Concept

While REDD has a limited basis under the UNFCCC, and increased but still minimal recognition under the Kyoto Protocol, forest conservation and preventing deforestation are also grounded in other areas of international law. These range from the International Tropical Timber Agreement of 1994 which aims to ensure all exports of tropical timber come from sustainable sources, Chapter 11 of Agenda 21 which identifies measures to combat deforestation and promote sustainable forest management, to the International Convention to Combat Desertification which promotes forest conservation.

A cumulative body of international norms and principles therefore attest to the unique place forests have in the global environment. Especially since the 1992 Rio Conference on Environment and Development, and the Non-binding Authoritative Statement on the Management, Conservation and Sustainable Development of all Types of Forests, there is international recognition that forests must be analysed outside the narrow confines of conservation. Rather forests provide essential livelihoods for developing countries and must be fully integrated into sustainable development plans. The development of a REDD mechanism should be placed in this context, whereby the environmental and social value of forests is increasingly recognised, while providing alternative sources of income and diversifying livelihoods is considered an essential tool in preventing deforestation.

Following the Kyoto Protocol, and the absence of a mechanism to achieve REDD in developing countries, momentum has been building to include this significant source of emissions in the post-2012 climate framework. The Kyoto Protocol expires in 2012 and a new or similar agreement is required to provide emission reduction targets from 2013 onwards. A catalyst for increased attention on REDD was a submission by Papua New Guinea and Costa Rica on behalf of the Coalition for Rainforest Nations made during COP11 in Montreal during 2005. The submission received wide support and emphasised the dialogue needed to develop scientific, technical, policy and capacity responses to address emissions resulting from tropical deforestation. In response, the UNFCCC Subsidiary Body on Scientific and Technical Advice (SBSTA) was requested to evaluate options for REDD and report back at COP13.[14] Since then, two high-level workshops were conducted by the UNFCCC in 2006 to build consensus on key REDD policy considerations. This culminated in a specific decision on REDD at COP13 in 2007 which formed part of the Bali Roadmap. The decision stated that the UNFCCC should be implemented through 'policy approaches and positive incentives on issues relating

13 B. Vickers, REDD: A Steep Learning Curve, Notes from a Session at the Asia Pacific Forestry Week, Hanoi, April 2008, available at http://www.recoftc.org/site/fileadmin/docs/Events/Features/article_on_APFW_REDD_short__3_.pdf.

14 *See* Griffiths, note 9 above.

to reducing emissions from deforestation and forest degradation in developing countries'.[15]

The Bali decision provided the first official UNFCCC recognition of REDD and encouraged parties to carry out voluntary, demonstration activities. Specific guidance for demonstration activities was stipulated including the need for emissions reductions to be results-based, demonstrable, transparent, verifiable, and estimated consistently over time. The guidelines allowed national or sub-national REDD approaches but stated the latter should constitute a step towards a national framework. Activities were further required to be consistent with sustainable forest management.

The broad principles laid down at Bali provide the foundation for a future UNFCCC REDD mechanism. However, significant and influential policy decisions still need to be made. To facilitate this process, at COP 13 SBSTA was requested to analyse methodological issues, in particular reference levels, the assessment of changes in carbon stocks, and the implications of national and sub-national approaches. Parties were invited to make proposals and over 30 were submitted by state parties and non-governmental organisations (NGOs).

While areas of difference remain, analysis of REDD proposals undertaken by the Global Canopy Programme indicates there is significant common ground.[16] A brief overview of REDD proposals will now be provided using the GCP analytical framework of scope, reference levels, distribution and financing. This enables contextualisation of the Ulu Masen project within the broader REDD debate.

15 *See* Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action, Decision 2/CP.13, *in* Report of the Conference of the Parties to the UNFCC, Thirteenth Session, Bali, 3-15 December 2007, Doc. No. FCCC/CP/2007/6/Add.1 (2008).

16 Global Canopy Programme, The Little REDD Book: A Guide to Governmental and Non-governmental Proposals for Reducing Emissions from Deforestation and Degradation (Oxford: Global Canopy Programme, 2008).

2.2.1 Scope

As REDD has developed, there have been differing opinions as to the scope of the mechanism. Although there is broad consensus that REDD should be voluntary and only apply to developing countries, considerable divergence remains as to which activities are permissible. This commenced with disagreement over whether just deforestation or also forest degradation should be included. While often considered jointly, both are distinct processes resulting from different drivers and with different carbon stock implications.[17] Deforestation often results from land use conversion for agriculture and according to the IPCC has occurred where there is less than 10 per cent tree crown cover.[18] Degradation is driven by selective logging, firewood harvesting and local environmental factors, resulting in a gradual thinning of the forest. Although the potential emissions reductions from degradation are high and abatement may be more cost effective, it raises significant monitoring challenges. Satellite technology – the main tool for tracking changes in forest cover – is far less effective at measuring degradation than deforestation. Accordingly many have questioned whether emissions reductions from forest degradation can realistically and reliably be calculated.[19] At present, however, there is widespread consensus that monitoring methodology is improving and as a result degradation should therefore be included in the REDD framework.[20]

Throughout 2009, REDD-Plus has gained significant traction within UNFCCC negotiations, potentially allowing emissions reductions from sustainable management of forests, enhancement of forest carbon stocks, reforestation and afforestation within the mechanism. The possibility of reforestation and forest management being included within REDD has proved particularly controversial as several parties and civil society stakeholders fear the mechanism could incentivise the conversion of primary forest

17 Erin C. Myers, Climate Change and Forestry: a REDD Primer (Washington, DC: Ecosystem Marketplace, 2008).

18 Intergovernmental Panel on Climate Change, IPCC Special Report on Land Use, Land Use Change and Forestry (Geneva: IPCC, 2001).

19 *See* Myers, note 17 above.

20 *See* Global Canopy Programme, note 16 above.

to plantation. At the time of writing, the core issue of scope remained unresolved, representing perhaps the greatest risk to not achieving consensus between all UNFCCC parties.

2.2.2 Reference Levels

Regarding reference levels, the use of national over sub-national frameworks has attracted significantly more support. Proponents highlight the increased efficiency and reduced leakage of a national approach, while detractors emphasise the benefits of a sub-national model in contexts where the central government has minimal capacity to manage a national carbon accounting system.[21] This position reflects the indicative guidance on REDD agreed in Bali: 'demonstration activities should constitute a step towards the development of national approaches'. In terms of baselines or reference scenarios, historic emissions levels are generally preferred over projected estimates.

2.2.3 Finance

Financing represents another contentious and unresolved element of REDD. Proposals are divided between a fund-based system, utilising carbon markets, or a combination of both. Funds are considered more appropriate for preparation, pilot and capacity building activities, given the questionable profitability of such actions. Carbon markets are thought to provide greater financing potential and increased consistency over the long-term.[22] A combination of different sources of financing throughout different phases of REDD, with funds phasing out to carbon markets by the full implementation phase, appears the likely result.

2.2.4 Distribution

A central equity issue regarding REDD is determining which developing countries should benefit. The REDD concept, based on measuring reductions in rates of deforestation, rewards those with historically high-levels of deforestation. Countries that have relatively low deforestation rates, such as Costa Rica, Belize and Gabon, would receive minimal benefit and perversely have incentive to increase deforestation in the lead up to REDD so rates can later be reduced and increased carbon credits generated. A proposed solution to this distribution issue is to utilise a global historic baseline against which national rates are measured against. Another has been to create a stabilisation fund to support countries with low rates of deforestation.[23]

These issues constitute the main areas of debate related to finalising the REDD framework. Definitions also remain unresolved with key terms such as 'forest' *and 'deforestation' not yet clearly defined.*[24] Yet despite the work to be done, it can be seen that the REDD concept is far from a new phenomenon and has developed rapidly since its inception. Importantly, it has been born out of developments in international environmental law since the early 1990s, has grounding in both the UNFCCC and Kyoto Protocol and has received official endorsement under the Bali Roadmap. Further, methodological issues have progressed significantly through the work of SBSTA with a decision also passed at Copenhagen. Overall therefore, despite the loss of momentum at Copenhagen, consensus on REDD has gradually been forming and agreement on a UNFCCC-mandated mechanism is achievable. It remains to be seen whether the progress made thus far can be translated into an effective agreement post-Copenhagen.

2.3 Forestry and the Clean Development Mechanism (CDM)

The CDM is one of the 'flexible mechanisms' established under the Kyoto Protocol to assist Annex I parties to meet their emission reduction commitments. Through joint implementation or obtaining emission offsets through flexible, market-

21 *See* Global Canopy Programme, note 16 above.
22 *Id.*
23 *Id.*
24 V. Kapos, P. Herkenrath and L. Mera, Reducing Emissions from Deforestation: A Key Opportunity for Attaining Multiple Benefits (Cambridge: United Nations Environment Programme – World Conservation Monitoring Centre, 2007), available at http://www.unep-wcmc.org/resources/publications/unep_wcmc%20RED%20Feb07.pdf.

based schemes, state parties can supplement national emission reduction efforts. Under CDM, projects that reduce greenhouse gas emissions and contribute to sustainable development in developing countries can generate Certified Emission Reductions (CERs). Following project verification and proof that emissions reductions are measurable, verifiable and additional, CERs can be sold on the market and used to meet emission reduction targets. While under the Kyoto Protocol REDD is neither promoted or prohibited, under the 2001 Marrakesh Accords – a set of agreements and policies to implement the Protocol – CDM is limited to certain activities. In relation to land use and forestry, CDM is restricted to afforestation and reforestation. While avoided deforestation has therefore been excluded from the CDM framework, the limited number of CDM forestry projects to date provides perhaps the best comparative analysis for a UNFCCC mandated REDD scheme. Analysis in this regard is conducted in section four.

2.4 REDD in the Context of Current Negotiations

In the lead up to Copenhagen, the REDD concept was further developed through SBSTA meetings, in particular a technical workshop held in Tokyo in June 2008. This emphasised the importance of national frameworks, cost-effective and robust methodologies and the gaps regarding forest degradation methodologies.[25] In late 2008, minimal progress regarding REDD was made at COP14 in Poznan, however SBSTA continued its work on REDD methodologies and monitoring systems.[26]

Most controversial at Poznan was the issue of indigenous peoples within the REDD framework. In its decision on REDD, SBSTA noted the importance of several elements including 'the need to promote the full and effective participation of indigenous people and local communities, taking into account national circumstances and noting relevant international agreements'.[27] This was amended from the proposed text of 'not*ing the rights and importance of engaging indigenous peoples and other local communities*'.[28] *The final text was pushed by the U.S., Canada and Australia, and received strong criticism from NGOs for insufficiently protecting the rights of indigenous peoples (emphasis added).*[29] For many, the practical and developmental benefits of REDD can only be achieved if forest dependant communities have a clearly defined role in the implementation of REDD projects. As local communities may have customary tenure over forest, possibly contribute to deforestation, and are also best placed to monitor forest conservation, their involvement in REDD activities is considered central to its success.[30] Since then, however, increased emphasis on social and environmental safeguards in the negotiating text has placated many of the earlier concerns.

In 2009, meetings of the UNFCCC's Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) continued with meetings in Bonn, Bangkok and Barcelona all feeding into the process to negotiate the post-2012 climate framework. A Subgroup of the AWG-LCA contact group on mitigation specifically focused on REDD as mandated by paragraph 1 (b)(iii) of the Bali Action Plan. Meeting at each of the AWG-LCA sessions, the Subgroup developed several non-papers to move debate forward and provided a negotiable REDD text for Copenhagen. Progress in the Subgroup was slow but steady with consensus forming around principles and safeguards, as well as monitoring, reporting and verification. Prior to Copenhagen, divergence remained regarding core issues of scope

25 *See* Draft Report of the Subsidiary Body for Scientific and Technological Advice, Subsidiary Body for Scientific and Technological Advice, Twenty Ninth Session, Poznan, 1-10 December 2008, Doc. No. FCCC/SBSTA/2008/L.14 (2008), available at http://unfccc.int/resource/docs/2008/sbsta/eng/l14.pdf .

26 C. Lang, 'FCPF's 'Poster Child' Would Reward Forest Destroyers in Indonesia', *REDD Monitor,* 2 March 2009, available at http://www.redd-monitor.org/2009/03/02/fcpfs-poster-child-would-reward-forest-destroyers-in-indonesia/.

27 *See* Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action – Draft Conclusions Proposed by the Chair, Subsidiary Body for Scientific and Technological Advice, Twenty Ninth Session, Poznan, 1-10 December 2008, Doc. No. FCCC/SBSTA/2008/L.23 (2008).

28 *See* Lang, note 26 above.

29 *See* Griffiths, note 9 above.

30 Leo Peskett et al., Making REDD Work for the Poor (London: Poverty Environment Partnership, 2008).

and financing. A crucial parallel issue that has attracted insufficient attention is how REDD fits into the broader UNFCCC mitigation framework with varying positions over whether REDD actions should be included within nationally appropriate mitigation actions (NAMAs).

Despite key issues being unresolved, prior to Copenhagen the relative progress on REDD led to expectations that it may represent COP15's main success story. Given the failure at Copenhagen to negotiate a legally binding agreement on deep emission reduction commitments and adaptation finance (amongst others), REDD provided a rare opportunity when the interests of Annex I and non-Annex I countries converge. As REDD can mobilise substantial finance for sustainable development, generate important co-benefits regarding biodiversity conservation and result in significant emission reductions (assuming REDD is not entirely an offset for Annex I parties) there is significant potential for a win-win scenario. Yet as mentioned previously, both due to a deadlock in REDD negotiations and the breakdown of the broader Copenhagen process, a REDD mechanism was not officially established. Despite the loss of momentum, the current post-Copenhagen pause in negotiations may provide scope to infuse abstract policy debates with a more grounded analysis of how REDD projects operate in practice. Indeed examination of a specific pilot activity illustrates the significant risks and obstacles that REDD projects must overcome to achieve their lofty objectives.

3 OVERVIEW OF THE ULU MASEN PROJECT

3.1 Context

Following the devastating Indian Ocean tsunami of December 2004 and the end of an over 30-year separatist conflict, Governor Irwandi Yusuf built his policy for Aceh's reconstruction on a platform of environmental sustainability. To much fanfare, the Governor announced a moratorium on all logging in the province from June 2007. In August that year he also pledged, along with the Governors of Indonesian province West Papua and Amazonas in Brazil, to tackle deforestation in exchange for carbon financing. The Aceh government's approach is encapsulated in the Aceh Green Strategy a comprehensive blueprint for land use change, sustainable management of forests and sustainable economic development across the province.[31] Included within the Aceh Green framework is the Ulu Masen Project ('the Project') – a large-scale demonstration activity initiated following the recognition of REDD under the Bali Roadmap.

Ulu Masen is of particular significance in the REDD debate given Indonesia's appalling record on deforestation. Industrial and illegal logging, forest fires, conversion of forest for oil palm plantations and degradation of peatlands contribute to give Indonesia the world's highest deforestation rate and largest national emissions from the forestry sector.[32] Indeed, 85 per cent of Indonesia's emissions come from the forest sector, making it the third largest greenhouse gas emitter in the world.[33] Making REDD successful in Aceh and across Indonesia will in itself make a sizeable contribution to cutting global emissions levels.

The social and political aspects of REDD projects that will be so crucial for their success are further amplified in the Aceh context. Until 2005, the national government waged a brutal civil war against Acehnese separatist rebels, with control of Aceh's valuable gas and oil reserves a major factor in the protracted conflict. A peace agreement gave the Acehnese significant provincial autonomy, including at least 70 per cent of natural resource revenues. Control of REDD projects across Indonesia, and in Aceh particular, highlights the very real tension between central and provincial government. Further, governance in Indonesia's forestry sector

31 Government of Aceh, Aceh Green Strategy, 2008, available at http://www.aceh-eye.org/data_files/english_format/economic/economic_analysis/eco_analysis_2008_07_00.pdf

32 *See* Food and Agriculture Organization, note 10 above.

33 World Bank, 'Indonesia and Climate Change: Current Status and Policies', *PEACE* (2007).

is widely acknowledged as ineffective and corrupt, and is a major factor in the inability to significantly reduce deforestation rates.[34]

Yet in Aceh, the long-standing conflict combined with tsunami-related infrastructure damage, resulted in significant tracts of tropical rainforest still being in tact. However, peace and reconstruction have markedly increased both access and demand for timber. Indeed deforestation increased dramatically from around 20,000 hectares per year pre-tsunami to over 130,000 hectares per year in 2005-2006, largely due to timber demands for tsunami reconstruction.[35] Demands for poverty reduction, increased investment, and agriculture fuelled economic growth have led to even more pressure on forests. These complex dynamics, the global imperative to protect a large remaining tract of Sumatran rainforest, combined with the importance of Indonesia's success at REDD, make the Ulu Masen Project a suitable lens through which to analyse REDD more broadly.

3.2 Project Design

The Project's objective is to develop and test carbon finance mechanisms to reduce greenhouse gas emissions, contribute to sustainable development and conserve biodiversity.[36] Covering over 750,000 hectares of tropical rainforest in the Ulu Masen ecosystem, the Project will run for 30 years and is limited only to deforestation. Despite the exclusion of forest degradation, all previous analysis regarding REDD is considered relevant except where explicitly stated. Specifically, the project aims to reduce deforestation rates by 85 per cent, avoid emissions of over 3.3 million tonnes of CO_2, and provide innovative alternative livelihoods to loggers and forest dependant communities. This includes high-value small-scale organic agriculture, sustainable community-based forest management and project-related monitoring and enforcement.[37]

Perhaps most significant about the Ulu Masen Project in comparison to other REDD demonstration activities is the formative role of the private sector. The Project was instigated by Carbon Conservation Ltd, a for-profit company which facilitated project design, development and finance. The Project is led by the Government of Aceh, with implementation intended in large part to be conducted by conservation NGO Flora and Fauna International in conjunction with its local partners. Initial start-up finance has been provided through official development aid, accessible in large part due to significant post-tsunami donor interest in Aceh's reconstruction. After the initial phase, the project is expected to generate Verified Emissions Reductions (VERs), which will be sold on the voluntary market but are also intended to be compatible with any post-2012 REDD scheme mandated by the UNFCCC.

Regarding project finance, Australian-based Macquarie Bank has committed and invested significantly in REDD, establishing a REDD Task-force with Flora and Fauna International (FFI) to develop six REDD pilot projects across the world. Ulu Masen is perhaps the most significant of these projects representing the first instance where high-levels of private sector investment has been mobilised. This comes primarily in the form of an agreement between Merrill Lynch, now owned by Bank of America, and Carbon Conservation, the project developer, regarding the rights to the carbon in a third of the project site.[38] The terms of the agreement include:

34 L. Arnold, 'Deforestation in Decentralised Indonesia: What's Law Got to Do With It'?, 4/2 *Law, Environment and Development Journal* 75 (2008).

35 Eye on Aceh, The Golden Crop? Palm Oil in Post-tsunami Aceh (Aceh: Eye on Aceh, September, 2007), available at http://www.aceh-eye.org/data_files/english_format/ngo/ngo_eoa/ngo_eoa_2007_09_00.pdf.

36 The Provincial Government of Nanggroe Aceh Darussalam (Aceh), Flora & Fauna International and Carbon Conservation Pty. Ltd, Reducing Carbon Emissions from Deforestation in the Ulu Masen Ecosystem: A Triple-Benefit Project Design Note for CCBA Audit (Indonesia: The Provincial Government of Nanggroe Aceh Darussalam, 2007), available at http://www.climate-standards.org/projects/files/Final_Ulu_Masen_CCBA_project_design_note_Dec29.pdf.

37 *Id.*

38 O. Brooks, 'Indonesia Discovers Green Gold in the Trees', *Far Eastern Economic Review,* 3 October 2008, available at http://feer.com/essays/2008/october/duplicate-of-aso-leads-ldps-struggle-for-survival .

> 'pre-payment for exclusivity, a guaranteed offtake agreement for carbon credits over the first four years, a call option for further carbon credits over six years, incentives for all parties to ensure alignment of objectives, and an upside sharing agreement. The financing resulting from this deal includes a guaranteed $9 million with a ceiling that is contingent upon the volumes and value of carbon credits and ecosystem benefits transacted over the 30-year project lifetime'.[39]

Carbon Conservation and together with NGO partner Fauna and Flora International will play critical enabling roles and work closely with the Acehnese Provincial Government. Sale of the VERs generated by the project is expected to be equitably distributed amongst all project stakeholders, including forest dependant communities, government and private investors. Under the 2008 Sales and Marketing Agreement between Carbon Conservation and the Acehnese Government, a Steering Committee is mandated to:

> '...ensure the development of equitable carbon revenue sharing mechanisms with the Aceh people affected by the Project... following consultation with such people (or representatives of such people)... [to achieve] ... an equitable and direct positive impact on people's livelihoods through the sale of Ulu Masen Credits generated by the Project (taking into account that 130,000 people may be affected); ...'.[40]

Despite these indications, neither the project design, related agreements nor developments since implementation have specifically determined benefit-sharing arrangements and the exact division of project revenue.

The Project design was finalised in late 2007 and was submitted for independent audit against Climate, Community and Biodiversity (CCB) criteria. The Project was validated but received a silver-rating due to methodological weaknesses in calculating intact and disturbed forest, a lack of strategy to mitigate community-level risks and the failure to include the relevant laws.[41] Since then, the focus has been on project development, with the Aceh government recruiting over one thousand forest wardens, forest monitoring systems being established and groundwork put in place to commence livelihoods projects.

The design of the Project was brought into question by research published in Environmental Research Letters in late 2009. This examined whether the Project was extensive enough to effectively contribute to curbing deforestation across Sumatra. Although the area protected through the Ulu Masen Project provided gains, it cannot address the widespread deforestation for oil palm plantations in other areas.[42] Thus the research concluded the Project operates at an inadequate scale to address the broader drivers of deforestation.[43] This critique attacks the sub-national operation of the Project rather than its specific methodology. It does, however, demonstrate the importance of a holistic analysis of REDD projects and illustrates the perverse outcomes that may arise if individual projects are examined in isolation.

Although initial projections expected the first tranche of VERs to be sold in mid-2009, this has not occurred due to delays in implementation and uncertainties regarding methodology. When VERs are sold, however, it is expected this will provide increased momentum to the Project, as stakeholders, and forest dependent communities in particular, will

39 Merrill Lynch Press Statement, 14 April 2008, London, available at http://www.ml.com/index.asp?id=7695_7696_8149_88278_95339_96307.

40 J. Dunlop, REDD, Tenure and Local Communities: A Study from Aceh, Indonesia (Sydney: International Development Law Organization, October 2009).

41 Smartwood, Validation Audit Report for Provincial Government of Aceh, Flora & Fauna International and Carbon Conservation in the Ulu Masen Ecosystem (New York: Rainforest Alliance, 2008).

42 C. Lang, Interviews about Ulu Masen, Indonesia: A REDD-labelled Protected Area, *REDD Monitor*, 20 January 2010, available at http://www.redd-monitor.org/2010/01/20/interviews-about-ulu-masen-indonesia-a-redd-labelled-protected-area/.

43 *Id*.

likely receive a share of the proceeds. To date, communities have not received direct payments from the project.

4 LEGAL AND POLICY LESSONS LEARNED

This section discusses legal and policy issues raised by the Ulu Masen Project in relation to broader REDD debates. The objective is to examine the implementation of this prominent REDD demonstration activity and glean lessons learned that contribute to the development of the REDD framework.

4.1 Legal Framework

The Ulu Masen Project operates in a context of legal uncertainty. At the heart of the matter is determining legal title to carbon sequestered in forests, otherwise known as carbon property rights. Central, provincial and district governments, logging companies with concessions, investors with contractual arrangements, private forest owners, to community leaders with customary title may all have legitimate claims. Given the potential money at stake – the World Bank has estimated REDD in Indonesia could be worth up to US $2 billion annually[44] – contestation is inevitable. Ulu Masen therefore provides a valuable case study on the central legal issues that REDD projects will encounter.

Analysing carbon property rights in relation to CDM projects with LULUCF activities, Miller et al find that given a lack of international principles on the issue, determining legal title to sequestered carbon is essentially a legal vacuum that must be filled by national law.[45] Although national legislation clarifying carbon property rights has been passed in a few instances, this has yet to occur in probable host countries under a REDD scheme, including Indonesia.[46] The resulting uncertainty means project developers do not have secure legal title to forestry carbon. Indeed even Ulu Masen proponents admit that the Project lacks a sound legal framework. Martin Berg of Merrill Lynch has described the Project's legal aspects as 'tricky' and noted that 'no country in the world has any experience on proving legally that a seller has the right to sell carbon from forests'.[47] While this legal void is recognised and schemes like UN-REDD envisage assisting countries such as Indonesia to clarify carbon property rights and develop appropriate regulatory frameworks, legal uncertainty over carbon title to sequestered carbon remains highly prevalent. Indeed this may have been a factor in delayed implementation of the Project.

In lieu of specific national legislation, existing property or natural resource law may provide guidance on the ownership of carbon property rights. For example in Indonesia, REDD project developers must obtain an environmental service permit or a wood forest product permit from the national or regional Forestry Ministry.[48] While there is an implicit assumption that carbon property rights are therefore vested in the state, which then has authority to issue concessions, this may still be subject to legal challenge, particularly by communities with customary title to forest.

Uncertainty over carbon property rights creates significant obstacles for the economic viability of any REDD project. Without clear and secure rights to sell REDD carbon credits to third parties, significant risk is unavoidable. Interesting in this regard is Merrill Lynch's sizable commitment

44 *See* World Bank, note 32 above.

45 M. Miller, M. Wilder and E. Knight, 'Legal Issues and Contractual Solutions for LULUCF Projects under the Clean Development Mechanism', *in* C. Streck et al. eds, *Climate Change and Forests: Emerging Policy and Market Opportunities* (London: Chatham House, 2008).

46 Examples include New Zealand where forest carbon is generally vested in the state or Australia where state-level legislation where carbon property rights can be vested in land owners. *See, e.g.,* Miller, Wilder and Knight, note 45 above.

47 C. Lang, The Private Sector and REDD: Turning 'Liabilities into Assets, *REDD Monitor*, 4 December, 2008, available at http://www.redd-monitor.org/2008/12/04/the-private-sector-and-redd-turning-liabilities-into-assets/.

48 *See* Miller, Wilder and Knight, note 45 above.

despite a lack of legal certainty over rights to forest carbon. The high risk can assumably be justified by the potential for large returns and Merrill Lynch gaining a foothold in the emerging REDD carbon market. Even so, the risks are significant and pending Forestry Ministry regulations – discussed in detail below – could completely change the landscape for rights over forest carbon and benefit-sharing.

While Ulu Masen and similar demonstration activities are essentially pilot projects, many will operate over long time-frames and have significant potential to generate conflict due to unclear rights to sequestered carbon. The results in Ulu Masen will further influence both investor confidence in REDD and the viability of the concept more generally. Until legal certainty on property carbon rights can be obtained, legal due diligence is of vital importance and associated risks must be managed. Yet it appears that Project proponents prioritised rapid project development over obtaining greater legal certainty.

4.1.1 Unclear Regulatory Framework

At present, while REDD is on track to being included in a post-2012 climate agreement, it is premature to consider it having any status under international law. Accordingly, a sound legal basis for demonstration activities must be found elsewhere. In Indonesia, given the expectation of a UNFCCC REDD mechanism and in light of the significant number of voluntary projects currently underway, several regulations have been passed, adding to a number of existing forestry sector regulations that affect REDD projects.[49] These include Regulations on Forest Zoning, Management and Utilisation issued by the President in January 2007 which authorise Provincial and District government to issue licences to utilise forest environmental services, including 'carbon absorption and storing'.[50] This demonstrates the Indonesian Government's position that REDD is primarily an economic activity requiring regulation in the same manner as logging and other forestry activities. It further reinforces the government's assumption that the state has primary rights over forest carbon. On the basis of this Regulation, the Aceh Government entered into partnership with Carbon Conservation to undertake the Ulu Masen Project.

Since 2007 there has been a proliferation of REDD activities across Indonesia, with over 20 REDD projects currently being implemented or in the pipeline.[51] As a result, the central government has sought greater control over REDD regulation. Initiatives include the establishment of a National Climate Change Council with a specific working group on forestry, a draft ministerial decree to create a National REDD Commission and regulations by the Forestry Ministry specifically created to regulate REDD activities.[52] Passed in May 2009, these regulations (*PerMenHut REDD*) list the forest areas eligible for REDD activities and include areas where concessions have been granted either for logging or conservation. The regulations mandate both a national and foreign entity jointly acting as project proponents with the latter generating carbon credits that are channelled to the national counterpart.[53] The REDD regulations also centralise oversight of REDD with all projects requiring ministerial approval.

Civil society groups criticised the regulations for a lack of consultation, the exclusion of forests identified for conversion to other land uses, the focus on logging concessions and a lack of protection for customary rights-holders.[54] Further the extent to which these regulations override and interact with provincial and district level licences for REDD projects is unclear. For the Aceh context, given its unique provincial autonomy arrangements, attempts by the central government to control REDD activities will most likely be contested.

Although Indonesian regulation of REDD is in a state of flux, projects such as Ulu Masen continue at

49 For a comprehensive analysis of the REDD framework in Indonesia, *see* J. Dunlop, note 40 above.

50 *See* Art 33(1)(f), Indonesian national Regulation 6/2007 on Forest Zoning, Management and Utilisation.

51 P. Anderson and T. Kuswardono, Reducing Emissions from Deforestation and Degradation in Indonesia (Norway: Rainforest Foundation Norway, 2008).

52 Down to Earth, 'The Pressure for REDD', 79 *DTE Newsletter* (2008), available at http://dte.gn.apc.org/79are.htm

53 S*ee* Indonesian Minister of Forestry national Regulation P.30/2009 on Procedures for Reducing Emissions from Deforestation and Forest Degradation.

54 *Id*.

pace. A valid question for all REDD projects is therefore the extent to which legal certainty is required before activities can commence. REDD proponents argue that the global imperative to reduce emissions overrides the need for legal certainty.[55] They argue that regulatory issues can be finalised as projects are implemented and that the 'learning by doing' approach will provide the lessons necessary to develop appropriate regulatory frameworks. Regardless of the merits of such arguments, the fact remains that in Aceh and for most early REDD projects, legal uncertainty will be prevalent and generate significant risk.

Although it may be unreasonable for the implementation of demonstration activities to be postponed until all regulatory issues are finalised, greater emphasis is needed on mitigating legal risks. This may involve delays while key regulations are finalised and obtaining expensive legal advice. To deal with this issue, UNFCCC negotiators should consider what level of guidance regarding carbon property rights and regulatory frameworks should be included within the REDD framework. Given state interests dictate negotiations and sovereignty is prioritised, it is highly unlikely that the REDD scheme would specifically canvas carbon property rights. Yet one option could be requiring all REDD host countries to establish a sound regulatory framework that meets certain benchmarks, particularly under phase two of the so-called phased approach. At present, however, regulators are struggling to keep pace with the rapidly increasing number of REDD projects. This presents significant risks and threatens to undermine REDD efforts as a whole.

4.1.2 Land Tenure

Nowhere is the importance of increased legal certainty more evident than in relation to land tenure. Indeed most policy analysis on REDD highlights how resolving forest tenure issues are a key precondition to effective implementation.[56] The Ulu Masen project design makes reference to recognising customary forest tenure but contains no specific strategy to make this a reality. The Project was criticised by auditors for not describing the tenure and rights over forest subject to customary claims, and for an insufficient evaluation of the potential legal contradictions between state and customary rights over forest.[57]

The Ulu Masen Project design fails to appreciate the complexities, uncertainties and potential risks regarding unclear land tenure. This is a trend across REDD debates whereby land tenure is generally referenced as a key consideration but then condensed into a brief project objective that can assumably be addressed within a short time-frame. Land tenure, particularly in the developing world and especially in relation to forests, is an inherently complex, social and political matter. Broad-scale efforts to recognise, formalise and strengthen customary rights over forest and resources have been implemented across Africa and Asia over the past 25 years, yet often with minimal or even negative results.[58] The mere suggestion that certainty of land tenure can be achieved within a short timeframe, let alone before a project commences, demonstrates a gross simplification and misconception of the tenure context in many host countries.

Compounding the issue is the increased value forests should have under REDD schemes. To be effective REDD should provide financial incentives greater than the value that would otherwise be gained through deforestation. When the increased value of forests under REDD schemes is added to already complex tenure dynamics, existing tenure disputes may worsen, new ones may arise and resolving these issues may simply prove unachievable.

The situation for communities in the Ulu Masen area is a case in point. Forest is generally considered state land in Indonesia but as only approximately 12 per cent has been officially gazetted the legality of this is questionable.[59] Furthermore, overlapping and contradictory regulations provide minimal but insecure recognition of customary rights. Recent

55 *See* The Provincial Government of Nanggroe Aceh Darussalam (Aceh) et al, note 36 above.

56 *See* Stern, note 3 above and Eliasch, note 4 above.

57 *See* Smartwood, note 41 above.

58 R. Palmer, Literature Review of Governance and Secure Access to Land (London: DFID 2007), available at http://www.gsdrc.org/docs/open/HD417.pdf

59 *See* Anderson and Kuswardono, note 51 above.

provincial-level legislation in Aceh provides a defined legal role in forest management for customary leaders, known as *imeum mukim*. While a progressive policy, it has yet to be realised in practice.[60] Even more basic issues such as determining forest boundaries pose significant challenges, with local communities often unclear as to the designated limits or status of forests.[61]

The national Forestry Law of 1999 vests forest ownership in the state but recognises limited customary or *adat* rights of use and management. The central government's draft REDD regulations reflect the same position, however they aim to introduce a restrictive bureaucratic process if REDD projects are conducted on *adat* land. This involves extensive red tape and applying for a customary licence of forest ownership, which is administratively impossible to achieve given the absence of pending regulations since 1999 to govern the designation of *adat* land.[62] So it is clear that customary rights to forest exist, but it is unclear the extent this relates to carbon.

The uncertainty of forest tenure in Aceh is not dissimilar from the situation in other tropical developing countries. While most REDD proponents accept the importance of clear tenure over forests for effective implementation, few explicitly recognise the extreme challenge this represents. Even less appreciated is the risk of project failure and serious disputes where high-value projects are implemented in cases where tenure arrangements are unclear. A clear risk area for REDD project design is therefore focusing on statutory tenure arrangements without appreciating the complex role customary norms and institutions play in controlling access and management of forests. Accordingly, a UNFCCC REDD mechanism should ideally contemplate minimum standards of tenure certainty. Practically this could be achieved by linking an assessment of tenure arrangements into procedures to achieve free, prior and informed consent of participating communities. Although an onerous requirement, such an approach provides an important safeguard for the integrity and effectiveness of REDD projects.

4.2 Scope: National or Project-based?

An issue that divides REDD proponents is whether a national or project-based framework is more appropriate. While there is growing consensus that a national approach is the eventual objective, there are divergent views as to the interim role sub-national activities should have, particularly in cases where the central government has minimal capacity.[63] This policy decision will have far-reaching impacts on baseline calculation, leakage and permanence, as well as market issues such as investor confidence and the demand for REDD carbon credits.[64]

National accounting and management of REDD initiatives provide scope for countries to flexibly manage several projects, adapt to market signals and better meet nationally set REDD targets. Where forest for a REDD project covers substantial territory, possibly over numerous administrative boundaries, involving national institutions may be most appropriate.[65] Detractors, however, highlight the bureaucratic processes associated with centralised regulation, the historic mistreatment of forest-dependent communities by central governments and the inability of some developing countries to successfully manage the complex methodology and accounting required for effective REDD oversight.[66] As poor forestry governance has generally caused high deforestation rates in countries flagged for REDD, these governance issues will continue to impact of the effectiveness of REDD initiatives. It is argued this would deter potential investors and buyers.

Advocates of a sub-national or project-based framework, along the lines of CDM, emphasise the increased potential to engage the private sector. If investors have a direct stake in a REDD project they

60 Taqwaddin, Aceh Traditional Forest, Aceh-Eye, 12 April 2008 available at http://www.aceh-eye.org/data_files/english_format/issues/issues_environment/environment_logging/env_logging_2008/env_logging_2008_04_12.pdf.
61 *See* Dunlop, note 39 above.
62 *See* Down to Earth, note 52 above.
63 *See* Global Canopy Programme, note 16 above.
64 *See* Myers, note 17 above.
65 *Id.*
66 *See* Global Canopy Programme, note 16 above.

have increased incentive to expand the REDD market.[67] As a project-based system facilitates greater private control and potentially higher revenue, innovators and eco-entrepreneurs are more likely to initiate and advance projects. Under a project-based framework, initiatives can also be instigated more rapidly without requiring national-level baselines, accounting systems and centralised regulation. Conversely, however, an increased role for the private sector results in significant power and information differentials between project developers and communities, imbalanced negotiating positions, and scope for exploitation. Indeed, predatory tactics by both corporations and governments in relation to natural resources on community land are a common occurrence in the developing world.[68]

Yet perhaps most significant regarding the broader climate change framework, is how project-based REDD most likely has a smaller impact and insufficiently engages national governments in the process. As avoiding dangerous and irreversible global warming must become an international effort, incentives and strategies to engage developing countries in climate change mitigation must be provided. REDD represents an unprecedented opportunity to achieve this and national over project-based implementation provides far greater benefit in terms of broader climate change goals.

Middle-ground or hybrid approaches have also been suggested. These fall into two categories: the 'nested' approach, and combing national commitments with project-level investments. The latter emphasises that private-sector carbon financing is central to REDD's success and that fully nationalised procedures will deter investment. Yet in this scenario emission reduction targets, REDD accounting, guarantees of permanence and leakage control are a national responsibility.[69] Alternatively, the 'nested' approach allows project-based REDD in the interim while a transition to a national scheme is prepared for. This facilitates early action while national-level institutional development and capacity building is undertaken in the interim.[70]

The Ulu Masen Project, entirely a project-driven scheme, provides significant insight on this issue. In many respects, the prominent role played by the Acehnese provincial administration has resulted in the central government being almost entirely excluded from the Project. In Aceh, where a fragile peace exists following a conflict caused partly by control over resources, this is an extremely sensitive, political issue. The central government's intention to establish a National REDD Commission and give the Forestry Minister final approval of REDD projects demonstrates the increased control and revenue sought from the emerging REDD market. This amounts to a *re*centralisation of forest management and goes against recent policy trends for administrative decentralisation across Indonesia.[71] It further goes against widely accepted best practice in natural resource and forestry management which aims to devolve significant authority to sub-national institutions and local communities.

The sub-national framework of the Project has been instrumental in advancing implementation and mobilising carbon finance. If the project had fallen under a national framework it is highly likely that the design and financing would be radically different, or perhaps non-existent. Carbon Conservation, in particular millionaire CEO Dorjee Sun, has been instrumental in promoting the project's investment potential and bringing various stakeholders together, including leading investment banks. The innovative project design which adopts a holistic vision of REDD, including broad-scale land use change on the borders of protected forest and the promotion of 'green' agriculture in organic coffee, cacao, rubber and oil palm, has arisen from the involvement of private-sector expertise in commodity trading and carbon financing. While premature to judge, the project's quick gains to date, achieved in conjunction with the Acehnese government, demonstrate the financing, efficiency and innovation benefits a project-based approach can provide. Above all, Ulu Masen demonstrates that a sub-national approach is ideally suited to carbon financing and mobilising significant private sector investment.

67 *See* Peskett et al., note 30 above.
68 *See* Palmer, note 58 above.
69 *See* Myers, note 17 above.
70 *See* Global Canopy Programme, note 16 above.
71 *See* Arnold, note 34 above.

Debate over whether a national-level framework would be more beneficial cannot be removed from the broader political issue over how revenues are divided between different levels of government. This is further a highly technical legal issue in Aceh where post-conflict provincial autonomy, embodied in the Law on the Governing of Aceh (LOGA) of 2006, grants the Aceh Government control over natural resources and 80 per cent of revenues from forestry activities. However, the central government retains regulatory control in areas related to international conventions, for example the UNFCCC, and more broadly 'standards, norms and procedures set by the central government have to be followed'.[72] The ambiguities of Acehnese governance under Indonesian law result in both the provincial and central governments having strong claims to authority over REDD. Given the large amount of revenue at stake, there is accordingly scope for REDD projects to become a flashpoint for political but also violent conflict.

A significant obstacle for a national REDD scheme is the widely acknowledged corruption and inefficiency of the Forestry Ministry.[73] Historically, the Ministry has been closely aligned to business interests with forests seen primarily as a vehicle for economic growth or personal gain. Governance reform has occurred in the sector over the past ten years, however minimal gains have been made.[74] It is questionable whether the high level of forestry governance required to prevent deforestation and make REDD a reality can be achieved before 2013. While similar concerns still apply for sub-national authorities, there is an argument for project-level capacity building activities being more efficient due to the reduced scale. In any event, it must be recognised that the ability of state authorities to monitor REDD activities, as well as police and enforce breaches of prohibitions on logging, are the cornerstone of REDD success. Up until now reducing deforestation has proved unachievable in Indonesia. Will financing under a national REDD scheme make any difference?

These governance issues are not unique to Indonesia. Countries with significant amounts of tropical rainforest and high rates of deforestation, such as Democratic Republic of Congo, Myanmar, Zimbabwe, Burundi, Uganda and Columbia, have a history of political instability or civil conflict.[75] Indeed sub-standard forestry governance in these countries is generally a leading cause of deforestation. When REDD revenues come online there will inevitably be internal contestation over who benefits. In most scenarios, it is the forest dependant communities who are at risk being marginalised. UNFCCC negotiators must keep the dynamics between various levels of government and communities forefront in design of the REDD mechanism. This may suggest that a national approach is preferred. Yet even so, safeguards must be put in place to ensure legitimate sub-national stakeholders such as provincial government and local communities receive appropriate benefit.

In the final event, determining whether REDD is national or sub-national may be an ideological more than a technical consideration. From a market-oriented perspective, national governments encumber investment and restrict efficiency. For some conservationists, the role of the private sector and profit-driven carbon traders in preserving priceless tropical rainforests should be limited or subject to strict regulatory controls. Perhaps then the 'nested' hybrid model offers the best of both options, with the private sector initiating early projects with fully national schemes implemented when certain preconditions are met. Alternatively, the 'phased' approach emphasises the development of national level frameworks and capacity before sub-national activities could commence.

4.3 Finance: Fund or Market-based?

The Ulu Masen Project provides support for a market-based approach. Despite uncertainties over carbon property rights, the lack of a sound legal framework, unclear jurisdiction between provincial

72 *See* Art. 156, Indonesian national Law 11/2006 on the Governance of Aceh.

73 J. Smith et al., 'Illegal Logging, Collusive Corruption and Fragmented Governments in Kalimantan, Indonesia', *in* L. Tacconi ed., *Illegal Logging: Law Enforcement, Livelihoods and the Timber Trade* (London: Earthscan, 2007).

74 *See* Arnold, note 34 above.

75 *See* Food and Agriculture Organization, note 10 above.

and central governments, not to mention the non-existence of a UNFCCC REDD framework, Carbon Conservation has been able to secure an initial commitment from Merrill Lynch to purchase US $9 million worth of carbon credits generated by the Project. The potential for carbon markets to provide substantial funding for REDD projects, even at the early stages, has therefore been demonstrated. While providing adequate economic alternatives to global deforestation will require vastly more finance, this initial mobilisation of substantial investment demonstrates the potential of a UNFCCC REDD compliance scheme. However, full judgment on project finance should be reserved until VERs are sold on the voluntary market and their price established. Yet there is an assumption that carbon financing creates a more predictable and scalable source of funding with international funds unpredictable given the need for constant donor contributions.[76] The significant fluctuations and volatility in the EU Emissions Trading Scheme (ETS) during 2007 and 2009 may however suggest otherwise.

An important aspect regarding REDD financing raised by the Project proponents is the difficulty in obtaining start-up financing.[77] Without internationally established methodologies to calculate baselines and measure emissions, all estimates are open to dispute and the project concept may lack sufficient certainty to attract investment. Further, initial project development for REDD schemes are resource intensive. High-resolution satellite imagery, ground checking, calculation of potential emissions reductions and legal advice, all contribute to a substantial initial outlay. Yet such assessments are vital to determine project viability and credible reference scenarios, but may not lead to any return.

It is therefore at the project development stage that fund-based mechanisms may be essential. Encouragingly, since COP13 at Bali, numerous funds have been established to finance this preparation work. These include the World Bank's Forest Carbon Partnership Facility, the United Nations scheme UN-REDD, and bilateral programs, including those by the Norwegian and Australian governments. The Ulu Masen project commenced before these funds were established but it has benefited from a significant donor presence in Aceh. Thus existing aid projects, such as the World Bank managed Aceh Forest and Environment Project (AFEP) and governance assistance to implement the Aceh Green strategy, has supported project development and capacity-building related to REDD. It is questionable whether the Project would have proceeded in its current form in the absence of a significant aid presence or without access to donor funds. Indeed, existing donor-funded projects, combined with Carbon Conservation's business acumen, was most likely a key catalyst in securing Merrill Lynch's investment. Some form of fund-based mechanism, particularly to finance country preparations and project start-up, may be essential to project viability and must there be included in the REDD framework. The direction of UNFCCC negotiations and consensus towards a phased approach suggests that early start-up and capacity funding will be available.

The issue of global equity further shapes the REDD financing debate. Countries such as Brazil are adamant that REDD should constitute a cheap emissions offset for developed countries. Thus 'business as usual' should not be allowed with Annex I emission reduction targets achieved by primarily purchasing REDD offsets. While some scope is open for REDD carbon credits to be offsets it is likely that some limit will be placed on this proportion. As REDD will significantly increase the supply of carbon credits, prices will fall, potentially allowing countries to continue high-levels of greenhouse gases emissions through the purchase of cheap offsets.[78] This may dramatically reduce the incentive for carbon-intensive industries to invest in cleaner, more efficient technology which is a main benefit of cap and trade systems such as the EU ETS. It should be noted, however, that the Environmental Defense Fund contests the negative impact REDD could have on the existing carbon market, claiming that emissions reductions under a possible US cap and

76 *See* Griffiths, note 9 above.

77 *See* The Provincial Government of Nanggroe Aceh Darussalam (Aceh) et al, note 36 above.

78 *See* Down to Earth, note 52 above.

trade system would dwarf the amount of REDD credits entering the market.[79]

Determining how REDD credits fit into the broader carbon market is therefore crucial not just for the integrity of REDD but also for all carbon trading. Several schemes for REDD markets have been proposed, with a trading system separate from other Kyoto flexible mechanisms such as CDM and Joint Implementation appearing likely. Such proposals include the Dual-Markets Approach by the Center for Clean Air Policy[80] and the Tropical Deforestation Emission Reduction Mechanism (TDERM) from Greenpeace.[81] Both envisage minimum and maximum limits on purchasing of REDD credits to guarantee sufficient funding for projects while also preventing Annex I parties from over-relying on cheap REDD credits to meet targets.

Yet given the lost emissions reductions if REDD credits are offsets for Annex I parties, the Norwegian government and Climate Action Network International[82] advocate decoupling REDD from carbon trading. Instead, it has been suggested that REDD-type activities could be funded through the auction of a small proportion of Assigned Amount Units (AAUs) under a post-2012 framework rather than being allocated without cost.[83] The proceeds could fund REDD activities in developing countries and avoid REDD credits flooding carbon markets. Others such as the Tuvalu Government propose establishing community trust accounts to reward forest retention with funding through international carbon taxes.[84] Finally, a 'basket approach' has been suggested whereby countries can engage in non-market and market mechanisms depending on country preferences.[85]

Most importantly, UNFCCC negotiators should aim to ensure that emission reductions from REDD are additional and do not detract from expected deeper emissions reductions in the post-2012 commitment period.[86] This would guarantee that REDD provides a significant contribution to the overall UNFCCC objective and *demonstrates that the principle of* 'differentiated responsibilities and respective capabilities' can be put into large-scale practice. Yet unless significantly deeper cuts are agreed, there could be minimal demand for the large number of REDD credits that will enter the market, the price would accordingly be low and limited finance would flow to REDD host countries. As curbing deforestation will require either fund-based or carbon financing that at least matches the economic gain from deforestation, determining how REDD carbon financing fits into the broader emissions trading schemes is of critical importance. Given the potential scale of carbon credits from REDD, which indeed reinforces its significance for overall mitigation efforts, a holistic approach which places REDD financing within the context of global emission reductions targets must be adopted.

The nascent voluntary market for forestry VERs which the Ulu Masen Project seeks to access provides guidance on pricing issues for a mandatory REDD scheme. In 2008, forestry VERs accounted for 15 per cent of the $265 million voluntary market.[87] Given questionable environmental credibility, a poor record on double accounting and questions over project quality, there is a high variation and price volatility across VERs.[88] Due to serious

79 S. Schwartzman et al., Getting REDD Right: Reducing Emissions from Deforestation and Degradation in the United National Framework Convention on Climate Change (Massachusetts: Woods Hole Research Centre, Environmental Defence and IPAM, 2008).

80 M. Ogonowski et al., Reducing Emissions from Deforestation and Degradation: The Dual Markets Approach (Washington DC: Center for Clean Air Policy, 2007).

81 B. Hare and K. Macey, Tropical Deforestation Reduction Mechanism: A Discussion Paper (Amesterdam: Greenpeace, 2007)

82 Climate Action Network, Reducing Emissions from Deforestation and Degradation: Action in Bali and Beyond (Washington, DC: Climate Action Network, Position Statement, 2007), available at http://www.climatenetwork.org/climate-change-basics/by-meeting-and-date/cop-13-bali-december-2007/CANREDDpositionFINAL5Dec.doc.

83 Carbon Trust, Global Carbon Mechanisms: Emerging Lessons and Implications (London: Carbon Trust , 2009).

84 UNFCCC, International Blueprint on Adaptation Submission from Tuwalu, Bali, 3-14 December, 2007, available at http://unfccc.int/resource/docs/2007/cop13/eng/misc02.pdf.

85 *See* Griffiths, note 9 above.

86 *Id.*

87 *See* Peskett et al., note 30 above.

88 Ecosystem Marketplace, 'State of the Forest Carbon Markets 2009: Taking Root and Branching Out, (2009), available at http://moderncms.ecosystemmarketplace.com/repository/moderncms_documents/SFCM.pdf.

questions about the validity of emissions reductions claims, Carbon Positive estimated that the proportion of forestry VERs plummeted from 37 per cent in 2006 to 18 per cent in 2007.[89] As a result, industry standards such as the CCB and 'value-added' VERs that have higher environmental and social standard have emerged as project developers seek to differentiate their VERs in the market. This demonstrates how issues of quality are highly determinant of carbon credit pricing as investors and buyers avoid projects with minimal credibility[90]. Effective REDD financing is therefore predicated on the quality and integrity of REDD activities. The voluntary market demonstrates that unless the REDD scheme provides meaningful safeguards against questionable methodology, and projects can withstand rigorous and ongoing third party auditing, market-based carbon financing will prove ineffective.

4.4 Forestry in the Clean Development Mechanism: Comparative Analysis of Financing, Rights, Permanence and Liability

As stated previously, the only activities allowed under CDM in relation to land use and forestry are afforestation and reforestation. REDD is therefore excluded from CDM and industry experts agree that this is unlikely to change in the future.[91] Despite the difference between the two activities, with REDD reducing a source of emissions and reforestation creating a carbon sink, Afforestation and Reforestation CDM (ARCDM) projects provide perhaps the best source of comparative insights for REDD. In particular, ARCDM raises key considerations regarding property rights, financing, permanence and liability that relate specifically to the Ulu Masen Project and REDD more broadly.

First, however, a brief overview of ARCDM is required. As the EU ETC excludes ARCDM credits, there is currently minimal demand for related Certified Emissions Reductions (CERs) and very few projects have been established.[92] Indeed as of April 2009 only three projects have been registered by the CDM Executive Board with two others pending, accounting for just 0.15 per cent of CDM activities.[93] The most established project, involving reforestation in China's Pearl River Basin was registered in 2006. A 2008 study by Gong et al found the project had failed to achieve tree planting in over 30 per cent of the project site due to disputes over unclear and insecure property right allocation.[94] In particular, local laws that vested tree ownership in those that planted them undermined project contractual arrangements. Land that was previously of minimal value and had no conflict over ownership became a source of contestation.[95] Clear lessons are the need to achieve certainty over tenure to the greatest extent possible, fully assess the local legal context and ensure benefit sharing arrangements are clear. In instances where the value of land increases due to a planned project activity, the lack of disputes over land tenure at the design stage provides no guarantees against future conflict.

ARCDM projects generate either short-term (tCERs) or long-term (lCERs) carbon credits. The former is valid for 5 years and the latter for the length of the project crediting period. The temporary nature of ARCDM credits arises from the fact that carbon sequestration by reforestation is considered non-permanent as unforeseen events, such as natural disasters and unanticipated logging, may later release the stored carbon.[96] Accordingly, ARCDM credits must be replaced once they expire. Given this, forestry CERs are considered a high-risk investment, have been valued at 20 per cent of general CDM CERs, and have no real market except for the World Bank.[97] Potential buyers of forestry CERs have further been discouraged by the possibility of legal

89 *See* Carbon Trust, note 83 above.
90 *See* Vickers, note 13 above.
91 *Id.*
92 *Id.*

93 Earth Watch Institute, 'UNFCCC Approves India's First CDM Forestry Project', available at http://www.earthwatch.org/europe/newsroom/science/news-forest2905.html.
94 Yazhen Gong, Gary Bull, and Kathy Baylis. "Participation in the First CDM Project: The role of property rights, social capital and contractual rules" *Ecological Economics* (2010), available at: http://works.bepress.com/kathy_baylis/19.
95 *Id.*
96 T. Neef, and S. Henders, Guidebook to Markets and Commercialisation of Forestry CDM Projects (Costa Rica: *CATIE,* 2007).
97 *See* Vickers, note 13 above.

challenges due to uncertain title arrangements over carbon property rights.[98] In many respects, the high risk nature of ARCDM credits has resulted in the concept's failure.

Similar concerns exist in relation to REDD, generally discussed in terms of permanence or the risk that carbon credits could reverse.[99] As demonstrated by the failure of ARCDM, to be economically viable, all REDD credits must be permanent. Yet the risk that emissions reductions are non-permanent, for example if forest fires occur or deforestation increases, needs to be addressed. Sound project design provides the most viable solution. For many projects, non-permanence is addressed by reserving an amount of the carbon credits generated to act as a buffer.[100] The Ulu Masen Project guarantees permanence for 100 years (despite the project only running for 30 years) due to the 'significant amount' of carbon credits to be stored in a buffer account and the potential utilisation of insurance markets.[101]

A central legal issue in this regard is who bears liability for impermanence, the purchaser or the party which generated the carbon credit? ARCDM resolves this issue through temporary credits which places liability on the purchaser and requires all forestry CERs to be continually verified and replaced once expired. Yet as such a system has only generated few projects and has failed in the market place, it will unlikely be applied to REDD. Myers highlights how a national REDD scheme would mitigate impermanence as losses in one area can be balanced against gains in another.[102] Further, given the momentum for a national scheme it appears likely that REDD hosts will hold liability for any deforestation that exceeds the national baseline. While this generates significant risks, it can be addressed by a buffer system similar to the project approach whereby a portion of credits is set aside, or possibly through reforestation activities to compensate for any deforestation in excess of the baseline.

98 *See* Miller,Wilder and Knight, note 45 above.
99 *See* Neef and Henders, note 95 above
100 *See* Myers, note 17 above.
101 *See* The Provincial Government of Nanggroe Aceh Darussalam (Aceh) et al, note 36 above.
102 *See* Myers, note 17 above.

For projects such as Ulu Masen, impermanence creates greater risks than a national approach as only one discrete area of forest is covered. Therefore losses cannot be compensated from another site. Sound strategies to protect against impermanence may therefore prove central to a project's integrity. While the 'buffer account' system adopted in the Project appears a valid approach, there is no prior experience on which to base judgment. Simply, no REDD-type scheme has had to deal with the liability issues raised due to the unforeseen loss of substantial forest. Yet given the effects of climate change and the projected increase in extreme weather events, it is likely that this will occur. When it does, a primary consideration will be whether the buffer is big enough to compensate for losses. This will depend on the extent of unforeseen deforestation and the market-price of the carbon credits. Above all, the issue of permanence is a crucial one for the REDD mechanism. The approach to use temporary credits under ARCDM contributed to its lack of success. More effective strategies that link permanence management into project design should therefore be high on the REDD agenda moving forward.

4.5 Community Involvement

For many, the impact of REDD on forest-dependent communities represents the main opportunities and threats of the scheme. In the abstract, REDD could facilitate substantial wealth transfer from North to South in exchange for significant emission reductions, thereby providing a funding base to achieve sustainable development in forest dependant communities while still conserving forests. However it could also facilitate increased marginalisation and exploitation of local communities with governments and the private sector potentially capturing most benefits. As it is increasingly recognised that the involvement of local communities is central to curbing deforestation, safeguards must be built into the REDD mechanism to ensure that community interests are protected.

As described above, at COP14 in Poznan the place of indigenous communities within the REDD framework generated significant controversy. For some UNFCCC member states the issue is highly political given a long and unresolved history of exploitation and maltreatment of indigenous

peoples. Two community-related issues will therefore be of crucial importance as the REDD mechanism is finalised: consent and benefit-sharing. These will be discussed specifically in relation to the Ulu Masen Project.

The rapid implementation of the Project and push to demonstrate results have resulted in significant trade-offs in terms of community consent and participation. While project proponents may counter by pointing to the 'rolling' nature of project start-up, whereby existing government and aid initiatives set the foundation for the REDD framework, key decisions and arrangements were made without full community consent. Project proponents have taken at face value that government and NGO stakeholders 'speak' for communities and have commenced implementation on this basis alone. Community consultation is planned as the project unfolds, however no free, prior and informed consent was sought. This is despite the issue of consent for land-related developments having a strong foundation under international law. In particular, the UN Declaration of the Rights of Indigenous Peoples upholds the right of indigenous peoples to give or with hold their free, prior, and informed consent to proposed developments that would affect their customary land.

Yet given the complexity, time and expense of conducting such a process effectively, it can be understood why project developers preferred deferring consultation until a later date. In particular in Aceh, where social capital is affected by post-conflict dynamics, community members will most likely have diverging opinions as to the desirability of the project or what represents equitable benefit sharing. Resolving the tension between getting REDD projects moving and ensuring social safeguards on consent are adequately fulfilled will be a key issue moving forward.

The differentials in terms of information and power are also stark. Indeed the author's observation of preliminary project negotiations highlighted the obstacles faced by the Acehnese government in making informed decisions. Given minimal expertise and information, combined with the newness of market-funded REDD projects, there was a significant imbalance between the likes of Merrill Lynch and the Acehnese government. While efforts were made to rectify this, with NGOs providing training to key government negotiators and the assistance of aid-funded governance advisors, the different starting points created a massive divide.[103] Further, if initial negotiations had also taken place at a community level (this did not occur), the minimal levels of education, literacy and access to information, would make achieving a reasonably equal bargaining position near impossible. Indeed the difficulties inherent in carrying out community-level negotiations may explain why fundamental benefit-sharing decisions have been deferred.

Thus until the present, despite the finalisation of project design in late 2007, no thorough community-level process to achieve prior, informed consent of communities who claim customary rights to forest has been undertaken. Informational workshops have been held, however these occurred after key arrangements had been finalised and were conducted in an ad hoc rather than systematic matter. Project proponents have therefore assumed that forest dependant communities *primae facie* approve the project and will be consulted to provide input as the project unfolds.

This pragmatic approach was adopted to facilitate rapid implementation. It may, however, prove misguided. Given unclear rights to forest carbon, the potential for and history of conflict between the Acehnese and central governments, and the pivotal role communities play in forest monitoring, greater efforts should have been made early on to mobilise community support. Indeed, while Governor Irwandi had 'sold' the project in international fora, local district-level political figures crucial to the Project's success received minimal consultation with some unaware of the project's purported benefits.

Although community involvement will grow once there is initial revenue from the sale of VERs and if alternative livelihoods to the logging industry become more advanced, over a year into implementation, the project's promise to achieve 'full, active and informed

103 International Development Law Organization, Avoiding Deforestation in Aceh, Indonesia: Land, Natural Resources and Local Communities Projects (Sydney: International Development Law Organization, 2009), available at http://www.idlo.int/Documents/Aceh/Defo_Report_Phase_1.pdf.

consent' has rung hollow.[104] Perhaps more concerning, however, is the unclear benefit-sharing arrangements. The Project design stipulates that once 'adequate carbon finance' is acquired, a process for deliberating, discussing and making decisions about how to engage and ultimately oversee the distribution of carbon finance will be under taken.[105] This issue – perhaps the crux of the Project – has therefore been deferred. While the Project design estimated that 50 per cent of project costs will go towards community payments, given a lack of transparency in project finance to date and the previous lack of consultation, there are few guarantees to ensure this commitment will be upheld.

Given the layers of uncertainty regarding title to land and carbon, the unclear regulatory framework, and the uncertain provincial-central relationship, the undetermined benefit-sharing arrangements present another significant project risk. When substantial carbon financing comes online, negotiations must commence and pre-existing uncertainties will make determining an equitable arrangement all the more difficult. A key lesson is therefore the importance of transparently establishing benefit-sharing before project implementation commences. Finalising benefit sharing arrangements can only be achieved when coupled with effective community consultation and consent processes – both of which have been marginalised in the Ulu Masen Project. Although deferring key processes concerning consent and benefit-sharing, as well as the availability of private sector investment, facilitated relatively rapid implementation, it may set the stage for future disputes that could threaten the Project's viability.

5 CONCLUSION

'We believe the world does not want to argue methodologies while the largest unprotected block of Sumatran rainforest disappears'.[106]

This quote from the Ulu Masen Project Design Document illustrates the core issue currently facing future REDD initiatives. To what extent should projects proceed in the face of methodological and legal uncertainty? Post-2013, should a UNFCCC-sanctioned REDD mechanism be introduced in contexts where a sound regulatory framework does not exist or governance capacity is insufficient to effectively monitor REDD activities? How much should current rates of deforestation and global warming justify a 'learning by doing' approach whereby uncertainties are disregarded and rapid implementation prioritised?

As a demonstration activity under the Bali Roadmap, the Ulu Masen Project is intended to provide lessons for the future REDD compliance scheme. Implementation to date highlights several key considerations for UNFCCC negotiators. First, a sound legal framework will be both difficult to achieve yet crucial to REDD effectiveness, resulting in a lengthy first phase of REDD projects. Clarifying the position of customary tenure over forest and ownership of carbon property rights are controversial, inherently political processes and extremely time-consuming. To ensure early onset efforts against deforestation, even under a phased approach, REDD frameworks will have to manage the tension between action and certainty. Effective safeguards to manage the resulting risks and ensure forest dependant communities receive an equitable share of benefits and are not adversely affected must therefore be put in place.

Secondly, while a 'nested' approach on balance appears most suitable, with project activities initially conducted and then a transition into a fully national scheme occurring at a later stage, real questions as to the ability of national governments to address the drivers of deforestation remain. Some REDD proponents appear to expect carbon financing to completely change the forestry governance landscape. However, REDD can never be a panacea for deforestation: both causes and symptoms must be addressed. Accordingly addressing poor forestry governance and other drivers of deforestation must be carefully integrated into any UNFCCC REDD scheme.

Thirdly, REDD financing – particularly the issue of offsets – cannot be considered in isolation. Rather

104 *See* The Provincial Government of Nanggroe Aceh Darussalam (Aceh) et al, note 36 above.
105 *Id.*
106 *Id.*

it must be factored into the broader climate change framework. To meet the UNFCCC objective, all REDD emission reductions must be additional to current levels. Thus to make the use of carbon financing and offsets acceptable, Annex I parties must make substantially deeper cuts post-2012 with the purchase of REDD carbon credits only contributing to these tougher targets. This allows REDD to make a substantial contribution to lowering global emission levels and addresses equity concerns in the developing world. Determining the extent to which carbon markets are an appropriate financing mechanism for REDD must therefore occur within the broader context of Annex I emission reduction commitments. If REDD becomes a cheap offset, addressing industrialised countries' reliance on fossil fuels and avoiding catastrophic climate change will prove ever more difficult.

Yet most importantly, the Project demonstrates the potential gains that REDD provides in facilitating a more unified international approach to climate change mitigation. In light of the potential revenue, Indonesia has taken exceptional steps to establish a regulatory framework for projects such as Ulu Masen and REDD more broadly. While uncertainty remains and significant improvement is necessary, REDD has engaged Indonesia in climate change debates to an unprecedented level. There is now potential for Indonesia to shift from a world leader in deforestation to a leading authority on REDD.

The co-benefits that REDD offers through significant emissions cuts in the developing world in exchange for extensive financing from Annex I parties is at the heart of the UNFCCC. Through REDD, extensive climate change mitigation can potentially be achieved through broad-scale international cooperative action, in a manner that reflects historical responsibility for climate change, and by mobilising the scale of finance necessary to make sustainable development a reality. The extent to which REDD is an offset, however, threatens to undermine many of the co-benefits that may otherwise be achieved. REDD further provides significant incentives to encourage developing countries to become involved in the post-2012 emission reduction framework. Given the progress achieved on REDD in the lead up to Copenhagen, there is hope that the existing areas of divergence and be overcome and an effective REDD mechanism can be established prior to 2012.

The Ulu Masen Project therefore demonstrates that while extensive work remains, the REDD concept has potential to become a viable and scalable climate change mitigation strategy. Yet before its potential can be realised, significant deficiencies must be overcome. REDD is not a panacea for deforestation, nor a replacement for forestry governance reform, and will have to navigate complex social, political and economic forces to be successful. The very real possibility that REDD may have negative effects, particularly for forest-dependent communities, must also be fully acknowledged and the associated risks managed. Despite being in its inception stages, a balanced assessment of the Project points to its deficiencies regarding participation and transparency as well as the lack of clarity over land tenure and carbon ownership. The ability of project developers to source significant private sector finance and mobilise a diverse group of stakeholders appears to be its primary achievement to date. Perhaps the real risk in relation to a UNFCCC mandated REDD scheme, is not the complex legal, policy and methodological issues that remain to be finalised, but rather an over-simplification of the contextual factors and complex dynamics inherent in REDD initiatives. It remains to be seen how the Ulu Masen project will fare.

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