Reducing Emissions from Deforestation in Developing Countries: International and National Governance (Case Study of Indonesia)

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ABSTRACT

The United Nations Framework Convention on Climate Change meeting in Bali in December 2007 resulted in a landmark decision on Reducing Emissions from Deforestation in Developing Countries (RED). This scheme promises an option of reducing deforestation as well as promoting carbon credit as an alternative income-generating activity within forest countries. However, there are still some challenges and issues that must be resolved before there can be successful implementation of this scheme such as the issues of leakage and permanence. These issues need to be addressed through establishing strong international and national governance. On the international level, there is a need to integrate the RED scheme with the global governance of forestry, in particular by establishing a global binding agreement on forestry that is integrated with the RED scheme. On the national level, there is a need for strong national governance to prevent leakage and resolve permanence issues. A strong national institution which functions to oversee the national RED project is required. However, consideration should be given to the need to decentralize the implementation functions and provide opportunities for local institution such as the FMUs and local communities to participate. If an appropriate balance can be achieved, there is high hope for a mutual partnership between government and the private sector which can realize a gain from the implementation of the RED scheme while reducing the national deforestation rate in a seamless manner.
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I. Overview on Deforestation

The United Nations Framework Convention on Climate Change (“UNFCCC”) meeting in Bali in December 2007 resulted in a landmark decision on Reducing Emissions from Deforestation in Developing Countries (RED) and also on forest degradation and conservation. This paper will discuss the need for strong international and national policies (with a case study of Indonesia) to ensure good governance (e.g. to ensure permanence and prevent leakage) in the implementation of RED.

A. Introduction

In the UN climate change talks in Montreal (11th Conference of Parties of the United Nations Framework Convention on Climate Change or UNFCCC) held in December 2005 (“Montreal COP”) most of the delegation spoke positively of the need to address Greenhouse Gas (GHG) emission from tropical deforestation. In fact, the largest share of developing country emissions comes from deforestation.¹

In the run up to the Montreal COP, Papua New Guinea and Costa Rica, on behalf of the Coalition for Rainforest Nations, sought to address deforestation by creating incentives for developing countries to better manage their forests by rewarding them with emission reduction credits. Several industrial countries' emitters began exploring funding for forest protection in the developing world in exchange for a share of the emission reduction credit.  

There are two ideas from the Montreal COP that need further attention; (i) whether developing countries should be compensated for the forest environmental services they provide and (ii) how developed countries should be involved in this compensation.

UNFCCC’s Subsidiary Body for Scientific and Technical Advice (SBSTA) recently discussed these ideas in its meetings and workshops, the latest of which was held on March 2007 in Cairns, Australia (“Cairns Workshop”). In addition to the discussion of these ideas, the Cairns Workshop also attempted to advance the common understanding that resolved in the next Conference of the Parties of the UNFCCC at Bali on December 2007 (“Bali COP”).

In the Bali COP, countries agreed to recognize the contribution from deforestation to global anthropogenic greenhouse gas emission and agreed to further strengthen and support ongoing efforts to address deforestation and forest degradation. The Bali COP agreed to further explore a

\[^2\] Id.

\[^3\] Id.

range of actions and options for reducing emissions from deforestation and enhancing carbon stocks due to sustainable management of forests.\(^5\)

**B. Deforestation in Developing Countries**

The Food and Agricultural Organization (FAO) defines deforestation as the conversion of forest to another land use or the long-term reduction of the tree canopy cover below the minimum 10 percent threshold.\(^6\)

In context of climate change, the Marrakesh Accords (adopted in the 7th Conference of Parties of the UNFCCC) define deforestation as the direct human-induced conversion of forested land to non-forested land.

Deforestation can be caused by several human activities which include logging (either legal or illegal), the conversion of forested lands to agriculture (which also includes plantation activities), cattle-raising, urbanization, mining and oil exploitation, acid rain and fire. Deforestation can be caused by migration of farmers from one area to another resulting in the cutting of forest due to the infertility of their previous land.\(^7\)


Deforestation can lead to several consequences, such as the release of carbon originally held in the forest (via burning or slow decay). Most of the carbon released is carbon dioxide and methane. Without deforestation, forests can grow and withdraw substantial amounts of carbon, accumulating it in trees and soil.\(^8\) Forest, according to the FAO 1998 definition, is land of more than 0.5 hectares, with a tree canopy cover of more than 10 percent, which is not primarily under agricultural or urban land use.\(^9\)

According to the FAO assessment in 2001, the highest rates of deforestation (estimated 10\(^6\) ha/year during the 1990s) occurred in Brazil (2.317\(^6\) ha/year), India (1.897\(^6\) ha/year), Indonesia (1.687\(^6\) ha/year), Sudan (1.003\(^6\) ha/year), Zambia (0.854\(^6\) ha/year), Mexico (0.646\(^6\) ha/year), the Democratic Republic of the Congo (0.538\(^6\) ha/year), and Myanmar (0.576\(^6\) ha/year). These rates are higher than the reported net changes in forest area since they includes both losses of natural forests and increases in plantations (as a substitute for forest). In India, the increase in plantations was greater than the loss of natural forests creating a positive net change, while in other tropical countries, the annual rate of forest loss (natural forests and plantations combined) was negative.\(^10\)

In the latest meeting of tropical rainforest countries held during the United Nations General Assembly meeting in 2007, the developing countries discussed their obligation for keeping and safeguarding their rainforests. In the discussion, they were aware that they lack the capacity for


\(^10\) Id. at 13 -14
forest management and need further assistance and resources from developed countries on this matter.  

C. Indonesia and Deforestation

The Republic of Indonesia (“Indonesia”) is a country comprised of the largest archipelago in the world, consisting of 17,500 islands and 3.1 million Km² of territorial waters. The total population in 2004 was about 238 million. The climate is tropical and characterized by dry and rainy seasons.  

More than half of Indonesia’s land is covered by forest, which is about 108,571,713 ha (45% of Southeast Asia’s tropical forest. Other land-use types are plantation (8.6%), consisting of big plantations of rubber and palm oil, cultivation (6.7%), and fallow land. About 9.4% of the land area is still considered a mosaic of mixed vegetation cover.  

Deforestation, peatland degradation, and forest fire have made Indonesia one of the top three largest emitters of green house gases in the world. Yearly emission in Indonesia from energy, agriculture, and waste consist of approximately 451 million tons of carbon dioxide equivalent (MtCO2e) but land-use change alone is estimated to release about 2,563 MtCO2e, mostly from deforestation (as estimated by the Intergovernmental Panel on Climate Change or IPCC).  

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13 Id. at 20.

14 PT Pelangi Energi Citra Enviro (PEACE), Indonesia and Climate Change: Current Status and Policies (2007) 1-2. This report is based on assignment from Department for International Development and the World Bank and in consultation with State Ministry of Environment Republic of Indonesia.
According to Forest Watch Indonesia's calculation, taken from the national forest inventory data from 1996, around 8 percent of total forest land (8,899,976 kilometer) is considered completely deforested. The World Bank estimated that the annual rate of deforestation in Indonesia in the early 1990's reached 1.3 million ha/year from the total natural forest area of 108.57 million. A further study, based on satellite images from 1997, estimated the nation-wide annual deforestation rate might reach more than 1.5 million ha/year.\(^\text{15}\)

Another study from World Bank in 2000 estimated that the rate of deforestation and land-use change is now more than 2 million ha/year. Forest fires were the main contributor to deforestation and land conversion, compromising 57 percent. The highest rates were in 1997, 1998 and 2002. Forest fires not only contribute to GHG emissions but also cause serious devastation and degradation to the function of the forest as well as haze pollution that negatively affects human health.\(^\text{16}\)

In his state address to the Regional Representative Assembly\(^\text{17}\), Indonesian President Susilo Bambang Yudhoyono asked each Provincial Governor to maintain its local environment and follow the sustainable development concept in the mitigation of environment degradation. He said that “As one of the countries who have the biggest tropical rainforest, Indonesia is committed to show real action, especially on the issues in relation to forest fire”. Forest fire is known as the cheapest method for forest land clearing, especially for land change to plantation use or other land use.

\(^{16}\) PEACE, *supra* note 14, at 2, 14-15
\(^{17}\) President Susilo Bambang Yudhoyono speech to Regional Representative Assembly, http://www.presidenri.go.id/index.php/pidato/2007/08/23/733.html (last visited 17 November 2007). Regional Representative Assembly is another chamber in the Indonesia Parliament and has similar form with Senate in United States (but with less authority than House of Representative).
President Yudhoyono, in another speech, also emphasized the importance of global cooperation in relation to forestry and climate change. He said, “countries with rainforest should have a duty of care while countries that do not have forest but consume forestry goods should also assist the rainforest countries”.

II. Reducing Emission from Deforestation in Developing Countries

A. UNFCCC proposal on Reducing Emission from Deforestation in Developing Countries

The Kyoto Protocol (adopted in the 3rd Conference of Parties of the UNFCCC) does not regulate GHG emissions or any other activities in developing countries, although deforestation is acknowledged as a cause of greenhouse gases. Article 3 of the Kyoto Protocol stipulates that only Annex I countries (developed countries) must reduce their emission by sink removals (i.e. through forest processes) by result of afforestation, reforestation and reduced deforestation to meet their commitment. The Marrakesh Accord, the implementing statute of the Kyoto Protocol, stipulates that the Clean Development Mechanism related forestry projects in Non-Annex I countries is only limited to afforestation and reforestation (“A/R”) and not reduced deforestation.

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18 Detik.com

19 Annex A of the Marrakesh Accord stipulates the following definitions:

“Forest” is a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ. A forest may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground or open forest. Young natural stands and all plantations which have yet to reach a crown density of 10-30 per cent or tree height of 2-5 metres are included under forest, as are areas normally forming part of
Indonesia, is one of many countries with very few CDM A/R projects. To date, no forestry project has been implemented in Indonesia despite the readiness of the country in terms of institutional and regulatory as well as scientific, technical and methodological aspects. One reason is because of the difficulties in finding eligible land which meets the definitions of forest, afforestation, and reforestation used for A/R projects. Furthermore, the fact that CDM rules and procedures are not simple has reduced the interest of project proponents towards CDM forestry and investing in other forestry projects/activities may be more profitable than in CDM projects.  

Subsequent to the Marrakesh Accord, developing countries have proposed to amend the above reduced deforestation limitation. The Montreal COP agreed that developing countries should be compensated for the forest environmental services they provide and emphasized the involvement of developed countries in this compensation.  

This proposal was further discussed in the meetings and workshops of the SBSTA of the UNFCCC.

In the Cairns Workshop, the following proposals were discussed:

- the forest area which are temporarily unstocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest;

- “Afforestation” is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources;

- “Reforestation” is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989;

- “Deforestation” is the direct human-induced conversion of forested land to non-forested land.


1. Reducing Emissions from Deforestation

This proposal is generally agreed upon by the participating countries with reservations to several issues. There is an urgent need to take meaningful action to reduce emissions which among other things (i) should be compatible with sustainable forest management, (ii) would contribute to the reduction of GHG emissions from a major source, (iii) poverty alleviation and (iv) the conservation of biodiversity. This policy approach and incentive should take into account national circumstances and the sovereignty of countries.

2. Reducing Emissions from Degradation

There is a proposal from several countries to also include forest degradation\(^{23}\) reduction for emission reduction. This is because of the significance of the rates of degradation (especially in countries with low rates of deforestation). Consideration of forest degradation in any arrangement on reducing emissions from deforestation in developing countries would be relevant for addressing the conversion of primary forest to secondary forest or plantations. However, there is an element of complexity involved in the estimation and verification of emissions from forest degradation.

3. Reduction of Emissions from Conservation

\(^{23}\)See FAO, supra note 6, at 10. There are various definitions of forest degradation, among others, FAO in 2006 define degradation as changes within the forest which negatively affect the structure or function of the stand or site, and thereby lower the capacity to supply products and/or services.
Countries that have moved into conservation of their forest and do not have high rates of
deforestation (such as India), suggested a proposal for compensated conservation. This
proposal was based on providing compensation to countries for maintaining and
increasing their forests, and consequently their carbon stocks, as a result of effective
forest conservation policies and measures. However, there is some disagreement in
relation to this proposal since it is not directly linked with deforestation as mandated by
the Montreal COP.

In the Bali COP, countries have acknowledged that deforestation, forest degradation and
conservation can promote the objective of the convention and complement other relevant
international conventions and agreements. The Bali COP invites all parties to further strengthen
and support efforts to reduce emissions from deforestation and degradation on a voluntary basis
and encourages all parties to support capacity building, technical assistance, transfer technology
to improve data collection, estimation of emissions, monitoring and reporting, and address the
institutional needs of developing countries to estimate and reduce emissions from deforestation
and forest degradation.\footnote{24 UNFCCC COP-13, supra note 5.}

The Bali COP also encourages all parties to explore a range of actions, options and efforts as
well as demonstration activities in relation to reducing emission on deforestation and degradation
and enhancing carbon stocks due to forest sustainable management.\footnote{Id.}
The Bali COP requested the SBSTA to undertake a program of work on methodological issues related to a range of policy approaches and positive incentives that aims to reduce emissions from deforestation and forest degradation. Some outstanding methodological issues are assessment of changes in forest cover and associated carbon stocks and greenhouse gas emission, incremental changes due to sustainable management of the forest, demonstration of reductions in emission from deforestation and degradation, implication of national and subnational approaches including displacement of emission, options for assessing the effectiveness of actions and criteria for evaluating actions.\textsuperscript{26}

In relation to the methodological issues above, in particular the effectiveness of actions and evaluation, the issues raised in the Cairns workshop were, among others, how to ensure permanence and prevent leakage. These issues need to be addressed since different policy approaches and positive incentives have different implications with regards to the potential for leakage and permanence.\textsuperscript{27}

\textbf{B. Leakage Issues}

Among the criticisms of the CDM is that the projects under the CDM are partial and scattered. This mean that there is high potential for leakage, such that one company can reduce its emission in one production unit (and qualify for Carbon Emission Reduction certification) while enhancing its emissions in another unit. In the area of deforestation, one way to prevent this is to

\textsuperscript{26} Id.

\textsuperscript{27} UNFCCC-SBSTA, \textit{supra} note 4, at 15
broaden the scope of the CDM, (i.e., to the national level) and therefore cover all forest areas in
the respective country. Therefore, the approach of RED should not be project-by-project like
CDM but should instead be national in scope.

Notwithstanding the above, there are still some questions regarding the potential for leakage on
the international or national level. On the international level, there is the potential that the RED
will not work unless there is a certain cap on the the rate of deforestation for all countries. One
example is that Country A could agree to reduce the rate of its deforestation by limiting logging
permits to utilize the RED scheme. Since many countries implement the same scheme, if there is
a rise in the price of world timber, Country B, which decided not to join the RED scheme, could
use this opportunity to increase its logging rate to capitalize on the increased timber price,
thereby negating any decrease in the rate of deforestation.28 If countries agree to a global
deforestation cap and trade, then this problem can be avoided since the possibility of other
countries profiting from the market would be eliminated.

Forest countries have shown their reluctance to cap the rate of deforestation, since this is also
implies their commitment for emission reduction, which currently does not apply to most of
these countries (especially developing countries which are Non-Annex I countries). They all
agree that the RED scheme should be voluntary, as per the Kyoto Protocol provisions. They can
opt to enter the RED scheme or prefer to sustain their business as usual.

28 Land Use, Land-Use Change, and Forestry 83 – 85 (Robert T Watson, et al. eds., 2000). This publication is part of
Intergovernmental Panel on Climate Change Publication series.
Countries argue that as long as the RED scheme is attractive and flexible enough, they will enter into it voluntarily. Currently, there is not much progress on the voluntary forestry related projects (A/R) based on CDM. This is caused by among other things, the difficulties in implementing the A/R scheme caused by the fact that some of the non-forestry land has already become profitable enough, or difficult to re-forest, or the credit benefit is far below the cost to re-forest the land. The RED scheme is intended to minimize this problem, since the participating countries already have forests and their duty now is to protect these forests.29

The need for attractiveness and flexibility also means that the RED scheme must be suitable to these countries' current conditions. As described above, other than RED, some countries also propose reduction of degradation and compensated conversion schemes. Each country has its own forest condition which differs from other countries and the future regime must be broad enough to cover these differences. This creates some questions on the effectiveness of the the future RED (expanded) scheme, among others, those on the methodology and baselines to review the effectiveness as well as the expected carbon sequestration, which will be further discussed in the future UNFCCC meetings and agreed upon by member countries.

If we do not want to repeat the A/R experience, it is clear that the voluntary scheme must be attractive and flexible enough to induce all forest countries to enter because of its benefits and suitability. If the countries perceive these benefits, then they will be encouraged to enter and thereby reducing the chance of international leakage. However, since the scheme is voluntary, there is still a chance of a non-participating country, such as Country B from the above example,

29 Submission from Indonesian to UNFCCC, supra note 20.
attempting to gain from non-participation by selling more timber and increasing its deforestation in response to the increased price of timber. Therefore, there is a need for other regulatory tools to prevent this from happening, which will be further discussed below.

**C. Permanence Issues**

The issue of permanence arises from the possibility of participating countries failure to maintain the reduction rate of their deforestation. Because mitigating climate change requires stabilizing CO2 concentrations, many people assume that every project to reduce CO2 emissions must have a permanent effect.\(^\text{30}\) The question is how can one ensure that these countries do not participate in further deforestation after obtaining their reduction credit? One of the suggestions being discussed is to create a deposit system (similar to the superfund in the US), where these countries will deposit some of their credit reduction for the compensation of future non-compliance. This deposit system will then be used as a security for compensation of future liability due to failures to maintain permanence.\(^\text{31}\)

Another proposal also discussed is the use of temporary credit. A country that reduces its deforestation rate will be given a temporary credit. This temporary credit will be converted into a permanent credit after some period of time. For example, Country A can only reimburse its


credit for the current reduction period in the next period (this period is usually 4-5 years) and this credit can be forfeited if Country A fails to maintain the reduction permanence.32

Another alternative is future reduction. This system works by compensating current reduction period non-compliance by reducing credits that are obtained in the next reduction period.33

The above proposals have their own advantages and disadvantages. For example Country A fails to maintain its permanence for the reduction during the first reduction period, the deposit would be forfeited for withdrawal under the deposit system. However, this would not be effective if the damage (credit reduction non-permanence) is higher than the deposit.

Under the future reduction system, one could compensate the current non-permanence with a future reduction. But this would not be effective if Country A decides not to participate in the next reduction period (because this system is voluntary).

Under the temporary credit system, there would be a forfeiture of the temporary reduction credit of Country A for noncompliance. Country A will have to wait for a long time to obtain the permanent credit while the credit will need to be used for current reduction implementation (e.g. for community projects or capacity building).

As we see above, it appears that the most effective approach is to implement the temporary credit scheme. To cure its inadequacy, we can implement the approach of CDM investors by way of giving different prices for the carbon credits of proposed projects, temporary credits and permanent credits according to their risk profiles. Similarly to the CDM, the risk would be borne by the buyer ("Buyer Risk") and the seller ("Seller Risk"). For the Buyer Risk, the buyer will bear the risk of losing the credit under certain circumstances, e.g. failure of project or non-permanence. For the Seller Risk, the buyer will receive the complete credit after full crediting (permanent credit) or can claim indemnity from the seller in the case of seller non-performance.

In a submission to UNFCCC, the Centre for International Sustainable Development Law and Global Public Policy Institute discussed a scheme of temporary crediting with Buyer Risk, whereby a seller country can sell credits at a lower price to the buyer. If the seller fail to maintain permanence, the buyer would need to replace the temporary credits with other credits (e.g. from other temporary credit or CDM credits). This would not prevent contracting parties agreeing otherwise on the sale and purchase contracts, but on an international level it would eliminate the possibility of a developing country becoming caught in a debt or liability relationship with a developed country if the developing country fails to preserve its forest resources.  

The question arises then to what extent the seller country should be liable for the RED credits? Should the RED scheme move toward buyer liability, because the major sellers are developing countries, or seller liability, which would enhance seller accountability, or rather, should this

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depend on the arrangement between the buyer and the seller? In the event of Seller Liability, who should enforce the liability if the seller fails to maintain permanence and causes a loss to the buyer? The RED administrator (e.g. RED Executive Board—discussed further below) could forfeit the RED credits and calculate such forfeiture as a reduction during the next performance period. However, there is no forum yet, where the buyer can submit claims for the compensation of a loss due to non-performance by the seller.

These RED projects, similarly to other international development projects, will usually be financed by international financial institutions (e.g. World Bank) or developed countries' governments/companies as investors. This may create deterrence for participating country non-compliance, since the RED scheme will also be monitored by these investors (particularly in the form of risk assessments) and countries will lose their financial/investment credibility if they engage in a pattern of non-compliance.

However, developing countries might be reluctant to agree to the above proposal because they do not want other countries/institutions to dictate the terms under which they must manage their natural resources. The developing countries may feel that forestland represents national sovereignty and should never be subject to any third-country/institution supervision. Therefore, there is also a need for a global agreement amongst countries (including developing countries) on the proper management of forests which also takes into account the interests of developed countries as investors as well as developing countries' sovereignty.
IV. International Governance on Implementation of Reducing Emissions from Deforestation

A. RED Executive Board

In order to ensure the implementation of the RED scheme, the UNFCCC members should establish an administrative body whose purpose would be to conduct the supervision and monitoring of the scheme. This body should have power similar to the CDM Executive Board, such as the power to grant RED credits and to supervise RED projects (this body is hereinafter referred to as the “RED Executive Board”). The RED Executive Board would be accountable to the COP/MOP.

The RED Executive Board should also develop the approved methodologies in the measurement of deforestation reduction and RED policies in cooperation with the related institutions (such as UNFF, ITTO or FAO). In terms of the RED implementation policy, it is important that this policy (whether formulated by the Board or a higher institution such as COP) should allow some space for sustainable activities (e.g. sustainable international timber trade) within the forest while at the same time ensuring strict compliance with the prohibition on further enhancements of the rate of deforestation. This policy should function as a framework that can be adopted in the form of national policy/legislation.

In terms of supervision, this RED Executive Board should also conduct direct supervision for the implementation of RED projects, with involvement of specific designated operational entities that have expertise in the field of forestry. This supervision authority will also need to be
followed with enforcement authority in the case of non-compliance such that the Board is empowered to give final and binding sanctions for non-permanence.

B. RED, Timber Trade and Sustainable Forest Management (“SFM”)

The RED scheme, including the issues of leakage and permanence, relates closely to the trade of timber. There is a question whether the supply and price of timber will be negatively affected by the implementation of the RED scheme. If the timber price and demand are high, illegal loggers with the protection of corrupt authorities will be encouraged to cut more timber. Therefore, there is a need to deter these loggers and also assist the RED participant countries by way of harmonizing the RED scheme with the timber trade regime.

To date, countries have not yet agreed on a global institution empowered to regulate on the issues of forestry. The Earth Summit in Rio de Janeiro failed to stipulate a legally binding forest convention. Although later on a consensus allowed for the formation of the Intergovernmental Panel on Forest and the United Nations Forum on Forest (UNFF) under the United Nations Economic and Social Council (ECOSOC), no binding agreement on forestry issues has resulted.\(^{35}\)

In the 7\(^{th}\) session of UNFF, countries only agreed on a nonbinding instrument on all types of forest which called for sustainable forest management and an increase in the assistance made

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available for its implementation. This instrument also called on the development of national policies in line with the principle of sustainable forest management. The member countries have not yet agreed on how to implement actions toward sustainable forest management, since there is no agreed upon framework other that based upon the Intergovernmental Panel on Forests (IPF)/Intergovernmental Forum on Forest (IFF) proposals for action (“IPF/IFF proposals”). This is caused by, among other things, the lack of incentives for agreement as well as the perspective of some countries that the regulation of forests is an issue that touches upon national sovereignty and not a global common that requires global cooperation.

Based on the UNFF Multi-Year Programme of Work, countries will only discuss the possibility of a binding international agreement on forest after 2015, and the discussion from 2007 – 2014 at UNFF will be concentrated toward that effort.37

Other than UNFF, there is also another institution in charge of the tropical timber trade, the International Timber Trade Organization (ITTO) which was formed by the International Timber Trade Agreement.38 The ITTO was formed under the auspices of the United Nations Conference on Trade and Development (UNCTAD) and has as its objectives promoting sustainable timber trade practices and implementing projects toward that objective. The membership of the ITTO is

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37 Id. at 18.

38 Currently being formed by 1994 agreement which planned to be renewed/amended in 2008.
limited to tropical forest countries as producing members and also developed countries as consuming members.\textsuperscript{39}

The UNFF and ITTO do not stipulate on binding agreements or direct supervision of forestry but instead focus more on the promotion of sustainable forestry management that will be implemented in countries as well as overseeing several sustainable forestry projects in developing forest countries. These organizations also request countries to report regularly on their forest management, on a voluntary basis, although not all countries comply due to the lack of incentives and sanctions.

Sustainability at the forest management unit level must take place within a framework of sustainable management policy within the forestry sector. The country in which the project is to be implemented may already be committed to the SFM criteria in prior international agreements such as the biodiversity convention. SFM may be vital to existing national aspirations as indicated by plans on resource management. SFM does not necessarily imply constant or smooth flow of goods and services. The interaction between a dynamic ecological and socio-economic system is likely going to lead to fluctuating flows. The main concern of a sustainable system is to ensure that there is no major sustained imbalance between demand and supply for the goods and services, given the constraints imposed on the system such as maintenance of biodiversity, protection of soil and water, etc.\textsuperscript{40}


In light of the above, an effective international regime on forestry is needed to prevent leakage and non-permanence, especially in preventing unsustainable logging and illegal logging practices. Prevention of trading illegal/unsustainable timber practices is needed, in particular when the RED scheme is implemented and causes higher prices for timber.

In balancing the higher price and demand, a strong policy on sustainable forest management is required for ensuring the supply of legal and sustainable timber. This means that the RED policy must be implemented seamlessly with the binding sustainable forestry management. The two complement each other, and the lack of sustainable forestry management in RED scheme implementation will surely create leakage problems and threaten its permanence.

In negotiating the RED scheme in the context of the UNFCCC, countries should also link this with the global forestry regime, which has not yet been agreed upon. A binding agreement on sustainable forestry management should be formed in due course and participating countries in the UNFCCC’s RED regime should also be part of a binding agreement on this issue. Therefore, the RED scheme can be part of the sustainable forest management and sustainable forest management can likewise be part of the RED scheme. This scheme is similar to the Trade Related Aspect of Intellectual Property Rights Agreement (TRIPs) created under the auspices of the WTO whereby a party is also bound by the Paris and Berne conventions since the TRIPs agreement specifically cross-referenced those conventions.
The Bali COP meeting already acknowledged the importance of this issue by stating that the sustainable management of forest is an important factor in enhancing forest carbon stocks. In the indicative guidance (annex) of the Bali COP RED decision, the COP agreed that the demonstration activities should be consistent with sustainable forest management noting the relevant provisions of the United Nations Forum on Forests, United Nations Convention to Combat Desertification and the Convention on Biological Diversity.\(^{41}\)

C. Timber Trade and Certification

Sustainable timber trade also constitutes an indispensible part of the sustainable forest management arrangement and the RED scheme. Eco-labeling can support sustainable forestry, whereby this type of eco-labeling tends to address the life cycle of timber-based products and ensure that the harvesting and production of the tree was sustainable.\(^{42}\)

Certification was envisaged as a market driven mechanism that promoted sustainable forest management by establishing standards for forest practices and management that guarantee a certain level of management performance by enhancing marketing opportunities for products from sustainably managed forests and promoting public education about improved forest

\(^{41}\) UNFCCC COP-13, supra note 5.

\(^{42}\) Lawrence C Christy, ET AL., Forest Law and Sustainable Development (2007), at 129. This publication is part of World Bank Law, Justice and Development Series.
management. For governments, certification is a mechanism for improving SFM as well as national image.\textsuperscript{43}

IPF/IFF proposals also stipulate voluntary certifications and labeling schemes in the timber trade.\textsuperscript{44} Although it is voluntary, the RED Executive Board can oblige a participant RED country to implement mandatory certification of sustainable forest logging. This mechanism, similar to CITES, could be used, e.g. by mandating that the exporting and importing countries inspect the logging sustainability certification of timber before clearing it for exit or entrance. This mechanism also ensures that the exporting country would verify whether timber came from forest that was within the scope of a RED project or not. Therefore, the participating RED country can record/monitor logging activities and control its permanence compliance. The consumer in developed countries could also recognize this label and thus would be encouraged to use certified wood since it would come from countries that had implemented the RED scheme.

Similar certifications have already been introduced by several non-governmental organizations such as the Forest Stewardship Council. However, since they are voluntary in nature, the majority of developing countries have not embraced them. This proposed certification could be implemented by countries in cooperation with non-governmental organizations. European countries (e.g. Austria) have encouraged timber suppliers to implement a certification policy to

\textsuperscript{43} Lena Gustafsson ET AL., Logging for the ark: Improving the conservation value of production forests in South East Asia (2007), at 11. This publication is Central for International Forestry Research (CIFOR) Occasional Paper no. 48.

\textsuperscript{44} IPF/IFF proposals point 13, \url{http://www.un.org/esa/forests/pdf/ipf-iff-proposalsforaction.pdf}, (last visited 17 November 2007).
prevent illegal logging, while the US's emphasis is more on national capacity building projects and not on certification.

One problem with certification, in addition to the question of its effectiveness, is the lack of enforcement power of national authorities against uncertified timber. There is also a chance of fake certification and re-certification of forest timber. One example is timber illegally logged in Indonesia then smuggled to Malaysia and certified as Malaysian legal timber. Therefore, there is a need for a strong national capacity building as well as a system to ensure enforcement and international cooperation to complement this certification system.

The option of trade sanctions could also be considered in deterring countries from non-enforcement. This trade sanction could be in the form of refusal to accept uncertified timber (for RED countries participant) or refusal to accept certain timber products from countries that tolerate or even accommodate the smuggling of timber from other countries. However, since certification is still voluntary, trade sanction on labeling could not be implemented because it could violate the WTO principles on non-discrimination and most favored nation principle. If in the future countries agree on mandatory certification (regardless of whether the country participates in the RED scheme or not) the trade sanction can be implemented for failure to obtain certification of timber.

45 Christy, supra note 42, at 129 - 130

Other alternative sanctions could be sanctions from the RED Executive Board. The RED Executive Board could give sanctions for non-certification or lack of enforcement on the part of RED countries participant by way of prohibiting them from participating in the RED scheme or causing them to forfeit reduction credits in a subsequent period.

IV. National Governance on Implementation of Reducing Emissions from Deforestation

(Case Study of Indonesia)

A. National Supervision and Implementation Policy

Forestland is a national asset and part of a country's sovereignty. Therefore, even if an effective RED policy were already in place as well as an internationally binding forestry agreement, without a strong national implementation policy the risk of leakage and impermanence would remain.

One purpose of implementing a policy of leakage that occurs at the national level is to ensure that the reduction of the deforestation rate in one province/area will not trigger a more rapid rate of deforestation in another province/area. Because of the RED's nationwide scope, it is important to develop a national coordination of deforestation reduction projects, lead by the national forestry authority (e.g. Minister of Forestry herein referred to as “National Authority”), so it does not end up sporadic and consisting of independent projects like the CDM. The same also applies for permanence issues, such as the responsibility of countries to look after their forest and maintain the deforestation reduction rate to avoid incompliance.
A strong national project management is required to implement the RED policy in line with sustainable forest management practices. This practice has already been introduced in various guidelines made by institutions such as the UNFF.\textsuperscript{47}

In the indicative guidance (annex) of the Bali COP RED decision, the COP agreed that emission reductions from national demonstration activities should be assessed on the basis of estimating and monitoring emissions.\textsuperscript{48}

In light of the above, the Indonesian Forestry Authority should form a national forestry project management system (herein referred to as “National Project Management or NPM”), either in the same or separate institution, and it must be given a strong authority based on national law/regulations to implement the RED scheme and sustainable forest management including the power of enforcement for any violations such as illegal logging, in cooperation with the Forestry Authority within the RED projects' locations. The implementation of the RED scheme could be conducted by mapping the national forest condition, identifying certain forest locations eligible for RED projects, forming a smaller unit to manage a particular forest location or giving licenses to third parties (such as regional government, private parties or local communities) to manage each forest location. This scheme would open the possibility of the involvement of private parties or local communities in reducing deforestation.

\textsuperscript{47} UNFF stipulates that sustainable forest management is a dynamic and evolving concept with aims to maintain and enhance the economic, social and environmental values of all types of forest, for the benefit of present and future generations. In developing this, country should establish national forest programs which includes among others enhancing legal, policy and institutional framework, efficient production and processing of forest product, enhancing cooperation and cross-sectoral policy and coordination, integrate national forest programs, establishing public-private partnership and stakeholders participation, promoting good governance and eradication of illegal practices, and strengthen forest law enforcement.

\textsuperscript{48} UNFCCC COP-13, \textit{supra} note 5.
The Forestry Authority should also oblige current holders of logging license to apply sustainable forest management and obtain sustainable logging certification. The certification could be conducted by a non-governmental institution or company accredited by the Forestry Authority. The certification would be conducted in line with the international forest sustainable management standards. These logging license holders could also be given the chance to preserve some part of their forest in scope with the national RED scheme managed by the NPM.

An issue that arises in terms of private party licensing, as mentioned above, is the distribution of the RED credits. Unlike in the CDM where the private parties are the main subject, under the RED scheme the subject is the national government and credits are not likely to be given directly to private parties. Therefore, the NPM will need to fairly distribute these credits to the local governments according to the forest proportion. Given the reputation of developing countries’ governments for their lack of transparency and rampant corruption, it remains to be seen whether private parties involved in RED projects will be able to properly obtain the appropriate return on their "conservation investment." In addition, there is also another risk factor relating to the imposition of sanctions on the national government for non-permanence which could lead to the reduction of the final credit distributed to the private parties (although these parties may not directly caused the non-permanence).

In relation to enforcement, there is also a need to form a strong enforcement institution within the Forestry Authority to combat illegal logging and issue sanctions for non-compliance on the
part of the current holders of logging licenses. This authority could also act as the enforcement
unit of the NPM for non-compliance of the RED projects license holders.

In summary, to ensure the effectiveness of the RED scheme, the Forestry Authority should form
and lead a strong NPM or other institution that conducts the following functions:

a. National project management for RED projects;
b. Distribution of reduction credits;
c. Accreditation of certification institutions for sustainable forest logging management;
d. Enforcement against illegal logging and non-compliance of current logging/RED licenses
   holders.

These institutions should aim for good governance in the forestry sector, by establishing
prerequisites, such as providing the scope for meaningful participation in forest decision-making;
increasing the stake that people have in sustainable management; improving the transparency and
accountability of forest institutions and setting forth rules that are coherent, realistic and
comprehensive.\(^49\)

B. Implementation and Governance of RED Scheme in Indonesia

B.1. Survey of Indonesian Forestry Laws and Regulations

\(^{49}\) Christy, *supra* note 42, at 101.
Forest activities in Indonesia are governed by Law No. 41 year 1999 on Forestry (“Forest Law”). Forest Law stipulates that there are two kind of forest, i.e. (i) state forest (which includes indigenous community forest\(^{50}\)) and (ii) right forest. Further, forest is divided into 3 categories, i.e. (i) conservation forest, (ii) protected forest, and (iii) production forest.\(^{51}\)

Forest Law also stipulates that for usage of production forest, the Government can issue licenses for area utilization, environmental management, utilization of timber and non-timber and collection of timber and non-timber, while for protected forest the Government can only issue license for area utilization, environmental service and collection of non-timber.\(^{52}\)

Government Regulation No. 6 year 2007 on Forest Management and Formulation Forest Management and Utilization Plan (“Forest Management Regulation”) introduces new concepts of usage of protected/production forest in relation to environmental service. One of these environmental service functions is for sequestration/deposit carbon. Other functions include protection of biodiversity, nature tourism and environmental safety.\(^{53}\)

In relation to local

\(^{50}\) Article 67 of Forest Law stipulates that indigenous community as long as still exist can conduct collection and management of timber for sustaining their day to day life.

\(^{51}\) Article 1 of Forest Law stipulates the following definitions:

Conservation forest is a forest area with special characteristic that has main functions as ensuring biodiversity of plants, animal and ecosystem

Protected forest is a forest area that has main functions as protection of life support for water management, prevention of flood, control erosion, preventing sea water intrusion and keeping land fertility

Production forest is a forest area that as a main functions of producing forestry goods

\(^{52}\) Article 1 of the Forest Management Regulation differentiates timber collection and timber utilization. Timber collection is define as harvesting of timber in the production forest while timber utilization is define as logging of timber in natural forest.

\(^{53}\) Article 25 and 33 of Forestry Management Regulation.
Community empowerment, Forest Management Regulation introduces the concept of licensing for village forest, i.e. granting licenses for forest utilization by village communities and partnerships between local village communities and current forest license holders.

Forest Management Regulation stipulates on the distribution of the authority to grant licenses as between the central government and regional governments. City/Regency governments can issue licenses for non-timber forest utilization and timber collection within their territory. Provincial government can issue licenses for non-timber forest utilization and timber collection for cross border cities/regencies within one province. The Minister of Forestry can issue licenses for non-timber forest utilization and timber collection cross-border provinces and also exclusively for utilization of timber in natural forest (e.g. though logging activities). These licenses can only be granted to Indonesian nationals or entities (which include state-owned entities).

Forest Management Regulation also introduces a Forest Management Unit (“FMU”) to conduct management of forest within certain areas of forest. The area of each FMU will be determined by the Minister of Forestry. The organization structure and staffing of FMU will be stipulated by the central government or regional governments who grant the licenses. For state owned enterprise, the FMU will be formed by the relevant state owned enterprise. FMU has the following authorities:

(a) Management of forestry which includes:

(i) forest management and formulation of forest management;

(ii) forest utilization
(iii) usage of forest area;
(iv) rehabilitation of forest and reclamation;
(v) forest protection and nature conservation

(b) Formulation of forest policy according to its area for implementation
(c) Conduct forest management activities including planning, organizing, implementation,
    supervision and control;
(d) Conduct supervision and evaluation of forest management implementation on its area;
(e) Open private investment opportunity to reach forest management goals;

In addition to the above, the Minister of Forestry has also issued Regulation No. P.14/Menhut-II/2004 that provides guidelines on the afforestation/reforestation (A/R) projects implementation in Indonesia’s. The guidelines on these projects were made in line with the Kyoto Protocol provisions and procedures stipulated by the Indonesian DNA.

For the period of 2005 – 2009 the Minister of Forestry is focusing on five priority areas, which include (i) eradication of illegal logging and trade, (ii) revitalization of forest, (iii) forest community empowerment, and (iv) stabilization of forest area. The Ministry also has issued a strategic guideline which aims to increase support for watershed services, promoting the role of the people and guaranteeing just and sustainable benefits.\footnote{PEACE, supra note 14, at 59}

**B.2. Issues and Challenges of RED Scheme Implementation in Indonesia**
The RED scheme opens a new possibility of funding for reducing the deforestation rate. Indonesia is in urgent need of funding for capacity building and obtaining alternative income other than timber utilization. For the past few years, Indonesian has been known for its increasing timber logging rate as well as its lack of enforcement against illegal logging activities.\(^{55}\)

In relation to the implementation of the RED scheme in Indonesia, the following issues and challenges must be observed:

B.2.a. National Project Management for RED projects

Before the reformation in 1998, most of the forestry related licenses were issued by the central government. This period was known as a period when central government gave most of the timber utilization licenses to entrepreneurs close to the President. In addition, the Government was conducting mismanagement of forest and used reforestation money (a deposit from the forest license holders) for non-forestry functions and corruption.\(^{56}\)

After 1998, the central government delegated some authorities to Provincial governments and City/Regency governments as part of its regional autonomy policy. This has had positive and negative impacts. The positive impacts are that certain cities/regencies have more flexibility in adopting policies and budgets and therefore the can increase the local community welfare.

\(^{55}\) TELAPAK, supra note 7, at 7.

negative impacts are the increased corruption and mismanagement, such as is seen when
governments give more concessions to the timber logging industry within their area as well as
when they succumbed to the temptation to engage in corrupt acts (e.g. improperly taking money
from illegal loggers or applicants for forestry licenses). Moreover, these city/regency
governments implemented new policies that surpassed or violated the central government
policy.57

The current Forest Law and Forest Management Regulation are structured in accordance with the
regional autonomy policy. As described above, the licensing regime is granted according to the
degree of central and regional governmental authority. The same also applies for the FMU,
where the appointment is based on the discretion of each central and regional governmental
authority. 58 As a consequence, there is diversity on the discretion of forest policy in each region,
especially in the formulation of sustainable forestry management policy. This may cause leakage,
whereby, one province/city/regency that joins the RED scheme will reduce its deforestation rate
while the others may have the chance to increase logging and deforestation rates. Early accounts
of Indonesian decentralization paint a picture of local officials with little accountability to their
constituency allowing increased logging.59

Because the RED scheme will be implemented at the national level, there is a question whether
there is a need for central government to re-centralize the forest management policy. If the nature

57 Id. at 688-694

58 Id.

59 Chomitz, supra note 30, at 173.
of forest as a national public good genuinely justifies its control by central government, time will show that centralized management in Indonesia has failed. In addition centralization has resulted in a lack of capacity of national institutions to implement laws and program and the disengagement of local communities and actors in forest governance.

One solution would be increase the capacity of districts and local stakeholders to manage forests sustainably and equitably in a partnership scheme. All levels of government have an important role to play in providing advice and guidance on how local people/institutions can sustain their income-generating activities while managing their resources sustainably (e.g. by way of community based forest management). FMU has the central authority in this matter, e.g. by giving local people the chance to manage some portion of forest and also local capacity building, consistent with the Bali COP meeting's recognition of the needs of local and indigenous communities in relation to RED related actions.

To support and oversee FMUs in the national level and as well as to ensure compliance against leakage/non-permanence, the government will need to amend the current law by forming a National Project Management (“NPM”) that has the authority to oversee all FMUs, including FMUs formed by provincial/city/regency governments. The NPM will then need to approve

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61 Christy, supra note 42, at 83

62 Dermawan, supra note 60, at 12-14

63 UNFCCC COP-13, supra note 5.
guidelines for forest management made by each FMU in accordance with the relevant FMU’s type of forest and also based on international standards (e.g. future binding agreement on forest or RED Executive Board provisions).

The NPM should have enough authority to oversee FMUs for conservation forest and protected forest, since no timber logging is permitted in these types of forest. The FMUs could conduct sustainable forest management in these forests and conduct actions against illegal logging in coordination with the NPM.

The above approach is consistent with the indicative guidance (annex) of the Bali COP RED decision, whereby the COP agreed that subnational (e.g. local government within a national boundary) approaches should constitute a step towards the development of national approaches, reference levels and estimates. Subnational demonstration activities should be assessed within the boundary used for demonstration and asserted for associated displacement of emissions.64

In relation to protected forest, the NPM will need to conduct continuing supervision of sustainable forest management practices especially with regard to timber logging, FMUs field verification and evaluation on the broad range of factors. After evaluation, the NPM and the FMUs could identify in which forest areas the licenses should not be extended due degradation or non-compliance of the license holders. NPM with the FMUs should also oversee the granting of forestry licenses by city/regency governments.

64 Id.
In the NPM’s oversight function, NPM will need to look at local considerations and also give substantial discretion to each FMU and local community forests within the FMUs. The role of the NPM is mainly coordination of the FMUs and each FMU should have the authority to conduct enforcement. In certain urgent, important or cross-area circumstances, the NPM can submit recommendations to the Minister of Forestry for further action (e.g. license revocation, refusal of extension or cancelation/deferment of licenses granted by city/regency governments). The NPM should also give recommendations to the Minister of Forestry for any plan of conversion from forestry area to non-forestry or non-forestry area to forestry (e.g. by way of afforestation/reforestation) made with the advice of FMU.

Due to regional autonomy, there might be resistance from regional governments if the Minister of Forestry decides not to extend, revoke or cancel/defer licenses. The regional governments can resist by maintaining the licenses in question because they have the real authority under current national law. To prevent this situation, the amended law should ensure that the Minister of Forestry has this authority and can exercise it despite resistance from regional governments. One option for strengthening the NPM is to install the Minister of Forestry as its ex-officio NPM chairman, with a separate full time executive director for its day-to-day management. The NPM should also consist of members from other departments, NGO representatives, regional governments and FMU representatives.

Achieving an effective balance of authority between the FMUs, the NPM, and national and regional governments is key. There should be a common understanding that FMUs will have day-to-day supervision while the NPM will mainly conduct coordination functions, supervise
guidelines on forest management agreed upon by the FMUs and NPM and ensure that Indonesia as a nation is in compliance with the International RED obligation.

B.2.b. Calculation and Distribution of Credits and Reduction Quota

In relation to the distribution of credits, the NPM could function as a national crediting institution. This function is similar to that of the Designated National Authority (DNA) under the Kyoto Protocol. The Indonesian DNA is currently under the auspices of the State Minister of the Environment. In relation to RED projects, the NPM under the Minister of Forestry could act as a national arranger for the distribution of credits. This credit distribution could be arranged under a direct allocation or a special agreement in accordance with the types of forest.

For conservation and protected forests, the NPM and the relevant FMUs could calculate the potential reduction of credits and allocate the funds from that credit reimbursement for forest management activities in those forests. For production forest, the NPM can enter into agreements with the relevant FMUs and license holders regarding the provisions for the calculation of potential reduction credits (in case the license holder wishes to participate) and the allocation of credits to FMUs and license holders. This will create opportunities for license holders to profit from the RED scheme as a substitute to usual timber logging practices or the conversion of forest land.

Based on the calculation of credit, the NPM and the relevant FMUs could then make a comprehensive map of Indonesian forestry credit potential. This map would serve as the basis for
the drafting of a national RED plan and the allocation of the reduction quota for each FMU. FMUs which meet or exceed the quota would be entitled to credit distribution (in the form of additional funding) while FMUs which do not meet the quota would be penalized (e.g. by way of a larger reduction quota in the subsequent period or a recommendation to the relevant local government or state owned company to replace the FMU’s management). If the non-performing FMU continued failing to meet its quota or threatened national leakage, the NPM could intervene by directly managing the relevant FMU for some time or recommending that the Minister of Forestry revoke the relevant forest license within the FMU (if necessary). If this FMU then returned to compliance, the management could be returned to the respective FMU with the new management appointed by the local government or state owned company respectively.

The calculation of credits also relates to the methodology used to measure the changes in forest cover and associated carbon stocks. The indicative guidance (annex) of the Bali RED COP decision stipulates that estimates of reductions or increases of emissions (i.e. from forest activities) should be result based, demonstrable, transparent, and verifiable, and estimated consistently over time. This implementation should be reported and made available via the web platform. The Bali COP have assigned SBSTA to undertake further work on the development of this methodology, and the RED national (and subnational) policy and implementation will also depend on the SBSTA methodology deliberation.65

65 Id.
Bali COP encourages all parties to conduct capacity building, technical assistance and technology transfer as well as to conduct demonstration activities.\textsuperscript{66} The Minister of Forestry along with the World Bank is currently planning RED pilot projects in some areas in Indonesia. These projects will analyze the land use change scenario, consolidation, stakeholders’ consultation/communication, and methodology design and implementation.\textsuperscript{67} These pilot projects will be important in determining the methodology of calculation and allocation of forestry future reduction credits.

The above cooperation is part of the newly launched World Bank’s Forest Carbon Partnership Facility program. This program consists of (i) US$100 million Readiness Fund to provide grants to help countries set up systems and processes to monitor and credibly govern their forest and (ii) selling emission reductions to a special US$200 million carbon fund supported by wealthy countries and private sector organizations. This program will also test various ways of reducing deforestation and degradation based on national circumstances. Various types of interventions may also be piloted, from policy reform to investment on different incentive models. This process will also involve a high degree of consultation with indigenous organizations.\textsuperscript{68}

\textsuperscript{66} Id.


B.2.c. Accreditation of certification institutions for sustainable forest logging management

Currently, forest certification in Indonesia is conducted by the Forest Stewardship Council or the Indonesian Ecolabeling Institute (LEI), an NGO which conducts activities in relation to sustainable timber certification. LEI is currently developing a project called Phased-Approach to Certification (PACt) which encourages FMUs to develop action plans to conform with the certification performance standard. LEI is endorsed by the Minister of Forestry and currently conducts pilot projects in several areas in Indonesia.69

In the future, the Minister of Forestry should create opportunities for other labeling institutions to conduct certification and give accreditation to these institutions. If the certification then becomes mandatory (e.g. because of an international binding agreement or requirement for participation in the RED scheme), the NPM should oblige all FMUs, especially timber producing FMUs, to obtain this certification and if they do not, e.g. because of license holders’ non-compliance, the NPM can recommend that the Minister of Forestry revoke the respective license holders' licenses.

If this certification is still voluntary, the NPM could strongly recommend that FMUs obtain certification to create an added value for their timber products and as a hedge against the

possibility that certification becomes mandatory in the future. This should also help efforts to identify and differentiate legal timber from illegal timber.

B.2.d. Enforcement against illegal logging and non-compliance of current logging/RED licenses holders.

Combating illegal logging may be the hardest challenge faced by the Indonesian Forestry Authority. The difficulties involved in enforcement arise because the illegal loggers act beyond the supervision of the forestry authority. They usually cut timber in protected or conservation forests where the local FMU officials fail to monitor their activities or in one way or another are involved in these activities themselves. In certain circumstances, the current license holders are also involved in illegal logging because they log unsustainably or do not do so in accordance with the logging plan they submitted to the Forest Authority.

Capacity building and enforcement are the only way to combat illegal logging. This can be done by strengthening the FMUs and national coordination/supervision by the NPM. The Forest Law itself already contains strong sanctions for illegal logging (i.e. imprisonment for 10 years and fine for 5 billion rupiah).70

The challenge of combating illegal loggers is mainly one of coordination between different governmental authorities. The national police, Minister of Forestry and state attorney are key officials in combating illegal logging. In recent cases, their lack of coordination and differencing

70 Article 78 of the Forestry Law
interpretation of the relevant regulations has negated the effectiveness of enforcement efforts.\textsuperscript{71} One example of this is the case involving Adelin Lis, who was suspected of illegal logging. He was freed by the court since the Minister of Forestry issued a letter stating that he was a legal forest license holder. The Minister of Forestry took this unilateral action because he felt that the police and state attorney were not coordinating with him on the enforcement actions against Adelin Lis.\textsuperscript{72}

To solve this coordination issue, a commentator suggested a formation of a special commission that has a strong authority (similar with the Indonesian anti-corruption commission) to overcome the above challenge and pursue illegal loggers.\textsuperscript{73} Another alternative is to form a coordination institution under the leadership of a high level official, e.g. the President or Vice President, that has the function of coordinating all relevant institutions. Whatever form the coordination institution takes, the NPM and FMUs will have important roles in sharing information with this coordinating institution and participating in enforcement actions. The Forest Law allows certain Ministry of Forestry officials to conduct preliminary investigation/enforcement actions, and these officials should also be assigned to the relevant NPM and FMU units as their preliminary enforcement arm, in coordination with other enforcement authorities.


Mandatory certifications are also another solution to identify illegal logs and loggers, although there is still a chance of that this might fail due to counterfeited certifications. However, if implemented correctly, a certification system would assist officials in producing or consuming countries (e.g. custom officials) in detecting illegal timber and assist the relevant enforcement authorities in prosecuting illegal loggers. At the very least, it would make smuggling illegal timber a bit more difficult.

Illegal logging is the biggest threat to forest permanence since it cannot be monitored and its effect is devastating. High level coordination of the efforts to combat this problem is absolutely essential to ensure the success of the RED scheme's implementation in Indonesia.

V. Conclusion

The RED scheme provides a promising option for reducing deforestation as well as promoting carbon credit as an alternative income-generating activity within forest countries. However, there are still some challenges and issues that must be resolved before there can be successful implementation of this scheme.

The Bali COP has requested the SBSTA to develop methodologies in relation to the implementation of the RED scheme, which among other things emphasize that estimates of reductions or increases of emissions (i.e. from forest activities) should be result based, demonstrable, transparent, and verifiable, and estimated consistently over time. The development of these methodologies will take some time and pilot projects will be needed to ensure that these methodologies can be implemented. In addition, these methodologies should also take into account differencing national circumstances and the multiple drivers of deforestation.
Other challenges and issues are the issues of leakage and permanence. To mitigate these issues, there is a need to establish strong international and national governance.

On the international level, there is a need to integrate the RED scheme with the global governance of forestry, in particular by establishing a global binding agreement on forestry that is integrated with the RED scheme. One important aspect of this agreement would be a global understanding on sustainable forest management practice that would ensure balance between the continuity of timber supply and forest preservation. If this binding agreement is applicable to all countries, then it would hopefully prevent the leakage issues. To ensure permanence there is also a need to study alternative systems of crediting that will provide enough deterrence for participating countries for non-compliance while not scaring them away from participation.

On the national level, there is a need for strong national governance to prevent leakage and resolve permanence issues. A strong national institution which functions to oversee the national RED project is required. However, consideration should be given to the need to decentralize the implementation functions and provide opportunities for local institution such as the FMUs and local communities to participate. If an appropriate balance can be achieved, there is high hope for a mutual partnership between government and the private sector which can realize a gain from the implementation of the RED scheme while reducing the national deforestation rate in a seamless manner.

Indonesia has much to gain from the successful implementation of the RED scheme. However, there are many issues that must first be resolved, especially in relation to capacity building. The involvement of local communities should also be highly encouraged to ensure that these communities gain from the RED credit system and participate in the preservation of their forests.
as an alternative to their usual practice of using the forest for timber. In addition, the Indonesian
government must enhance the enforcement of illegal logging by establishing a strong
coordination mechanism between the relevant enforcement institutions. Illegal logging is the
biggest threat to the success of the RED scheme in Indonesia, especially with regards to ensuring
permanence.