
DOES MONEY GROW ON TREES?



OPPORTUNITIES AND CHALLENGES OF FORESTRY CDM IN INDONESIA

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Acronyms

| | |
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| APKI | Indonesian Pulp and Paper Association |
| APKINDO | Indonesian Plywood Industry Association |
| Bappeda | City's Development Planning Board |
| BRLKT | Land Reforestation and Conservation Agency |
| BUMN | State-owned Corporations |
| CDM | Clean Development Mechanism |
| CGI | Consultative Group on Indonesia |
| CIFOR | Center for International Forestry Research |
| COP | Conference of the Parties |
| DAK-DR | Special Allocation Fund - Reforestation Fund |
| FPHJ | Jambi Forest Saviors Forum |
| GDP | Gross Domestic Product |
| HPH | Forest Utilization Rights |
| HPHH | Timber Product Utilization Rights |
| HPHTI | Industrial Forest Utility Rights |
| HTI | Industrial Forest |
| HTI-Trans | Industrial Forest - Transmigration |
| IDCF | Inter Departmental Committee on Forestry |
| IMF | International Monetary Fund |
| IPK | Timber Utilization Permit |
| IPKH | Upstream Logging Management Industry |
| ITTO | International Tropical Timber Organization |
| JI | Joint Implementation |
| LKMD | Villager Community Resilience Forum |
| LOI | Letter of Intent |
| LPD | Village Representative Forum |
| LULUCF | Land Use, Land-Use Change, and Forestry |
| MOP | Meeting of the Parties |
| MPTS | Multi Purpose Tree Species |
| NGO | Non-Governmental Organization |
| PBKU | Superior Commodity Plantation Program |
| PETI | Unauthorized Mining |
| RMU | Removal Unit |
| TJTI | Indonesian Line Cutting and Planting; logging and replanting trees in one straight line |
| TPTI | Indonesian Selective Logging/Planting Policy |
| UNFCCC | United Nations Framework Convention on Climate Change |
| WALHI | Indonesian Forum for the Environment |
| WSSD | World Summit on Sustainable Development |

Section I: *The Political Economy of Forest and the CDM*

The Seventh Conference of the Parties to the United Nations Framework Convention on Climate Change (COP7) in Marrakech, Morocco, reached agreement on a complex set of decisions spelling out rules for implementing the Kyoto Protocol. The decisions provide detailed “legal” text elaborating on the broad principles of the Bonn Agreement, reached in July at COP 6.5 in Bonn, Germany.

Among key decisions is the finalized rules and guidelines for a prompt-start of the implementation of the Clean Development Mechanism (CDM). CDM allows industrialized countries listed under Annex I of the Climate Convention to gain credits for emissions reduction projects undertaken in developing countries. Alongside emissions reduction, CDM also aims at fostering sustainable development in the host developing countries, as stipulated under Article 12 of the Kyoto Protocol. While rules to implement the clean development mechanism (CDM) are largely decided, those associated with the use of forest as carbon sequestration are to be elaborated further.

Major decisions in the Marrakech Accords related to forestry CDM include:

- Fungibility, allowing emissions units under all three mechanisms to be treated equally. This allows for a more liquid market in emissions units, making it more viable and enhancing opportunities for cost-effectiveness.
- Creation of a new Removal Unit (RMU) to represent sinks credits (including through Joint Implementation; JI). RMUs can be used only to meet a party's emissions target in the commitment period in which they are generated. They cannot be banked for future commitment period.
- Banking on any remaining emissions allowances beyond those needed to meet a Party's target is permitted. Banking of credits generated under CDM or JI is limited to 2.5 percent of a Party's initial assigned amount.

- Unilateral CDM is allowed, enabling developing countries to undertake CDM projects without an Annex I partner and market the resulting emissions credits in the world market.
- Annex I Parties that cannot meet the Protocol's inventory requirements can still host JI projects through a project design and approval process similar to the CDM.
- The CDM Executive Board is authorized to approve methodologies for baselines, monitoring plans and project boundaries; accredit operational entities; and develop and maintain the CDM registry. The COP/MOP will oversee rules of procedure for the Executive Board; accreditation standards for, and designation of, operational entities; and a review of regional/sub-regional distribution of CDM project activities.

Decisions on the compliance regime that set consequences for failing to meet an emissions target were deferred until the first Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (COP/MOP1). Decisions on issues related to the Land Use, Land-Use Change, and Forestry (LULUCF, or "sinks" issues), including sinks in the CDM, were also deferred to the next COPs, and are expected to be finalized at COP9 in 2003.

In addition, the Conference appointed 10 members and 10 alternates to the CDM Executive Board, nearly doubled Russia's allocation for forest management sinks credit, and approved a declaration in the World Summit on Sustainable Development to be held in Johannesburg, South Africa.

Unlike other investments, CDM is unique in the sense that it has to follow sets of rules governed by an international agreement.

It has not only economic implications but also social implications, as well as forest-related environmental aspects such as impacts on biological diversity and sustainable forest management.

The capacity of stakeholders involved is one of the determinants of how far we can benefit from CDM.

As a potential host country for CDM, while Indonesia must ensure that the two goals of the CDM – emissions reduction and sustainable development – are met, it also needs to increase its attractiveness host for CDM investment. Current political uncertainties in Indonesia, unfortunately,

are not immediately conducive to foreign investment, while indigenous investment capacity is inadequate.

If Indonesia is to attract CDM project, the institutional arrangement should be independent from the political situation and the associated uncertainties. In so doing, the role of the private sector and non-governmental entities should be enhanced, while limiting governmental agencies at the minimum is absolutely necessary. Considering the complexity of the issues related to CDM, capacity building of stakeholders at the various levels is deemed necessary.

Hosting the third largest forested areas in the world after Brazil and Congo, Indonesia has ample interest in observing how the forestry CDM negotiation process reveals itself. Currently, a National Strategy Study on Forestry CDM is being undertaken. Government's position regarding forestry CDM is still mixed. This paper is an attempt to provide insights for decisions on this important matter.

Forest Condition in Indonesia

The past and current forest conditions in Indonesia have been a direct result of the assortment of external causes such as the El Niño, climate variability, and the longer term problem of climate change. But the problems lie on the underlying causes of long-standing destruction of the Indonesian forests: institutions, governance, and straight economics.

Between 1984 and 1998, the average rate of forest destruction in Indonesia was about 1.6 million hectares per year. The figures in the recent years — during the economic crisis and beyond, the so-called 'reform' period — might have been closer to 2 – 2.4 ha per year, the highest destruction rate in the world. By 1997, Indonesia had lost 72 percent of its primary forest cover and 54 percent of the remaining ones were threatened.

While the reform era demonstrates more severe problems, forest degradation in Indonesia predates the reform era. Prior to the crisis, the Indonesian forests had been under severe pressures from high demands, due to Suharto administration's resource-based industrialization and the use of forest resources as political patronage. Then, forestry was the second largest contributor to GDP after hydrocarbon products.

Pre-Reform

From 1967, the government has been distributing over 60 hectares (ha) of timber concessions to private companies,¹ bringing Indonesia to become the largest exporter of tropical timber in the world with 470 percent increase of log production in the first eight years of Suharto's New Order period. By the end of 1980, Indonesia was the largest plywood exporter with production capacity of over 12 million cubic meters (m³), supplying 70 percent of the world market and generating US\$3.5 billion export revenues per year when Indonesia banned log exports.² Pulp and paper industry began to put even heavier pressures with doubling production capacity between 1987 to 1997.³ The expansion of oil palm plantation — from 100,000 ha in 1967 to about 2.5 million ha in 1997 added to the pressures.

The forest utilization policy was not made in isolation from power politics. When Suharto started his New Order government, his power base was among the military, especially with the Diponegoro Regional Command in Jawa, and the military intelligence. The government control over forestlands, the establishment of the logging concession system (the Forest Utilization Rights, or Hak Pengusahaan Hutan, HPH), and the distribution of these HPH to military leaders, politicians, and key bureaucrats provided him with new power base. The companies that invest in logging often recruit military officers, politicians, or bureaucrats by offering some share in the company. In return, these officials will provide the companies with secured concessions and political influence.⁴

With the industry rampant with collusion, it is not surprising that large concessions are heavily concentrated among few holders. The top 10 groups of logging companies controlled only slightly less than half of the total, about 27 million ha out of the total 62 million ha. Barito Pacific, the largest group among all, controlled 68 out of about 600 concessions, controlling about 6 million ha.⁵

As a result of this highly concentrated industry, the companies could control the profit that they gained. A significant portion of the economic rents from the forest actually went back to the timber companies. Estimates range from 17 percent nationally,⁶ 25 – 33 percent in East Kalimantan,⁷ to the most recent estimate by the Indonesian Ministry of Finance of about 15 – 27 percent.⁸

Post Reform

What was started as a monetary crisis that caused a drastic devaluation of the Rupiah led to widespread socio-political and economic crises. Prices soared, foreign debts, in its rupiah term, were multiplied, and unemployment rate increased. The crisis rendered Indonesia to face difficulties in paying back its billions of dollars of overdue loans to the international lending institutions. In the wake of the multidimensional crises, two forms of reform emerged in relation to the forestry sector in Indonesia. The first is the reform of the entire economy and the increased influence of the International Monetary Fund (IMF) in the domestic economic policy, whereas the second is the reform of the forestry sector, mainly led by the World Bank, but increasingly channeled through the IMF. The IMF came to the rescue with multi-billion-dollar bail-out package, among the largest Structural Adjustment Loans packages that the IMF ever made. Came with the bail-out were conditionalities that literally sets the IMF as the de facto economic manager of the country.

In 1998, the first Letter of Intent that includes restructuring of the forestry sector was signed by the then President Suharto. Among others, the Letter of Intent contains provision to break up forest industry conglomerates and opening the sector for new investors.

Indeed, many of the economic reform measures recommended by the IMF would, directly and indirectly, result in more exploitation of the natural resources. Literally, the three largest natural resources in Indonesia — oil and gas, mineral, and forest resources — are to be exploited even further to service the debt. A recent report by American Lands blamed the IMF policies for putting pressure on heavily indebted countries into undertaking excessive deforestation. Friends of the Earth released a similar report calling for IMF to link environmental standards to its loans.⁹ IMF denies the allegation that its policies contribute to deforestation.

The original Letter of Intent did not address forestry or general environmental questions at all. However, when the LOI became public in mid-January 1998, several forestry and environment-related conditions were included, believed to be to dismantle the excessive control over the sector by small number of Suharto's cronies, notably Bob Hasan, and to open the opportunities to new players from Indonesia and, especially, from overseas. The public reacted favorably to these conditions. From

the very beginning, however, the government showed great reluctance in carrying out the policy reforms proposed in the LOI.

In the mean time, non-forestry sectors continue to put pressure on the forests, competing land-use for non-forestry uses, or extracting other resources that, in so doing, destroys the forests. The pressure from the mining sector is exemplary in this case. Some mineral deposits in Indonesia happens to locate within national parks. Currently there is a ban on mining in protected forests, but government and legislators are sending mixed signals about whether this ban will be lifted.

Meanwhile, pressures to liberalize the forestry industry continued with full support from the civil society. During the ninth CGI, February 1-2, 2000, in Jakarta, Dr. Nur Mahmudi, then Minister of Forestry and Plantations, conveyed 8 government commitments in forestry sector. These eight commitments are: (1) A moratorium of primary forest conversion; (2) closing down heavily indebted industry; (3) putting an end to illegal logging; (4) restructuring the wood processing industry; (5) revaluation of forest resources; (6) making the reforestation program in line with industrial capacity; (7) decentralization in forestry sector, and (8) development of national forestry program. In the action plan from November 2000, these commitments were expanded to include (9) forest fire prevention; (10) re-arrangement of tenure rights; (11) inventory of forest resources; and (12) improvement of forest management systems. In its efforts to implement its commitments, the Government of Indonesia formed an Inter Departmental Committee on Forestry (IDCF) based on Presidential Decree No. 80, of 7 June 2000.

A year later, and nine months since the formulation of IDCF, no progress on the commitments can be seen.¹⁰ In the end, the reform agenda failed to achieve its expressed goals. These facts bring about questions as to whether problems in the forestry sector in Indonesia can actually be solved at all.

What's Next?

At present, Indonesian forests remain vulnerable while significant portions of which are lost every year albeit efforts by domestic and international communities to save them. Decentralization as we know it may exacerbate, rather than solve, the deep-seated problems surrounding the

forestry sector. Currently, corruption fuels illegal logging epidemic. Evidence began to surface that local police, military, and government officials are deeply involved in the illegal logging practices. In brief, the first thing on the list must be to address the issue of good forest governance.

National institutions have failed to function as a safeguard for forest protection, but not all international pressures are effective either. International institutions were utilized to complement and substitute them — mainly to substitute than to complement. Indonesia, as many other developing countries, is currently trapped in the globalizing world, where production and consumption are no longer limited by national borders. Demand for forest products — not only logs, but also plywoods, pulp and paper, and others — and demand for other commodities with, due to overlaps in areas, extraction of which may disrupt the forest.

In Indonesia, the International Tropical Timber Organization (ITTO) and the International Monetary Fund (IMF) are possibly the strongest international influences to the forestry sector. Still, these institutions are ineffective in reforming the current unsustainable forest management. The ITTO relies its success on ecolabel mechanism, which itself relies on consumer awareness. While markets to environmentally-conscious countries such as Japan and those in Europe are restricted by ecolabel, those to large developing countries are not. Even compliance rate in the European countries is not fully. In the UK, for example, paper products are distributed in such a way that the origin of the fiber is obscured.¹¹ At the same time, developing countries will increase their shares as consumers of forest products from Indonesia. Consumers from these countries are very unlikely concerned about the origin of the products and whether they are produced sustainably.

Similarly, the IMF-led reform was not effective for various reasons. First, domestically, pro-reform movement has been hampered by the resistance from the status-quo who for the longest time reaped benefits from unsustainable forest management. For example, even the precondition for sustainable forest management such as basic information on the status of the forests and their surrounding environment is lacking, and so is a comprehensive map of forest resources. Second, the reform process lacks proper involvement from key stakeholders, notably local institutions. The third, and this may result from the above two, is the lack of political will

for the reform itself showing reform only to please the IMF and other donors. The recommendations from the Reform Committee, the members of which consists of pro-reform forest professionals, were largely ignored in further decision making.

Multilateral environmental agreements also fail to support sustainable forest management. The non-legally-binding Forest Principle has turned into sovereignty saga, which turns forests into object of development. Biodiversity Convention has probably been the most utilized international agreement to enhance forest protection. There are some financial assistance under the Convention itself, through bilateral donors, and through the Global Environment Facility. These assistances have been focused around protected areas, and around the physical and economic issues, while failing to properly address the key institutional problems. With this record of failures of the international community to save Indonesian forests, will the CDM be a hope for protecting forests?

At the same time, there are actually local institutions that have demonstrated their effectiveness in managing the forests sustainably. But these cases were not elevated into national and international institutions — in some cases, international and national institutions tend to conflict with local institutions.

Indeed, while international cooperation may help, political will to reform the entire forest badly needed. If political will remains lacking, forest destruction that may lead to more forest fires will be repeated continuously in the future.

Research Questions

Against the backdrop of the complex political economy of the forestry sector in Indonesia, CDM offers an intervention that promises sustainability. But, learning from other failing foreign interventions, can CDM address the underlying causes of forest destruction and degradation in Indonesia? This is the ultimate question that needs to be answered, and thus this research.

This research is a survey of the political ecology of forest management institutions as a basis for assessing institutional capacity and preparedness for the implementation of forest-based socially beneficial

CDM projects. To this end, this research will address the following key questions:

- What is the current institutional environment? What is the knowledge base of each institution concerning (1) each other, (2) international environmental regimes, and (3) forest management strategies? To what degree do other institutions influence each other's organization (1) before economic crisis and decentralization, (2) during the transition to regional autonomy, and (3) the target date fore the completion of decentralization? Do the institutions have a global, national, local, or an aggregate of these three effect on their beneficiary populations? How strongly do funding options effect and/or alter the institution's goals? Are there differences in perception and interpretation at the institutional level, at the local community level?
- What is the institutional setting concerning CDM projects? What is the institutional framework/setting for potential CDM projects? Are these projects in conflict with domestic policy, how so? What are the institutional framework and constraints for administering these projects? What is the goodwill intention from either side? What are the motivations behind the project and were the motivations sustained or did they evolve throughout the project? What is the extent of the interplay between the Annex 1 and non-Annex 1 country? Are the twin requisites of Article 12 of the Kyoto Protocol viable in the forestry sector?
- What is the project environment? What are the economic, social, and environmental benefits and risks of these CDM projects? What is the market and economic potential of these projects? What are the socio-economic effects of CDM projects? What are the effects on human well-being? Do these projects contribute to or exacerbate the alleviation of poverty, and how so?
- What are the environmental concerns about CDM projects? What are the potential constraints to agroforestry, reforestation, afforestation projects in conservation and production forests with respect to forest habitat type? What are the risks of leakage, additionality, displacement, longevity, and monitoring?
- What are the human concerns about CDM projects? What are the potential levels of involvement for different power-brokers in the community? What are the tangible benefits to social well-being short-term and long-term? Does this project have viable long-term economic

options for the community? What is the target population of the project? Are effects of project localized, and if so, how?

In this study, we specifically focus on the level of the public awareness of climate change and the political economy of forest management institutions as a context for capacity and preparedness for the implementation of forest-based CDM projects effecting human well-being. We plan on linking with existing work on institutions and CDM projects conducted by this organization and other like organizations. Our study will render an analysis that will help us draw conclusions on the institutional environment and its capacity to respond to socially beneficial CDM projects. Ultimately, this new body of knowledge can be utilized to craft policy concerning CDM projects, to ensure the viability of the CDM project at the institutional level, and to guarantee that CDM projects have a local developmental effect.

Footnotes

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Section II

The Case Studies: Local Institutional Interplay

This field research is not to prove a point, but aimed to form a character, attitude, and readiness of local community for their own environmental potential.

Firstly, we would like to see position and response from local community to the global warming issue. From this aspect, such position and response will be reflected in future hopes that they will developed out of their current attitude, behaviour, and perception.

Secondly, we would like to see whether local institution's dynamic and potential can be relied on as a platform for the implementation of CDM project. These institutions can at least become a sort of pilot project, which can receive foreign reclamation and reforestation aids. Through this second aspect, the researcher can also get an idea of the community's commitment and institution's participation to the environmental efforts.

Thirdly, we would like to see the possible results from regional autonomy era, especially in regards to obedience and solidarity of the local community and *stakeholder* in forestry sector development.

The methodologies involve discussion, information exchange, and secondary data gathering through reports, papers, and other sources. Discussion or the information exchange was done individually or in groups, in the provincial, regional, or village level.

Jambi

The province of Jambi is located in the center part of the island of Sumatra, alongside the Batanghari River, extending an area of more than 50,000 square kilometers (sq km), consisting of 9 districts and 1 municipality. Jambi is home for some 2 million inhabitants in 1990, about 2.5 million in 1997, and was estimated to be about 2.7 million in 2000.¹ This high population growth is attributed to migration, especially due to the government's transmigration program of relocating (poor)

people from the densely populated island of Jawa to more sparsely populated areas. The transmigration program caused a high demand for land and the accompanied forest clearings. A large-scale forest clearing for farming and transmigration has deforested more than 90,000 hectares (ha) between 1993 and 1997.²

Most people in Jambi are farmers, especially rubber and palm oil. When the economy slumped, the available land — especially for small and medium farmers — decreased. There is a very low land-man ratio — less than 2 ha per farmer — and the lands that are still available for farming are far less than productive. On the other hand, the private sector's unutilized and neglected lands now reach an area of 750.000 ha.³

Saving Jambi's forests will require redesigning of all the forest management regulations, especially the Forest Utility Rights (Hak Pengusahaan Hutan, HPH), Industrial Forest Utility Rights (Hak Pengusahaan Hutan Tanaman Industri, HPHTI), and the Upstream Logging Management Industry (Industri Pengolahan Kayu Hulu, IPKH). The redesigning has become a policy of the regional government of Jambi.⁴

Institutional Interplay

The government remains the strongest actor in influencing forest management in Indonesia. Prior to the reform era before 1997/1998, all regional administration and technical activities were centered in the Provincial Office of the Forestry Department (Kantor Wilayah Propinsi) and the Forestry Office of the Provincial Government (Kantor Dinas Tingkat I). The Regional Forestry Office, which was an extension of the central government, had significant authority — politically or otherwise — with the Forestry Office of the Central Government following closely behind. Almost all policies, decisions, and technical guidelines were set and managed directly by these two offices. On the other hand, their counterparts in the district level had almost no adequate authority whatsoever.

But in a more autonomous climate of today, these conditions have changed and even reversed. The Forestry Office of the District Government now has full authority over regional forestry activities. On the other side of the coin, since all policies, authority, and control are now in the hands of the district level office, the provincial office has virtually no control especially on policy making.

In the field, some problems arise due to these changes in authority, for example, there is a conflict of authority between the province level Forestry Office — which no longer has much authority but is still obsessed with the pre-reform attitude, and the district level Forestry Offices — which consider all forests in a given district is for the district alone to manage. As it is, the *bupati* (district head) does not follow the existing rules. Often times, the *bupati* would issue decrees for excessive forest utilization, or letting illegal mining operating within a protected forest, or not controlling the existence of illegal sawmills, etc. These unruly decrees result in an unhealthy competition between loggers who have permits from the *bupati* but conducting their activities in HPH areas, and HPH holders which carry licenses from the Department of Forestry, in the end pushes some HPH to either receive materials from illegal loggings, or it being involved in illegal logging.

Private sector and state-owned corporations (Badan Usaha Milik Negara, BUMN) dominated forest utilization prior to the reform era. Only a handful of large HPH holders, however, survive after reform. Even the State Owned Corporation (Inhutani I-V) is currently going under. Inhutani used to be an extension of the central government to exploit the resources around the regions outside of Jawa. The other problem is that the reforestation funds collected from HPH activities are still gathered centrally to the central government. These two problems triggered district level governments to shake their existence, and use the Timber Utilization Permit (Ijin Pemanfaatan Kayu, IPK) to manage the existing forests. An evaluation by the Department of Forestry found that forest management institutions such as BUMN and HPH failed to manage forest-based production sustainably.⁵ This failure caused drastic degradation in forest quality. The main cause for such failure is partiality in planning and weak law enforcement; secondly, both business bodies always put profit before the environment.

The non-governmental organizations (NGOs) have been an effective watchdog. There are many NGOs founded in Jambi, with all sorts of focuses such as environment, regional economy, health, social, government watch groups, etc. In the environmental sector, a group consisting of a few NGOs formed Jambi Forest Savivors Forum (Forum Penyelamat Hutan Jambi, FPHJ), consisting of 13 concerned local NGOs. FPHJ was a valuable institution, especially as a partner as well as a watchdog of government's policies. FPHJ was also able to bridge the

government and the local communities, in involving the local in managing the environment (forests).

It is unfortunate, however, that sometime ago, FPHJ was officially dissolved. This was caused by a lack of a common vision and mission to save the Jambi area forests. The eight NGOs, which voted for the dissolving of FPHJ, claimed that many of the other NGOs had used the Forum to gather personal profits out of the activity. In order to keep a communication forum, all of the above eight NGOs would form another alliance.

Different from its government and NGO counterparts, tribal forums and local community groups are far behind in their organization, management, and human resources. Tribal forum is an informal institution, and their activities are mainly keeping an eye on community groups and activities. On the other hand, community group is more practical in launching programs such as prayers group, cooperation, farmers group, etc.

Before the reform, tribal forum worked through the government-formed Villager Community Resilience Forum (Lembaga Ketahanan Masyarakat Desa, LKMD). This formal institution is now defunct, replaced by the Village Representative Forum (Lembaga Perwakilan Desa, LPD), whose members are democratically elected.

Box I

Suku Anak Dalam

Suku Anak Dalam (SAD, literally means Inner Child Tribe) is a victim of forest mismanagement. SAD is a community group which is most affected by forest management, since they live in the forest almost their whole lives, and are dependant on the forest. In their lives, SAD is not depended on wood, but more on non-wood products such as honey, tree saps, rattan, etc. As villagers and newcomers converted natural forests into industrial forests, the non-wood resources that the SAD is so dependent on are deteriorating.

Similar with the NGOs but in a somewhat more independent manner, tribal forum is highly active in keeping an eye of all community activities at the local level, where tribal laws are applied to all community trespasses. In forest resource management, the tribal forum is highly active in the development and management of tribal forests, forbidden ponds (where it is unlawful for the community to fish), and the protection of protected forests

through the enforcement of tribal laws. In some villages, this forum is very strong, while in other villages they are no longer the authority.

To villagers who live around the forest area, the forest is not only a source of wood for their household needs. More than that, it is a reserve area for the expansion of their farms and gardens. When HPH holders claim these reserve forests (in the form of traditional forest, *ulayat* forest, or community forest) as private forests, the result is severe conflict.

Newcomers increase the need for land, and often at the cost of deforestation. There are two kinds of newcomers, the transmigrants and other migrants. At first, the Industrial Forest-Transmigration (Hutan Tanaman Industri-Transmigrasi, HTI-Trans) program is to fulfill the need for labor in the forestry sector, as well as a migration program from a packed Java to sparsely-populated islands. This program failed due to two reasons. Firstly, there is a decline in work activity in the industrial forest companies, which leads to high unemployment. Secondly, due to this high unemployment, in order for the transmigrants to survive, they are forced to clear more forests for their needs. They clear the forests to build farms and gardens, just like the indigenous communities, and this caused an unhealthy competition between them and the natives. This results in conflict, but the forest clearing activities continue to be widespread.

Other migrants did not move to Jambi through government programs such as the transmigration program, but came spontaneously, and usually in relatively small groups. However, during its development, these groups expand in quantity, so they develop the same pattern as the native community to fulfill their daily needs, i.e., they depend on the forest, HPH owned production forest or the native owned *ulayat* forest. As happened with transmigration program, the migration results in conflict.

Opportunities and Challenges

Forest clearings and illegal loggings are serious problems. The large amount of illegal sawmills triggered illegal loggings in the forest area, and destroyed natural forests. Corrupt officials involved in the illegal logging activities exacerbate this condition, and this happens in almost all areas of the province of Jambi. The limited resources mean a great challenge for the forestry department. There are not enough patrol squads to watch over the protected forests and national parks. This condition makes it difficult to apply punishments to trespassers.

The main source of conflict is land tenure, borders, and locally claimed forests. This conflict arose between local communities, between local communities and the private sector (HPH), or between local communities and the regional government. This conflict is partially caused by the lack of law enforcements and consciousness.

Some requirements, which have to be met to implement CDM program, are the critical land availability for reforestation, public and government support, and the elimination of land tenure conflicts. From statistics, we know that there are large critical areas in Jambi, consisting of unutilized lands, and bushes, but land tenure conflict is high, and land function permanence is not guaranteed.

Institutionally, the government, private sector, NGOs, and tribal forums have undergone changes in their relationship to one another, especially in the relationship between the regional government and provincial government where regional government has more authority in managing their own region, and often times ignores provincial and central government's policies.

West Kalimantan

The field site for this case study is West Kalimantan generally, and district of Landak and Mandor especially. There is an environmental reserve area in Mandor, and its condition will continue to worsen if illegal logging and unauthorized mining (Pertambangan Tanpa Izin, PETI) of gold were to continue. The forest will turn into a desert, and a reclamation and reforestation will be difficult and require extremely high investment.

The direct result of the first issue, is the availability of critical land, which fits the requirement for the implementation of CDM. Until mid September 2002, there is approximately 3,000 hectares of critical land in the village of Mandor created due to the illegal logging activity, collaborating with illegal gold mining (PETI) within only the last 10 years.

West Kalimantan covers an area extending almost 150,000 sq km. Until 1997 only has one municipality and six districts. Since 1998, the district of Sambas was split into the district of Bengkayang (1998), Sambas (1999), and the town of Singkawang (2001). This was followed with the breaking of the district of Pontianak into two districts, Pontianak and

Landak (1999). The district of Ketapang has the largest area in the province (24 percent), and this district will remain the largest considering that there has been no plans devised to break the district into smaller districts, after the idea of forming its own province of Ketapang went south recently. The second largest district is Sintang (22 percent), but with the plan to break this district into two smaller ones: Sintang and Pinoh, it will not remain so. The same goes for the district of Sanggau, which will be broken into Sanggau, Sekayam, and Sekadau. With these in mind, the second largest district status will be enjoyed shortly by the district of Kapuas Hulu (with 22 townships). But more importantly than the breaking of districts, there is even talks of breaking the province into three provinces: West Kalimantan, Uncak Kapuas, and Ketapang.⁶

The nature exploitation is being done especially in the forest area, its surface resources as well as underground. Some areas have even requested the *bupatis* (district heads) to transfer the people's forest to the regional government so that the said government can control the development and distribution of the forests to fulfill the needs for settlements and farming. In the mean time, deforestation continues.

In 1997, there were only 7 IPKH Forest Timber Industry (Industri PerKayuan Kayu Hutan, IPKH) operated in Pontianak. Since 2001, there was an increase to 17 IPKH. The timber resource for these IPKH are loggings conducted by HPH and HPHH, and illegal loggings which were incorporated into HPHH, considering that currently the number of active HPH companies is only 3, namely PT. Bumi Raya (2 HPH), and PT. Benua Indah. Indirectly, social reform and regional autonomy put an increase in deforestation because those involved in it are growing in numbers and are more spreading.⁷

The result from all these activities is that until the 2002, there was a 700,000 hectares decrease in size of tropical forest in West Kalimantan, and the remaining tropical forests consist of the mostly inaccessible national parks. Those that were easily accessible have been destroyed.⁸

On the other hand, reforestation program in a destroyed area, whether through BUMN (PT. Inhutani, PTPN) and BUMN along with government programs through the Special Allocation Fund — Reforestation Fund (Dana Alokasi Khusus — Dana Reboisasi, DAK-DR) are still limited. There is even a DAK-DR program suggested by the government that had only

reached the stage of “suggestion”, with no implementation planned in the near future. In the mean time, the amount of critical area in West Kalimantan is growing, and will continue growing along with the growth of illegal loggings. According to the West Kalimantan Forestry Department Annual Report of 2000 (released October 2001), critical areas in West Kalimantan almost reached 5 million hectares, inside and outside forest areas.⁹

The majority of the people of Mandor are farmers and rubber tappers, but there has been a decrease in farming area since the sand concentration within the land is very high. In the mean time, with an unstable rubber price fluctuation, there are many abandoned rubber farms, intentionally or unintentionally. The result is a profession change, from field and rubber farmers to mine workers, possibly because it is more profitable for the farmers to be mine workers than farmers.

Seeing the negative impact of unauthorized mining practices and illegal loggings, the local traditional authority and senior citizens consider it necessary to return the 2001 Taitukong Traditional Agreement into effect.¹⁰ This agreement is a form of social reconstruction. The traditional agreement produced policies such as follows:

- Mandor Natural Reserve area has to be saved, because it does not belong to the Mandor community alone, but also belongs to the state, or even the world.
- There is a need for a traditional law and punishment, which will be applied to trespassers, as well as for a protection of the agreed decision.
- Such implementation of traditional law has to be supported by the government, and guaranteed protection from the security forces.
- To form a team which consists of a variety of community components, government, and security forces, which then formed to back the traditional council’s future decision. Such team was formed in the past, but suffered a dysfunction because there was a gap between the government and the local community.
- The law cannot be bought or sold.
- There has to be assurance that local officials will not be inconsistent – a decided policy has to be put in effect absolutely and with guarantee.
- Law enforcement can no longer be done half-heartedly.
- There has to be punishment for corrupt/inconsistent officials.

Since there is limited reforestation activity in the forest or critical areas, the remaining forests will continue to wither, and will grow smaller and smaller. If this were to continue, the prediction that Kalimantan forests will meet their untimely end by the year 2008 will come true, especially if illegal logging activities, economically driven or personal profit drive, were to worsen — not only to supply domestic market but also smuggled to Sarawak, Malaysia. This activity will exacerbate the existing deforestation process in the whole of West Kalimantan area specifically, or other islands in Indonesia generally.

There is 3,080 ha of natural reserve (Taman Nasional Mandor), 2,500 ha of Makam Juang Mandor forest including its supporting areas, and another 2,500 ha of PPKN location. All three locations are currently in critical condition. The natural reserve is heavily mined since 1995. About four years ago, illegal loggings and illegal miners have exacerbated the environmental condition. This results in approximately 1,000 ha of widespread damage, with holes depth between 6 to 9 meters.¹¹

Makam Juang Mandor forest, including its supporting areas, also suffers similar damages caused largely by illegal mining, illegal loggings, and forest fires. Furthermore, illegal loggers do not just cut down large trees, but also those which are still so small (about as big as your thumb) to be used as vegetable rails. The accumulation of all these causes have damaged about 75 percent of the area. In the drought season of this year, parts of the area also caught fires — and intentionally burned — as well as heavily mined.

The existence of HTI is considered unhelpful in contributing to the gradual advancement of the people's welfare, as well as to an environmental improvement. The local community very much doubt the success, considering that most reforestation activities conducted by government owned BUMN thus far work "by itself" without the involvement of the local communities. Local stakeholders predicted that the project will fail precisely because the government do not involve the locals, whether in human resource recruitment (because most workers are imported from other areas) or in the project's monitoring. This phenomenon brought the local community to the conclusion that Critical Area Rehabilitation Program through HTI, which is undertaken in Mandor, will have very minimal success rate. Thus, the locals do not have any particular interests or psychological bond with the trees being planted by

the reforestation program, especially since their office and base camp are currently abandoned post the 1996/1997 ethnic riot.

Knowing that the local communities have very negative view of the project, PT. Inhutani continues to implement public education to the local community about the importance of sustainable forests. There is very little impact, however, to be felt from such public education, especially in decreasing the numbers of illegal loggings or mining. Although the public education program will be continued, an implementation of the previous program model will hinder the ability of the state-owned company to reach the 2,500 hectares target, especially since the people still remember the failed Superior Commodity Plantation Program (Program Budidaya Komoditas Unggulan) from the forestry department through DAK-DR since before independence (1939) until 1996, which was never realized although the information of the program is already out in circulation. This “Program Budidaya” did not enjoy success because it was only implemented once (in 1937). In the years following 1937, this is a “proposal only” program, so the people do not take it very seriously. Finally, the local community seem to be in consensus that every other one of government programs will end up fairly similar to the Program Budidaya.¹²

The government has always been forbidding the local community from the Natural Reserve area, but for the past 10 years, the people no longer take it seriously. Illegal exploitation continues although the government forbids it. In the mean time, some members of the local community who were members of a certain *paguyuban* or society submitted a proposal, that in certain areas such as the Natural Reserve area can be developed in return for a compensation to the regional government. This proposal still has not obtained the response it deserves from the authority. In the mean time, the exploitation in the Natural Reserve still continues, and grows even stronger with some 400 – 600 mining machineries.¹³

There are a few things that put an increase in the mining and loggings activities in the Natural Reserve, as well as in Makam Juang Mandor, such as the following:

- The distance between the Natural Reserve and the local community housing is too close (between 12 – 15 meters). With such close proximity, there are many challenges faced by the Natural Reserve,

especially in an era where law is weak and the authorities impotent. Some respondents also mentioned that there are some rubber plantations actually located within the Natural Reserve, and they also question the status of their own gardens which areas are included in the Natural Reserve.

- There are no more security officers posted within the Mandor complex since the reform era, so that control over trespassers no longer exists. On the other hand, there is a large amount of high-valued resources within the complex, such as gold, plants, and animals. A drilling to assess the concentration of gold had even been conducted in the Natural Reserve area.

Institutions, Their Dynamics, and Interactions

There are two main issues that stand as a base for potential conflict in the research area. The first one is the illegal mining, and the second one is the illegal logging. Both factors are complex because they involve many people with conflicting interests. To this day, illegal mining caused 3,000 hectares of damages in Mandor, with a third of it happens in the Natural Reserve area.¹⁴ The land is now practically good for nothing if one only depends on traditional method of cultivation. The formerly green area is now dry desert. It will not be until 7 years that some signs of life would reappear, and even then is limited to certain species of grass.

As a result of the mining activity, local community's farming activities are experiencing serious decrease in productivity. Furthermore, they have no problem "sacrificing" their productive rubber plantation if the compensation for such sacrifice is deemed appropriate. There are many members of the local community who switched from being a farmer to a more lucrative miner.

According to inputs from discussion participants held in the field study period, the support to reclaim the damaged Natural Reserve is relatively large. Suggestions are made to protect and fix the problems, and to undertake reforestation. The support to reclaim the damaged area, which amounts to some 1,000 hectares, comes from the local communities through traditional institutions and village officials.

Traditional value is supported by the community majority, and adequately mediated. This can play an important role in securing the sustainable

forest management program. Some *tumenggungs* (traditional village leaders) who were present at the discussion even suggests a tribal punishment for the trespassers or those who protect them. However, security forces must support such tribal decision, so that this institution does not directly deal with the masses. Before any tribal sanction can be applied to the convicted, there should be a meeting beforehand to ratify a tribal agreement. This meeting should consists of various authorities from the regional officers to the village, officers of the Forestry Department, to the tribal authorities and seniors, and other local institutions.

Such tribal sanction can only act as a platform to create regulations, considering that the government's sanctions which deal with environmentally damaging activities can be considered obsolete. The relatively ineffective government regulations in preventing environmentally damaging activities is caused not only by corrupt officials who were involved in the deeds, but also because there are limited numbers of officers and the lack of fear or guilt from the people who performed the activities. Tribal sanction is hoped to complement the ineffective government regulations. Although the tribe has no power to apply physical punishment to those they consider guilty, the inducement of "shame" through the convicted person's requirement to pay for his crimes should be enough to prevent the people to disobey the sanction.

Before commencing any tribal disciplinary action, therefore, there should be efforts in distracting the local community from the proposed reclamation area to another sector, such as fisheries or agriculture. Until then, it will still be very difficult to control illegal loggings and PETI.

Central Sulawesi

The site for the field study is the province of Central Sulawesi, in the district of Luwuk. Central Sulawesi extends an area of more than 68,000 sq km. Administratively, Central Sulawesi is divided into 4 districts, 1 municipality, and 69 regional areas, consisting 1,388 definitive villages, and 5 tentative villages.¹⁵

The site for the field study is the district of Luwuk, due to the following. A good part of its area is the Bakiriang National Park (TNB). According to the Provincial Spatial Planning (Rencana Tata Ruang Wilayah Propinsi,

RTRWP), the district of Banggai/Luwuk is close to 10,000 sq km, consisting of 8 regional areas. This area also consists of East, Central, and Western regions, with various commodity potentials according to each agro-ecosystem. Administratively, the site for the field study is included in the district of Banggai's Forestry Department, Central Sulawesi.¹⁶

According to the 2000 population census in the district of Banggai/Luwuk, the local population is more than 260,000 inhabitants (2001), with about 130,000 women, and 133,000 men. Population concentration is 27 inhabitants per sq km. Most population is in the agriculture sector, working both in dry and wet rice fields. They also do a little gardening and farming. The main farming commodities are cacao, *kemiri*, and *durian*. Side income is managed by gathering of wild rattan in the forests, carried out mostly in 3 – 4 days in groups. The rattan deal is very profitable with Rp. 15,000 to 26,000 per day. A small part of the population is also engaged in trade and services, but only serving their own local community. According to interviews with the local community, the population's productive age is 15 – 49 years old (a little less than 150,000 people) and the non-productive is 0 – 14 years and above 50 (a little less than 120,000 people).¹⁷

Forestry is still a *primadona* in the regional and national livelihoods. During the autonomy era, the district government has an important role in forest development — this is consistent with the transferring of authority from the central to the regional government. In the district of Banggai/Luwuk, the only operating (but now defunct) HPH is Bina Balantak Raya.¹⁸

Following the population boom, the local community caused some part in converting the forest area into agricultural area. This happens in state-owned forest, including in protected forest. This condition continues along with the worsening of the economy. As an alternative income, some of the locals are involved in loggings in the *hutan rakyat* (community forest) area, production forests, or protected forests — legally or illegally. Conflicts frequently happen, among the community itself, between forestry department, private sector, or the government.

The forest area in Luwuk, according to the Ministerial Decree No. 757/Kpts-II/1999, consists of about 14 percent of all forests in Central Sulawesi. There is only one HPH holder, and now the company is defunct. On the other hand, there is only one active HPHTI holder, the HTI Berkat

Hutan Pusaka (approx. 10,000 hectares). Also, there are 46 units of IPKH and IPKL.¹⁹

In the process of forest development, the forests suffered tremendous pressures — this comes from the fact that forests are still a “fast cash” industry. This condition is not only realized by those working in the forest industry/business, but also by all levels of the society. Some activities which play significant role in damaging the existence, potential, and integrity of the forests are illegal logging, forest clearing, and forest fires.

To this day, there is no significant decrease of the above-mentioned activities. On the contrary, there are significant increases. Information gathered so far shows that such increase happens after the reform era when forest development underwent a transition from the central government to the regional government. Such also happen on the society level, where the community feels that they have more right in deciding what is good for the forest development, for economic, tribal, inheritance reasons, or others. Until 2000, there has been more than 77,000 ha (8 percent of the whole region) of critical land, consisting of more than 55,000 ha of forests and 22,000 ha of non-forests.²⁰

In the effort of forest improvement through reforestation, the regional branch of the Forestry Department has implemented reforestation in the state-owned forest areas, and some outside of the forests area to rehabilitate the forests, and to return them to the previous condition. Other than this activity, the government in conjunction with the private sector (HPH/HPHTI) also performs other activities, such as *tumpang sari* (mixed agriculture), abandoned lands cultivation, tree planting along roadsides, and TPTI implementation. The reforestation mostly uses pine-like trees, *johar* trees, and some *sengon*. This reforestation is implemented through the Dati II Banggai Reforestation Project. The target for the reforestation is 12,000 ha of critical lands, leaving more than 65,000 ha of critical lands still in need of improvement. There are other land-use such as *kawasan budidaya* (more than 150,000 ha) and other uses (16,000 hectares).²¹

The local community's land utilization pattern mostly consists of monoculture plantations, with main agricultural plants like cacao, *kemiri*, and *durian*. In areas with more 40 percent slope, the condition is quite bad because of the high risk of erosion.

In Banggai/Luwuk there are some large rivers, which are the main irrigation source for the area. This condition shows that upstream reclamation is very important in supporting the security of water resources for the downstream areas. In implementing forest rehabilitation projects in the fiscal year 2002, the government transferred the project's funds through *Dana Alokasi Khusus Dana Reboisasi* (DAK-DR). This project is a continuation of similar but unrealized project in 2002, which is the forming of a Forests Rehabilitation Master Plan, with the water catchment areas as its bordering areas.²²

The definition of self-supported can be assessed from several criterions. The first can be defined as development of forests by the government *alone* (not by third party as is known in the form of HPH – private or BUMN). The second involves with the forests development principle itself, which needs sustainability in resources, environment, social, and financial. With this second definition, forest development can be sustainable if and when the results gained from the development can be used to routinely finance all the development components, so that the whole needed income in implementing sustainable forest development can be satisfied – without asking for funds from other resources.

As with other forest development activities, rehabilitation/reforestation should begin with plantings with full consultation with the local community. Generally, forest rehabilitation technique is rather similar with community-based forest development, in its pure form or in *agro forestry*. Reforestation is an effort to return critically-damaged and unproductive forest function and to increase its productivity by ways of replanting. There are four kinds of reforestation: pure reforestation (replanting of trees), mixed reforestation (replanting of trees plus of Multi Purpose Tree Species (MPTS), *tumpang sari* reforestation (outside conservation forest area), and enrichment reforestation.

Utilization of neglected areas by the community can be done through community forestry program with the planting of cacao and pine-like trees. The community forestry program was started in 2000, coordinated by the Reforestation and Conservation Agency (Balai Reboisasi Lahan dan Konservasi Tanah; BRLKT). Currently, there are 8 forest agriculture teams with some 35 members in each. Each of the members owns some 1 to 1.25 ha. In community forestry program, the people obtain their seeds from the project manager, whether for agriculture (cacao) or reforestation.²³

Plans for self-supported forest rehabilitation in the study area are principally the same with reforestation development; so the activity is mainly consist of field preparation, planting, and conservation. The planned 1,000 ha area will be completed within a year. The planned species to be used is *meranti* and *nyatoh*, with distances of 6 x 3 meters. The field preparation, seeding, and planting is to be done in year one, and the planting of one-season plants in year two and three.

Institutional Dynamics

Institutionally, the authority over ex-HPH lands is the Regional Office of the Forestry Department and the Regional Government, specifically for ex-HPH lands, which are no longer developed by the logging companies. In relation with the result of the social, economic, and cultural survey in ex-HPH lands development studies, we can find many local community's aspirations regarding the format of ex-HPH lands development, which is hoped to increase their quality of life.

In the study area, the suggested programs are Indonesian Line Cutting and Planting (Tebang Jalur Tanam Indonesia; TJTI) forest development, self-supported rehabilitation, reforestation, agroforestry, community forestry, and selective cutting. The suggested controller of the programs is proposed as an institution with legal capability, and members consisting of local communities. The institution to manage a community forest in an area of more than 7,500 ha is proposed as a collaboration between involved stakeholders and community agriculture team, which members consist of participants from the local communities.²⁴ The choice of this institutional format, other than the locals' aspiration, is also by taking into account the location that is included in state-owned area.

For selective cutting program in natural forests with approx. 50,000 hectares, HPH format with cooperation or profit-sharing between the private sector and the local community can be applied. Self-supported rehabilitation program using *meranti* and *nyatoh* for an area of 1,000 hectares is proposed as cooperation between the Forestry Department and the local communities. An agroforestry program in an area of approx. 1,700 ha is proposed as a cooperation between the Forestry Department and local communities in the form of agricultural team.²⁵

A reforestation work for an area of slightly less than 10,000 ha is also suggested as cooperation between government agencies and the local

communities, to promote community involvement and conservation. A TJTI development in an area of about 14,000 hectares is suggested as cooperation between the government, the business-community, and the local community in the form of region-owned corporation.²⁶

The tribal community as one of the largest elements in the structure of the nation state is a community that suffers the most from careless development policies, economically, politically, and socio-culturally during the last three decades. As an example, community control and understanding of natural resources which has been developed for quite some time as a method of survival, was destroyed by one-size-fits-all policies. In the forestry sector, for instance, respect for the forests is focused mainly on wood products, although the tribal community for a long time has been advocating socio-cultural other than economic values of the forests. The tribal community's ability to survive has been ransacked by unfair development policies.

Based on the above issue, and influential group, the Central Sulawesi district branch of WALHI promoted an audience between the tribal community and the Luwuk Banggai regional parliamentary. The regional government has proposed a plan for a regional regulation regarding tribal community, tribal institution, and tribal ethics to reinforce the position of the tribal community. With the existence of this regulation, the tribal community can better manage and conserve the natural resources in the forest.

There are many environmental impacts from sand mining, rock and pebbles mining, and oil mining, not to mention serious erosion, flood, and the serious damaging of local agriculture. All these mining operations are done by domestic and foreign investors, which manage the area around Kayo village in the region of Batui, in the district of Luwuk/Banggai, in approx. 10,000 hectares. This damages happen despite a 20 percent compensational fee to be paid according to the provincial regulation no. 7, series D, no. 4, chapter 7, 1989, regarding the sharing of such fee. Therefore, several NGOs such as the Merah Putih Foundation and WALHI, together with the tribal community, will resolve to propose to the regional government to stop mining activities.²⁷

Opportunities, Problems, and Solutions

The outlook of the community towards forest development system,

specifically considering the implementation of Indonesian Selective Logging/Planting Policy (Tebang Pilih Tanam Indonesia, TPTI), is consistent with what they have been doing so far, namely seeding, cleaning, planting, and replanting. The HPH also helps people who are directly involved as laborers in forest development. Everything ran smoothly because of the involvement from community leaders in ensuring the cooperation to improve the community's quality of life.

The government's participation in monitoring HPH works is very good and intensive, because it has been the responsibility of HPH holders to report their field activity, monthly or periodically, and a bi-annually cross-check of their report.

The community's level of involvement in conserving sustainable forests and its development is very high, and tribal sanctions applied to those who jeopardize such efforts in loggings or forest clearings by way of burning.

Conflict between stakeholders has never happened, because apart from enforced government policies, there are also tribal regulations that they have to follow because they are a joined effort in conserving the forests between the community and the government.

Stakeholders', especially HPH holders', contribution in forest conservation is required in the form of reforestation fee, or DR, and other forest resources fee (US\$ 5 per cubic), which will all be returned to rehabilitate the forest. HPH is also required to leave 20 mother-trees per hectare, and conduct a forest conservation activity according to the agreement regulated by the government.²⁸

Possibility for CDM Implementation

Some main requirements that need to be met for the implementation of CDM program is the existence of critical land for rehabilitation, or forests for reforestation, government and community support, and the inexistence of land tenure conflict. From information and statistics, we can tell that there is quite a large amount of critical areas in Banggai/Luwuk district, consisting of abandoned/neglected lands, bushes and wild grass, and log over area. These conditions alone have guaranteed the possibility for the implementation of CDM.

The government, in this case Bappeda and regional branch of the Forestry

Department, is ready to help and support the CDM activities, so long as the regulations and institutions have been agreed. Later on, it is hoped that the CDM program will be able to improve the economy of the local community as well as the forest quality as well as the community's economy. Past experiences in reforestation and rehabilitation will be a standard so that we can anticipate and find solutions to problems and potential failures.

The community, in this case the non-governmental organizations (NGOs) and tribal institutions, will strive to support, giving public understanding and guidance, so that the community understands the direction, goal, and benefits of CDM. The land conflicts which never happened so far will be a foundation for tribal groups in coordinating with the government, and bridging the public's general communication. Therefore, interactive communication between all stakeholders can be implemented. This will be the foundation of the organization's mechanism that will manage the CDM.

Footnotes

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Section III

Conclusion and Recommendations

What are the underlying causes of forest destruction and degradation in Indonesia? Can CDM overcome these causes, and stop deforestation in Indonesia, and ultimately reduce emissions from deforestation? This paper ultimately should answer these questions.

The case studies have enriched this exploration, and provided field-level data on the preparedness of the local, hence national, institutions to carry out forestry CDM in the case study sites particularly, and in Indonesia generally. Major conclusion arising from the case studies as well as institutional examination at the national level is a mixed bag. While the best way forestry CDM can contribute to the forestry sector is additional financial resources, the lack of which is by no means the only — even the most pressing — cause of forest destruction and degradation. Forestry CDM runs a risk of gross infeasibility when faced by the complex institutional interplay in the forestry sector in Indonesia. A closer look at how the intervention from CDM can address the underlying causes of forest destruction and degradation in Indonesia is still much needed. Ultimately, forestry CDM needs to be integrated with the entire national sustainable forest management scheme.

Lessons Learnt from the Case Studies

In all three case studies, the most apparent underlying cause of forest destruction and degradation is land use conflicts, and is much more complex than the lack of financial resources. While the rhetoric may show otherwise, most actors treat forest resources as open access resources; the increased practice of illegal logging in the last 5 years demonstrates this assertion.

The current and potential future conflicts are rooted from unclear and insecure tenurial system, conflicting regulatory regime that governs land use, and competing utilization of the forestlands. In Jambi, alongside the pressures from settlement needs arising from the transmigration program, farming and plantations. Farming and plantation are major

livelihoods in Jambi. In West Kalimantan, as in Jambi and Central Sulawesi, illegal logging and mining are rampant, even in the areas of protected forests. Not only to fulfill domestic demands, illegally-fell logs are also smuggled out to the neighboring Sarawak and Sabah, Malaysia. While the *adat* (customary) law remains strong in the area, illegal forest destruction remains unchecked, especially since their efforts were not supported by law enforcement officials. The illegal encroachment exacerbates the long-standing conflict of land use for settlement, farming, and plantation purposes. Conflicts between local community and the incoming timber corporations have been a classic source of conflicts, claiming the same forest areas under their jurisdictions.

What is currently apparent since the reform era is the tug-of-war of power between the central and the local governments. While decentralization laws have been operational, there is a resentment on the side of the central government to let go of their authorities and hand them over to the district and provincial governments. But on the other hand, the local governments have seen National Parks and other Protected Areas as a burden – being non-productive forestlands – especially relative to converting them to loggings. Moreover, in the wake of decentralizing budget, local governments have been pressured to reap as much local incomes as possible, and logging – and other forest-destructive activities – legal or otherwise are actually more profitable to them.

The inconsistent regulatory implementation and enforcement, rampant illegal logging and other unauthorized land-use changes may reduce the attractiveness of any forest CDM investments in Indonesia. In fact, they can be seen as risks to forestry CDM investments.

Lessons Learnt from the Reform Era

The most recent trends show that the economic and political reforms have not been effective in reducing deforestation; if at all they may exacerbate it. Forestry sector was one of the sectors that need to be reformed as committed in the Letter of Intent between the Indonesian government and the International Monetary Fund (IMF) as part of the whole economic and financial reform in the country. The Consultative Group on Indonesian Forest, led by prominent forest professionals, was formed as a follow up to the pressure from Indonesian development donors, notably the World Bank and the IMF. Major institutional reforms occur in the

Ministry of Forestry, marked by the list of actions committed by the Minister of Forestry.

Still, forest destruction happens twice as fast today than it was prior to the 1997 reform. This fact shows that reforming the forestry sector in Indonesia is a very complicated action. Reforms that happen at the national and international levels, even after the involvement of the most committed government officials and forestry professionals, failed to address the underlying problems causing much of the deforestation. Local communities have been largely left out of the reform process. It is just possible that when the local communities are involved in the entire reform process the efforts can be more successful.

What Can the CDM Do?

This preliminary analysis shows that the underlying causes of forest destruction and degradation are largely tenurial problems, conflicting and ineffective regulatory measures, high demand for forest products, and bad governance and corruption. Money, apparently, is not as much a problem as it has been portrayed. What CDM can do best, however, is providing money – and money by itself will not be able to solve the underlying problems of forest destruction and degradation. CDM by itself will not be able to reduce forest destruction and degradation, not until the institutional reform fully takes place.



Pelangi is a non-profit, non-governmental research institution established in 1992, Jakarta, with programs on energy, forestry, transportation, air pollution, and climate change issues toward a sustainable development.