CHAPTER

# 14

# Targeting Deforestation Through Local Forest Governance in Indonesia and Vietnam

*Ngo, T.D.*, Mahdi*†

*Hue University of Agriculture and Forestry, Hue City, Vietnam †Andalas University, Padang, Indonesia

## 14.1 INTRODUCTION

Community-based forest management (CBFM) is recognized as an effective solution to find a balance between forest conservation and livelihood improvement in localities. Both Indonesia and Vietnam initiated CBFM during the 1990s due to similar contexts of rapid deforestation, high rate of poverty, and urgent demand for local participation in forest management. Given the difference in geographical, socioeconomic and sociopolitical settings, the progress of CBFM setting and operation in each country was different. In Indonesia, the government has adopted traditionally favored large-scale, capital-intensive industries that had monopolized the forest economy, resulting in serious ecological and economic problems. This management style has caused serious illegal logging and forest conversion activities that destroyed 70% of country forest areas during last 50 years (Rukmantara, 2006). In Vietnam, the government has managed forests through its state forest enterprises (SFEs) since the country's reunification in 1975. During the period 1943–1993, Vietnam lost about 5 million hectares of forests, which reduced forest cover from 43% to 27.8% (de Jong et al., 2006). Both countries have adopted centrally managed forest management systems where all decision-making power comes from the state. This system excludes local people from participating in the decision-making process, abandoning them from access to forest rights, and eliminating them from their forest-dependent livelihood practices. Consequently, it has caused serious impacts on ecological and economic issues at global, national, and local levels.

This chapter identifies some common elements that influenced local forest governance through CBFM and their implications to ensure the access for the poor to natural resources for improving their livelihoods and guaranteeing the sustainability of the forest ecosystem service.


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## 14.2 TRENDS OF DEFORESTATION AND FOREST DEGRADATION IN INDONESIA AND VIETNAM

Deforestation in Indonesia has attracted worldwide attention due to its high rate. The Food and Agriculture Organization of United Nations reported that the rate of the world's forest cover change during 1990–2000 was −0.22% and during 2000–2005 was −0.18% annually. During 1990–2000, the worlds' forest cover declined about 8,868,000 ha and during 2000–2005 it declined 7,317,000 ha annually. The highest rate of decline was found in Indonesia: −1.61% during 1990–2000 and −1.91% during 2000–2005 annually (FAO, 2006). The last report shows the deforestation rate in Indonesia is continuing to increase despite a high-level pledge to combat deforestation and a nationwide moratorium on new logging and plantation concessions (Murdiyarso et al., 2011). For the period of 2000–2012, Indonesia lost 6 million hectares of primary forest. This situation put Indonesia in the first row on deforestation rate, even higher than Brazil. Primary forest lost in Sumatra island contributed the most, 2.86 million hectares, following by Kalimantan, Sulawesi, and Papua for the same period. More than half of the deforestation occurred in lowland forests. Wetlands forest loss increased at a faster rate, accounting for 2.6 million hectares or 43% of loss overall within the same period (Margono et al., 2014). For the two decades, 1990–2010, Sumatra island alone lost 7.54 million hectares of primary forest (Margono et al., 2012). Beside deforestation, Indonesia is also facing the problem of forest degradation. Forest degradation does not represent a change in land use and the outcome is by definition still a forestland cover, but the forest is destroyed. Forest degradation has mainly occurred in state-owned forest. Sumatra island has degraded its primary forest by 2.31 million hectares (Margono et al., 2012). The Ministry of Forestry reported that for the period of 2000–2010 Indonesian primary forest was degraded by 50,000 ha a year.

Forest cover decline involves agents, both institutional and environmental, that influence agents themselves (Contreras-Hermosilla, 2000; Sunderlin et al., 2001). The agents could be an individual, government institution, estate firm, or others. The factors for deforestation and forest degradation have been widely reported. The main driver is demand for forest-related production in the international market and domestic infrastructure development (Angelsen and Kaimowitz, 1999; Kaimowitz and Angelsen, 1998). A study by Wheeler et al. (2013) pointed out that palm oil future prices, saw-log prices, global palm oil production, global saw-log production, exchange rate, and mobile phone coverage were the variables that significantly correlate with forest clearing in Indonesia. The draft national Reducing Emissions from Deforestation and Forest Degradation (REDD+) strategy indicates that the main causes of deforestation and forest degradation are weak spatial planning, problems with tenure, ineffective forest management, weak governance, and weak law enforcement (REDD-Monitor.org).

Poverty is the main reason for participation of rural households in illegal logging in the absence of secure and sustainable alternative livelihoods (Yonariza and Webb, 2007). Weak governance during social and political turmoil during 1997–2000 led to a high rate of forest degradation within protected and conservation forests. The breakdown of the "new order" Suharto regime and unclear responsibility among regions and government agencies in managing forest provided space for people to illegally take timber from the state owned forest (Mahdi et al., 2009).

In Vietnam, deforestation occurred seriously during the years 1943–1993. In this period, the core mandate of SFEs was to harvest timber for export to cover the national budget shortage after the war. Forest cover declined from 43% (14.3 million hectares of forests) to 27.8% (9.2 million hectares) over this 50-year period (de Jong et al., 2006; Meyfroidt and Lambin, 2008). By the 1980s, of Vietnam's 33 million hectares of total land area, 19 million hectares had been legally classified as state forestland. Publicly managed companies (SFEs) held over 4 million hectares, and conducted logging operations on 150,000 ha each year, rapidly exploiting them for commercial timber production (Poffenberger, 1998). Among the major causes of deforestation in this period were (1) timber logging, (2) resettlement of people from delta and coastal areas to the central highland for new economic zones, and (3) destruction by war and Agent Orange. To address deforestation, the government of Vietnam has launched huge plantation programs such as Program 327 (1992–1997) and Program 661 (1998–2010) with the objective of adding 5 million hectares of forests by the end of 2010. As a result, forest cover increased to 39.1% in 2009 and 41% in 2013 (MARD, 2014). The increase of forest cover was due to plantation forest (Sunderlin and Huynh, 2005; de Jong et al., 2006; Meyfroidt and Lambin, 2008) while the natural forest was still decreased and degraded. A study by de Jong et al. (2006) showed that poor-quality natural forests, with a forest stock of less than 80 $m^3$/ha, occupied up to 80% of the total forest area at that time.

In both countries, central planning and management in the forestry sector led to the high rate of deforestation and exacerbated poverty due to preventing local people from having access to forests through transmigration in Indonesia or resettlement programs in Vietnam. Enacting the Basic Forestry Law of 1967 in Indonesia resulted in deposing about 100 million people of their land rights, with rights formally transferred to the Forestry Department (USAID, 2012). Similarly, approximately 4 million people were resettled mostly into the Da River and, after 1975, the central highlands under the New Economic Development Zone policy of the 1960s and 1970s in Vietnam (Poffenberger, 1998). Specifically, both governments have relied too much on state forestry departments and enterprises in timber logging, management planning, and collaborating with private sectors to pursue economic benefits. Under the context of sustainable development set by Earth Summit Rio 1992, both countries had to revise their policies on forest management, which incorporated local participation to harmonize socioeconomic and environmental aspects in the country development. These contexts helped to facilitate the CBFM setting in both countries.

## 14.3 HISTORY AND CONCEPTS OF CBFM IN INDONESIA

In Indonesia, CBFM was first initiated during the 1990s. Following-up this initiative, in 2007 the government of Indonesia (GoI) issued regulations to allow individuals and communities to manage the forests near to where they were living. Currently, there are four types of CBFM as follows:

- Group or cooperative rights, under a regime known as Community Forestry (*Hutan Kemasyaratan*, *HKm*).
- Cooperative and individual rights in timber production, under a regime known as People's Timber Plantations (*Hutan Tanaman Rakyat*, *HTR*).

- The delegation of forest management rights to village administrations within the framework of Village Forests (*Hutan Desa*, *HD*).
- Company-community partnerships in which communities may gain access to forest resources based on an agreement with holders of business licenses or concessions (*Kemitraan*).

Among them, two major types of community forest tenure were community-based forests (*Hutan Kemasyarakatan-HKm*) and village forests (*Hutan Desa*). Community-based forests allow groups of farmers with 35-year contracts to manage selected production or protection forests and rights to harvest forest products. Village forests enable village-based institutions to obtain a 35-year lease to manage and protect state forestlands (USAID, 2012). Although Indonesia has many customary tenure systems operating at varying levels of functionality, the centralized government has strongly resisted efforts to implement legislation that would recognize customary ownership claims to forest resources. So far, the total area under either type of arrangement is very small. The contracting arrangements in particular are relatively cumbersome and successful contracts usually involve nongovernmental organizations (NGOs) or research organizations.

According to the CBFM plan for the period 2009–2014, about 2.5 million hectares of forests (out of 132 million hectares of forests or 1.9%) would be allocated to CBFM with 35-year renewable permits. However, according to the Partnership for Governance Reform (known locally as *Kemitraan*), only 326,000 ha (13% of the target) had been allocated for CBFM by the end of 2013. The main reason was due to the bureaucratic procedures that required permits to pass through 29 levels and took about 3 months to 3 years (Satriastanti, 2014). Weak coordination between the central and local governments was another obstacle that delayed the process of allocating community forest or village forest permits.

## 14.4 CBFM IN VIETNAM

In Vietnam, local communities have been in different positions in the forest management system during historical development of the country. Before the colonized period (1954), local communities actively participated in forest management led by the village patriarch council and maintained good forest cover via sustainable uses (Tran, 2004). This traditional forest management system proved its sustainability in terms of meeting local livelihood demand and maintaining ecological services (Sikor and Apel, 1998). After reunification of the country in 1975, the state nationalized forest tenure and prioritized timber production for national economic development (Poffenberger, 1998; Sam and Trung, 2001). During this period, local communities were excluded from forest management despite their long tradition of forest uses and conservation. Crisis in both economic development and environmental management has led to the *Doi moi* (renovation) in 1986 in which the government called for participation of multistakeholders in developing a market economy. In the forestry sector, local participation in forest management was officially encouraged in a forest allocation program expressed by a series of government forest policies (eg, Decree 01/1995/ND-CP, Decree 02/1994/ND-CP, and Decree 163/1999/ND-CP). The local communities, however, were only recognized as "legal" forest users until the issuance of the Land Law (2003), the Forest Protection and

Development Law (2004), and the Civil Law (2005). These laws, however, emphasized local communities' duties rather than the benefits they could gain from forest management; and local communities continued managing allocated forest with very limited rights compared with other stakeholders (Sikor and Tan, 2007; Clement and Amezaga, 2008).

Even though there were still some disputes on concepts and management structure of CBFM in Vietnam, most of experts and policy makers agreed that forest areas under CBFM in Vietnam could be classified in three different models (Nguyen et al., 2006).

### 14.4.1 Traditional Forests

Forest areas were claimed and managed by local communities for generations. These areas are often located in remote areas where local communities are ethnic people and traditional regulations are still strong in forest use and management. These forests play important roles in a community's living such as watershed protection, graveyards, NTFP-produced forest, and grazing land. Forests in this category are mainly located in northern Vietnam where the majority of ethnic people are living. In the Forest Development and Protection Law (2004), these forests are officially recognized and planned to allocate their traditional management to local communities.

### 14.4.2 Allocated Forests

Forest areas that were allocated to local communities by the government were based on legal documents such as Decree 02/1994/ND-CP, Decree 163/1999/ND-CP, Decree 181/2003/ND-CP, or by particular projects. Until 2004, there were 18 provinces that allocated forests to local communities as pilot programs (Nguyen et al., 2006). In the course of allocating land and forests to organizations, households, individuals, and based on real conditions, some local authorities (province and district) have allocated land and forests to the community for management and long-term forestry use. The community has become a forest manager. Also, in this group, there are forests that had been previously allocated to cooperatives, which no longer exist; they are being managed by local communities. Under this category, the Community Forest Management Pilot Program was implemented in the period of 2007–2009 in 40 communes nationwide, which try to establish a good model of CBFM in terms of allocation procedures, monitoring, benefit sharing, and long-term secure tenure for local communities. Forest areas under this category are managed well, although there are still shortcomings in allocation procedures and unclear benefit sharing mechanisms.

### 14.4.3 Contracted Forests

Contracted forests are forest areas that were contracted with local communities for protection, natural regeneration, and plantation. These forests belong to state forest enterprises and are subcontracted to local people for protection or plantation following Decree 01/1995/ND-CP, Decision 661/1998/QD-TTg, and Decree 181/2003/ND-CP. These forests were not owned by communities, but the communities were entitled to share benefits from the forests, depending on the time, labor, and funds such communities have invested in the course of

their management, protection, and development of the forests. This was a joint management model between local communities and state organizations. Because the amount of payment for protection was very low (about $3/ha/year), most of the forests in this category are not very well protected. As proposed in Forest Allocation Proposal 2007–2010 (signed by Minister of MARD on Sep. 20, 2007), forest under a contracted group will be allocated to local communities for long-term management.

In both countries, the government only provides "forest use rights" to local communities within a period of time (35 years in Indonesia and 50 years in Vietnam). From the discussion above, the community-based forest (HKm) in Indonesia is similar to the "allocated forest" in Vietnam, with harvesting rights in both production and protection forests. However, in Vietnam the harvesting rights were very limited, especially timber. The village forest (HD) is similar to the "contracted forest" in Vietnam, which provided limited rights over the forests through community management.

## 14.5 ASSESSMENT OF CBFM CAPACITY TOWARDS FOREST CONSERVATION AND LIVELIHOOD IMPROVEMENT

In overall assessment, we analyzed local forest governance structure based on several theories developed recently by researchers and practitioners. The first one was a Program on Forests (PROFOR) toolkit (Kishor and Rosenbaum, 2012) that explained that a good model of forest governance should include three major components: policy framework, planning and decision-making process, and implementation-enforcement-compliance. These components are analyzed by six principles: accountability, effectiveness, efficiency, fairness/equity, participation, and transparency. The added value of this toolkit is to generate a standard method of overall assessment on the sustainability of forest governance regardless of who is the operator (state, private, or communities). Using this toolkit can help to identify why some policies worked in this context but not in the other ones. In the long-term, results of assessment by this toolkit can contribute to the process of designing a rationale policy that could reduce the deforestation and increase local capacity in dealing with climate change impacts. The second one was a critical review of facilitating and enabling conditions for sustainable governance of resources (Agrawal, 2001). This review showed elements of a self-sustaining system of resource governance that can be grouped into four main categories: resource system characteristics, group characteristics, institutional arrangements, and external environment. Besides, relationships between resource system and group as well as resource system and institutional arrangements were also discussed. To come up with our approach, we selected five common and relevant elements that can be used to analyze the current situation of CBFM in both Indonesia and Vietnam. The five elements are secure forest tenure, sound business practices, committed government supports, engaged local participation, and integrated global initiatives.

### 14.5.1 Secure Forest Tenure for Local Communities and Households

By forest tenure, we mean all aspects of bundles of property rights (Schlager and Ostrom, 1992). Bundles of property rights expressed in five levels from less to most power: access, withdrawal, management, exclusion, and alienation. Clearly defined property rights was the

most important condition for a sustainable system of local forest governance. This helps to secure forest tenure and provide people with strong incentives for long-term planning, executing, and mobilizing resources to effectively manage their forests. Without land (forest) being secure, all activities and efforts would be temporary, and that may cause resources to be exhausted in a short time. However, the security of forestland tenure may have different influences on local behavior depending on forest status, conditional support from external forces, and local people's awareness about tenure.

In Vietnam, land belongs to the entire people and the government is the only representative owner (Land Law 2003). Therefore, there is no absolute "ownership" meaning when discussing forest tenure in Vietnam. In reality, the government allocates only "use rights" (usufructs) to local people for 50 years of use (forestland) or 30 years of use (agricultural land). In any case, with the user rights or long-term tenure, local people would tend to invest more resources and time on their forestland due to their long-term tenure over the allocated forestland areas. Ngo et al. (2014) compared the management of forests in relation to five levels of property rights in the Thua Thien Hue province of Vietnam, and reported that households that have individual rights in forest management tend to manage the forest more sustainably in comparison with groups and villages types of forest management. An individual household's forest management has the strongest power in terms of rights. It has access, withdrawal, management, and exclusion as well as alienation rights, while the members of both groups and villages forest management have weaker property rights, and tend to harvest short-term benefits from their respective plots of forest.

In Indonesia, forest tenure has a strong relationship with legalizing community property rights by state law. However, forest tenure security requires more, as it results from an interplay between state and/or community normative systems, actual practices, and actors' perceptions. As pointed out by Safitri (2010), the degree of forest tenure would be determined by three elements: the rights' robustness, proper duration, and strong legal protection. Unfortunately, Indonesian national legislation had not been able to achieve satisfactory results on those three elements. The bundles of rights in forest areas continued to be limited; communities were not allowed to hold any ownership rights in these areas. The legal basis of the Ministry of Forestry to physically control all land in forest areas is also unclear. In addition, legal protection of community rights was weak (Safitri, 2010).

### 14.5.2 Appropriate Business Practices

The concept of business practices was employed from community-based enterprises or community forest enterprises (CFEs). CFEs are businesses based on collective ownership or secured resource access that serve multiple functions and multiple goals (Antinori and Bray, 2005). More simply stated, Peredo and Chrisman (2006) define a community-based enterprise as a community engaging corporately as an entrepreneur and enterprise toward the collective good. The underlying theory of the approach is that by linking a viable community enterprise to the biodiversity or ecosystem of an area—and thereby generating sufficient livelihoods for community stakeholders—the stakeholders are enabled and motivated to counteract the threats to the resources (Salafsky et al., 2001). Our research used case studies from different projects operated in both countries to illustrate how business practices can motivate local villagers in protecting their forest. Also, the concept of "appropriate business practices" implied

long-term business strategy and nature-friendly measures that applied are by local people. A sound business practice based on the forest resource can be defined if it is compatible with livelihood strategy (Measham and Lumbasi, 2013) and the potential diversified products can be ensured for the long-term sustainability (Stoian and Roda, 2006). So the conversion of the forest to plant economic exotic tress (as *Acacia mangium*) was not a sound practice because it destroyed the provision of environmental service provided by natural forest. Hunting wildlife was a similar case of unsound business practice because it challenges the biodiversity value of the wildlife population.

In Vietnam, business practices were a set of activities that local people apply to generate incomes for short- and medium-term benefits while investing in long-term benefits derived from their resources. By the short and medium terms, we mean that local people could have income daily or monthly from their activities based on the forest resources. Examples are palm leave collection, rattan harvest, or wild fruit collection (*Scaphium macropodum*). The long-term benefit can be either timber or environmental services such as water resources or carbon sequestration. Other examples of business activities include nontimber forest product (NTFP) cultivation, ecotourism, wildlife hunting, or nursery garden. Other models of sound business practices in study areas such as rattan plantation, nursery garden of native tree species, beekeeping, bamboo plantation (Nam Dong district), and ecotourism (Phong My commune). Most of these business models were funded either through the state program (Decision 147/2007) or by nongovernmental funding through projects (eg, International Cocoa Organization (ICCO), Extension and Training Support Project (ETSP), PROFOR, Consultative and Research Center on Natural Resources Management (CORENARM)). Some villages didn't receive any support and they continued their NTFP harvest in protected areas (Pa Hy village in A Luoi district). In general, business practices were more common at groups and household levels than at the village level. The reason could be the nature of business activities that require some knowledge of finance management such as investment, cost and benefit management, and simple business model without linking to a large-scale market.

In Indonesia, business practices in CBFM were limited due to slow progress in allocating forest tenure to local communities. However, the potential for applying business practices—especially for timber plantation—in CBFM in Indonesia is very huge given the massive gap between timber supply and industrial processing capacity of the country. As discussed in Macqueen (2012), forest-owning families and communities could be key players in potentially tackling this issue in Indonesia. For example, in Java alone, between 1 and 1.5 million hectares of private woodlots managed by local farmers and communities already produce up to 8 million cubic meters of timber to industrial processing units—worth US$360 million a year in income to local farmers. Prospects for expanding this contribution are huge. There were other projects that supported business practices under the CBFM. During 2008–2010, the Ford Foundation supported the establishment of one of the country's first village forests in Sulawesi. With support from the project, villagers from three communities in Bantaeng district attained Village Forest Management Licenses in November 2010, securing tenure over local forestlands for 35 years. Those resources will be managed by local village enterprise bodies (referred to as Badan Usaha Milik Desa (BUMDes)) under Village Forest Management Regulations. On average, the sale of coffee grown in the village forest augments a family's income by 50%. Another case study was the CBFM-certified villages in Wonogiri district, Central Java. There were two villages, Sumberejo and Selopuro, which were entitled to

community-based forest certification under the Indonesian Ecolabelling Institute (LEI) system. Right after certification was granted in 2004, timber and wood materials produced in the village were sold at a 15% to 30% markup (Takahashi, 2008).

### 14.5.3 Engaged Local Participation in Decision Making of Forest Allocation and Management

The engagement process includes the early steps to the ending step of forest allocation and management. We explored how local people were consulted in the forest allocation process including forest types, areas, location, and in preparing 5-year local forest management plan. Local participation also included aspects of decision-making power on the rights (and duties) over the allocated forests and integration of traditional rules into new/state regulations in both formal and informal ways. It was also important to identify whether those rules/norms were working or nonworking in reality (Thomson and Freudenberger, 1997). The idea of bringing local participation into the framework was to emphasize how local people feel about their ownership over the decision-making process, which could further facilitate their ability to make future decisions in forest management.

In Vietnam, during the process of forest allocation, local people participated in different stages, and levels of participation varied. Local people participated in the following activities:

- Preparing application forms for receiving the forest (based on guidelines of the district forest protection unit).
- Taking a forest inventory to collect data with provincial technicians. In most cases, local villagers just help field work and showing boundary rather than attending in technical process.
- Building a 5-year forest management plan in some sections (majority was done by the district forest protection unit).
- Dividing into groups to conduct a forest patrol weekly or monthly.
- Attending some trainings on technical and management issues.

A general concern was the lack of a presurvey on people readiness in receiving forests for long-term management. Many villages entered the forest allocation without technical and management skills and even knowing little about their rights over the forest allocated. As a result, many villages could not manage their forests and returned the task to the local government after 2–5 years of receipt.

With support from international funding and through NGOs, forest allocation was carried out in a more participatory way and thus local people participated more actively. The results were a forest allocation map that clearly defined the forest in different zones of management (plantation, conservation, regeneration). This approach has greatly facilitated local people in managing the forest after the project ends. Local participation was more effective in group management due to their homogeneity and commitment rather than the villages. For example, local groups were encouraged to initiate their business activities. Then the project was funded for most feasible business activities and helped them to create a village fund for long-term management. These pilots were only available in international funding projects.

### 14.5.4 Committed Government Supports in Law Enforcement and Establishment of Local Institutions

This element came from the fact that local people were not yet fully aware about forest management practices and their capacity might not be strong enough in law enforcement. Based on our working experience, law enforcement was the most challenging part that local people often met after forest allocation. In theory, the government supports should lead to create "incentives" for local people to actively participate in resource management, protection, and utilization. The questions for exploring were then what kinds of incentives that the government could provide to local communities for sustainable resource management. We also focused on types of government supports such as a particular program (eg, buffer-zone development in VN) or a policy (eg, subsidies for planting native tree species) to analyze for an incentive structure for local forest management.

The government supported in-forest allocation through land-use planning, forest management planning, and forest inventory. These components were essential during and after the forest allocation process. Besides, other supports came from integrated programs such as buffer-zone development (agriculture and forestry sectors), sustainable forest development and conservation (funded by the World Bank), or projects on protected area conservation (Carbon and Biodiversity (CarBi) project).

During the period 2000–2007, about 5300 ha of forests were allocated without inventory data (Program 430). This caused a lack of clarity in the benefit sharing mechanism because there was no baseline data to prove forest increment in the future. Program 430 has addressed these shortcomings during the period of 2010–2014.

In most of the forest allocation supported from state budgets, there were no supports for income generation activities after allocation. This created a big challenge for local people who had no benefits from protecting degraded forests without any payment or compensation. It was a fact that many villages were reluctant to continue protecting forests and returned allocated areas back to the local government. In recent years, the government tried to incorporate Payment for Environmental Services (PES) into community forest management. However, very limited amounts of forest areas were located within the watershed, which was a condition for receiving payment from the PES fund.

A more critical issue was that most of the local forest owners (villages, groups, or households) were not strongly supported by local government in terms of law enforcement. In a workshop on local forest management in the postallocation period, several farmers reported that they didn't receive any local government's support in preventing illegal encroachment that happened in their allocated forests. Together with low or zero payment for forest protection, this action could create a disincentive for local people to continue to protect their own forest. In a worse situation, local people could let their forest be destructed to start planting other commercial crops such as rubber or *Acacia* spp.

Indonesia forest governance and policy are ambiguous between forest protection as well as conservation and forest resources extraction. On the one hand most policy was taken mostly for economic development purposes. Good sound policy on paper is not in line with implementation on the ground level. Wood and forest-related products is the source of state revenue until the present (Wardojo and Masripatin, 2002). This policy encouraged entrepreneurs and government agencies to exploit forest and their resources. Investors,

both domestic and international, were invited to develop forest product industries. For this purpose, some forest concessions were issued and given to some enterprises both private and state-owned enterprises. In addition, agricultural development has also been done extensively. Plantation estates were opened in Sumatra, Kalimantan, Sulawesi, and other islands. This was also attracted by handsome demands from both domestic and international sources. Economic development encouraged the exploitation of natural resources. Forest resources were one of the important sources of income. It was in third position after oil and mineral and garments and textiles product. GoI received Rp. 2.8 trillion in revenue from the forestry sector and increased this to Rp. 4.2 trillion in 2013 (Ministry of Finance, 2014). Furthermore, economic development policy encourages business communities to expand agricultural land, especially for oil palm plantation. There are recorded 423 forest concessions operating in Indonesia that cover more than 13 million hectares of forest (APHI, 2014). Oil palm plantation grown by 4.14% annually for 2012–2014 (Directorate General of Estate, 2015). Peatland fire has still happened regularly for the last 5 years due to land clearing for plantation.

On the other hand, GoI also has adopted natural forest protection principles. Fighting between these two groups of interest results in a lack of policy implementation at the ground level (Mahdi et al., 2014). GoI adopted the natural forest protection principles in 1990 by enacting Law No. 5 in 1990, Conservation of Living Resources, and their Ecosystems Act. The management of natural resources conservation in a terrestrial area is grouped into six different types: strict natural reserve (*cagar alam*), wildlife sanctuary (*suaka margasatwa*), nature recreational park (*taman wisata alam*), game hunting park (*taman buru*), national park (*taman nasional*), and grand forest park (*taman hutan raya*). In addition, Indonesia ratified the United Nations Convention on Biodiversity in 1994. This convention supports Law No. 5 in 1990. Based on this law, Indonesia has 368 units of conservation in a terrestrial area that covered more than 17 million hectares of forestland throughout the country by the end of the 1990s. In addition, Indonesia has also introduced forest rehabilitation policies since 1967. Some policies and programs were launched to rehabilitate destructed forest by forest planting. Total forest plantation in Indonesia from 1997 to 2004 was 645,376.6 ha (MoF, 2005). However, forest cover declining over the same period is much higher that forest plantation, almost 14 million hectares, that mentions clearly that the forest policies at that time was ambiguous.

Some scholars argued the factors for this ambiguous policy. Structural problems and conflicts of interest between government agencies (Siscawati, 1999), and lack of law enforcement and corruption (Barr et al., 2010; Smith et al., 2003) also lead to lack of policy implementation.

Political change at the end of 1990s forced GoI to introduce new Forestry Law No. 41/1999. Article 66 of the law stipulates that forest management should be transferred to the local government. It means that the law encourages the adoption of a decentralized management model. The Ministry of Forestry has no direct line to local government for forest service. Instead, the forest service of the district government is likely more independent in decision making. Furthermore, the new law provides a greater chance for the participation of all stakeholders. The district government was given the authority to manage the forest within its territory, while the provincial government was given the authority over transdistrict boundaries. The central government was relegated to the role of national planning and providing guidance for forest management (Mahdi et al., 2013).

There are structural problems related to the governance of forests. By implementation of Law 1967, there were conflicts between government agencies and local communities over forest management. Some local communities, de facto, only acknowledge local customary rule in forest management instead of national law. The conflict produced forest destruction due to lack of local communities participation. In addition, conflict between government agencies arose on the issue of forest conversion to other purposes versus protection as natural forest. In the context of economic development, the agriculture sector is supposed to expand agricultural land to generate income in an effort to improve people's living standard.

Lack of law enforcement in forest management is acknowledged by the Ministry of Forestry in its report document to stakeholders in 2003 (MoF, 2003). Some problems emerge due to it. Illegal logging is the main issue that destroyed the Indonesian forest. The total loss because of this problem was estimated at about US$3.38 billion a year. The illegal practice was exacerbated by a high level of corruption practiced during the new order era. Presently, corruption in forest management is still rampant.

GoI issued a permit moratorium in 2011 to slow down deforestation. However, the policy was not effectively implemented at the ground level mainly due to unresolved conflict of interest among stakeholders. Although the central government banned license issuance within certain state-owned forest areas, the deforestation within the area is continuing. The forest was converted to be palm oil plantation both by private companies and by local communities (Mahdi et al., 2014).

### 14.5.5 Integrated Global Initiatives in CBFM Planning and Management

The integrated global initiative in CBFM planning and management might help to reduce transaction costs as well as increase financial sustainability of local forest management. Such initiatives include PES or REDD+, which help to create sustainable financing mechanisms for local forest management. The recent involvement of Vietnam into the Forest Law Enforcement, Governance, and Trade (FLEGT) process was also discussed in the context of global initiatives that contribute to large-scale forest management in Vietnam.

Recently, there were some global initiatives that help contribute to sustainable local forest management. The contribution could be technical aspects (ie, forest inventory, silvicultural practices), strengthen local participation (eg, Free, Prior, and Informed Consent (FPIC) rule), or a better benefit sharing mechanism (eg, PES). The following programs are active in Vietnam and have strong impacts on the local forest management.

REDD+ required many conditions from developing countries to participate in a "payment mechanism" such as Monitoring, Reporting and Verification (MRV) and FPIC that call for strong participation from local people. Payment from carbon credit did not happen, but the process of setting conditions for that payment is being set up through two phases of the REDD+ program and one project of the Forest Carbon Partnership Facility (FCPF).

The PES program started in 2010 and strongly redistributed benefits to local forest owners. However, a condition for this payment was the forest areas must be located within a watershed where environmental services were produced. Therefore, not all allocated forest areas could benefit from this program. In addition, the amount of payment depended largely on the total budget regenerated from that watershed. Some areas received very low payment (estimated at 8–10 USD/ha/year).

FLEGT is another initiative that was being negotiated in 2015. This initiative, together with a voluntary partnership agreement (VPA) could potentially have negative impacts on forest-dependent communities who do not have land tenure over forest resources. However, the preparation process for FLEGT/VPA could accelerate the provision of land tenure during forest allocation.

Because of an ambiguous policy between forest protection and extraction, Indonesian commitments on emission reduction, which were submitted in the Cancun Agreements in 2010 (COP16), is questioned (Mahdi et al., 2014). Recent political changes at the national level have diminished REDD+ Agency, which was established in respond to LoI with the Norway Government. REDD+ scheme implementation in Indonesia is now becoming uncertain.

The policy in the near future is likely to focus more on economic development and resources extraction. Although the frequency of peatland forest fires was reduced in the last year, agricultural land expansion and issuance of forest concessions are still continuing. Indonesia still needs agricultural land expansion for food production to meet food demand from a growing population and high prices of palm oil in the international market (Greenpeace Southeast Asia—Indonesia, 2012). The situation is becoming worse as opportunity cost to comply with the pledges on REDD+ is much higher than for BAU. Irawan et al. (2013) reported that the opportunity cost of an oil palm plantation on mineral soil is much higher than compensation from the REDD+ scheme, except for oil palm plantation on peatland. The business lobby has not tried to get a concession license and even bribed the officials (Dermawan et al., 2011).

## 14.6 CONCLUSION

Allocation of forest should facilitate both access to and control over the forest with full rights and suitable local knowledge. There is a need to have better benefit sharing policies on local forest management, especially during the first several years after forest allocation.

Livelihood should be an important part that integrated with forest allocation. Beside forest protection, local people need to have sufficient land for agroforestry production so that they do not clear forest for agriculture cultivation. Supporting off-farm jobs showed potential benefits to local people as case studies on local weaving and bee keeping recorded.

The local governments (province, district, and commune) must strongly commit to support local forest management, at least in terms of law enforcement. Besides, local people expressed their request in other types of hands-on training on forest management, conflict resolution, and conservation of traditional practices. To reduce conflicts among local forest users, it is important to create a dialogue where local communities, district forest rangers, and district/commune authorities can sit together to discuss "supporting local communities on legal aspects of protecting forest." This issue is really important when local people start to earn benefits from their efforts to protect and develop forest resources. Otherwise, they will lose their interests in village forest protection and management and the forest will become "open access," which is subject to deforestation quickly.

With the new funding scheme from PES, those forest areas in watershed and subject to PES need to be allocated to villages that have set up a village fund for development. The village fund can receive future payment from carbon trading (REDD+) and thus contribute to sustainable forest management.

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