




Working Paper 3 - Forestry
Sudarsono Soedomo

Karya Ilmiah ini telah didokumentasikan
di Departemen Manajemen Hutan
Fakultas Kehutanan IPB,
Ketua Departemen MNH

Dr. Ir. Diank Suharjito, MS.
NIP. 132 104 680

✓

Enquiries should be addressed to:

Sударsono Soedomo
Department of Forest Management
School of Forstry
Bogor Agricultural University
BOGOR - INDONESIA
(0251) 421-355
Srikoyo0@yahoo.com

Heinz Schandl
CSIRO Sustainable Ecosystems
GPO Box 284
Canberra
ACT 2601 AUSTRALIA
(612) 6242 1673
Heinz.Schandl@csiro.au

Brian Roberts
CSIRO Sustainable Ecosystems
GPO Box 284
Canberra
ACT 2601 AUSTRALIA
(612) 6246 1586
Brian.H.Roberts@csiro.au

Copyright and Disclaimer

©2008 CSIRO To the extent permitted by law, all rights are reserved and no part of this publication covered by copyright may be reproduced or copied in any form or by any means except with the written permission of CSIRO.

1 INTRODUCTION

Indonesia in general and Nanggroe Aceh Darussalam (NAD) in particular still have large areas of undisturbed tropical rainforest which are under pressure because of population growth, settlement and cultivation activities and commercial logging. Indonesia has 104,893,300 hectares of forest area, while NAD has 3,318,400 hectares.¹ Around 54.2% of production forest area in Sumatra is no longer covered by forest, while only 33.7% of Aceh's production forest area is not covered by forest.² This shows that land use change in Aceh is happening more slowly than that in Sumatra.

In an earlier period the state of Indonesia carried out extensive cadastral surveys or created land titles over extensive areas in the remote 'outer islands' of Indonesia. In these areas the Indonesian state has embarked on a strategy to control natural resources by designating certain areas as 'forests' irrespective of existing agrarian uses or the variety of plant life found there. This has involved setting geographic boundaries, in an attempt to control the activities of people including their access to natural resources within these boundary areas. During the 1980s, government agencies embarked on a mapping exercise that created the so-called Consensus Forest Land Use Plan (Tata Guna Hutan Kesepakatan, or TGHK), what might be called a "forestry map." This mapping exercise divided the geography of the outer islands, including Aceh, in accordance with the categories established in the Forestry Law (UU II/1967), designating areas for conservation, production, limited production, protection forest, and nature reserves, or leaving them as unclassified areas. Thereby, the authorities marked on paper at least the acceptable boundaries within which local village areas and cultivation areas would legitimately exist. This mapping exercise was later revised by the Regional Physical Planning Program for Transmigration (RePPPProt). In 1999, a new law (UU 41/1999) replaced the earlier Forestry Law and made some allowance for adat rights in forest areas, also introducing the concept of a state forest zone (Kawasan Hutan Negara).

Inside the boundaries of the large state "forest zone" (kawasan hutan) the forestry department allocates the use of forest under direct or indirect state control. Whereas the forestry agency maintained direct control in protection forests and nature reserves they granted long-term leases (Hak Pengusaha Hutan, or HPH) to timber concessionaires, who log under forestry department supervision. Later, in another official mapping process carried out in accordance with the Spatial Planning Law (UU 24/1992) land area was divided into "cultivation" and

¹Thomas Waggener. 2004. Strategies for the Development of Sustainable Wood-Based Industries in Indonesia. Ministry of Forestry of Indonesia and ITTO.

²On going study by Ministry of Forestry of Indonesia (not yet published).

"non-cultivation" areas.³ In this process, the earlier territorial categories that had resulted in huge areas for production and conversion under the TGHK Forest Maps were revised. This led to the establishment of regional spatial plans (Rencana Umum Tata Ruang Daerah, or RUTRD) in provincial government offices, producing maps in which territorial classifications in many areas contradicted the Forest Map. However, "community spatial plans" and "Community Maps" have rarely been produced and they have only occurred in areas where NGOs, through community consultation processes, have carried out such a mapping.

In many cases in Indonesia, the state carried out its mapping exercises without the locally evolved and long-practiced "Community Spatial Plans". As a result, communities did not always accept the formal status of a state-designated "forest" because adat property rights (known in legal language as hak ulayat) are still operative in many areas. This can have two consequences: There might be conflict with local communities in cases where land management authorities implement their spatial plans, possibly expressed in the form of passive resistance and clandestine theft. Where the state does not implement the plans (or implements them unevenly) local communities will be able to continue their land management practices according to local understandings.

While it would be preferable if local and governmental institutional arrangements would be harmonized, in reality, we find complex configurations of overlap of state and local regimes in localized ways. Therefore, in areas mapped as "state forest", we may find: logging by a concessionaire operating within the official permission of the Forestry Department; rapid conversion into plantation agriculture by corporate interests with a lease over an area; conversion for government-sponsored transmigration programs; retention of forest within the boundaries of a protected area; village gardens for food and tree crop production perhaps combined with swidden agriculture; retention of forest within village territory; and 'uncontrolled' logging by 'illegal' logging networks.

Since the 1980s, there has been increased international attention on the important socio-ecological functions performed by rain forests, and on their protection. Beside the biodiversity the forest hosts it has numerous other functions. These include hydrological functions such as protecting the forest from floods, erosion and landslides and provision of water for industrial, agricultural and domestic use, as well as carbon sequestration and provision of resources for ecotourism and timber and non-timber products. If forests are to continue to

³Non-cultivation areas should primarily have the function of environmental preservation while cultivation areas where designated for productive purposes and were divided between cultivation, forest production and transmigration functions (Act No. 24/1992 1).

provide these goods, institutional arrangements have to be put in place to enforce restraint on resource users who might otherwise deplete local resources. At the same time, these institutional arrangements have to allow for reasonable access to forest resources in order to secure and improve livelihoods for local people and communities. Resource depletion problems in developing countries are often a consequence of institutional problems. Hence, a wise institutional arrangement will support the sustainable use of forest resources.

According to the decree of the Indonesian Department of Forestry (170/Kpts-II/2000) dated 29 June 2000, forest areas in NAD Province covered 3,335,713 hectares, constituting 60.2% of the territory of the NAD Province. The total forest area includes conservation forests, protection forests, and production forests. There has been considerable effort by the NAD authorities to define stable forest boundaries which have by today achieved the enclosure 70% of NAD's forest areas by defining about 3,520 kilometers of outer boundaries. Boundaries between forest functions have not been determined. The definition of stable forest boundaries is important to avoid legal uncertainties in forest resource management and resulting land use conflicts.

According to data provided by Baplan (Badan Planologi Kehutanan) for the year 2002, there were 2,125,300 hectares or 37% of NAD's land, inside and outside forest areas that needed to be rehabilitated.⁴ Except for Papua, figures from all other provinces in Indonesia show a worse situation. In a way, the prolonged military conflict had halted the commercial utilization of forests by big companies. When the military conflict was resolved in 2005, the underlying problems causing failures in sustainable forest management prevailed. If those underlying problems of failures in sustainable forest management are not solved, another case of failure of forest resource management in Indonesia is just a matter of time. The objective of this paper is to construct policy recommendations based on the key issues identified through discussions with stakeholders and literature review.

To achieve this objective, the paper is organized into four sections. Section 1 identifies key issues that need to be addressed to improve natural resource management in forests. Some issues are underlying problems themselves and some other issues are problems resulting from underlying problems that become public concerns. Section 2 presents lessons learned in relation to the key issues and section 3 outlines policy recommendations. Finally, needs for research and technical assistance to support and accelerate sustainable forest resource management in the NAD Province are outlined in Section 4.

⁴<http://www.dephut.go.id/INFORMASI/INFPROP/>

2 KEY ISSUES

2.1 Governance

Laws and regulations determine the quality of forest governance. Synchronized laws and regulations are required to create good forestry governance. Unfortunately, many laws and regulations conflict with each other. Several laws and regulations described below will demonstrate the confusion that currently exists in Indonesian forest management.

2.1.1 Conservation Areas

1. Decree of Forestry Minister No. 276/Kpts-VI/1997
The National Park of Leuser was mentioned for the first time by the Minister of Agriculture in 1980, covering an area of 792,675 hectares. Subsequently, the Ministry of Forestry determined and established the area of Leuser National Park by issuing a ministerial decree 276/Kpts-VI/1997 increasing the area of the National Park to 1,094,692 hectares.
2. Presidential Decree 33/1998 regarding Management of Leuser Ecosystem Area
 - (a) The ecosystem covers an area of 1,790,000 hectares, situated in a territory bordered by coordinate points as depicted on the map attached to the presidential decree (Article 1 section 2).
 - (b) Area division consists of Sanctuary Areas or Nature Reserve Areas according to the existing rules and regulations (Article 1 section 3).
 - (c) For management execution, International Leuser Foundation may create an Executive Body to run tourism, business, recreation, and hunting activities, as a support to conservation endeavors and development of the Leuser Ecosystem Area (Article 8 section 1).
3. Law 11/2006 regarding Aceh Governance, Article 150
 - (a) Section 1: "The government assigns the NAD Government to conduct the management of Leuser ecosystem area in Aceh region in the form of protection, security, preservation, function rehabilitation of the area and utilization in a sustainable manner."
 - (b) Section 4: "For execution as referred to in section (1), the government is obliged to provide the budget, facilities, and infrastructure for that."

On the basis of Article 150 UU 11 / 2006 the Government of NAD established a management body for the Leuser Ecosystem Area (BP-KEL) through Governor regulation. It is inevitable that BP-KEL is a competitor, rather than counterpart, for UPT⁵ of National Park of Leuser which has been formed by the central government. The mandate passed to BP-KEL overlaps with the mandate given to UPT of National Park Leuser, at least for some of the area of the Leuser Ecosystem. Another important player for managing the Leuser National Park and its resources is the Conservation Office of Natural Resources of Leuser (Balai Konservasi Sumber Daya Alam (BKSDA) Leuser). Each player has its own interests and there are frequently in conflict with one another.

4. Instruction of Aceh Governor No 05/INSTR/2007 regarding Logging Moratorium (Temporary Suspension of Forest Harvesting in NAD)
 - (a) First dictum: "To put into effect a Logging Moratorium (Temporary suspension of all forest harvestings) in natural forests and mainly natural forests which are in forest areas starting on Wednesday, June 6 of 2007 in entire NAD's territory."
 - (b) Third dictum: "Trees harvested from concession areas of HTI, from land clearing of plantation estate, and from transmigration preparation located outside forest areas, will be subsequently arranged after a comprehensive review and evaluation."
 - (c) This regulation also applies to holders of harvesting concessions (HPH, HTI), other business and activities that have implications for forest cutting;
 - (d) Thirteenth dictum: Head of Management Body of Leuser Ecosystem Area takes the following steps:
 - i. To conduct supervision, control, and safekeeping of Leuser Ecosystem Area from activities of illegal logging, land occupation, and forest encroachment;
 - ii. To conduct coordination with security officers to overcome violations to borders of forest area and conservation area in his or her working areas;
 - iii. To make a review for optimizing area size and use of various conservation areas;
 - iv. To completely solve various conflicts of interest, wildlife issues in the conservation area of Leuser Ecosystem Area.

⁵UPT (Unit Pelaksana Teknis) is Technical Implementation Unit.

This Governor's instruction creates additional tension between the central government and the provincial government of NAD and certainly furthers uncertainties in managing forest resources. Such legislative conflicts and overlapping formal arrangements should be solved in order to provide a clear and understandable institutional framework for managing forest resources in the NAD.

Fortunately, in the construction of the Provincial Spatial Plan (Rencana Tata Ruang Propinsi, or RTRP) the entire protection areas that were defined in the National Spatial Plan (Perencanaan Tata Ruang Wilayah Nasional, or RTRWN) and Regional Spatial Plan (Rencana Tata Ruang Wilayah, or RTRW) and the Sumatra Island Spatial (Pulau Sumatera) were maintained.⁶ This reflects the importance of harmonizing spatial plans operating at different scales (from national to local) in order to create a secure framework for people's actions.

2.1.2 Production Areas

The instructions of the Governor of Aceh No.05/Instr/2007, especially the first dictum, generate problems of governance. The dictum says that a Logging Moratorium (temporary halting of forest harvesting) in any natural forest and mainly in forest areas started on June 6, 2007. The instruction, therefore, overwrites licenses which have been issued by the central government. However forest harvesting in production forest areas still happens without any control by government officials. Meanwhile, the governor's instruction does not express clearly what follow-up must be done during the moratorium. This situation generates uncertainties over the future of forest resources and also raises a question of governmental credibility. This kind of situation is very dangerous for the forest and also for the people involved.

2.1.3 Conclusion

The divisions of authority and responsibility for forest resource management under the current legislative frameworks are not clear. The process of increased provincial autonomy has altered the relations between central and regional government. Autonomy that is focused on Regency/Town results in changes in governmental relation patterns between Central-Province-District/Town, and because the relationships are not addressed adequately in law and regulation, there is room for interpretation of the regulations and their implementation. As a

⁶Rencana Tata Ruang Wilayah Provinsi Nanggroe Aceh Darussalam (2006).

result, forest conditions tend to be largely ignored because there is no agreement yet between Central Government and Local Government on natural resource management objectives. For example, Forestry Law 41/1999 emphasizes ideal forest management aspects, whereas the authority aspects of forest management are not accommodated clearly. Law 32/2004 regarding Local Government, which is a revision of Law 22/1999, despite having affirmed the relation between Central Government and Local Government regarding authority, responsibility, utilization, maintenance, control, revenue sharing, environmental and spatial harmonization, still needs further rules and regulations, especially regarding forest resource management.⁷

2.2 Inefficiency in Timber Utilization

Forest utilization experiences show that timber utilization in Indonesia is not socially efficient, and Aceh is no exception. Production forest management so far has truly been controlled fully by the central government; including licensing, planning, determination of revenue collection, and division of revenue. While the revenues flow elsewhere, the negative impacts that emerge are carried by the region and its communities. Coastal areas of the eastern NAD Province incur floods more frequently in the rainy season. The increased flood frequency and intensity is mainly caused by the degradation and eradication of forests in the watersheds. Therefore, many forest areas in NAD Province need to be rehabilitated in order to provide their ecosystem and social functions. Satellite imagery shows that around 227,888.5 hectares of production forest area, 165,838.2 hectares of protection forest area, and 50,416.1 hectares of conservation area are in critical condition.⁸

Since the 1970s, forests have been exploited allowing for considerable economic growth through log exports and also forestry based industries. The main approach in forest management has been to award rights of forest utilization (HPH) to certain groups of people in an often opaque manner without involving the local community, customary community, or local government. In such a situation, social control does not work, corruption is rampant, and perpetrators tend to pursue the short term advantage as much as possible. In the years to come, forest management systems will need to be socially, economically and environmentally sustainable concurrently.⁹ This can be achieved by synchronizing

⁷Pemda Propinsi NAD. 2007. "Agenda Pengembangan Ekonomi Propinsi NAD." Initial Edition. Proyek Kerjasama antara Pemerintah Provinsi NAD dan Republik Federal Jerman (dilaksanakan oleh GTZ).

⁸On going study by Ministry of Forestry of Indonesia (not yet published).

⁹Pemda Propinsi NAD. 2007. "Agenda Pengembangan Ekonomi Propinsi NAD." Initial Edition.

laws and regulations, maintaining stable policies, and establishing well defined property rights.

As has been the case in Indonesia in general, contract arrangements of HPH in Aceh do not promote efficient forest utilization. One company has been able to obtain a huge quota of HPH that is frequently larger than that the amount that could be managed efficiently by the company. This is a direct result of comparably cheap license fees, the collection system of PSDH and DR which is based on the amount of timber harvested,¹⁰ and weak law enforcement in combating violations that occur.¹¹ As a result, wood theft does not mean a real loss for HPH licensed companies because the stolen timber at this stage is not in the company's possession. Because the benefit of forest utilization for local communities is inadequate, local communities suffer because of the activities of HPH companies; hence local communities' concern about illegal logging has been marginal. Forests resource are a source of income for local communities. HPH companies often prohibit local people to enter forests licensed to them. The need for job opportunities for making a living motivates local communities and households to become involved in illegal logging.¹²

Illegal logging is encouraged by weak inspection and monitoring and the complex and cumbersome set of regulations which govern forest exploitation. This illegal practice begins at the stage when permits are issued and licenses to harvest timber are given and runs through all stages of forest management including insufficient inspection. The absence of effective inspection, especially, encourages the violation of existing laws and the breach of existing regulations.¹³

Makinudin and Effendi (2001) cited by Walhi (2007) in 'Conflict in the Forestry Sector' gave an example from South Aceh, which had an average economic growth of 6.2% in 2000 (50% of which was contributed by the forestry sector), while the growth of the green economy was 3.6% at most. The reason behind these figures is that almost 50% of conventional economic growth in South Aceh

Proyek Kerjasama antara Pemerintah Provinsi NAD dan Republik Federal Jerman (dilaksanakan oleh GTZ).

¹⁰According to PP 35/2002, DR must be collected on the basis of Laporan Hasil Cruising (LHP, report on cruising result), but in reality DR is collected based on Laporan Hasil Penebangan (LHP, report on harvesting result).

¹¹Contreas-Hermosilla, Arnaldo and Chip Fay. 2005. "Strengthening Forest Management in Indonesia through Land Tenure Reform: Issues and Framework for Action." Forest Trends and World Agroforestry Centre.

¹²Yonariza and Edward L. Webb. 2007. "Rural household participation in illegal timber felling in a protected area of West Sumatra, Indonesia."

¹³Wardoyo, Wahyudi, Suhariyanto, Boen M. Purnama. 2001. "LAW ENFORCEMENT AND FOREST PROTECTION IN INDONESIA: A Retrospect And Prospect." Paper presented on the East Asia Ministerial Conference on Forest Law Enforcement and Governance, Bali, Indonesia, September 11-13, 2001

had caused serious depreciation of forest resources. Flooding and landslides hit the region's economy ever more frequently. Of course, it is the community around the forests who suffer these impacts, combined with crop failures in the downstream agricultural sector.¹⁴ An impressive economic figure should have environmental costs, incurred mainly by local communities, subtracted in order to get more accurate figure.

2.3 Data and Information Availability

Adequate data and information needed for managing forest resources rationally and efficiently have not been available. The available information lacks both validity and reliability. Lack of accurate data affects forest management planning and forestry policy making.¹⁵ Different government institutions often publish differing data on the same subject. This situation is confusing, even for government planners themselves. In some cases, government institutions have to ask for data from sources outside government, such as NGOs working in a particular field.

Meanwhile, budget absorptions by UPT's¹⁶ under the Department of Forestry are generally low, without exception for UPT working in the NAD Province.¹⁷ The Ministry of Forestry is conducting a study to answer why budget absorptions have been so low, which factors were responsible, and how to improve the situation. Data and information on conservation areas, in particular, are insufficient and coordinated activities for collecting data and information are lacking.

2.4 Tenure Rights

Well defined property rights are potentially a strong economic incentive for sustainable resource management. However, local resource management institutions such as customary laws (adat) practiced by local people, have frequently been replaced by state regulations often poorly understood or not accepted by local people.

Current tenure conflicts are a consequence of the "nationalization" of forests. Appropriation of people's land, which is then claimed as State land, has multiple impacts that ultimately force people to fight back. Aceh has been one of the most

¹⁴http://www.eng.walhi.or.id/kampanye/hutan/shk/070627_conflict_forestry_cu/

¹⁵Indriatmoko, Yayan, Hasantoha Adnan, Heru Komarudin, Yulia Siagian. 2006. "Tsunami, conflicts, and forestry in Aceh: A brief review." World Agroforestry Centre.

¹⁶UPT is Unit Pelaksana Teknis (Technical Implementation Unit)

¹⁷Consultation with Head of Planning Bureau - Ministry of Forestry, November 27 of 2007. UPT is unit pelaksana teknis (Technical Implementation Unit).

obvious examples of such conflicts in Indonesia. The rebellion in Aceh during the last two decades has partly been based on the injustices of natural resource exploitation. However, this is usually seen merely as an issue of conflicting factions in the political arena.¹⁸

For many years, an unjust forest management system has benefited large companies and deprived forest-dependent people of their rights to forest resources. Logging outside the permitted areas, illegal logging, unilateral designation of protected forests and national parks, HTIs and oil palm plantations overlapping indigenous people's land are some of the violations and injustices that have resulted in prolonged conflicts over resources, which have grown to larger and violent horizontal conflicts throughout the province.¹⁹

Some other dimensions of land rights include competition between religious law and customary law in land rights, as has taken place for centuries in Indonesia, most recently in West Sumatra, in Aceh, and the North Moluccas where there is competition in land rights between Islamic law and customary law; and the fact that most land is owned by men, not by women. This puts women in a very disadvantaged position although they are the people who are working on the land.²⁰ Controversies arising from the contradiction between customary and state laws have been reported more frequently since a decision of the People's Consultative Assembly no. IX/2001 on the Agrarian Reform Law, not only from outside Java provinces but also from Java.²¹

Greater land tenure security has positive economic implications as it reduces uncertainty and generates incentives to invest to improve forest resources management by increasing the likelihood that rural populations will be able to enjoy the fruits of their money, labor and time.²² Tenure security is thus a key strategic element in alleviating rural poverty.²³

A great majority of the economic activities of forest-dependent communities in Indonesia are illegal in terms of forestry laws, wildlife laws and protected area

¹⁸http://www.eng.walhi.or.id/kampanye/hutan/shk/070627_conflict_forestry_cu/

¹⁹Document prepared by Telapak titled "Aid Trace in the Forests: Reviewing EC Development Aid Scheme in Forest Sector in Indonesia (Case Study South Central Kalimantan Production Forest Project)"

²⁰ADB. 2002. "Indigenous Peoples/Ethnic Minorities and Poverty Reduction." Proceedings of A Regional Workshop. Manila, Philippines

²¹Tjondronegoro, S.M.P. 2003. "Land Policies in Indonesia." Working Paper 37435. Rural Development and Natural Resources East Asia & Pacific Region.

²²Contreas-Hermosilla, Arnaldo and Chip Fay. 2005. "Strengthening Forest Management in Indonesia through Land Tenure Reform: Issues and Framework for Action." Forest Trends and World Agroforestry Centre.

²³Deininger, K. 2003. "Land Policies for Growth and Poverty Reduction: Key Issues and Challenges Ahead." The World Bank, Washington, D.C.

laws. Despite the fact that land tenure laws are notionally recognized as customary rights regarding the use of land (they are seen as usufructuary rights), these rights are not given effective recognition in practice. Indeed, according to existing forestry laws, the very presence of communities in the forest is often deemed illegal. At the same time, forestry laws in Indonesia have been applied to favor the interests of large-scale forestry operations. This has led to serious problems for the communities who also make use of and often claim rights in the same forests. Studies of community development in concession areas note that logging has polluted water supplies and reduced the land base of communities, leaving them insufficient land for their own subsistence.²⁴

The Government does actually acknowledge the existence of communities and their systems of land tenure. These are regulated in Law No. 5/60 on Agrarian Principles and Law No. 5/67 on Forestry Principles, which were subsequently updated by the Law on Forestry No. 41/99. However, regardless of this acknowledgement, it has also been firmly stated that the opportunity to demand forest exploitation rights and collective rights may not override the national interest. This means that if the State has given rights to forestry businessmen to profit from the forests, the people must give way to (subsidize) these businessmen. From the point of view of the government, the presence of industry at the location will have a trickle down effect and provide a trickle of profit for the surrounding community which does not always happen in the way expected.²⁵ Pulp and paper industries in Riau are claimed to improve the local economy. However, wood processing industries relying on natural forests are not usually able to sustain their business as timber production from natural forest is declining steadily.

2.5 Disincentive Regulations

The central and local governments lack sufficient resources to manage forest resources in Aceh. Participation of people is absolutely needed. However, many regulations hamper their participation. The forestry sector is already the most overly regulated sector in Indonesia, starting from the permit application process, to the regulation of the production process, transportation, and distribution and trade.²⁶ As a result, transaction costs in the forestry sector become

²⁴Colchester, Marcus, et al. 2006. "Justice in the forest: Rural livelihoods and forest law enforcement." *Forest Perspectives* 3. Center for International Forestry Research Jl. CIFOR, Situ Gede, Sindang Barang Bogor Barat 16680, Indonesia

²⁵Syumanda, Rully. "CONFLICT IN THE FORESTRY SECTOR." Briefing Paper, Walhi.

²⁶Wardoyo, Wahyudi, Suhariyanto, Boen M. Purnama. 2001. "LAW ENFORCEMENT AND FOREST PROTECTION IN INDONESIA: A Retrospect And Prospect." Paper presented on the East Asia

so high so that investment in the sector is less attractive in comparison with investments in other sectors, such as palm oil and rubber plantations.

Economic disincentives of forest utilization in Indonesia can be found in the basic law regulating forest management, which is Forestry Law 41/1999. Article 4 section 1 and 2 of the law states:

1. All forests in the Republic of Indonesia's territory including natural resources contained inside those forests are controlled by the state for the greatest welfare of the people;
2. The control of forests by the state as meant in section 1 gives authority to the government to:
 - (a) govern and take care of anything related to forest, forest area, and forest products;
 - (b) establish status of certain areas to become forest areas or of forest areas becoming non-forest areas; and
 - (c) govern and establish legal relation between people and forest, and govern legal conducts concerning forests.

Pure private forests (hutan rakyat)²⁷ are facing similar difficulties. According to Ministerial Regulation P.33/Menhut-II/2007, a timber species harvested from private lands falls into one of three categories:

1. Timber that needs a legal receipt issued by the seller;
2. Timber that needs a letter of timber origin issued by the head of village (SKAU);
3. Timber that needs a letter of timber origin issued by a person who has competence as supervisor of forest products and is authorized to issue a SKSKB document (SKSKB cap KR).

While timber appears to be strongly regulated, agricultural commodities that can be produced in a shorter time and frequently have greater value do not need any document for their transportation and trade. Officially the issuance

Ministerial Conference on Forest Law Enforcement and Governance, Bali, Indonesia, September 11-13, 2001

²⁷The word of "pure" in pure private forest is selected to indicate that the forests are grown on private land. New government regulation PP 06/2007 introduces a new term of Hutan Tanaman Rakyat (HTR), which is plantation forests grown privately by local communities on forest areas. While industrial plantation forests (HTI) are plantation forests grown privately by large scale companies on forest areas.

of the legal documents for timber origin is free of charge but in reality it is not. In addition, the regulation of P.33/Menhut-II/2007 potentially creates an opportunity for law enforcement officials to create a moral hazard. It is an entry point for the officials to exercise their power or authority which is not essentially required. This kind of practice has been well recognized but no single concrete action has been taken to eliminate it.

Farmers of HTR, if any, will be facing an even harder situation. The farmers have to apply for their participation in the HTR program and in response the government will grant them the right to utilize forest areas. The application for land alone is too complicated a process for most farmers, who have generally very limited education and resources. Since HTR involves forest areas, the harvest of any product from the forests involves very complicated formal processes that discourage people from participating in HTR.²⁸ This is very unfortunate, since HTR is potentially an instrument for rehabilitating degraded forest lands, a task which is impossible for the government to achieve alone because of limited resources.

Smallholders in plantation forests, either on private or public lands, are also constrained by the availability of financial support. No commercial bank is willing to lend its money to smallholders operating in plantation forests. The long term investment required to profit in forest businesses is beyond a smallholder's capacity. Smallholders do need financial support to run their businesses but while there is rhetoric about helping smallholders very few real actions are taken.

The Alternatives to Slash-and-Burn (ASB) team in Indonesia identified three kinds of barriers to trade in agroforestry timber. The first barrier is export taxes and quotas intended to promote domestic wood processing. In reality, these measures drive down the domestic price of timber and hence, in the case of agroforestry species, reduce the income of smallholders. A second barrier is royalties, which in theory are applicable only to products from natural forests but in practice are applied to agroforestry products as well because of confusion about the products' origin. A third barrier is complex bureaucratic procedures that smallholders and local traders must follow before they can harvest or market timber and other agroforestry products.²⁹

The question is, why have governments decided to put so much control on forestry industries? There must be many factors that are responsible for this situation. However, intense discussions with many government officials and foresters has led to the conclusion that a lack of understanding about business

²⁸See P.55/Menhut-II/2006 and P.23/Menhut-II/2007.

²⁹DEREGULATING AGROFORESTRY TIMBER TO FIGHT POVERTY AND PROTECT THE ENVIRONMENT, ASB Policy briefs 03, Oct 2001.

behavior is a big issue. To make things worse, the lack of understanding leads government officials to adopt a command-and-control paradigm while ignoring the fact that government bureaucracy is inefficient and incapable. It is undeniable that government officials serve their own interests by adopting a command-and-control regime. Hence, training and education to improve knowledge and capacity of government officials and finally to alter their approach are vital.

2.6 Non Timber Products

The utilization of non-timber products and environmental services has not yet been developed optimally. Non-timber products and environmental services from forest ecosystems, such as water, biodiversity, clean air, climate balance, natural beauty, and environmental assimilation capacity, that are useful for supporting life and have economic value, have not been exploited adequately.

At the local level, it is also important to recognize that natural forests have often been replaced by a variety of agroforestry systems, which, for local communities, are more productive and profitable than the original ecosystems. In fact, agroforestry products such as cloves, nutmeg, mace, pepper, and cinnamon, were what placed the archipelago on international trade maps hundreds of years before Indonesia became a nation. The forest gardens in Krui and Lampung (Sumatra) are examples of such systems.³⁰ Social forestry originally had potential in Aceh, but due to prolonged conflicts, this potential has been underdeveloped.³¹

Rapid withdrawal of foreign capital from Indonesia and other Asian countries, during the first quarter of 1998, triggered the Asian economic crisis. Yet, agroforestry communities with trading links to export markets, such as rubber, resins, and coffee, enjoyed a boom while other agricultural communities suffered losses due to increases in production costs that were not offset by domestic price increases.³²

The potential role of forest ecosystems for absorbing and storing carbon has not yet been fully appreciated. Carbon emission potential from natural forests converted into other uses that have higher economic value for the perpetrator

³⁰Fay, Chip and Martua Sirait. 1999. "Reforming the Reformists: Challenges to Government Forestry Reform in Post-Suharto Indonesia." Southeast Asia Policy Research Working Paper, No. 26

³¹Indriatmoko, Yayan, Hasantoha Adnan, Heru Komarudin, Yulia Siagian. 2006. "Tsunami, conflicts, and forestry in Aceh: A brief review." World Agroforestry Centre.

³²Fay, Chip and Martua Sirait. 1999. "Reforming the Reformists: Challenges to Government Forestry Reform in Post-Suharto Indonesia." Southeast Asia Policy Research Working Paper, No. 26

is very high. Willingness of forest owners to sacrifice the opportunity to obtain better economic value by avoiding the release of carbon to the air through forest conversion is not yet appreciated adequately. Also, carbon absorption through plantation forest development is not yet well understood. Awareness about global climate change due to carbon accumulation in the air needs to be manifested immediately by rewarding parties who have expended effort to hamper the increase of carbon in the air. Preliminary calculation of carbon storage service is valued at an estimated 263 billion Indonesian rupiah per year.³³ The district of Malinau in East Kalimantan has received a carbon payment for conserving its forest resources, and may be used as a model.

The challenge is to redesign concession agreements to incorporate non-timber forest products and environmental values, to require concessionaires to manage the forest for non-timber and environmental values, and to provide incentives (both positive and negative) for concessionaires to manage the forest for these values. The redesign of concession agreements, forest management requirements and procedures, performance incentives, penalties, supervision and inspection procedures are needed.³⁴

3 LESSONS LEARNED

1. Forest resources in the NAD province are in relatively better condition than forest resources in other parts of Indonesia. This has been a side-effect of past conflicts, which made access to forest resources difficult if not impossible. The fact that other parts of Indonesia, except Papua, have experienced severe forest degradation and even deforestation is a strong indication that the existing forest utilization scheme created by the central government does not provide a framework for encouraging the sustainable use of forest resources. It will not be sufficient to rely on existing legislation in order to enable the proper management of Aceh's large rainforests and the most sustainable use of forest resources to enable economic growth and improved standards of living in NAD.
2. Clear policies that can be translated into a clear distribution of authority are necessary, but not sufficient, for good governance of the forestry sector. Currently, we find policies and regulations that contradict each other

³³On going study by Ministry of Forestry of Indonesia (not yet published)

³⁴Gray, John A. 2000. "Forest Concessions: Experience and Lessons from Countries Around the World." IUFRO International Symposium Integrated Management of Neotropical Rain Forests by Industries and Communities, Belém, Pará, Brasil

so that a clear distribution of authority in managing forest resources is hampered. Clear institutional arrangements are needed to guide the management and the day to day practices in forest resource utilization and to allow for sustainable management.

3. The capacity of government officials responsible for managing forest resources still needs to be improved. Human resources, budgets, facility infrastructure, institutions, and incentives for government officials are very limited when compared to the magnitude of forest resources that need to be managed. An increased capacity of government officials and resource managers would contribute to overcoming problems of illegal logging, forest fires, and lack of forest area establishment.
4. A lack of understanding of business behavior by government officials leads to misconceptions about how forestry based businesses operate and what kind of enabling environment they need to prosper. A strong demand for forest products, for example, is perceived as a threat to forest resources instead of an opportunity that needs to be exploited in an effective and efficient manner. This misconception leads to misjudgement and finally results in wrong policies.^{35,36} Instead of addressing the supply side correctly as a cause of forest degradation and deforestation, blaming strong demand tends to become mainstream. Many wood processing plants have been closed down, while the demand for wood products has grown stronger. This is clearly an impractical paradox.
5. The problems of bureaucracy need to be addressed. Instead of facilitating the business community to run their businesses efficiently and competitively, government bureaucracies tend to intervene in businesses unnecessarily thereby hampering the performance of businesses. The bureaucratic procedures in the forestry sector, especially with regards to forest utilization, are the most complicated bureaucratic regulations in Indonesia. In order to create an enabling environment for businesses to flourish and to implement sustainability imperatives in their business activities, bureaucratic barriers have to be reduced significantly.

³⁵Wardoyo, Wahyudi, Suhariyanto, Boen M. Purnama. 2001. "LAW ENFORCEMENT AND FOREST PROTECTION IN INDONESIA: A Retrospect And Prospect." Paper presented on the East Asia Ministerial Conference on Forest Law Enforcement and Governance, Bali, Indonesia, September 11-13, 2001

³⁶Pemda Propinsi NAD. 2007. "Agenda Pengembangan Ekonomi Propinsi NAD." Initial Edition. Proyek Kerjasama antara Pemerintah Provinsi NAD dan Republik Federal Jerman (dilaksanakan oleh GTZ).

6. The livelihoods for smallholder forest farmers who have been marginalized for too long need to be secured and improved. In many cases, forest ownership of stallholders has been abandoned and land confiscated for the sake of state ownership and to be used for modern industrial activities to support the "public interest." Stallholders are left with very limited resources to build their livelihoods. This situation needs to be improved with some urgency.

4 POLICY RECOMMENDATIONS

4.1 Short Term

1. The government of NAD and the central government of Indonesia need to negotiate to achieve a suitable sharing of competencies for supporting sustainable forest use in the NAD province. The existing institutional design will not be sufficient to avoid deforestation in the NAD province and will be an obstacle for achieving sound forest management.
2. The existing forest utilization scheme created by the central government has failed to achieve sustainable forest management in other parts of Indonesia. A new scheme of forest utilization needs to be agreed upon and implemented in order to allow for sustainable use of NAD's forest resources.
3. A reassessment of the regulations provided by the logging moratorium of the NAD Governor No. 05/INSTR/2007 is urgently needed. Without appropriate steps, this policy turns production forests into open access resources that will be overexploited.

4.2 Long Term

1. There is a need to synchronize provisions regulated by Forestry Law and by Autonomy Law. With regard to forestry governance, the central government tends to take advantage by applying Forestry Law 41/1999, while the government of NAD takes advantage by relying on the Special Autonomy Law 11/2006. In the absence of an agreement between both legislations, forest resources will be overexploited. This synchronization would also provide a foundation for better coordination between governmental offices.
2. There is a need to improve the knowledge base and capacity of government officials with regard to sustainable natural resource management. Until today, a command-and-control paradigm has been dominant in forest

resource management resulting in inefficiencies and overuse. Alternative strategies and best case practices contributing to improved efficiency and sustainability of forest management and use have to be introduced to government officials. Every success or failure of any society starts from the society's mind. The mindset needs to be changed.

3. It might be advisable to reduce the role of government in the management of production forests and allow for an increased role for private businesses. This might eventually increase the effectiveness and efficiency by which forest resources are used but it would need to be accompanied by clear government imperatives enhancing sustainability criteria in order to avoid the overuse of forest resources.

5 NEEDS FOR RESEARCH AND TECHNICAL ASSISTANCE

1. Research to determine the optimal size of local government organizations. It is not totally wrong to view that public offices are basically economic resources. Many people will try to access these limited resources for their own benefit, in particular people of NAD who were forced to be unemployed because of the long military conflict. Too many people need a job but very few positions are available. It might lead to too big organization size for the sake of accommodating too many unemployed persons.
2. Technical assistance to improve the performance of government organizations, that includes but is not limited to:
 - (a) Improving capacity of human resources;
 - (b) Reviewing responsibilities and tasks of each government office;
 - (c) Building good coordination among government offices.
3. Technical assistance to update data and information on forest resources. Collecting accurate data and information takes a while but must be done immediately prior to or in parallel with taking any further steps toward forest resources management. The technical assistance should also address issues of how to maintain data and how information will be updated.
4. Technical assistance to help smallholder farmers, including setting up microfinance institutions operating in villages and how to run them in an accountable and efficient way.