



GROWING CONFLICT AND UNREST IN INDONESIAN FORESTS: A SUMMARY PAPER

CONFLICT OVER FOREST RESOURCES IS A SIGNIFICANT AND PERVASIVE PROBLEM IN INDONESIA.



ARD, INC.

Villagers in Porsea protest the reopening of the PT Toba Pulp Lestari mill in North Sumatra. The mill has taken land to grow plantations and is simultaneously responsible for widespread clearance of natural forests.

Introduction

In recent years the role played by valuable natural resources, such as diamonds and timber, in financing conflicts has been well documented in countries such as Liberia, Burma, Cambodia, and the Democratic Republic of Congo. There are, however, far more pervasive local-level conflicts over forest resources that occur every day, in all regions of the world. In Southeast Asia, and specifically in Indonesia, these local-level conflicts over forest resources occur regularly, and on a vast scale.¹ This not only significantly impacts rural livelihoods and contributes to the loss of forests and the biodiversity they contain, but also serves as a destabilizing political force—especially in rural areas where rule of law is weak, and economic opportunities are limited.

The relatively high economic value associated with timber—many Asian tropical hardwood species currently sell for between US \$300 and US \$1,200 per cubic meter (m³)—coupled with weak governance structures, corruption, ambiguous or weak land/resource tenure and loose financial oversight, define the framework within which conflicts over forest resources evolve. In Indonesia these conditions result in both chronic conflict, and rampant illegal logging. The Center for International Forestry Research (CIFOR) estimates that between 55 and 75 percent of industrial wood production in Indonesia is illegal, and results in a loss of between US \$1 billion and US \$1.9 billion in tax revenue. The economic loss to local communities is likely significantly higher, as is their potential for future earnings. These large-scale logging activities also negatively impact the environmental services provided by forests—impacting water quality and water supply—further affecting local communities. As a result, the fight for control of Indonesia's forests can, in effect, be viewed as a fight for survival.

¹ In Indonesia, a survey of reports on conflict over timber resources published in six regional papers over the course of twelve months (March 2002-February 2003) documented 845 separate accounts, or better than two incidents per day (Conflict Timber: Dimensions of the Problem in Asia and Africa, Volume II, Asian Cases).

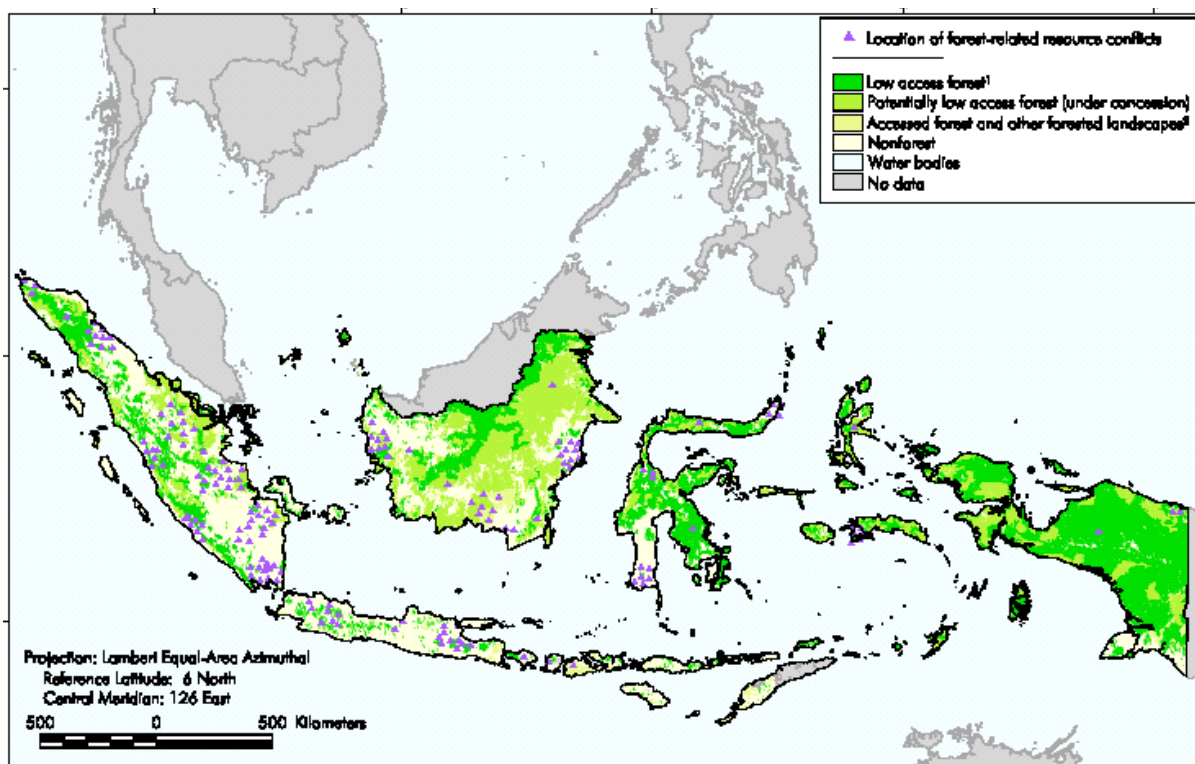
This report summarizes an in-depth case study of Indonesia found in the publication: *Conflict Timber: Dimensions of the Problem in Asia and Africa, Volume II, Asian Cases*.² The full three-volume report, funded by USAID, can be found on the accompanying CD. The report highlights the factors contributing to forest conflicts—with specific examples of violence in Sumatra, Kalimantan, Java and West Papua—and discusses the implications that current levels of conflict may have on the future, and what might be done to reduce the conflict.

Forest conflict in Indonesia

Forest-related conflicts tend to arise where large commercial stocks of timber are present. Examples of common settings for forest-related conflicts in Indonesia include:

- Areas around timber concessions and plantation estates where natural forest is first logged, then cleared for pulp fiber or oil palm; and
- Areas where forest stocks used by local communities are depleted—either through their own use, or more often, through outside interference.

This is visually demonstrated in the map below, which based on limited data, presents reported forest-related conflicts between 1997 and 1999.



Source: FWI/GFW. 2002. *The State of the Forest: Indonesia*. Bogor, Indonesia: Forest Watch Indonesia, and Washington DC: Global Forest Watch.

² Conflict Timber: Dimensions of the Problem in Asia and Africa, Volume I (Synthesis Report), Volume II (Asian Cases) and Volume III (African Cases). ARD, Inc. for USAID/OTI and USAID/ANE/TS, Washington DC, USA.

In simple terms, conflicts over timber resources arise from a lack of clear legal right to use forest resources over which there are competing claims. Claims can be competed among or between individuals, communities, government agencies or the private sector. In Indonesia, high levels of corruption and selective application of the law make it unlikely that competing claims will be adjudicated in a fair, transparent manner. Given the complicit involvement of the military and other security forces in much of the forest-related conflict and forest-related crime, efforts to mitigate conflicts and punish criminal interests are, most often, in vain. The Indonesian military is widely assumed to make up budget shortfalls from illegal logging. The police are increasingly involved. It has been reported that the Navy has, in some conflicts, extorted money to provide protection to timber (and wood product) shipments. Yet there are those police and military officials, who in the course of their duties, have suffered serious injury or even died defending the forest-related law.

Conflict over forest resources is a significant and pervasive problem in Indonesia. Yet unlike illegal logging, it is rarely discussed among policymakers, donors or the general public. The Indonesian media reports conflict over forests regularly, but once a conflict is reported, there is generally no follow up. Even though news reports are found, incidences of violent conflict are by and large grossly underreported. The reasons for this underreporting include lack of journalistic interest, lack of media capacity to follow up stories, and bribery or the threat of violence to journalists and editors. Thus victims of violence remain largely unheard, and the impacts of criminally backed deforestation on the lives and livelihoods of individuals and communities at the local level are essentially ignored at the national level.

Given current trends, the future will likely see an increase in the both the incidence and the severity of forest-related conflicts. This almost inevitable outcome will be driven by a combination of the decreasing natural resource base and an increasing human population—resulting in increased pressure on natural resources, and increased competition for income-generating/livelihood alternatives. As such, conflicts over forest resources seem set to further destabilize Indonesia, and to destroy the natural resource base upon which much of the national economy depends.

Factors contributing to forest conflict

Many factors contribute to the evolution of forest-related conflicts. The most important of these factors include:

- The geographic area,
- The forest resource, and
- The type of industry for which forest products are used.

These contributing factors are further compounded by poorly defined, articulated and adjudicated tenure arrangements. These problems of tenure have been further complicated by the ongoing decentralization process, which has unleashed old resentments that have long held the potential for violence. Many of these violent hotspots remain virtually unchecked, through the selective application of laws and regulations by the political elite.

Whereas there is variation in the type of violence surrounding forest-related conflicts, there are essentially five core factors responsible for motivating and sustaining forest-related conflicts:

1. **Formal security and military forces are directly and indirectly involved in timber conflict.** In some parts of the country, the military and police are directly involved in timber harvesting, while in others they extort money from timber concessionaires or illegal loggers. Private armed militias have been established in some areas to serve the interests of the forest and wood products industry, usually with tacit approval of security forces.
2. **Fragmentation of political power has fragmented natural resource management authority.** Rapid devolution of political power from a highly centralized regime to unprepared district governments has fragmented command and control over the country without creating meaningful opportunities for stable, democratic self-governance. Practical power over forests has been concentrated in individual districts, with little coordination among branches of government within a district and almost none among governments of different districts.
3. **Newly devolved local political powers are abused.** District-level political posts are prized and frequently acquired for high prices through corrupt means. Campaign debts are sometimes repaid using a “currency” of resource extraction licenses, including timber.
4. **Implementation and enforcement of law is selective and inconsistent.** The law serves as a tool for powerful individuals and institutions to legitimize criminal actions, or pursue goals by pressuring opponents with the threat of selective law enforcement
5. **Ambiguous land/resource tenure promotes struggles over timber.** With decentralization, the central government’s power over land has dwindled. Communities are reclaiming their traditional right to forest resources. Forest communities often find themselves at odds with security forces, which are sometimes allied with local elites who wish to claim the resources. These dynamics have triggered conflict.

Any discussion of forest management in Indonesia must recognize its transitional governance framework, resulting from the 1999 decentralization laws. The rush to take advantage of the decentralized legal framework unleashed environmental disaster throughout the country. The new local governments issue natural resources exploitation permits to capture local revenues, typically to benefit local political elites rather than general populations. Largely ignored during the Suharto era, local governments are now taking full advantage of new powers, real and perceived.

Local government civil servants and institutions, after decades of neglect, have not yet developed long-term visions. Policies, plans and strategies for sustainable management and development of resources are conspicuous by their absence. Horizontal and vertical conflicts have sprung up among and between communities, governments and private companies as they compete for resources. The strong win and weaker groups like local communities remain disadvantaged. Many have evolved a “grab it while you can” attitude that places them in direct competition with local elites and security forces. Some local communities have experienced short-term improvements in the form of bubble-like, economic benefits from small-scale natural resource exploitation operations. These benefits have been unevenly distributed within and between communities. Middlemen and contractors have captured most of the benefits. Communities, by contrast, will reap the long-term, negative impacts of the current headlong race to harvest remaining forest resources and thus effectively complete the deforestation of Indonesia.

Regional military commands, except in Papua, are aligning with local political elites as well as local businesses, to mutual financial benefit. In Papua there appears to be little collusion

between security forces and local politicians. In practical terms the military runs natural resources extraction operations, causing great resentment among the effectively disempowered local politicians. Papua perhaps represents the only part of Indonesia where there is state-societal conflict, and conflicts over timber resources clearly highlight this situation.

Security forces frequently compete with each other—often violently. Even during the Suharto era, occasional reports flagged armed conflict between police and army units, particularly over illegal businesses in which both engage (e.g., gambling, prostitution and drug dealing). It is widely assumed that such tensions extend to illegal logging. These conflicts continue; for example, in October 2002 in Sumatra, eight people died in a gun battle between police and army touched off by police arrest of an army drug dealer.

The problem of land/resource tenure in forest-related conflicts

Ambiguous land/resource tenure promotes struggles over timber and other forest resources. Ambiguous land tenure claims in forested areas strongly increases the potential for conflict timber incidents to flourish. If governments prove unable or unwilling to adjudicate conflicting claims—often because the rule of law is problematic—a test of strength becomes the only way to resolve competing claims. In such cases the stronger of the two claimants, often an agent of the state, is almost certainly destined to “win.” Furthermore, while carefully planned and executed decentralization may well improve the land/resource tenure situation in local settings, hurried devolution can create doubt as to who is in charge. In this scenario, numerous actors may come forward with claims to the same piece of land, each substantiated by some level of authority—further increasing the likelihood of conflict.

Examples of violence stemming from forest-related conflicts

Forest-related conflict is best described geographically. Indonesia is a vast archipelago with a wide variety of cultures, local laws and institutions, forest types, and forest industries.

Violence occurs among and between communities, security forces, government and private business. Yet how these conflicts play out varies according to geography. For example, companies and communities clash over plantations in Sumatra and Java. Yet because the Sumatran conflict is over new plantation development and involves old and new heterogeneous communities, its patterns of violence differ from Java with its old, established, teak plantations and a community with an ancient, indigenous, and largely homogeneous culture.

Conflict between communities and security forces over natural forest in Kalimantan and West Papua also differ. In both areas, communities are largely indigenous but with a significant proportion of newcomers. Yet the **governance** framework surrounding the forests are entirely different. In Kalimantan, local political and business elites forge alliances with local security forces and extract wood and other resources. In West Papua, the military increasingly controls the province. Aceh has the potential to follow the same pattern.

The study documented the following conflict settings:

- *Sumatra* - pulp and paper companies in North Sumatra and Riau provinces clearing natural forest for plantations;
- *Kalimantan* – commercial and small-scale logging operations in natural forests;
- *Java* - colonial era teak plantations; and
- *West Papua* – access and rights to natural forests.

Kalimantan

Kalimantan lowland forest is likely to be gone within 10 years, assuming that current rates of forest conversion to other uses is not controlled. There is a struggle among many groups for the remaining resources.

Central and East Kalimantan provinces still have significant areas of natural forest, and forest-related conflicts are frequent. Central Kalimantan, like West Kalimantan, witnessed serious outbreaks of violence between Madurese and other ethnic groups, particularly Dayaks, during which thousands died in the late 1990s. West Kalimantan has experienced severe forest resource depletion. As resources have dwindled communities have found fewer sources of livelihood, deepening ethnic tensions over access to remaining resources, including forest and land. In East Kalimantan, reports highlight tensions building up among ethnic groups, in part over competing claims to natural resources.

Since 2000, various district heads have issued district-level extraction permits to local, national and international interests, on land already licensed by the central government to other industrial interests. Over the last two years these new loggers, consisting largely of local contractors often with Malaysian backing or direct involvement, have rapidly increased in number. Indonesian customs and security forces have colluded with Malaysians; they allow and protect the import of heavy equipment such as large bulldozers, excavators and trucks into East Kalimantan.

Loggers, whose permits have been issued by local government, log with local labor areas that often overlap with established timber concessions licensed by the central government. Violent incidents can erupt when staff from the licensed, established concession tries to protect forest assets from local loggers. Communities frequently obtain better economic benefits from locally licensed operators, who mobilize community members to attack the established company. In the ensuing frays, camps are burned, equipment destroyed and staff beaten. Many companies have either closed their threatened operations or entered into deals with local operators to reduce “security” pressures. Horizontal conflict occurs between communities, when, for example, two villages seek to claim compensation for lands scheduled for logging under locally issued licenses. Vertical conflicts within villages occur when gains obtained from such arrangements are either distributed unfairly within the village—if at all—or are tied to agreements made by one resident of a community without agreement or participation of the others.

Conflicts around national parks are frequent, and while media reports on these conflicts are not common, they are beginning to occur with greater frequency. One such example of increased media reporting on conflicts around national parks is represented in the case of the Environmental Investigation Agency (EIA) and the Indonesian NGO Telapak. In this case, independent media sources reported on the background and history leading to the beating and kidnapping of staff from both EIA and Telapak in Tanjung Puting National Park in Central Kalimantan. These reports included statements from the Secretary General of the Ministry of Forestry, in which he indicated that a company, Tanjung Lingga, owned by Abdul Rasyid, a member of the National Assembly, was responsible for buying logs illegally harvested within the park. Furthermore, Tanjung Lingga staff were identified as being responsible for the kidnapping and beating of EIA and Telapak researchers investigating allegations of illegal logging in Tanjung Puting.

Whereas Tanjung Puting has the best-documented evidence of conflict over a protected area, the pattern is repeated elsewhere. Kutai National Park staff members in East Kalimantan have suffered intimidation and death threats when trying to stop salvage logging of burned areas of the protected area they wish to see regenerate back to natural forest. Harvard University researchers working to protect Gunung Palung National Park in West Kalimantan have had local staff members beaten and their building torched, as well as being attacked in local media, because their conservation efforts upset illegal logging gangs. Press reports from Lore Lindu National Park in Sulawesi, and Gunung Leuser in Aceh, repeat the same patterns.

Sumatra

Sumatran lowland forest is likely to be gone within five years at the current rates of forest conversion to other uses. The pulp and paper and oil palm industries have converted huge expanses of Riau forest to plantations; ignoring local rights to forests. Low-level violence is widespread and increasing between pulp and paper companies and their supporters, and local communities. Security forces regularly, and violently, back the companies.

In North Sumatra, mass community action resulted in the closing of a pulp mill, Indorayon, in 1999. The mill closed after protests erupted over tenural disputes between communities and company, and pollution caused by the mill factory. The protests resulted in 12 deaths and hundreds of injuries. The company reopened in 2003, known now as *Toba Pulp Lestari* (TPL). Community protests continue apace. Violence includes:

- Security forces shooting protestors;
- Regular temporary kidnappings of activists, beaten and dumped; and
- Security forces terrorizing communities.

The pulp and paper industries in Sumatra's Riau Province are well established and well organized. Human rights reports have identified these industries as orchestrators of violence in pursuit of profits. These industries are beginning to rely more on *Acacia* plantations than on the natural forest they have been exploiting to date. Communities find *Acacia* competes poorly against economic alternatives such as oil palm, yet the power of the pulp and paper companies has led to massive conversion. As law and order has loosened, communities increasingly engage in land grabs in which large areas of *Acacia* plantations are burned. Coercive and retaliatory attacks by mill owners are common. As has been documented by both Indonesian and international NGOs, mill owners often hire local "thugs" and organized gangs. When these clashes arise, they are often extremely violent.

Some companies have been trying to improve, yet improvement can be fraught with danger. The APRIL mill in Riau has been working with communities and NGOs. When APRIL security made preparations to implement a system that would curtail the entry of illegal logs into the mill, a security post was attacked by a mob of 30 to 50 individuals who lynched two security guards and hospitalized others. A local parliamentarian blamed the incident on the local World Wildlife Fund (WWF) office, which was working with the company to improve its practices. The WWF office had to be closed and placed under police protection. Sources indicate that the mob leader was both an illegal logger and related to the aforementioned politician.

Java

After independence, the Indonesian government restored the Dutch colonial system for management of teak plantation forests. Following a few changes over the years, plantation management was consolidated in a single parastatal company, Perhutani. The parastatal manages plantations located in a number of smaller estates, the majority in Central and West Java. The political destabilization of the late 1990s encouraged greatly increased levels of illegal logging by local communities. Local gangs, often employed by teak processors seeking input stocks, lead these operations. These activities have been reinforced as young male labor migrants abandoned cities in the wake of the Southeast Asian recession and large-scale urban unemployment, and returned to their countryside villages.

Communities feel threatened by timber theft gangs, and feel that Perhutani operations limit their rights and access to resources. Security forces have engaged in serious human rights violations, with extra-judicial killings reported. Like much illegal logging across Indonesia, the parties responsible are usually gangs or syndicates. Their activities in teak plantations illustrate well their role elsewhere in the country, whether raiding national parks, forest timber concessions or traditionally claimed lands.

Gangs have long been associated with the teak trade, but were largely checked or controlled by the army during the Suharto era. They tend to be centralized around certain villages. Members are not afraid of ostentatious displays of wealth, even though other members of the community know that wealth was acquired illegally. Large gangs rarely appear to be involved in violence; they are organized, and they divide territory and “exploitation rights” among themselves. Perhutani usually cannot confront gangs because of their numbers and strength, and also because of the influence of gang backers, whether in government or the security forces.

Until recently, security forces rarely challenged the teak gangs. Yet since President Megawati’s administration publicly condemned illegal logging, the military appears to be making a more concerted effort to arrest gangs in densely populated Java. However, local observers suggest that this may amount merely to a “change in management” of illegal logging, with security force units replacing gangs as the major operatives, rather than a real attempt to end illegal logging.

Conflict around teak erupts in short bursts. Either a mob threatens police, or police catch a small band of illegal loggers and violence breaks out. Such confrontations can end with shooting and deaths, but injuries from beatings and sharp weapons are more usual. Mobs may take revenge by burning company property or houses. In retaliation for the arrest of illegal loggers, police property or housing may be torched. There are reports of Perhutani company staff being kidnapped and held until gang colleagues are released.

Top quality teak currently fetches US \$1,200 per m³ in nearby city factories on Java; Kalimantan *meranti* timber sells for less than a tenth of that figure. Teak’s value seems sure to continue to motivate conflict.

West Papua

Many observers conclude that Papua has the only true state/societal conflict in Indonesia. Natural resources, including timber, are a dominant factor in Papua and the army (TNI) is the only administrator with power over these resources. West Papua’s size and lack of communications infrastructure make gathering information on human rights issues particularly

difficult. The same problem is encountered regarding timber. Some estimates report 600,000 m³ of timber cut illegally in West Papua, with related conflicts.

The issue of conflict over timber is a small component of wider political struggles within and among provincial political and power elites. Decentralization has led to great changes in the province's forestry sector. West Papua's more than 42 million hectares contains approximately 12 million hectares of production forest and 9 million of conversion forest. Of 54 concessions licensed by the central government, only 16 are active and many of them in name only. The central government licensing system is largely ignored on the ground, and those able to conduct logging, by whatever means, are active.

A recent policy initiative has been the introduction of KOPERMAS, cooperative ventures between concessions and communities. The system arose as a solution to conflict between timber concessions and communities. KOPERMAS wood should be cut and sold by communities to the timber concessions they are cutting within. Yet the system is flawed. Wood goes to middlemen, *cukong*, because they pay more. Many *cukong* are said to be Malaysian or Indian. The wood they buy is allegedly exported illegally to foreign markets.

Interviewees reported that government and security force involvement in timber can take the form of financial backing or setting up informal joint ventures with communities to log an area of forest. The army, in these arrangements, often has the community cut forests, or in some cases, has soldiers performing labor duties. Techniques for securing land include long-standing roadblocks securing an area prior to logging. Human rights observers have noted that across the province, the army, outside of the KOPERMAS framework, hires communities to log wood. If people refuse they are terrorized. In the 2001-2002 time period, 20 such cases were recorded with 10 to 15 involving physical violence and terror.

Interviewees stressed that "security" has been used by security forces as a rationale for decades to clear forests. An area is declared a security zone for having a concentration of Free Papua Movement (OPM) separatists. Over time the area is logged by timber concessions. Then, transmigrants arrive and the area is cleared for agriculture and oil palm. Even after oil palm has been planted, security forces demand payment to protect the plantation. Some local communities gain revenue by extorting transmigrants, threatening crop destruction unless they are paid. No clear rule of law prevails; low-level terror maintains order.

Conflicts tend to be short and often brutal. Again, reports are sparse and much is assumed to be unreported. Among all interviewees the incident in Wasior was referred to as most representative of the type of conflict and rationale that occurs now and is most likely in the future. The International Crisis Group reported that local protests against a logging company led to three company staff being murdered in March 2001 by armed Papuans. Police were sent to track down the killers and protect other logging companies. This led to many villagers abandoning their homes, fearing reprisals. In May, police attacked civilians in the area who may have been on their way home from a celebration. Six are reported to have died, either shot by the police or drowned. This increased tensions. In June, a group of armed men attacked a police post, killing five police and a civilian. The attackers seized weapons and ammunition. The police then made their own reprisals in nearby villages; 12 Papuans were killed and 26 remain missing, some of whom may still be alive. The police also destroyed houses and arrested more than 150 people, according to local NGOs. Sixteen of the latter have been convicted, so far, of

various offences in trials that Amnesty International believes were unfair and followed torture or ill treatment.

Forests, Violence and the Press

Forest-related conflicts are largely underreported in the Indonesia media. This underreporting results from a number of factors including:

- ◆ **Intimidation of journalists:** Committed reporters covering gangster-type actors in the timber trade take risks that can prove fatal. In Papua, the military visits local news offices on a regular basis, which intimidates journalists and causes editors to shy away from articles implicating the military in criminal activities.
- ◆ **Lack of journalistic capacity in the more remote forested areas:** Journalists often do not have the resources to follow up stories and travel to remote areas to cover low-level conflict stories.
- ◆ **Collusion between mass media and the industries involved in logging and the promotion of conflict:** Violence regularly occurs in North Sumatra around the TPL pulp and paper mill, yet some provincial newspapers may be pro-industry and uninterested in reporting human rights abuses. In a recent shooting of an elderly woman, two populist papers covered the story while two pro-industry papers ignored it. Major players in timber frequently defame competitors and pay for media coverage of press releases, often in the context of inter-elite struggles.

As there is little investigation into the background of conflicts, reports on identities of protagonists and their motives are often circumstantial. This will remain so unless, as one interviewee suggested, there is infiltration of security forces, gangs and government offices to peel back the layers of corruption and collusion behind the fundamental problems leading to conflict over forest resources.

Corruption in Financing and Banking Arrangements

The formal banking sector in Indonesia fails to provide an adequate deterrence for laundering profits stemming from forest-related conflicts. Due to significant legislative deficiencies in the Indonesian anti-money laundering regime, banking institutions with access to Western financial institutions through correspondent banking activities remain loosely regulated. Especially troubling is the lack of legislation that mandates reasonable measures to obtain information about the true identity of the persons on whose behalf an account is opened or a transaction conducted. Additionally, financial institutions are not required to scrutinize complex, unusual, or large transactions, and lack internal programs that mandate adequate anti-money laundering procedures and controls. Indonesia also houses a substantial number of private banks that are in practice unregulated and not open to the public, which provide further opportunities for money laundering, especially through electronic banking services.³

Indonesia's non-banking sector is in worse shape. There are no requirements for those remitting money to include accurate and meaningful originator information, including name, address and account number on fund transfers, and there is no licensing or registration regime in place for money remitters. Moreover, *bureaux de change*, money remittance services, stockbrokers, and insurance companies are not required by law to conduct enhanced scrutiny of funds for

³ While the Government of Indonesia has taken important steps to address deficiencies in its money laundering legislation (e.g., the GOI has established the Indonesian Financial Intelligence Unit), as of July 2004 Indonesia remained on the list of Non-Cooperative Countries and Territories (NCCT) of the Organization of Economic Cooperation and Development's (OECD) Financial Action Task Force on Money Laundering (FATF).

suspicious activity when incomplete information on the originator is presented for a transaction. These services neither identify the customer nor, with regard to this information, identify the true identity of the person on whose behalf a transaction is conducted. Non-banking institutions also fail to adhere to international norms for maintaining years of records on financial transactions.

The Future

There is a broadly shared consensus within Indonesian civil society organizations and among foreign observers that forest conflicts are rooted in poor forest governance, inconsistent implementation of the law, and that they are carried out with the complicity of the nation's security forces. A number of extra-governmental means of controlling forest conflict have either been tested or proposed. These means are described briefly below.

Local Level

- Civil society groups have been effective in documenting forest-related violence and illegal timber extraction and successfully publicizing these incidents in the local media. This strategy can be effective at raising public awareness at the local and provincial levels, but has much less impact at the national level.
- There is an urgent need for conflict management training of government officials and civil society organizations in areas where forest conflict occurs.
- There is evidence that communities and local governments can protect local rights to forest resources from outsiders, including security forces, if they are well organized and prepared to act forcefully. These efforts are most effective when scaled up to the district level where forest management rights and responsibilities can be encoded in local law. To do this successfully would require political organization based on public participation in decision making.

Provincial Level

- Potential and actual forest conflicts should be analyzed and integrated at the provincial level as a means to avoid, mitigate or manage conflict. Environmental impact assessments, including social impacts, of logging operations and plantation establishment have not been coordinated nor has the data from them been integrated in a way that would facilitate its use in analysis of forest conflict. What is needed is a relatively simple method for analyzing potential forest conflict province-wide that indicates who will be impacted and where, what the immediate and long-term effects will be, and if conflict is likely to arise.

National and International Levels

- There is a pressing need to develop a coordinated information system to serve as a tool and common resource for monitoring and mitigating conflict. Groups served by this monitoring system would include:
 - Firms wishing to invest in or purchase forest products that are ethically and sustainably produced;
 - Civil society groups working to identify conflict hot spots and predict where future problems may arise;
 - Economists analyzing natural resource trends and impacts on local economies;
 - Political analysts tracking trends in decentralized natural resource management;
 - Environmental programs and projects;
 - Governance programs and initiatives; and

- Conservation organizations identifying threats to biodiversity through conflict in key habitats.
- Governments and consumers of timber and timber products should demand, and buy, products that have been harvested in an ecologically sustainable and socially ethical manner, and actively reject those products harvested under conflict conditions. Given the level of harvesting of Indonesian timber and the level of conflict it generates, the onus should be placed on producers to demonstrate they are working with best practices.
- Financial institutions should be encouraged to avoid investments that contribute to forest conflict.

Perhaps the most daunting task needed, to not only mitigate but also reduce the incidence of forest-related conflicts, is the development and implementation of well-defined and articulated tenure arrangements. Clarifying forest property rights in Indonesia will require action at all three levels—national, provincial and local—if communities or individuals are going to shift from resource use strategies predicated exclusively upon immediate economic gain, to strategies where security of tenure allows these stakeholders to plan, manage and utilize natural resources for sustainable economic growth over a much, much longer time horizon.

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