

# Resources Policy Brief



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## ***FOREST PROBLEMS AND LAW ENFORCEMENT IN SOUTHEAST ASIA: THE ROLE OF LOCAL COMMUNITIES***

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*"It seems rather odd for us to enforce the reserved forest law on the people in the forest which became reserved only subsequently by the mere drawing of lines on pieces of paper. The problem arises inasmuch as, with the delineation done, these people become violators of the law. From the viewpoint of law, it is a violation, because the law was duly enacted; but according to natural law, the violator of the law is the one who drew the lines."*

H.M. Bhumibol Adulyadej, King of Thailand

Excerpted from a royal statement delivered on June 27, 1973

## 1. INTRODUCTION

In 1995, the World Resources Institute published a comparative study of national laws and policies affecting forests and forest-dwellers in India, Indonesia, Nepal, the Philippines, Sri Lanka, Thailand, and PNG (Lynch and Talbott, 1995). The study arrived at two main conclusions. First, the national system of forest ownership and management that prevails throughout South and Southeast Asia is not sustaining forest stocks. Second, legally securing the community-based tenurial rights of local populations can improve forest management, enhance local livelihoods, and potentially reduce the scope of illegal logging, timber theft, agricultural encroachment, trade in rare and endangered species, arson, and other forest problems.

This paper takes the 1995 study one step further by examining the role of local communities specifically in forest law enforcement. Law enforcement is essential to ensure that the benefits of forest exploitation are sustained and distributed fairly. But stronger law enforcement has often been practiced at the expense of the poor, who are easier targets for suppression than the rich and powerful. Care must therefore be taken before advocating for stronger law enforcement. This paper highlights the role of local communities in law enforcement because there is strong evidence that, in partnership with official agencies, they can prevent and detect forest problems more reliably, and at lower cost, than the state alone. Engaging local communities in law enforcement is

thus both efficient and equitable. But building such partnerships implies fundamental changes in the way state authorities perceive and treat those who live in, and depend on, the forest. This means going beyond what is currently characterized as “community forestry,” which often means no more than paying farmers to plant trees on degraded land, to a partnership that capitalizes on their respective strengths and capacities.

The need to explore new and better ways to deal with forest problems is clear. Between 1990-1995, mainland Southeast Asia suffered the world’s highest annual rate of deforestation (1.6 percent), closely followed by insular Southeast Asia (1.3 percent) (FAO, 1999). Recent reports of forest fires (Barber et al., 1999) in Indonesia and continued deforestation in Cambodia (Global Witness, 1999) and Burma (Brunner et al., 1998) indicate that the situation is far from stable. One dimension of the problem is the booming illegal timber trade (Box 1). Many of these problems have their roots in the fact that most states claim exclusive control of the forest, despite their demonstrated inability to prevent widespread forest mismanagement by state-authorized logging and industrial plantation companies. As a result, “communities lose the authority to restrict use of state forest land, while forest departments lack the organizational capacity to control access” (Poffenberger, 1990).

The paper is organized as follows. Section 2 defines some of the limits to the use of law enforcement in response to forest

### Box 1. Illegal Timber Trade

The illegal timber trade flourishes in Southeast Asia because high demand coexists with strong incentives for illegal logging, porous borders, and weak enforcement capacity. The extent of this problem is shown by two indicators: large differences in forest cover per capita, and large differences between declared and undeclared timber exports.

Table 2 shows forest cover in 1990 and 1995, deforestation rates, and forest area per capita for the countries of mainland Southeast Asia. The region can be divided into two groups: those countries with relatively abundant forest cover per capita (Burma, Cambodia, Laos) and those that are forest-poor (China, Thailand, Vietnam). The latter exert a high and growing demand for timber and non-timber forest products from the former. This demand could surge if the ban on logging natural forest in China, announced in aftermath of massive flooding of the Yangtze in the summer of 1998, is enforced, in which case China’s annual timber imports are expected to rise from 5 to 40 million m<sup>3</sup>, creating new pressures for illegal logging in the region.

Table 3 shows imports and exports of logs and sawnwood within the region compiled by the International Timber Trade Organization (ITTO). ITTO cross-checks national figures with independent estimates to monitor both declared and undeclared trade. (The table is incomplete because Laos and Vietnam are not ITTO members and Cambodia only joined in 1995.) The table shows large differences between the amount of timber that Burma and Cambodia report as exports and that China and Thailand report as imports. In 1997, for example, Thailand reported 218,000 m<sup>3</sup> of logs imports from Cambodia, when Cambodia allegedly had no log exports; and China reported 206,000 m<sup>3</sup> of log imports from Burma, when Burma allegedly exported only 1,000 m<sup>3</sup>. There can be some legitimate reasons for mismatched import and export figures, but when these discrepancies persist for several years in the same direction, they point to a systematic attempt by countries to conceal timber exports and the illegal income it generates.

**Table 1. Forest Cover and Deforestation, 1990-1995**

	<u>Burma</u>	<u>Cambodia</u>	<u>Laos</u>	<u>Thailand</u>	<u>Vietnam</u>	<u>China</u>
Forest cover 1990 (km <sup>2</sup> )	290,880	106,490	131,770	132,770	97,930	1,337,560
Forest cover 1995 (km <sup>2</sup> )	271,510	98,300	124,350	116,300	91,170	1,333,230
Deforestation 1990-1995 (%)	1.4	1.6	1.2	2.6	1.4	0.1
Forest area per capita 1995 (ha)	0.6	1.0	2.5	0.2	0.1	0.1

*Source: FAO (1999)*

problems. Section 3 identifies some of the preconditions for effectively engaging local communities in forest law enforcement. Section 4 examines the scope of community-based law enforcement based on evidence from across the region. Section 5 identifies some of the major challenges in building working relationships between the state and local communities. Section 6 provides some conclusions and preliminary recommendations.

## **2. LIMITS TO LAW ENFORCEMENT**

Not all forest problems are amendable to law enforcement. In the first case, what the state considers a forest “crime” may be relatively benign. In the second case, state collusion in illegal practices precludes the effective deployment of its law enforcement powers, a situation that is aggravated when the military itself is involved in these activities. These problems are not equivalent in terms of their development and environmental impacts. Whereas many uses of the forest by the rural population that are proscribed by the state are carried out for subsistence purposes, state involvement in illegal logging, for example, results in losses to government budgets of hundreds of millions of dollars a year, impoverishment of local people and indigenous communities, and large-scale destruction of forest habitats.

### **Many Forest “Crimes” Are Benign**

Some countries have policies to stamp out shifting cultivation, despite evidence that under certain conditions this form of agriculture is environmentally sustainable (Rambo et al., 1998). Research in Laos and Vietnam shows that shifting cultivation is only responsible for one-third of current forest loss (GOL, 1998; Do Dinh Sam, 1994). To the extent that shifting cultivation causes unacceptable erosion and sedimentation problems downstream, it should be dealt with through the promotion of alternative farming technologies and off-farm income generating opportunities (World Bank, 1998).

Similarly, many protected areas include human settlements. Although their presence is technically illegal, these populations may have been resident for generations and depend on the extraction and marketing of forest resources for their survival. The involuntary resettlement of such populations has often resulted in violent conflict and misery, and may simply displace the forest problem elsewhere. Resettlement has, on occasion, been implicitly supported by foreign conservation groups (Peluso, 1993). In recognition of the fact that “the goals of conserving biodiversity and protecting and securing indigenous cultures and livelihoods have sometimes been perceived as contradictory rather than mutually rein-

### **Box 2. Logging and the Military in Burma**

One of the most overt examples of military-sanctioned logging for both strategic and financial purposes was the decision in December 1988 by Burma’s State Law and Order Restoration Council (SLORC) to grant contracts to Thai logging companies along the Thai-Burmese border (a move triggered by the cessation of official development assistance and concessional lending following the events of September 1988). Within months, 42 five-year logging concessions were granted to 36 companies, many of them linked to Thai military interests rather than specialist forestry firms (Brunner et al., 1998). Worth \$112 million a year, revenue from the concessions doubled the government’s income from timber. Many of the logging concessions were deliberately located in rebel-controlled territory. The most important strategic consideration was logging roads. The government had been unable to bring the full weight of its military superiority to bear against the ethnic armies because of lack of road access. But once the logging roads were bulldozed, the Burmese army was able to advance rapidly. There was a very close correlation between the granting of the concession and the timing of military offensives against the ethnic minorities.

forcing,” the World Wildlife Fund (1996) published a statement of principles on indigenous peoples and conservation, which “recognizes the rights of indigenous peoples to exert control over their lands, territories, and resources, and establish on them the management and governance systems that best suit their cultures and social needs, whilst respecting national sovereignty and conforming to national conservation and development objectives.” This statement reflects a growing understanding that long-term biodiversity conservation cannot be achieved at the expense of local populations.

#### Not All Forest Problems Are illegal

Conversely, many acts of gross forest mismanagement are, strictly speaking, legal and/or sanctioned by the state and thus by definition not amenable to law enforcement. For example, much of the logging that takes place in Cambodia is poorly planned, wasteful, and generates little government revenue, but is neverthe-

less legal. In the Philippines, logging practices have long been contested by indigenous forest dwellers who face displacement and the loss of traditional sources of livelihood. Private individuals and government officials with links to logging interests have often responded to such opposition with intimidation, threats, and violence. In the 1980s, the government consistently failed to respond to reports of such abuses in any meaningful way, and offenders were seldom brought to justice, because many members of government were themselves heavily involved in logging. These acts, and the relative impunity with which they have been carried out, have heightened tensions and sparked further conflict (HRW, 1996).

The involvement of the military in logging makes forest problems particularly intractable for two reasons. First, because of the military’s overwhelming coercive power, it can flout environmental regulations with impunity. Second, in some countries, the military’s anti-insurgency and self-financing objectives converge, leading to both unsustainable logging and human rights viola-

**Table 2. Timber Imports and Exports (‘000 m<sup>3</sup>)**

<u>From Burma to Thailand</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
<i>Logs</i>					
Imports reported by Thailand	688	486	212	141	102
Exports reported by Burma	828	121	92	196	66
Difference	-140	365	120	-55	36
<i>Sawnwood</i>					
Imports reported by Thailand	68	54	40	32	24
Exports reported by Burma	10	6	6	3	3
Difference	58	48	34	29	21
<u>From Burma to China</u>					
<i>Logs</i>					
Imports reported by China	403	23	17	28	206
Exports reported by Burma	11	7	0	4	1
Difference	392	16	1724	24	205
<i>Sawnwood</i>					
Imports reported by China	43	4	34	28	60
Exports reported by Burma	3	3	0	4	0
Difference	40	1	34	24	60
<u>From Cambodia to Thailand</u>					
<i>Logs</i>					
Imports reported by Thailand		448	458	30	218
Exports reported by Cambodia		171	50	0	
Difference			287	-20	218
<i>Sawnwood</i>					
Imports reported by Thailand		130	139	84	78
Exports reported by Cambodia		65	52	49	
Difference			74	32	29

Source: ITTO Forecasting and Statistical Enquiry, <http://www.itto.or.jp>

tions. In the Philippines, allegations of collusion between the military and logging interests were advanced in the context of offensives against the rebel NPA (HRW, 1996). There is similar evidence from Burma (Box 2).

In Laos, the military has not been accused of human rights violations, but is categorically implicated in illegal logging. In 1992, the government attempted to control logging, which had expanded rapidly to feed a Thai-financed boom in sawmill capacity, by imposing a series of provincial quotas. But central government was unable to enforce these quotas, and above-quota logging and sawnwood exports continued. In October 1994, the government revoked concessions throughout Laos, withdrew the right of sawmills to cut their own wood, and transferred logging rights to three military-run corporations (Walker, 1996). Today, illegal logging by the military accounts for production figures far in excess of the annual allowable cut of 275,000 m<sup>3</sup>. An analysis by ITTO shows sawnwood exports of 170,000 m<sup>3</sup>. Since three units of timber are needed to produce one unit of sawnwood, and Laos imports no

logs, there is a 235,000 m<sup>3</sup> gap between actual and authorized timber production. According to the government, half of this gap is accounted for by illegal logging, often in areas slated to be flooded by hydropower projects (GOL, 1998). But very few of these projects are financially viable. The real reason for such large-scale logging is not legitimate salvage, but the need for the military, which receives little government financial support, to pay for itself.

### 3. PRECONDITIONS FOR LAW ENFORCEMENT

In general terms, the appropriateness of law enforcement as a response to forest problems increases with the just character, clarity, and popular support of the law, the capacity and accountability of institutions vested with coercive power, and the “point source” character of the problem. Conversely, the appropriateness of law enforcement decreases with the likelihood of human rights violations and adverse impacts on the welfare of vulnerable populations, the cost of the problem relative to the cost of law enforce-

#### Box 3. Forest Policies in Indonesia

Indonesia represents an extreme example of how the law has been used to appropriate and exploit large areas of forest for the benefit of the few. Indonesia's commercial logging boom was precipitated by the implementing regulations of the Basic Forestry Law, which was passed in 1967. In its wake, the traditional *adat* tenurial rights of millions of forest-dwellers in Indonesia's Outer Islands were steadily subordinated to the interests of a relatively small number of logging and industrial plantation companies and state enterprises. By 1991, 580 logging and industrial plantation concessions, covering 60 million hectares or 30 percent of the land area, had been granted. This hand-out was facilitated by overlapping and chaotic land use classification schemes that worked to the benefit of private developers at the expense of the rights of forest-dwellers (Kartodihardjo and Supriono, 1999).

This concentration of land and profits was reinforced by forest policies that were socially and environmentally disastrous. During the 1980s, Indonesia went from being a minor player in the world's plywood business to controlling over 70 percent of global tropical plywood exports (Kaimowitz, 1998). It achieved this by subsidizing plywood companies, banning log exports, and aggressively marketing its plywood (often selling for less than it cost to produce). Plywood exports grew rapidly, but the social and environmental costs were huge. First, the business generated huge profits for a few groups with close ties to the Suharto regime. The government gave the Indonesian Plywood Association (Apkindo) monopoly powers to fix the amount of plywood each producer could export and set prices for what they sold. As a result of this monopoly, Indonesia's timber sector became more concentrated. By 1990, fifteen business groups controlled over half of the industry's plywood production capacity and about one-third of the forest area under concession (18 million hectares). Second, the monopoly on plywood exports combined with a log export ban sharply reduced the domestic price of logs. The result was, predictably, a rapid expansion of plywood manufacturing capacity in response to an under-valued raw material, a surge in illegal logging to meet this demand, and the loss of over 1 million hectares of forest a year between 1990-1995, the world's second highest rate of forest loss after Brazil (FAO, 1999).

The World Bank and other international agencies have long argued against these policies, but were strongly resisted by Indonesian government officials and businesses. But in January 1998, following the collapse of the rupiah, the government was forced by the IMF to agree to sweeping reforms. Among the most important reforms, the government agreed to reduce export taxes on logs to a maximum of 10 percent of the market price, eliminate Apkindo's monopoly over plywood exports, reduce land conversion targets to environmentally sustainable levels, create new resource rent taxes on timber, including an increase in stumpage fees, and implement an auction system to allocate new concessions.

ment, and the “non-point source” character of the problem. Some of these preconditions require far-reaching improvements in the performance and accountability of state agencies, notably the police, military, and judiciary. But others are amenable to shorter-term policy reform, especially when backed by donor conditionality and technical assistance.

A key shorter-term precondition for involving local communities in law enforcement are forest policies that encourage good forest management. Many forest problems have their roots in the acquisition of forests, first by the colonial powers and then by the post-colonial Asian elites at the expense of forest-based communities. This acquisition has been accompanied by the legal expropriation of the sovereignty and property rights of the indigenous populations. States have exerted legal control of substantial portions of their territories by declaring vast areas, many of them inhabited, to be publicly-owned forests (even if many of them are highly degraded or barren). Indonesia claims as much as 70 percent of the nation’s land mass, for example, while the Philippine government considers itself the owner of more than half the archipelago’s land area. In Thailand, the Royal Forestry Department has jurisdiction over 40 percent of the country. Private ownership of forest, whether individual or community-based, is minimal throughout the region. Underlying the legal claims of these states to ownership of classified forest areas is the tacit assumption that those who have been using the resource base, in many cases for hundreds of years, are not necessarily those who should be entrusted with its continued management. States have thus acquired the legal mandate to grant outsiders commercial concessions to extract or convert forests in areas forest-dwellers already occupy.

The state seizure of forest land has been accompanied by forest policies that have encouraged, directly or indirectly, large-scale logging and forest clearing that is environmentally and socially damaging. Forest revenue and concession systems in the region tend to be complex, inefficient, and generate little government revenue (but large amounts of off-budget revenue in some countries). Forest taxes are very low, set administratively, and considerably below the real value of the resource (and well below what the industry was willing to pay). These systems are further characterized by very low tax collection rates, arbitrary allocation of con-

cessions, inefficient wood processing, and enormous waste of forest resources. Indonesia’s experience epitomizes the negative environmental impacts of specific policy measures (Box 3). In the face of forest policies that do not encourage efficient cutting and processing, an emphasis on law enforcement is misplaced. Fundamental reforms in the way that concessions are allocated, taxed, and managed are a precondition for effective law enforcement of any kind.

There is a growing body of evidence about what constitute “best bet” policies to promote efficient and sustainable harvesting while protecting the interests of local communities and the biodiversity of the forest. Key policies include a land use zoning plan, allocation of concessions by public auction, a taxation system that rewards efficiency and penalizes waste, and performance bonds coupled with a minimum level of state monitoring. These policy measures are summarized below.

#### Land Use Zoning

There are basically two levels of land use zoning. The first, at scales of 1:250,000 or smaller, is used for national-level land use planning and forest allocation. Zoning at this scale classifies forests into logging concessions, industrial plantations, community forests, protected areas, and other broad categories. It thus provides a visual representation of the long-term expectation of forest use at the national-level. Zoning may be accompanied by forest inventories that permit an assessment of the commercial value of the forest, and can thus be used to stratify the forest into logging concessions in anticipation of more detailed inventories. But zoning at this scale is no substitute for the development of forest use plans at scales of 1:50,000 or larger. The problem is who should do it and how. These plans have often been used as a legal pretext by outsiders to acquire large areas of forest at the expense of forest-dwellers. There is therefore a need to develop plans in a transparent and participatory manner that recognizes customary forest use and includes mechanisms for resolving competing claims over the forest. One problem with this approach is that such mechanisms are seldom in place. Another is that while donors have been prepared to pay for national-level zoning, they are less willing to fund concession-level zoning. Since the state can rarely afford to pay for the latter, one solution (which is being tested in Cameroon) is for the

## Box 4. Role of Non-state, Non-local Actors

Experience in India and the Philippines shows that community-based law enforcement depends partly on the extent to which non-state, non-local actors can bring pressure to bear on the government to introduce legislation that allows greater local participation in forest management. In some countries, these actors play a growing role in detecting and publicizing forest crimes. Much of what we know today about the extent of forest mismanagement in Cambodia, for example, comes not from the government or U.N. agencies, but from Global Witness, a London-based environmental NGO. While the World Bank has taken the lead in working with the government to improve its forest policy and enforcement capacity, it was Global Witness who put the state of logging in Cambodia on the international agenda. Similarly, it was the NGO community in Indonesia who monitored and reported on the location and extent of the forest fires in the summer of 1997 (Barber et al., 1999).

An important factor contributing to the success of these actors has been the availability of low cost information technology products (e.g., GPS receivers, compact video recorders, PC-based satellite image receivers, the Internet) that can be used to acquire and broadcast accurate information to a global audience. As the cost of hardware falls, even poorly funded government departments and NGOs can improve the quality and timeliness of their information.<sup>2</sup> Falling hardware prices will soon be matched by a 90 percent decrease in the cost of 30 m resolution Landsat TM data following the launch of Landsat 7 in April 1999. At \$600 for a 190 by 190 km image, these data will be affordable for almost any group that needs to monitor forest extent and condition over large areas. But it is easy to exaggerate the value of these technologies. Remote sensing can only be used to detect forest fires or large-scale clearing after the event. Remote sensing, in the absence of stronger field-based monitoring is therefore unlikely to make a significant contribution to improved law enforcement.

company to be awarded the concession for a 3-year interim period during which it can log a small area of the concession to generate revenue to pay for a forest management plan that incorporates the needs and interests of local communities. However, this approach is susceptible to conflict of interests and would need to be carefully adapted to suit local conditions.

### Concession Allocation

Most logging in tropical forests is carried out under short-term licenses awarded to private logging companies. Traditionally, concessions have been allocated administratively based on mutual agreement between the state and the company. This approach has tended to greatly undervalue the resource, which encourages inefficiency and generates lower tax revenues. The system is also susceptible to political pressure. The alternative approach is to allocate concessions by auction. The principle of an auction system is to let the market determine the value of the resource. In theory, auctions are transparent (because any qualified company can bid), objective (because the company, not the state, decides what price to pay for the concession), and economically efficient (because it favors those companies that can make the most money, and pay the most tax, from the concession). Introduction of an auction system in Indonesia was a precondition for structural adjustment lending by the World Bank and IMF.

### Forest Taxation

The level and type of taxation influences the way logging companies behave. The level of taxation in the region is generally low, meaning that concessionaires capture a large share of the potential value of the forest. Low taxes also encourage bad management because an undervalued raw material reduces the incentive to invest in better harvesting, and because the concessionaire will be in a hurry to extract as much timber as possible before the present favorable taxation system changes. The introduction of a significantly higher area tax is a key component of many forest taxation reforms. Area taxes are recognized as an instrument to increase revenue collection (because they are easy to collect) and as a regulatory tool (because they act as a disincentive to companies that want to acquire huge concessions for speculative purposes).

Area taxes are particularly powerful when coupled with an auction system because they force companies to reveal how much they consider the forest to be worth. This is particularly important in Southeast Asia because the companies usually have much better data on the commercial value of the forest than does the state. Under these conditions, an area tax-based auction system serves as a disclosure mechanism. Cameroon was one of the first countries to allocate concessions by auction. The results of the first round of auctions held in November 1997 showed a high willingness to pay by the industry, with many companies offering 3-4 times the minimum required bid of \$2 per hectare per year. Imperfect or asymmetric information therefore does not prevent the state

from getting a fair price for the forest.

### Performance Bonds

In the absence of regulation, loggers can be expected to ignore the negative environmental impacts of logging as they derive little or no financial gain from mitigating them. In response, governments have imposed a variety of logging regulations. Despite these efforts, much evidence indicates that logging practices throughout the tropics are highly damaging. Given the lack of empirical evidence of how logging companies respond to incentive-based measures, Boscolo and Vincent (1998) modeled the environmental and economic impacts of performance bonds, using forest inventory data from a permanent sample plot in Malaysia. The results of the model show that because logging a parcel of virgin forest is so profitable, renewability provides a powerful incentive for the logger to obey the law, even when concessions are very short. This could significantly reduce monitoring costs because even the threat of inspection encourages compliance, a finding that is important given the state's very weak monitoring capacity. But this threat only works if the logger believes that the concession will be terminated in the case of non-compliance. The incentive power of renewability thus depends on the state's commitment to enforce the law on a non-discretionary basis.

## 4. COMMUNITY-BASED LAW ENFORCEMENT

Despite expansive claims of ownership, governments exercise relatively little control over many forest areas. Few can pay, train, or maintain the forest department staff needed to survey, patrol, and manage the vast areas classified as public forest land effectively. In Indonesia, for example, a single forest officer is often responsible for 20,000 hectares of forest and is largely without transportation and other basic professional tools. Simply put, government agencies in the region do not have, and most likely will never have, the capacity and political will to manage and protect remaining natural forest. Unable to secure an equitable share of the benefits from the forests in which they dwell, many forest-dependent communities assert control over their forests by engaging in illegal logging, timber theft, arson, and other acts of defiance. In

Indonesia, most of forest "plundering" that has occurred since collapse of the Suharto regime has been carried out by local communities operating in collusion with the police and forest department officials (Kartodihardjo, 1999). During the 1988 crisis in Burma, government-managed eucalyptus fuelwood plantations were almost completely destroyed by the surrounding rural population.

Despite a history of mutual distrust and animosity between local communities and forestry officials, there have been remarkable changes in recent years in Asia in formal policies and programs supporting greater engagement of rural people in the management of public forests. Nepal and the Philippines began exploring community forest management policies nearly 20 years ago. By the late 1980s India began implementing joint forest management. Now China, Cambodia, Laos, Thailand, and Vietnam are experimenting with policies that involve communities in public forest management (AFN, 1997). In the Indian states of Orissa and West Bengal, where community forestry was first tested in the late 1970s, forest protection committees have successfully led the regeneration of forests and replication of such institutions in other villages. The committees have set limits on forest use by locals, and have set up patrols to protect against outside encroachment. Replication has been rapid. A single village created a forest protection committee in northern Orissa in the early 1980s and, with the encouragement of sympathetic forest officers, met with other villages to share information. The number of forest protection committees in the region grew from 8 in 1987 to 79 in 1993 (Poffenberger, 1994).

Engaging local communities in forest law enforcement makes sense because communities are often better placed than law enforcement officers to detect illegal forest exploitation by outsiders. The Philippines has the longest experience of community-based law enforcement. As part of a structural adjustment loan in 1992, the World Bank asked the government to create Multisectoral Forest Committees under the forest monitoring and enforcement conditionality. Committees were established at the village, province, region, and national levels, and include representatives from local communities, the forest department, police, customs, and other state agencies, and NGOs and civic groups. Different committees are responsible for law enforcement at different levels. For ex-



ample, village committees track activities in and around concessions, whereas provincial committees track shipments between provinces. The committees are backed by a legal team, paid for by the World Bank, which has prosecuted thousands of violators for forest crimes, including several mayors and well-connected businessmen. When apprehended, the violators have had their vehicles immediately confiscated, which serves as a strong deterrent.

The Philippine experience yields a number of lessons. First, the Multisectoral Forest Committees have stopped almost all large-scale illegal logging. The high probability of detection combined with immediate sanctions have made the costs of committing crimes greater than the perceived benefits. Second, the fact that the law has been applied fairly and indiscriminately makes it likely that the committees will continue functioning after the end of the World Bank loan, albeit at a lower level of intensity. Once funding stops, the committees will only receive logistical support from the state so that they maintain a degree of independence. Third, by implementing committees in all provinces, both with and without forest cover, the scope for leakage is reduced, whereby successful enforcement in one area simply displaces the problem elsewhere, with no net gain. Finally, the committees received strong support from the state.

A distinction needs to be made between prevention, detection, and suppression. Communities are best at preventing and detecting forest crimes, but once detected, it is the responsibility of the state's law enforcement agencies to suppress them. The Philippines experience is reflected in West Bengal where a review of the role of local communities in law enforcement showed that the lack of formal government recognition of their authority in the form of a letter, certificate, or identification card had undermined their ability to confront illegal forest use by non-members. It also showed that the failure of forest department officials to backup committee members during such confrontations had adversely affected morale and had been a source of resentment toward the department (Poffenberger and Singh, 1993).

Finally, in the Philippines, local communities have received strong support from domestic NGOs that have strengthened their capacity to promote their rights and claims and better address con-

flicts over forest resources. This support has involved innovative legal and policy research, lobbying of legislators and other government officials, on the ground initiatives by NGOs to disseminate information to forest communities about their legal rights to natural resources, and most important, actions by local communities to defend and assert their rights (Box 4).

## 5. FUTURE CHALLENGES

Despite these promising experiences, huge challenges remain before community-based forest law enforcement becomes standard practice. In many countries, local communities fear and resent the forest department as a paramilitary force that is quick to use repressive measures to restrict their access to the forest. In Indonesia, conflicts over forest resources have erupted in violence, and law enforcement activities by the State Forest Corporation often cause such intense resentment that forest rangers and guards are afraid to enter forest villages (Seymour, 1991). Moving from a situation in which communities and the forest department see each other with mistrust and animosity, to one in which they treat each other as partners, implies a fundamental shift in attitudes, particularly on the side of the state.

Traditionally-trained forestry officials are likely to be comfortable with production objectives (i.e., what and how much is produced), somewhat less comfortable with equity objectives (i.e., who benefits) and very uncomfortable with attempts to reallocate rights and responsibilities for forest management (i.e., who decides). Yet reallocating rights and responsibilities is essential if communities are to be effectively engaged in law enforcement. Experience to date, however, shows that communities have only been formally engaged in forest management when the remaining forest is highly degraded or has no commercial value, and civil society is strong enough to advocate for these changes (Seymour and Rutherford, 1990). In the Philippines, for example, the government only started to take tentative steps toward recognizing and registering ancestral domain claims in 1993, once all the accessible forest had been logged and as it came under increasing pressure from the country's vocal NGO community. Change in the Philippines was also triggered by a series of catastrophic floods and landslides allegedly caused by deforestation. This implies that current trends,

although promising, are neither broad-based nor reflect fundamental changes in government attitudes toward the forest and those who live in them.

Although many governments have enacted legislation granting communities the right to manage and benefit from their forest, they are extremely reluctant to recognize these rights, because once recognized, they cannot easily be revoked, reduced, or revised. As a result, progress toward community-based forest management has been slow. In Burma, for example, community forestry was recognized by the 1995 Forest Law, but anecdotal evidence suggests that villages have great difficulty in acquiring usufruct rights from the forest department (Brunner et al., 1998). It appears that the notion that villagers have rights, guaranteed by law, to control and benefit from their forests is fundamentally not supported by the present regime.

In Vietnam, the reluctance of the state to relinquish control explains why, six years after the introduction of the household allocation scheme, state forestry enterprises continue to play the leading role in forest management, despite the fact that the system was introduced in response to the failure of these enterprises to sustain productive forests. Under the household responsibility system, forests can only be contracted to households if the enterprise relinquishes its claim on the land. And if forest is managed for production purposes only, households have to compensate the enterprise for the value of the forest and sell forest products to the enterprise. Moreover, the procedures to acquire forest land are time-consuming, complex, and costly. As a result, three-quarters of forest land allocated to the end of 1996 was retained by state forestry enterprises (Morrison and Dubois, 1998). Because communities do not have the legal and political leverage required to negotiate management strategies, they must take what they are offered. Consequently, forest protection programs tend to be little more than short-term renewable (and cancelable) contract-based reforestation initiatives. The lack of community buy-in and the heavy administrative burden are fundamental flaws in the government's latest program to reforest 5 million hectares by 2010. Because the benefits will not necessarily accrue to the farmer, the proposal to pay them a few dollars a year for every hectare refor-

ested is unlikely to prove cost-effective.

Even in Thailand, which has a strong NGO community, progress has been slow. By mid-1997, Thailand was on the verge of passing progressive new legislation known as the Community Forestry Act. As a prelude and in response to pressures from Thai civil society, the government passed three cabinet resolutions in April 1997 that recognized the community-based property rights of forest occupants. In an effort to implement these resolutions and to gain final enactment of the Community Forestry Act, a new constitution was ratified in July 1997. But soon after the constitution came into effect, the government fell following the onset of the financial crisis. Looking for scapegoats, the new government stepped up the prosecution of forest farmers, and in June 1998 the cabinet canceled the April 1997 resolutions and enacted a new one. This resolution reaffirms the state's legal powers to identify and evaluate evidence of forest occupancy, and prohibits occupation of any critical watershed, even if occupation predates the land classification. All delineation of local communities legal claims has stopped (Lynch, 1998).

## 6. CONCLUSIONS

Since the colonial period, South and Southeast Asian countries have increasingly vested control of the region's forest in centralized resource management agencies. Legislation either ignored or barely recognized the customary rights of long-term occupants or indigenous communities. Today, accelerating deforestation indicates that these agencies are failing to manage forests in a sustainable manner. There is substantial evidence that for generations forest-dependent people have sustainably managed forest resources through community-based systems. That so many of these systems continue to function, albeit often in altered form and despite widespread rural migration, testifies to their efficacy and resilience. Moreover, there is strong evidence from India and the Philippines that when the state proactively engages local communities as partners in law enforcement, the results have been positive. Given the undeniable failure of the state to control deforestation, and the continued proliferation of forest crimes, engaging local communities simply makes good sense. But effectively engaging communities in forest law enforcement implies significant policy and institu-

tional changes that include, critically, state institutions that are prepared to prosecute violators without prejudice and the introduction of forest policies that favor efficiency and conservation in the logging sector. These changes imply short-term political costs.

Experience to date suggests the only when the forest has lost all its commercial value is the state prepared to relinquish control over the forest. Thus, while the positive results from community-based law enforcement are encouraging, they beg the question: why not sooner? This question is critical in Burma, Laos, and Cambodia, which have retained most of their original natural forest, because it suggests that if these states fail to implement reforms and fail to engage local communities, their forests risk following the same trajectory as in China, Thailand, and Vietnam.

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<sup>2</sup> Falling hardware prices will soon be matched by a 90 percent decrease in the cost of 30 m resolution Landsat TM data after the launch of Landsat 7 in April 1999. At \$600 for a 190 by 190 km image, these data will be affordable for almost any group that needs to monitor forest extent and condition over large areas.



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## Resources Policy Support Initiative

The Resources Policy Support Initiative (REPSI) is a project to improve the basis for decision-making on development and natural resource use in the uplands of mainland South-east Asia. REPSI aims to provide policy-makers with timely options for sustainable upland management, and to strengthen local organizations' capacity for providing such analysis, through independent research, outreach and regional exchange.

REPSI is a collaboration between the World Resources Institute and many local and international organizations. The project focuses on Vietnam, Laos, Thailand and Yunnan, China, and has recently expanded its research into Cambodia. REPSI has a field-based manager in Chiang Mai, Thailand and a project manager in Washington, DC.



### About the Working Paper Series

This paper is one of a series of REPSI “working papers” that seeks to illuminate the cutting-edge issues, challenges and opportunities of natural resource management in the region's uplands. The working papers are written by researchers in and outside of the region—and often represent collaborations between the two. It is hoped these papers will promote discussions among government decision-makers, researchers and non-governmental organizations about sustainable development options in the coming decade.

Upcoming releases in the working paper series will address the three themes listed at right. We welcome papers or small research proposals from organizations in Laos, Vietnam, Thailand and Yunnan for possible inclusion in the series. If you are undertaking research that relates closely to REPSI's activities, please contact our regional office in Chiang Mai or our Washington, DC headquarters for more information. We also look forward to receiving your feedback on the papers themselves.

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In REPSI's current phase (1999-2001), the project is focusing its policy analysis, regional exchange, and dialogue activities on three major themes:

Local institutions, livelihoods and resource management: How can governments achieve the best fit between the level of government authority for resource management and the various scales of resource competition. How can they allow the strengths of indigenous natural management regimes to flourish, while accommodating the weaknesses?

Regional dynamics and transboundary issues: How are key investment decisions made about the development of the Mekong River basin? How can institutional mechanisms and processes for regional development be improved to achieve more equitable and environmentally sustainable outcomes?

A third set of activities under REPSI aims to improve the data platforms needed to understand environmental change in the region. Typically, GIS analysis and collection of existing biophysical data is undertaken in tandem with the institutional and political economy analyses described above.





## ABOUT WRI

The World Resources Institute's (WRI's) mission is to move human society to live in ways that protect Earth's environment and its capacity to provide for the needs and aspirations of current and future generations. Because people are inspired by ideas, empowered by knowledge, and moved to change by greater understanding, WRI provides and helps other institutions provide objective information and practical proposals for policy and institutional change that will foster environmentally sound, socially equitable development.

WRI's particular concerns are with globally significant environmental problems and their interaction with economic development and social equity at all levels. WRI focuses on: the global commons, where the cumulative weight of human activities is undermining the integrity of environmental systems; U.S. policies, since the United States is the world's largest producer, consumer, and polluter, as well as a trend-setter for many nations; and developing countries, where natural resource deterioration is dimming development prospects and swelling the ranks of the poor and hungry.

The REPSI project falls under WRI's Institutions and Governance Program (IGP). This program addresses the social and political dimensions of environmental challenges, and explores the equity implications of alternative environmental management regimes.

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