Hidden Faces in the Forest:
A Twenty-First Century Challenge for Tropical Asia

by

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International concern about tropical and subtropical deforestation, which is occurring at a rate of 10 million hectares a year, centers largely on its role in global warming and biodiversity losses. But while less discussed than the strictly environmental consequences of logging and forest conversion in developing countries, the toll of deforestation on the people is equal or greater importance. Deforestation brings bitter poverty to millions of forest dwellers, degrades agricultural lands, interferes with hydroelectric dams and other infrastructure projects, and causes social tensions that may disrupt national stability and development. Not surprisingly, those most directly affected by deforestation, indigenous people and long-term migrants who love in the area, also hold the key to managing forests sustainability. However, making use of the capacity and commitment of these communities depends on the ability of national governments and international donors to realize a paradigm shift in their understanding of the causes of and responses to forest degradation.

The dangers linked to deforestation remain especially acute in the developing countries of south and Southeast Asia. Despite the region's rapid industrialization and "trigger" image as an emerging middle-class market for global business community, upwards of 70 percent of its national populations still live in rural areas spanning the equatorial belt from India to the Philippines. These villagers depend for their well-being not so much on world trade as on the integrity of nearby land, water, soils, and forests.

Prominent among these rural Asians 200 million indigenous people, most of them ethnic minorities such as the Hmong of Laos, the Penan of Malaysia, and the Dayak tribes of Indonesia, who still live in and primarily rely upon the forests that once blanketed the region.[1] Their usage of the forest for fuel, building material, and an assortment of other products from resins to rattan to mushrooms, has always been heavy. For hundreds and in some instances thousands of years, these tribes people were careful forest stewards, managing their principal resource with little outside interference and subsisting in relative comfort and security. Today, however the forests around them are fast disappearing. While Thailand was 54 percent forested in 1961, it is now a timber importer. The Philippines, with 80 percent forest cover in 1900, now is only some 20 percent forested, and only 800,000 hectare of that is virgin forest. In Malaysia and Indonesia, still relatively well endowed, forest clearing is accelerating.[2] During the 1980's, Asia's rate of deforestation increased by more than 50 percent.[3]

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[1] Figure, from data gathered by Survival International, a human rights organization, as cited in Lynch, Owen J., *Securing Community-Based Tenurial Rights in the Tropical Forests of Asia.* Washington, DC, Center for International Environment & Development, World Resource Institute, November 1992.

[2] Porter, Gareth. "Managing Renewable Resources in Southeast Asia: The Problem of Deforestation." Paper of Deforestation." Paper prepared for the conference, *Southeast Asia: Economic Experience and Prospects,* Washington, DC, November 1993.

[3] United Nations Food and Agriculture Organization, " Second Interim Report on the State of Tropical Forests," presented at the *10th World Forestry Conference*, Paris, September 1991.

Pressure on these woodlands dates from the mid-19th century. For over 100 years, forest managers viewed forests as a resource to be exploited. Colonial governments-the Dutch in Indonesia, the British in Malaysia and India, the Spanish in the Philippines-successfully sought the transfer of forest lands from community to national control under the jurisdiction of newly created forestry agencies. Staring in the mid-1960's newly independent Asian states and some aid donors likewise saw harvesting the forest as an important way to generate cash and underwrite economic growth. Often political pressure, government foresters gave timber exploitation rights to commercial firms at highly subsidized rates. Short-term leases, inappropriate technologies, and undervaluation of contact charges led to forest "mining" practices.

While timber operations throughout tropical Asia have enriched a few entrepreneurs with good political connection, they have hardly swelled national coffers. According to a recent World Bank report, natural forest cover in Indonesia declined from 152 million hectares in 1950 to 92 million hectares of good forest in 1989, under aggressive logging policies. Yet over that period, government income from timber tariffs and royalties never exceeded 0.1 percent of the Indonesian government's annual budget.[4] Deforestation's environmental and social consequences have, on the other hand, been severe. Reduced vegetation cover in upper watersheds ahs heightened the incidence of erosion, flooding, and crop losses. Though intact rainforest rarely burns, some of the most destructive forest fires in recorded human history have occurred in the logged regions of Kalimantan and Sumatra in Indonesia. In 1981-83, the largest recorded fire in human history occurred in Kalimantan, affecting an estimated 3.6 million hectares. Mark Leighton, a tropical forestry ecologist who studied the Kalimantan fires, reported that the additional heat generated from residue in loggedover secondary forests increases the attrition of full-grown canopy trees from 10 percent in primary forests to nearly 90 percent. From May to October 1994, fires burned over an area of 5.11 million hectares of forest, bush, and grassland.

The problem of deforestation is often compounded by the arrival, via timber hauling roads, of migrants from the lowlands after contact logging operations have ended. Over the past several decades many migrants have moved into tropical Asia's already overcrowded cities in search of security and economic opportunity. But as urban centers have also migrated from traditional lowland farming areas to the upland forest frontiers. The agricultural methods of migrant farmers often prove unsuitable to hilly highland conditions and accelerate the rate of environmental degradation. In the Philippines, for example, most internal migration was from rural to urban areas until national recession and structural adjustment programs contracted the economy in the 1980's Since then, the lack of urban work and population pressure have driven more and more migrants up the hillsides, where in some areas they now constitute 70 percent of the regional population.[5]

As commercial exploitation and population pressures increase and traditional forest management systems are weakened, open access forests have been further degraded as a result of fuelwood collecting and livestock grazing. India now consumes over 262 million cubic meters of fuelwood and timber annually, 80 to 90 percent of which is burned in rural areas. Wood demands, which will likely double in the coming

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[4] *Indonesian Forest Sector Review*. Jakarta: World Bank, April 1993.

[5] Cruz, Maria Concepcion, Carrie A. Meyer, Robert Repetto and Richard Woodward, *Environmental Growth, Poverty, and Environmental Stress*. Washington, DC: World Resource Institute, 1992.

thirty years, are already estimated to exceed the sustainable yield by up to 800 percent.[6] When stems, branches, and leaves become scarce, the roots that act as anchors for the soil are dug up and removed, thus accelerating topsoil erosion and the final biological collapse of the forest.

Throughout the region, deforestation and rapid population growth in the highlands have devastating consequences for impoverished and destabilized traditional forest users. In East Kalimantan, the Benuaq Dayak have managed the fragile forest soils for generations, using beneficially long fallows systems and sustainable forest practices to harvest forest products. These lands are now threatened by water pollution from nearby coal mines and the actions of newly-arrived migrant farmers who have already abandoned the degraded logged kilometers further up the Mahakam River from Samarinda, eight logging companies have been trampling the ancestral lands of the Wehea Dayaks for the past 20 years. Most of the commercial timber has already been removed. Pak Biteq, a tribal leader, feels strongly that it is time for timber companies to leave and the forest to be placed under the permanent control of the community. Other indigenous groups in Kalimantan have stopped talking and begun burning logging company base camps in an attempt to slow the destruction of their environment.[7]

Not only uplanders are affected. Reduced vegetation cover in upper watershed heightens the incidence of erosion and flooding, disrupting farming in traditionally productive river-basin lowlands. Degradation along seacoasts due to the siltation of waterways depletes fisheries and coastal spawning grounds.

The recent completion of Hoa Binh dam on Vietnam's Black River provides a stark example of how deforestation's effects reach far beyond immediately afflicted communities. The Soviet financed dam took 14 years to complete and now supplies 50 percent of the nation's electrical power. Deforestation in the uplands areas sends huge sediment loads down the Mekong, red, and Black Rivers; already the life expectancy of the Hoa Binh has been lowered from 100 years to 50 years due to upper watershed erosion. In the Philippines, the disruption of upland watersheds, many of which have been commercially logged and cleared by migrants, have created impediments to national economic development. Electrical power shortages tracing back to hydrological changes in the watersheds of the Sierra Mountains that run along the eastern spine of Luzon Island, led to perpetual brown-outs in the capital and compelled fast-track construction of additional plants at significant social and environmental costs.

Such environmental factors affect the behavior of foreign investors and suppliers of foreign exchange. In the Philippines, insurgency movements built on discontent in the uplands, which were active in the 1970's and early 1980's, scared away potential investors who sought opportunities in Asia. For all these reasons, the stability of equatorial Asia's developing nations will remain, to a degree not widely recognized, based on their ability to maintain a decent agrarian lifestyle for most of their citizens. With the majority of the world's population and its most rapid rates of economic growth, dynamic tropical Asia will continue to play an expanding role in shaping global stability in the twenty-first century. But if this generally promising outlook is not to turn sour for environmental reasons, the husbanding and sustainable management of rural resources,

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[6] See Poffenberger and McGean (eds.) *Village Voices: Forest Choices*.

[7] Reuters Wire Service report, September 7 and 21, 1994, Chapter 9, pp.13-14.

forests in particular, must replace the uncontrolled growth that increases income disparities and the likelihood of conflict.

Until recent years, funds that international aid agencies loaned or gave to tropical Asia often deepened the region's natural-resource depletion problems. Billions were allocated to large dams to provide hydropower and water for irrigation schemes, and to support infrastructure development and agriculture resettlement efforts. Aid agencies from the World Bank to the Us Agency for International Development (USIAD) preferred commercial logging and tree-farming projects over alternative eco-level programs to manage forests and protect their biodiversity. Since the mid-1980's, however, both the aid agencies and private-sector tropical timber traders have shifted towards more conversation and community-minded forestry policies. What follows are some examples of past and current efforts, initiated in part to address non-governmental sound projects.

After a succession of environmental policy reviews, the World Bank in 1991 issued a new Forest Policy paper acknowledging that its earlier lending "has sometimes had an undesirable impact on forest resources" and pledging sharply revised approaches to forest policy, including a blanket prohibition on support for commercial logging in primary tropical moist forests. Between 1993 and 1996, as part of a major worldwide shift towards environmentally and socially beneficial policies, the Bank targeted $660 million a year in Asia lending to " conservation and management of forests, soil, and natural resources." Further support has come from the experimental, world Bank-affiliated Global Environmental Fund (GEF), which in its 1992-95 pilot phase allocated an additional $25 million to protected areas in Laos and the Philippines.[8]

Starting in the mid-1980s, an Untied Nations-led coalition of public and private institutions launched a major effort to stem forest attrition through the preparation of global Tropical Forest Action Plan (TEAP) that would emerge from national planning components. This effort eventually collapsed after years of bickering, though it did lead to the creation of many draft management plans. Due to the top-down nature of the planning process and the influence of forestry consultants with tropical orientation, many of the plans promote traditional forestry concepts such as industrial forest plantations. Some constructive national planning and consciousness raising has also been accomplished, but the failure of these plans to adequately address the roots of deforestation calls into question the value of national and international-level planning that fails to consider the role of forest dwelling communities.

The International Tropical Timber Organization (ITTO) began to explore ways to bring tighter control to the international timber-products trade. Repeatedly this association's members, representing 32 timber consuming nations, have reaffirmed their commitment to trade only in timber from "sustainably managed sources" by the year 2000. Well before the United Nations' 1992 Earth Summit, several nations, led by the US, began pressing for a Forest Convention to be presented in Rio along with new treaties on biological diversity and global climate change. Sharp opposition from developing countries in the tropics, many of whose spokespeople alleged the need to

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[8] World Bank data quoted *in Review of Implementation of the Forest Sector Policy.* Washington, DC: Natural Resource and Agricultural Policies Divisions, Agriculture and Natural Resources Department, The World Bank, December 1994, p. 17.

protect their national sovereignty, reduced the Forest Convention to non-binding statement of "forest principles." While vague and controversial, this declaration was ratifies in Rio by close to 180 nations and represents a springboard for ongoing discourse about future forest policy.

Since 1992 the UN system has addresses forest issues through the secretariat formed to administer the Convention on Biological Diversity and through another creation of Rio, the United Nations Commission on Sustainable Development (CSD). Meeting in April 1995, the CSD continued the search for a grand strategy to halt global forest loss and degradation. At this meeting a separate Intergovernmental panel on Forests was formed to carry on these discussions at a high level, and report back to the CSD in 1997. Some official and unofficial participants in its deliberations favor the creation of a forest protocol within the biodiversity treaty to replace the non-binding forest principles. Others argue for a freestanding forests' treaty. Still others, persuaded that treaties tend to build bureaucracies more than progress, prefer greater UN attention to forest issues via the 103 national sustainable development commissions functioning under the umbrella of Agenda 21, the broad blue print for national actions that was Rio's principal accomplishment. Forests received particular emphasis in this document. It calls for global effort, costing $3.1 billion a year, to manage them sustainably.[9]

All foregoing undergoes the careful scrutiny of small but resolute group of non-governmental organizations (NGOs) that are determined to play an active role in forest policy-making. The Mexico-based Forest Stewardship Council (FSO), the Global Forest Policy Project (a coalition of US environmental organizations), and the International Society of Tropical Foresters rank among the NGOS pressing for firmer commitments from suppliers and governments. Such groups now propose not bans or boycotts, but a variety of non-confrontational information and eco-labeling programs to be implemented in cooperation with international agencies and the governments of producer and consumer nations. Chief among these is the search for internationally agreed-upon "criteria and indicators" that would ensure a transition to a timber trade based upon certifies, sustainably managed sources.

There are reasons to question weather such approaches, laudable as some are, will work well enough to arrest the continuing loss of tropical Asia's forest cover. For all the World Bank's expressed good faith, the institution may be better at announcing policies than at managing them or measuring results. After spending US $1.5 billion on forestry projects in Asia between 1979 and 1990, the Bank admits that its actions "have had a negligible impact on borrower's forestry sectors as a whole." Former World Bank President Robert McNamara, seeking in vain for technical advances or macro-economic policy changes that might effect a change for the better, remains gloomy" "I know of no one who predicts our present course-either in India or in the world-will lead to 'sustainable forest management' over the next decade.[10]

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[9] Report of the Untied Nations Secretary General to the United Nations Commission on Sustainable Development, Third Session. New York: United Nations, December 21, 1994.

[10] Robert S. McNamara, *A Global Population Policy to Advance Human Development in the 21st Century with Particular Reference to India*. Presented at the Rajiv Ghandi Memorial Lecture, New Delhi, May 23 1992, pp.11-12.

Certification schemes are no more effective than certifiers who may be appointed by government or commercial entities with little genuine interest in bringing about change. Until wide agreement has been reached on what constitutes sustainability, pledges to achieve it will need to be taken with a grain of salt. Most tellingly, since nearly 80 percent of all timber cut is consumed within the country of origin,[11] what happens remains beyond the easy reach of the Untied Nations and other international institutions.

The future thus rests largely in the hands of national policy-makers and practitioners in countries that have tropical forests. At this level, the Asian record is also spotty. Simply declaring logging illegal has been ineffective in Thailand: some ignore the ban others slip across the border to strip forests in Burma and Cambodia. In several countries, efforts to stabilize natural forests have also failed to address fundamental conflicts over tenure and usufruct security. State agencies lack the human resources to ensure the careful use and protection of critical forests and upland watersheds. Indigenous communities' rights have been steadily undermined and local management institutions disempowered. This prevalent tenurial vacuum is primarily a social and political problem that will not be solved by capital inputs or technical innovations.

Commercial interests throughout tropical Asia have lacked incentives to manage for longer term goals. While policy analysts suggest that short-term leases are a disincentive for long-term management, many Asian leaseholders know that their contracts flow from transitory political connections and logically seek to maximize their short term profits. Yet the regions future timber, pulp and paper raw material requirements will likely be met by private sector plantation operators growing trees as commercial, agricultural commodities on private lands. This is already happening widely in Thailand and India. High timber and pulp prices, increasing as natural timber subsides are removed and natural reserves are depleted, will encourage farmers to plant fast growing tree species without outside subsides. Given the hundreds of millions of hectares of degraded forest land in the Asia region, multilateral development bank strategies for funding exotic tree plantations are financially prohibitive, present immense management problems, and have negative implications for biodiversity.

If progress toward sounder practices faces many obstacles at the global and at the national level, all is not lost. In the uplands of the Asian tropics, a more promising and far less expensive approach is to empower local communities to protect and benefit from the public forests near where they live. Under effective access controls, most of these forest lands will regenerate rapidly, yielding fuelwood, fodder, non-timber forestry products, and timber for local needs. The costs of natural regeneration are generally estimated to be 1 to 5 percent of those for establishing tree plantations. Community protection vests rights and responsibilities locally, while plantations tend to reinforce the power of government bureaucracies or commercial firms.

Moreover, the efficacy of community-based management is already being demonstrated by several telling Asian examples. In eastern India, uncontrolled deforestation after the country gained independence in 1947 denuded tens of millions of hectares of natural forests. Despite investments of over one billion dollars by the World

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[11] According to figures assembled by the World Resource Institute and published in Johnson, Nels and Bruce Cabarle, *Surviving the Cut: Natural Forest Management in the Humid tropics.* Washington, DC: World Resources Institute, 1993.

Bank, bilateral donors, and the government of India in Plantation projects during the 1980s, natural forests continue to shrink. However, although unnoticed by developers, despairing villagers in Southeast Bengal, south Bihar and Orissa began to organize volunteer forest protection groups as long ago as the late 1970s. Patrolling at night with poles and bows and arrows, they began to control grazing and cutting with remarkable results. In many areas, coppiced tree trunks began sending up new shoots at a rate of 3 to 6 feet per year.

Over the past decade several million hectares of badly degraded sal *(Shorea robusta)* scrub, have emerged as dense strands of young regenerating forests. Recent studies indicate that village protection also leads to enhanced biodiversity. One researcher reported the presence of over 200 plant species in a study site within five years of protection efforts. Over 70 percent of these plants are used by tribal villagers for food, fodder, fuel, medicine, construction, agriculture tools and ritual activities.

In Kudda hill tract, 10 kilometers south of Jamshedpur, India's steel capital , 34 villages now protect most of the upland forest with little help from the Bihar forest Department. According to Suren Singh Sardar, an 80 year old tribal elder, by 1968 the forest was in very bad condition. Most standing tress had been felled, while roots were being extracted for fuelwood, revealing a stony ground cove. Nunaram Mardi of Bithardari village was one of the early leaders of the forest protection movement. Mardi is a traditional medicine practitioner who spends time collecting herbs in the forest and walking to distant villages to provide them with his services. When asked why he began encouraging his neighbors to protect the forests he explained:

> One day my friends and I were walking from Marang Baru to Dulthihill. On the way we saw a mother monkey running with her child. She wanted to sit on a stone, but the stone was too hot. She was forced to keep running. We saw a dove making her nest on a bush. We realized that the monkey was running to protect her child from the hot sun. But there was not tree to give her shelter or provide a place for the dove to build a nest. So we came back to our village and called a meeting. We described to our villagers what we had seen on our walk. In that meeting we decided to protect the forest for our own sake, as well as that of the wild animals.

Another villager reported that he protected the forest because "We are *Adivasi* (tribals). We are totally dependant on the forest. Destroying the forest means the destruction of Adivasi culture." Across India's central states, where tribal concentrations, forest lands and poverty levels are high, ten thousand villages now manage adjacent lands in partnership with government foresters who were once their antagonists. Community forest protection efforts, which began informally in the 1970s had, by 1995, been recognized officially by most Indian states.

In northern Thailand, grass-root watershed protection movements are also spreading, sometimes encouraged by government programs and in other places through tribal organizations. According to Uncle Chan, a Karen hill farmer and community leader "Before this program began, forest use in the Nam Sa watershed was out control." Recently, the forum of 10 villages that protect the sub-watershed have banned the use of chain saws, placed restrictions on pesticide use, and shifted extensive forest clearing for agriculture away from critical slopes and ridge tops. Uncle Chan and his family live just a

"dog's bark" away from the main settlement. The 64 year old began working with his Hmong and Lisu neighbors as well as Chiang Mai University social scientists, the Royal Forest Department and other government officials mounting environmental problems. The villagers were increasingly concerned about declining stream flows and began to link them to upland forest clearing. They also suspected that the heavy use of pesticides on European vegetable crops, which had been substituted for opium flowers, was killing the fish in their streams and polluting drinking and bathing water. Just as India, their rural environment was deteriorating and they recognized the need to assume tighter management. Studies of local land use problems and facilitated by resident community organizers, led to the emergence of new forms of cooperation and problem solving.

While outside mediators played a significant role in helping Nams Sa's villagers solve their resource problems, hill tribes in other parts of northern Thailand are organizing on their own. On the eastern side of the Salween River dividing Burma and Thailand, Karen and Hmong tribal communities began to discuss population pressures and land use problems after land use conflicts resulted in the deaths of several local leaders. Through indigenous Karen tribal councils involving dozens of hill communities, new inter-tribal agreements are emerging. These agreements restrict forest clearing for shifting cultivation and forbid villagers from establishing farm plots on erosion-prone, upper forest slopes.

As in India, the Thai government has not opposed such community actions. Uncle Chan recently appeared on a national television talk show, and prime Minister Chuan was scheduled to visit the area early in 1995. While most bureaucrats tend to resists the idea of transferring state lands to communities, it may be a process that is increasingly difficult to oppose. The Chuan administration's support for land reform recently encountered trouble when it was revealed that politically well-connected businessmen were manipulating the program to gain control of valuable property n the tourist island of Phuket. The subsequent uproar nearly toppled the government.[12]

While India's experience suggest that an absence of government programs and intervention may have assisted communities to take action, the reverse is true in China, where privatization with a commercial bias is rapidly gaining acceptability and communal management systems are threatened. In one village near Kunming in Yunnan Province, changing policies, commercial opportunities, and altered political and social controls appear to have resulted in accelerated and uncontrolled logging in the township's upper forests. Older villagers lament the loss of their pine trees that generated 400 kgs. Of nuts per household annually and ensured a stable water supply. But noted one of them: "What can we do? We are surrounded by four other villages and they have started logging the forest. If we don't cut too, we will get nothing." To avoid conflicts with local authorities who only nominally attempt to enforce existing regulations, villagers do all their logging and timber hauling at night. Over the past three years, they report, three-quarters of trees on the mountain have been felled. One young villager stated that privatization would lead only to continued deforestation. With better leadership, he added, the community could reestablish effective controls over forest resources.

In Vietnam, too, privatization or contract leasing of state forests is under consideration and may affect community-based resource management practices. Planners see this as a strategy to unleash entrepreneurial drive. Two hundred and fifty kilometers

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[12] "Dark Days for Chuan's Shining Gem." *The Nation*, December 4, 1994. P.B3.

from Hanoi, up the Black River, it is hard to see how this policy might be implemented. With 29 ethnic minority groups practicing diverse forms of resources use, primarily subsistence based, the commercial take-off appears to be distant. Of more immediate importance to Thai and Hmong communities is the clarification of land rights with local commune and district governments.

Ban tat, a Thai village in Yen Chau District has traditional system of forest protection under the leadership of older men known as Jompa (forest observers). The Jompa were responsible for overseeing forest use by ensuring the strict protection of upper watershed forests, designating production forests and allocating selective cutting rights for housing and tools, and mobilizing the community to control forest fries. The Jompa system appears to have fallen out of use in recent decades as the authority of the commune has been extended over forest resources.

According to Lo Van Beo, the headman of Ban tat, "We need more Jompa. The last Jompa was Mr. Quang Van Hien, born in 1904, and since he died we have had no new Jompa." Beo notes that before 1992 each village made their own forest use rules. He suggested that anew Jompa be chosen and that each household should assign one member for forst protection and management activities. Lo Van Lai, one of the oldest men in ban Tat, echoed the headman's sentiments. "Most importantly," he said, "we must highly value forest protection, and our village needs to promote this. We need to focus on the benefits of forest protection to local people. We need to recognize the Jompa system with the support to the commune. As a second measure, we need to identify on a simple map forests in need of protection and those we could use."

From such modest beginnings, as in the northern Thailand example, community forestry projects in Asia's tropics tend to scale up, often with little or no financial support from any source. As Pat Dugan, A Filipino forester who spent twenty years managing a timber concession, told National Public Radio:

> Forests have been managed under this 'big is beautiful' concept with…government and large corporations being the 'proper' managers of forests. We have all come to realize that it just hasn't worked. What we're finding out is that a lot of the forest practices of these so-called primitive people are in fact extremely sophisticated and a lot more sensible than what you try to apply from a modern perspective.

He notes that in the Philippines rural communities are acting increasingly independently.

> This sense of empowerment, this sense of belonging… 'this (forest) is mine already, it doesn't belong to fellows in Manila or big investors from Cebu or Hong Kong. This is ours, this is my turf and I'm going to take care of it'… that's quite important for political and social stability, and it seems to be growing.

Currently, communities are managing five percent of the Philippines' forests. The national twenty-five year master plan calls for turning over half the nation's forests to community management. Even in complex and bureaucratic India, the trend toward community management is slowly gaining strengths. Arvind Khare, a leader of the national Joint Forest Management, says: "We should quickly get to a critical mass where

you put so much of the forest under community management systems that the process become irreversible." He estimates that 250 million poor villagers are dependant on generally degrading forests, and laments that while the Government of India are encouraging decentralized management, it is often done reluctantly and with resistance from forest departments whose 100-year traditions of control will not be easily overturned. Ajit Banerjee, a forester who pioneered much of the community management work in West Bengal and later worked for the World Bank, predicts that such opposition will continue for at least another 15 years. But the year 2030, he estimates, much of the county's watershed will be under local management and stabilized.

Initiatives that foster community participation have not been part of the traditional development paradigm. Typically, large forestry loans have been allocated to large bureaucracies in order to meet technical targets that often bear only limited relationships to the political and institutional forces that drive deforestation. Sometimes, the forest sector merely serves as a disguise for straightforward balance of payment lending. While it is now fashionable for international aid donors and UN agencies, not to speak of NGO's, to profess their belief in the importance of participatory grassroots efforts, particularly those that empower women, action on the ground still too often fails to support the rhetoric. Even today, the World Bank admits of its forest sector lending: "participation in forest decision making remains far from adequate and the interests of many stakeholders are still neglected."[13] Within nations, for all the promise of the mechanisms being established to implement the UN's Agenda 21, lip service to the enthusiastic endorsement and follow-through.

For all their appeal, tropical Asian community forestry schemes will count for little on large national checkerboards unless these attitudes change and real commitment begins to flow from above. Ironically, such grassroots efforts frequently require little or no outside capital or technical assistance. Yet, in places like eastern India, they are achieving results where millions of dollars of external funding, along with application of new technologies and policy instruments, have failed to dent the problem. It is critical that national forest and agriculture departments and Agenda 21 implementation committees act, in conjunction with support from the international aid communities, to respond to the challenge of rural resource management, and to support the concerted efforts of millions of rural people to stabilize an environment essential to their survival and the security of their national. Rural resource users are the hidden faces behind a subtle, but potentially revolutionary shift in the control of forest resources in Asia, to which policy-makers and aid lenders would do well to pay keener attention. Little in tropical Asian development is more difficult, more important, or more costly.

[13] *Review of Implementation of the Forest Sector Policy*. Washington, DC, The World Bank, December 1994, p. vi.