

**COMMUNITY-BASED TENURIAL STRATEGIES
FOR PROMOTING FOREST CONSERVATION AND DEVELOPMENT
IN SOUTH AND SOUTHEAST ASIA**

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Introduction

If there is a solution to the ever more serious problem of tropical deforestation in South and Southeast Asia, in many areas it lies among the large number of people living in "public" forest zones. Forest dwellers can and must play a role in any credible efforts to stop deforestation and to promote afforestation. Their involvement can be best promoted by, among other things, creating or reinforcing, community-based short- and long-term tenurial incentives for sustainably managing natural resources. At present, however, "the political will and capacity to begin transferring authority to forest villages remains limited."¹

Innovative, community-based tenurial strategies which promote conservation and sustainable development in areas which are still forested are urgently needed, especially in regards to indigenous and other long-term occupants. Tens of millions of indigenous and tribal people have resided within tropical forests for hundreds, and in some instances, thousands of years. Yet, except for Papua New Guinea and other Pacific Island nations, undocumented

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indigenous territorial rights, including fishing and water rights, are seldom acknowledged in any meaningful way. This situation persists despite a growing body of anthropological literature which demonstrates that many forest-dependent peoples possess local knowledge bases and conservation ethics which are well suited for sustainably managing local resources.²

Most indigenous and tribal people in South and Southeast Asia also still rely on community-based, i.e., common property, systems of resource management. Acknowledging the value and legitimacy of these systems will be a crucial and complementary component of any viable effort to conserve and develop the forest resources of South and Southeast Asia in an equitable and sustainable fashion. As the noted Indian legal scholar, Chhatrapati Singh, observed "unless we tackle issues concerning the inequitable distribution of common property resources [which overlap with state forest land] and the benefits arising from them, environmental and ecological problems cannot be solved."³

Some national governments and international development agencies in South and Southeast Asia have begun to respond positively to these insights and developmental imperatives, and many of these responses are described in this paper. Nevertheless, with a few notable exceptions such as in West Bengal and some other Indian states, most rural peoples in South and Southeast Asian countries continue to have little, if any, influence over the formation and development of national laws and policies, including

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those which concern their cultures and the natural resources they depend on to live.

Issues concerning forests and tenure were addressed during May, 1990 by fifty professionals gathered in Bangkok to discuss "Agroforestry in the Asia-Pacific Region." The participants "emphasized that tenurial reforms and farmers rights to use the trees were the major constraints in agroforestry." They added that although this has been "known for long" there were, as yet, "no significant institutional reforms to modify tenurial laws and procedures in favor of those practicing agroforestry."⁴

Even the presence of many forest dwellers is still not acknowledged by national bureaucracies which possess legal jurisdiction over land and forest resources.⁵ Forest dwellers whose presence is acknowledged are almost always indiscriminately labeled as destroyers of forest resources. They are also usually considered, regardless of their length of occupancy, to be squatters illegally using state-owned resources.

The end result is that tens of millions of people residing in South and Southeast Asian forest zones live under a constant threat of being arbitrarily displaced and/or economically marginalized, oftentimes with state sanction. The threat ripens into "legal" eviction when indigenous territories and migrant settlements are overlaid with commercial concessions to extract or control natural resources.⁶

At the same time, international development and policy

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institutions continue to experience difficulties in responding to the challenges and opportunities posed by tenurial and management issues in ecologically fragile areas. National laws and policies concerning the allocation of legal rights to natural resources are still largely controlled by political and economic elites who profit from the status quo.⁷

This paper examines various legal and policy issues concerning the community-based tenurial rights of forest dwellers in South and Southeast Asia. Section I estimates, in broad terms, the number of people comprising forest dependent constituencies, especially those consisting of indigenous and tribal peoples.

Section II explains why it is imperative in the effort to arrest tropical deforestation and promote improved natural resource management that national governments address community-based tenurial issues, either by recognizing, delineating and protecting indigenous territorial rights, or at least granting some type of social forestry tenurial right. Since community-based, i.e., common property, systems of resource management are usually operative within the territories of long-term forest dwellers, Section III describes the nature and importance of these systems and clarifies some related tenurial issues.

Section VI details a strategy for recognizing and delineating indigenous territorial rights and briefly describes the ongoing and increasingly successful campaign in the Philippines to promote official delineation of ancestral domains. It also describes the

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community-based tenurial components of existing and prospective social forestry programs in West Bengal, India, and the Philippines. Lastly, opportunities for additional research and analysis concerning community-based tenurial rights within classified forest zones and related issues are listed.

I. Forest Dependent Constituencies

Concurrent with the need to develop legal strategies for recognizing and granting tenurial rights on behalf of forest dwellers is the need to know more about the target constituencies. Remarkably, there are still almost no complete, accurate and up-to-date country specific demographic and related social science studies of rural people living in or directly dependent on forest, marine and pastoral areas. Globally, they may number over 500 million.⁸ This estimate includes approximately 200 million indigenous and tribal people, many of whom reside in South and Southeast Asia.⁹

The total number of people estimated to be (a) directly dependent on tropical forests,¹⁰ or (b) living on land classified as "public" forest, in Asian countries numbers in the hundreds of millions. The demographic dearth makes it extremely difficult, and in some cases virtually impossible, to come up with any precise figures. Admittedly rough, but nevertheless reasonable estimates made by non-government individuals and organizations include the following:

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India: (a) 275 million; (b) 100 million;¹¹

Indonesia: (a) ???; (b) 40 - 71 million;¹²

Philippines: (a) 25 - 30 million (b) 20 million;¹³

Thailand: (a) 20 - 30 million; (b) 14 - 16 million;¹⁴

Myanmar (Burma): (a) ???; (b) 8 million;¹⁵

Papua New Guinea: (a) 4 million; (b) 4 million;¹⁶ and

Bangladesh: (a) 10 million; (b) 5 million.¹⁷

Millions more live in the classified forest regions of Nepal, Sri Lanka and northern Pakistan.¹⁸

These estimates include a dwindling number of hunter-gatherers and pastoralists. The hunter-gatherer population probably ranges in the hundreds of thousands. The largest number of pastoralists would be in India, where they make up six percent of the national population, or approximately 45 to 50 million people.¹⁹ Compared to indigenous and tribal forest dwellers, however, many pastoralists in India apparently possess a greater degree of political power and access to state decision-making processes concerning the allocation of legal rights to pasture lands.²⁰

II. The Tenure Imperative

Major structural and policy reforms are required to save and sustainably develop what remains of forest resources on local levels. Fortunately, a "fundamental shift has started in the way in which the international conservation community has come to view the issue of planning in areas which are occupied and used by

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indigenous people."²¹ The shift is even more evident in the indigenous and human rights communities and, more importantly, among indigenous peoples. The key issue is tenure.

In affirming the principle of ethno-development and calling for greater participation of indigenous peoples in the development process, the fundamental issue is the recognition and protection of native land rights.²²

The tenurial instability of forest dwellers frequently undermines short- and long-term customary incentives to conserve and sustainably manage natural resources and to make long-term improvements. It prevents many small-scale users from legally benefiting from their local natural resource bases. It generates animosity between small scale users and natural resource officials and bureaucracies.²³

Implementation of many conservation and development projects are often impeded, and in some instances have been blocked because of insecure or conflicting property rights.²⁴ Even development projects in which tenure plays an integral role have suffered.²⁵ None of these developments should come as a surprise.

Officially sanctioned property rights mean, at bottom, the willingness of the state to step in to protect the interests of those holding the property rights under discussion. Without effective (or credible) enforcement one has anarchy; small wonder that the relentless theme of the propertied classes down through history has been to insist that the primary function of the state is to protect private property. One can search in vain for the dispossessed making a similar argument.²⁶

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By ignoring the rights of indigenous and other long-term forest dwellers and insisting that forest resources are state owned, national governments have provided economic and political elites with easy legal access to forest resources and a great deal of short-term profits have been made by the favored few. But the costs in terms of forest degradation have been staggeringly high.

The indiscriminate legal labeling of forest resources as public has effectively created open access situations which undermine common property management systems, encouraged "legal" and illegal use and extraction of natural resources, and promoted migration and greater population density in ecologically fragile areas.²⁷ At the same time, although they oftentimes possess exclusive legal authority to grant rights to outsiders engaged in capital intensive, commercial extraction endeavors, the natural resource bureaucracies of most national and state governments lack the institutional capacity to manage and protect forest resources which fall under their jurisdictional mandates.²⁸

The foregoing problems reinforce the impression that tenurial reforms in South and Southeast Asia should, among other things, provide small-scale resource users with effective short- and long-term incentives to conserve and sustainably develop the natural resources located within and around their communities. The "general solution is to ensure

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that prudent biological resources management considerations are integrated into national economic policy, especially in countries where economic well-being depends fundamentally on a narrow and fragile natural resource base."²⁹ The most effective and cost efficient specific solutions will entail either the recognition of existing, community-based customary rights based on long-term occupancy and use, or the granting of community rights through some type of social forestry program.

III. Common Property Management Systems (CPMSs)

The emphasis on community-based tenurial strategies is based on the realization that many forest dwellers in South and Southeast Asia, especially indigenous and tribal peoples, participate in common property management systems. These systems are under great stress, and in some areas they have virtually disintegrated. Most national governments, however, continue to view CPMSs with indifference and, in some cases, hostility.³⁰ They overlook the fact that many common property management systems promote sustainable and environmentally sound development.³¹

The distinguishing characteristic of common property management systems is that their primary legitimacy is drawn from the community in which they operate and not from the nation state in which they are located. In other words, when

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authoritatively allocating and enforcing rights to natural resources, participants in a common property management system rely on themselves; they do not rely on the allocation framework of the national government.³² This is true whether the system functions on private or public land.

National strategies for conserving and developing natural resources located within common property management systems should likewise rely on local peoples. Participants in a common property resource management system are well aware of their rights and duties. The state need not be so familiar.

This important point is usually overlooked. Relatively few tenure specialists any longer propound the "tragedy of the commons" thesis which enjoyed considerable popularity during the 1970s and early 1980s.³³ Instead, a new paradigm is emerging. The new paradigm

seeks a new balance between community-based management and management by governments. It links equity issues with conservation by showing that a particular resource may be most effectively conserved under the control of a group of users who depend on it to meet their own needs.³⁴

Various types of rights can be found within a common property management system. As with state-created rights, none of them are absolute and permanently fixed. For purposes of simplification, natural resource rights can be broken down into six general categories: 1) rights of direct use; 2) rights of indirect economic gain; 3) rights of control;

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4) rights of transfer; 5) residual rights; and 6) symbolic rights.³⁵

These rights may be held by an individual, a nuclear or extended family (clan), a neighborhood grouping, or the community as a whole. Tenurial rights often overlap and invariably encompass spatial, temporal, demographic and legal dimensions. Land tenure specialists acknowledge the complexity when they describe tenure as encompassing a "bundle of rights." This enables them to invoke more precisely their use of words, like "ownership" and "leasehold," which all too often oversimplify the complex nature of the rights being investigated.

Despite the complexities of CPMS, national, state or region-wide recognition strategies should not be made contingent on the intricacies of these systems first being researched, written up and internalized by planners and implementers. Instead, only a general familiarity with the existence and viability of CPMS is necessary. Requiring that intra-community tenurial variations be specifically addressed in policies, programs and projects will unduly complicate, and perhaps even preclude, widespread and systemic efforts to support and gain legal recognition of CPMSs. It will also raise the likelihood of unnecessary external interventions on local levels and make efforts to rely on CPMSs more

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complicated, prolonged and expensive than they need be.³⁶

A. The Public/Private and Communal/Individual Dichotomies

Although the internal aspects of CPMSs need not be understood by project planners and implementors in any great detail, there is need for clarification and further analysis of several seemingly abstract but important tenurial issues. Perhaps foremost is the need for clarification and better understanding of the private/public and communal/individual dichotomies which are inherent, but often overlooked, in most analyses of natural resource rights.

All too often these dichotomies are mixed up and misapplied. The main mistake is that private ownership is usually considered to be synonymous with individual ownership.³⁷

The error can be corrected while simultaneously providing for an important simplification in tenurial analysis. This entails limiting state-centric ownership categories, for policy and project purposes, to four possible combinations: 1) private individual; 2) private communal; 3) public individual; and 4) public communal.

Each combination refers to a bundle of various rights. "Public" is used as a legal label applied by the state to natural resources ostensibly owned by the state. "Private" refers to land rights owned by non-state entities, whether

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individually or communally, documentarily or traditionally. Private rights are usually subject to a lesser degree of state regulation, than are rights to "public" resources.³⁸ But it merits emphasizing again that all property rights, including private ones, are not absolute and can be regulated rights can be regulated, e.g., zoning laws.

B. Social Relations and Property Rights

Another important theoretical issue which impairs much analysis of tenurial issues is the popular belief that people can actually "own" land or other natural resources. This belief overlooks the fact that all legal relations are between persons, and that there is no such thing as a legal relation between a person and a thing. Although legal rights often appear at first glance to concern relations between people and material objects, the fundamental relationship is between people and involves the status they have vis-a-vis each other insofar as particular objects, including parcels of land and forest products, are concerned.³⁹

This insight is gaining acceptance among scholars who study common property.⁴⁰ It has obvious and immediate relevance for any analysis, as well as policy- and legal-prescription concerning natural resource rights on national and local levels. Policies and laws are the means by which states provide for the allocation of rights which concern land, forest and marine resources. But contrary to what many people

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think, the rights created are not actually to the natural resources. Rather the rights create a special social status. Those holding land, tree, hunting, gathering or fishing rights are entitled to use the resources in certain ways, and they can usually deny other people similar access.

Understanding the social nature of rights not only helps clarify the nature of tenure. It serves to demythologize the emotional attachments often cited by recognized holders of natural resource rights in their efforts to preserve, what for them is, a favorable status quo. It also helps cut through the rhetoric which overlays much of the discussion about tenure and exposes a stark reality: many nation-states purport to be democratic while promoting and protecting an inequitable natural resource allocation system which creates a privileged social status for a comparatively small number of people while, at the same time, the national majority is legally and socially marginalized.

IV. Existing and Prospective Community-Based Tenure Programs

A. Recognition of Indigenous Territorial Rights

For most indigenes, and other original long-term occupants relying on common property management systems, the appropriate governmental response in terms of community-based tenure should be the official recognition, delineation and protection of indigenous territorial rights, particularly

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insofar as they overlap with common property management systems.⁴¹

The recognition and protection of indigenous territorial rights is provided for in international law.⁴² It is also mandated in some countries, such as the Philippines and Indonesia, by existing national laws which are not yet effectively invoked.⁴³

Legal recognition would effectively repeal existing national laws and policies which promote "open access" situations in "public" forest zones. It would discourage overexploitation and migration. It would also put existing and prospective concessionaires on notice that legal rights to extract natural resources within ancestral domains are subject to community approval and profit sharing.

Perhaps most important, recognition would align national governments with -- and officially tap the energies and potentials of -- indigenous communities who have long resisted migration and external extraction activities within their indigenous territorial perimeters. It would also provide an official imprimatur with these ongoing, local level protection and conservation efforts.⁴⁴

Formal delineation of indigenous territorial perimeters also has economic and developmental advantages. It would obviate the need for national governments to conduct more expensive and culturally disruptive individual surveys. More

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importantly, it would enable governments to determine the exact location and size of indigenous territories domains within tropical forest zones. With this information in hand, future natural resource policies and projects could be better formulated and more equitably and sustainably implemented.

The USAID-funded Central Selva Natural Resource Management Project in the Palcazu Valley of Peru provides a valuable insight into the importance of addressing tenure and responding to local conditions early on. The project originally overlooked the fact that the area covered is the homeland to approximately 8000 Amuesha and Campa native peoples. Opposition to the project by the Amuesha and Campa peoples and their supporters prompted a review, and ultimately a revision, of the original project design.

The history of the Central Selva Natural Resource Management Project demonstrates that native rights and interests can be included in a regional resource management plan without sacrificing either local or national goals.

The key to such a plan lies in the recognition and protection of native land rights and the promotion of development projects for local residents rather than outside, intrusive populations.⁴⁵

Similar insights come from conservation projects in other parts of the developing world, including Papua New Guinea and Nepal,⁴⁶ Pakistan,⁴⁷ and the Philippines.

The Philippine Government's Department of Environment and Natural Resources has begun developing institutional

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processes for delineating indigenous territorial perimeters.⁴⁸ But even in that country, as elsewhere, the conventional forestry sector continues, in large measure, to ignore issues pertaining to the recognition of indigenous territorial rights. Perhaps the primary reason is the mistaken belief that recognition of indigenous rights will effectively eliminate the role of foresters in managing forest resources within indigenous territorial perimeters.

It is necessary to emphasize, therefore, that recognition of indigenous territorial perimeters and the legitimation, on national levels, of the common property management systems operating within these perimeters, will not eliminate the role of foresters or government agencies with legal jurisdiction over forest resources. Rather, recognition will alleviate, at least in the short term, some of the pressures on remaining forest resources, while at the same time helping to ensure that long-term forest dwellers play an official role in, and are guaranteed a profit from, official forest development activities.

Recognition of indigenous territorial rights should have little, if any, impact on existing or prospective forestry extension services. For decades, agricultural extension agents have assisted rural farmers in promoting productivity and sustainable resource management. Yet agricultural extension agents do not control the tenurial rights of their target

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constituencies. Forestry extension agents working within indigenous territories should also not have the power to control, let alone annul, the tenurial rights of local residents. If and when it is deemed necessary to regulate or curtail specific forest-farming practices, rural zoning laws can be enacted.

B. Social Forestry Grants

Unfortunately, opposition by political and economic elites ensure that efforts to promote recognition of indigenous territorial rights in most South and Southeast Asian countries will likely bear fruit only in the long term. Most short-term strategies for securing the tenurial rights of forest dwellers, therefore, will inevitably be under the auspices of government-sponsored social forestry programs.

Social forestry programs vary from country to country, and in some cases even within countries. Nevertheless, in every instance tenurial rights are granted and are cancellable by government bureaucracies with legal jurisdiction over "public" forests.

The two most innovative, community-based social forestry programs in South and Southeast Asia are in the Philippines and the Indian state of West Bengal. (A Community Forestry Law is pending enactment in Thailand).⁴⁹ The Philippine program promoted forest conservation. It provides for the granting of twenty-five year communal forest leases by the Forest

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Management Bureau of the Department of Environment and Natural Resources. The leases, which are renewable for an additional twenty-five years, are predicated on a Community Forest Stewardship Agreement entered into by the community and the forestry bureau. In essence, the community promises to cooperate with the forestry bureau in protecting areas which are still forested in return for the bureau's legalizing the community's occupation and utilization of the leased area for non-commercial purposes.

As of year-end 1990, there were fifteen agreements covering 44,221 ha. On balance most agreements have benefited the communities by legitimating their ancestral rights and providing government support in the effort to keep migrants and illegal users outside of the communal perimeters. (Ironically, the communities were compelled to lease land which they already owned.)⁵⁰ The forestry service has also benefited by what is in essence free reforestation and conservation man-hours donated by the corporations' members.⁵¹

The primary input of government forestry officials has been to help the indigenes keep migrants outside of the communal perimeter. As a direct result, forests within the perimeter of most leased areas have continued to be utilized in a sustainable manner, shielded from demographic pressures being generated by a growing number of migrant farmers. Meanwhile, a recent visit by the author to one leased area in

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sitio Malutok-Magarang in southern Mindoro Island revealed widespread denudation outside the perimeter where migrants have established claims and clearings.⁵²

The West Bengal program, by contrast, is largely geared towards the rehabilitation of degraded forests. It is predicated on a community's establishment of a Forest Protection Committee, which then enters into a Joint Management Agreement (JMA) with the West Bengal Forest Department.

The JMA is more restrictive than the Philippine community forest lease. It legalizes the non-commercial extraction of forest resources by community members. But it prohibits any agricultural and grazing activities on land located within the perimeter of the area covered by the agreement. Unlike the Philippine lease, however, the JMA anticipates the eventual commercial exploitation of trees and guarantees that 25% of the proceeds from the sale of any mature trees will go the Forest Protection Committee.⁵³

VII. Opportunities for Additional Analysis and Action

As the foregoing discussion implies, scholars, activists and policy-makers should continue taking an active and multifaceted role in encouraging governments in South and Southeast Asia, and elsewhere, to address the growing array of problems associated with deforestation in an equitable and

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locally responsive manner. In terms of legal and social issues, the following priorities should be considered:

I. Promote laws and policies, including the design and implementation of projects, which provide for the recognition, delineation and protection of indigenous territorial rights, and the creation and/or strengthening of existing social forestry programs.

II. Fund research into the number, location and resource utilization practices of hunter-gatherers, small-scale fishers and people living within forest zones. Besides basic demographic research, recommended topics for inquiry include:

(a) the nature of indigenous forms of resource tenure and use, including

(1) the processes by which claims are established and rights are allocated and enforced;⁵⁴

(2) the equitable or inequitable outcomes of these processes, especially in comparison with rights allocated pursuant to national laws in nearby areas;

(3) the connection between indigenous forms of resource tenure and the adoption and maintenance of terrestrial and marine conservation practices; and

(4) the connection between indigenous

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forms of resource tenure and productivity;

(5) the role of women in natural resource allocation and use (Special laws, policies and programs should be developed to empower women formally and assist them in efforts (whether as individuals or groups) to use and manage natural resources);⁵⁵

(b) the changes which indigenous forms of resource tenure are undergoing and the primary external and internal reasons for the changes, including the effect of tenurial interventions undertaken by governments;

(c) the effects which existing national level and state level laws and policies on have on local level systems of resource use, with special attention being given to resources which governments claim ownership of but lack the bureaucratic capacity to manage

(d) the identification and development of efficient and equitable processes and fora for resolving local level inter-community tenurial disputes over natural resources.

III. Fund country-specific research on alternative legal

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strategies for recognizing and granting tenurial rights. As demonstrated in the Philippines and Indonesia,⁵⁶ these strategies need not be contingent on substantive changes being made in existing laws and policies. This paper is replete with reasons for making substantive changes in the tenurial laws and policies of most South and Southeast Asian nations. But many short-term strategies require efforts to identify, and even reinterpret, existing laws for acquiring or gaining recognition of existing property rights.

IV. In keeping with these strategies, strengthen natural resource bureacracies, especially in terms of retraining and provisions for more culturally appropriate and responsive extension and educational services. This will require institutional reappraisal about long-standing bureaucratic perspectives concerning small-scale resource users.⁵⁷ In keeping with these reforms, bureaucratic officials with jurisdiction over natural resource issues, whether locally, regionally or nationally, should be provided training in ways to communicate with and learn from rural peoples, especially those from different educational, economic and ethnic backgrounds. Forestry schools should be encouraged to open their faculties and curriculums to social scientists and the liberal arts.

V. Finally, there is a need to identify, develop and implement strategies for strengthening local NGOs and

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community-based organizations which address interrelated issues concerning equity and the environment. These types of organizations appear to be burgeoning in numbers throughout South and Southeast Asia and they merit more support in terms of money and organizational development.⁵⁸

Conclusion

The growing crises spawned by tropical deforestation require innovative, comprehensive and cost-efficient responses. These responses will fail in many tropical forest areas unless the tenurial rights, claims and potentials of forest dwellers, especially indigenes and other long-term occupants, are addressed. This paper examines some of the key issues concerning community-based tenurial strategies for promoting forest conservation and sustainable development in South and Southeast Asia, especially within existing constitutional and national legal frameworks. The challenges are daunting but the specter of tropical deforestation requires that they be faced.

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1. Mark Poffenberger, "Steps Toward Establishing Collaborative Management," Keepers of the Forest, p. 279.

2. See, e.g., Marcus Colchester, Shifting Cultivation: Rational Use or Robber Economy? (1990) (preliminary draft prepared for the Third World Network and the APPEN conference on "The Destruction of Asian Agriculture"); Janis B. Alcorn, "Indigenous Agroforestry Strategies Meeting Farmers' Need," Alternatives to Deforestation: Steps Toward Sustainable Use of the Amazon Rainforest, Anthony Anderson, ed., New York: Columbia University Press (1990); S.C. Chin, "Do Shifting Cultivators Deforest?" Forest Resources in the Third World, Penang: Sahabat Alam Malaysia, (1987); Jaganath Pathy, "Shifting Cultivators of India: Bearing the Brunt of Development," Forest Resources in the Third World; Evelyn Hong, "Forest Destruction and the Plight of Sarawak's Natives," Forest Resources in the Third World; Gerald Marten, Traditional Agriculture in Southeast Asia: A Human Ecology Perspective (1986); Michael Dove, Swidden Agriculture in Indonesia: The Subsistence Strategies of the Kalimantan Kantu', Berlin: Mouton Press (1985); Michael Dove, "Government Perceptions of Traditional Social Forestry in Indonesia: The History, Causes and Implications of State Policy on Swidden Agriculture," Community Forestry: Socio-Economic Aspects (1985); Paul Richards, Indigenous Agricultural Revolution: Ecology and Food Production in West Africa, London: Hutchinson (1985); Michael Dove, "Swidden Agriculture and the Political Economy of Ignorance," Agroforestry Systems, Vol. 1 (1983); Harold Olofson, ed., Adaptive Strategies and Change in Philippine Swidden-based Societies, Los Baños: Forestry Research Institute (1981); Terry Grandstaff, Shifting Cultivation in Northern Thailand, Tokyo, United Nations University (1980); Joseph Weinstock, Land Tenure Practices of the Swidden Cultivators of Borneo, Master's Thesis, Cornell University (1979); J.E. Spencer Shifting Cultivation in Southeast Asia, Berkeley: University of California (1966); Harold Conklin, Hanunoo Agriculture: A Report on an Integral System of Shifting Cultivation in the Philippines, Rome: FAO (1957).

3. Chhatrapati Singh, Common Property and Common Poverty: India's Forests, Forest Dwellers and the Law, Oxford: Oxford University Press (1986), p. 5.

4. "Agroforestry Experts Meet At Bangkok," Tigerpaper, Vol. 17 (April-June, 1990), p. 16

5. For background on the tendency of most tropical forest bureaucracies to overlook even the presence of people living on classified forest land see Owen Lynch, Whither the People?

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Demographic, Tenurial and Agricultural Aspects of the Tropical Forestry Action Plan, Washington: World Resources Institute (1990).

6. See, e.g., Larry Lohmann, "Commercial Tree Plantations in Thailand: Deforestation by Any Other Name," The Ecologist, Vol. 20 (1990); Owen Lynch, "Withered Roots and Landgrabbers: A Survey of Research on Upland Tenure and Displacement," Uplands and Uplanders: In Search of New Perspectives, Charles Castro, ed. Quezon City: Bureau of Forest Development (1984); Peoples Union for Democratic Rights, Undeclared Civil War: A Critique of the Forestry Policy, New Delhi: PUDR (1982).

7. It is estimated that in developing countries "public" forest land encompasses over 80% of the closed forest. See Jean-Paul Lanley, Tropical Forest Resources (FAO Forestry Paper No. 30, 1982), pp. 49-53.

8. John Spears and Edward S. Ayensu estimated five years ago that "there are some 200 million people living in tropical forests." "Resources, Development, and the New Century: Forestry," The Global Possible, Robert Repetto, ed., p. 304. Norman Myers estimated that "forestland farmers" and their progeny number between 300 million to 500 million. Deforestation Rates in Tropical Forests and their Climatic Implications, London: Friends of the Earth, (1989), p. 68. Myers added that the larger figure "may well be an under-estimate."

9. The estimate of the number of tribal people is provided by Survival International, a London-based human rights organization which advocates on their behalf.

10. The definition of "dependent" used in this paper is limited to mean people extracting timber or other forest products for personal consumption or for direct sale. It excludes people who purchase forest products extracted by others. It also excludes people employed by timber companies or wood processing industries and who do not directly extract forest resources for consumption or sale. Degrees of dependency obviously vary a great deal and, in many instances, increase or decrease on a seasonal basis.

11. N.G. Basu, Forests and Tribals, Calcutta: Manisha (1987). Basu's estimated that 94 percent of India's 52 million tribal people as of 1980 lived in and around forests. The number of tribals in India as of 1991 is in the range of 100 million. S.B. Roy, Chairman of the Indian Institute of Bio-Social Research and

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Development, a professional organization recognized by the Governments of India and West Bengal. Personal communication, August, 1991. Using Basu's percentage that would mean that 94 million tribals now reside in and around forest lands.

12. Mark Poffenberger estimates that 65 million people live on state forest land in the Outer Islands. Personal communication, 1991. This estimate is an increase over an earlier one of 30 to 40 million people. See, M. Poffenberger, "Facilitating Change in Forest Bureaucracies," Keepers of the Forests: Land Management Practices in Southeast Asia, West Hartford, CT: Kumarian Press (1990), p. 101. Charles Zerner's estimate is more conservative and includes 6 million people on Java and 25 million on the Outer Islands.. See, C. Zerner, Community Rights, Customary Law, and the Law of Timber Concessions in Indonesia's Forests: Legal Options and Alternatives in Designing the Commons (FAO Forestry Studies UTF/INS/065, March 1990), p. 10.

13. Ma. Concepcion Cruz, personal communication, 1991. See also Ma. Concepcion Cruz, Population Pressure and Migration: Implications for Upland Development, Los Baños: Center for Policy and Development Studies Working Paper 86-06 (1986). The 1991 estimate includes approximately 8.5 million indigenous people, of whom six million are generally considered to be tribal. Indigenous territorial rights are believed to cover four to eight million hectares of the fifteen plus million hectares of classified forest land.

14. Witoon Permpongsacharoen, Project for Ecological Recovery, Bangkok, and Larry Lohmann, The Ecologist, London, personal communication, 1990. Approximately 5.3 million hectares, or about one-fifth of classified forest land, is occupied and cultivated. Gershon Feder, et al., Land Policies and Farm Productivity in Thailand, Baltimore: John Hopkins University Press for the World Bank (1988), p. 17.

15. The vast majority of tribal peoples in Myanmar live in the classified forest zone as do a smaller number of Burmans. In 1981 the FAO estimated that the number of rural people living in hilly areas and practicing shifting cultivation was 4.25 million. Tropical Forest Resources Assessment Project: Forest Resources of Tropical Asia, p. 165.

Estimates of the number of tribal people in Myanmar vary widely. A standard estimate is that they comprise 15 to 17 percent of the total national population of 42 million, or approximately 6 to 8 million people. Charles F. Keyes, "Tribal Peoples and the

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Nation-State in Mainland Southeast Asia," Southeast Asian Tribal Groups and Ethnic Minorities: Prospects for the Eighties and Beyond, Ruth Tasswell, ed., Cambridge, MA: Cultural Survival (1987), p. 19. Others estimate that the ethnic "minorities" actually number 25 million and comprise 55 percent of the nation's total population. Personal communication, Christian P. Scherrer, University of Zurich (August 1990).

16. The year-end 1990 population of PNG is estimated to be slightly over 4 million, the vast majority of whom are rural forest dwellers.

17. Mohiuddin Farooque, Principle Executive, International Institute of Environmental Studies and Disaster Management, Dhaka, personal communication, August 1991. This estimate includes 600,000 people who are directly dependent on the Sundarban forest. Robert Winterbottom, Sustainable Development of Forest Resources in Bangladesh: Challenges and Opportunities, World Resources Institute, 1990. A similar number belong to one of the thirteen indigenous hill tribes in the Chittagong Hill Tracts. It does not include the growing number of Bengalis migrating in the Chittagong area. Bernard Nietschmann, "Economic Development by Invasion of Indigenous Nations," Cultural Survival Quarterly, Vol. 10 (1986).

18. A 1981 FAO assessment of forest resources noted severe population pressures on forest resources in all three countries, but it contained no forest-zone population estimates. Tropical Forest Resources Assessment Project: Forest Resources of Tropical Asia, Rome: FAO (1981), pp. 345, 365 and 425.

19. Anil Agarwal, Human-Nature Interactions in a Third World Country, Fifth World Conservation Lecture, London, WWF-UK (1985).

20. Richard P. Tucker, "The Evolution of Transhumant Grazing in the Punjab Himalaya," Mountain Research and Development, Vol. 6 (1986), pp. 26-27.

21. Preface by Shelton Davis in Peter Poole, Developing a Partnership of Indigenous Peoples, Conservationists, and Land Use Planners in Latin America (Washington, World Bank PPR Working Paper, 1989), p.ii. This insight is shared by other international land tenure specialists. See, e.g., Daniel W. Bromley and Michael M. Cernea, The Management of Common Property Resources, pp. 5-6. In the words of Bromley and Cernea:

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The development community has gradually come to realize that it will not be successful in addressing resource degradation at the local level so long as the very nature of property and authority systems over natural resources are seriously misunderstood in policy formulation and the design of donor-assistance programs.

22. Shelton H. Davis, Indigenous Peoples, Environmental Protection and Sustainable Development, Gland, Switzerland: International Union for the Conservation of Nature and Natural Resources (1988), p. 7.

23. See, e.g., Ramachandra Guha, The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya, New Delhi: Oxford University Press (1989); Nancy Peluso, Rich Forests, Poor People, and Development: Forest Access, Control and Resistance in Java, Berkeley: University of California Press.

24. A survey of forty-two World Bank development projects revealed that "land problems delayed project implementation in one-third of the projects." Raymond Noronha and Francis J. Lethem, Traditional Land Tenures and Land Use Systems in the Design of Agricultural Projects, World Bank Staff Working Paper No. 561 (1983), p. 5.

25. Transmigration sites in Indonesia are chronically hampered by the absence of legally secure titles which can be used to recognize and protect property rights, obtain credit and dissuade people from abandoning project areas. See, e.g., Charles V. Barber, The State, The Environment and Development: The Genesis and Transformation of Social Forestry Policies in New Order Indonesia (doctoral dissertation, School of Law, University of California at Berkeley, 1989); Charles Zerner, Community Rights, Customary Law and the Law of Timber Concessions in Indonesia's Forests (March 1990).

A nation-wide contract reforestation project in the Philippines currently being funded by the Asian Development Bank and the Government of Japan, for example, is encountering resistance in many forest communities because the project planners failed to address local concerns over land rights in a coherent and systemic manner.

26. Daniel W. Bromley, The Commons, Property, and Common Property Regimes. Paper presented at the First Annual Meeting of the International Association for the Study of Common Property, Durham, (September 1990), p. 21.

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27. See, e.g., Robert Repetto, Macroeconomic Project and Deforestation. Paper Prepared for the UNU/WIDER Project on Macroeconomic Policies and Deforestation (1990); Jeffrey A. McNeely, Common Property Resource Management or Government Ownership: Improving the Conservation of Biological Resources. Paper Presented at a Conference on Incentives and Constraints: Macroeconomic Policy Impacts on Natural Resource Utilization, Smithsonian Institution (May 1989); Douglas Southgate, "The Causes of Land Degradation along 'Spontaneously' Expanding Agricultural Frontiers in the Third World, Land Economics, Vol. 66 (1990); Douglas Southgate, How to Promote Tropical Deforestation: The Case of Ecuador, Columbus: University of Ohio Department of Agricultural Economics (1989).

28. Mark Poffenberger noted "growing concern over the inability of Asia's national forestry agencies to sustainably manage vast areas of state-controlled forests. "Facilitating Change in Forestry Bureaucracies," Keepers of the Forest, p. 101. In the Philippines, the overreach of the forestry and fisheries bureaucracies prompted the World Bank to propose a "policy of divestiture" which would require the national government to constrict its jurisdictional claims of "public" ownership and better target its resources. Philippines Environment and Natural Resource Management Study (1989).

29. Jeffrey A. McNeely, Common Property Resource Management or Government Ownership, p.10. McNeely recommended specifically at page 13 that "community-based resource management systems which are functioning well ... should be strengthened through being enshrined in national legislation."

30. See, e.g., Douglas Southgate and Peter May, The Suppression of Common Property in Latin America. Paper presented at the First Annual Meeting of the International Association for the Study of Common Property, Durham, NC (September 1990); N.S. Jodha, Rural Common Property Resources: Contributions and Crisis. Foundation Day Lecture of the Society for the Promotion of Wastelands Development, New Delhi (May 1990).

31. See, e.g., C. Ford Runge, "Common Property and Collective Action in Economic Development," World Development, Vol. 14, No. 5 (1986).