

POLITICAL ECONOMY OF TROPICAL AND BOREAL FORESTS

A Scoping Paper

INTRODUCTION

Rationale

The state of the world's forests is an emerging global issue. Global environmental changes, and the social, economic, and political processes of globalization that help drive them, are now influencing local forest conditions and management practices. Trade in timber products continues to grow rapidly and consumptive demand from the wealthiest importing nations shows few signs of weakening. At the same time political changes and alliances are facilitating the evolution of novel institutions and the interplay between institutions from different levels of governance. Some of these are clearly aimed at facilitating further exploitation of forest resources and promoting economic development, whereas others are aimed more at controlling or mitigating some of the environmental and social impacts of these transformations. At the international level a number of environmental regimes, like the Kyoto Protocol and the Convention on Biological Diversity, are evolving in ways that could potentially have a major influence on forest land development strategies of nations. At more local levels, decentralization is facilitating what is in some a cases, a return to more community-based rather than state-centered forms of forest management. It is in this context of global and local changes that we address some of the key issues in the political economy of tropical and boreal forests.

Although we recognize that many of the issue are global in scope, in this paper we focus on just two critical regions, the boreal forests of Canada, US and Russia and the tropical forests of Southeast Asia. The two focus regions provide an interesting mix of natural and institutional realities and challenges.

Rapid economic growth over the past few decades in Southeast Asia has been accompanied by rapid conversion of mature forests to secondary forests, plantations and agriculture. The current status of forests, in terms of cover and conditions, however, varies substantially among countries within the region (Table 1) reflecting differences in histories of exploitation, wars and original resource endowments. The loss and fragmentation of original forest cover is a global issue because of the high levels of endemic biodiversity in the region.

Table 1. Forest Cover and Present Forest Cover as % of Original Forest Cover in Southeast Asia

Country	Forest Cover (000 ha) In 1995	% Annual Change in 1980-1995	Frontier Forest ^a Cover as % of Original Forest ^b (1996)	Present Forest ^c as % of Original Forest (1996)
Cambodia	9,830	(2.71)	10.3	65.1
Indonesia	109,791	(1.18)	28.5	64.6
Lao PDR	12,435	(1.41)	2.1	30.0
Malaysia	15,471	(2.83)	14.5	63.8
Myanmar	27,151	(1.75)	0.0	40.6
Philippines	6,766	(3.96)	0.0	6.0
Singapore	4	0.00	0.0	3.1
Thailand	11,630	(3.58)	4.9	22.2
Vietnam	9,117	(1.45)	1.9	17.2
Total for SE Asia	202,195	(1.44)		

^aFrontier forest refers to large, relatively undisturbed forest ecosystems

^bOriginal forest is estimated to be that which have covered the planet 8,000 years ago given current climate conditions

^cCurrent forest includes frontier and non-frontier forests.

Table 2. Forest Cover and Present Forest Cover as % of Original Forest Cover in Countries in the Boreal Regions

Country	Forest Cover (000 ha) In 1995	% Annual Change in 1990-1995	Frontier Forest Cover as % of Original Forest (1996)	Present Forest as % of Original Forest (1996)
Canada	244,571	0.1	56.5	91.2
Finland	20,029	(0.1)	1.1	82.3
Iceland	11	0.0	0.0	0.0
Norway	8,073	0.3	0.0	90.4
Russian Federation	763,500	0.0	29.3	68.7
Sweden	24,437	0.0	2.9	86.0
USA ^a	209,572	0.3	6.3	60.2
Total	1,273,124	0.03		

^aReflects the whole USA, even if the boreal forests are confined to the Alaskan region

The boreal and tropical forests of the world will play a critical role in the regulation of future climate of the Earth. The tropical forests of Asia could potentially sequester a substantial amount of additional carbon, as many parts are well below potential maximum biomass as a result of human activities, such as logging. The boreal forests, for example, contains 40% of the world's reactive soil carbon (McGuire et al. 1995). The long-term effects of sequestering carbon in forests, however, depends greatly on management practices, and also on the impacts of future climate change, for example, on tree demography and disturbance regimes like fire. Thus, the boreal forests could be part of the "missing sink" of CO₂, if they are accumulating carbon (Ciais et al., 1993; Myenemi et al., 1996; Randerson et al., 1998) or a carbon source if recent warming trends enhance fire frequency or decomposition more than they enhance plant production (Kasischke et al., 1995; Kurz and Apps, 1995; Zimov et al., 1999).

Boreal and tropical forests are managed under dynamic and diverse political structures and processes. The boreal forests are basically governed by two contrasting political and economic systems: the Canadian and Alaskan blocks being governed by a western-styled democracy existing in a predominantly capitalist system, whereas the Russian block is governed by a socialist-dominated economy that is gradually opening up itself not only to market forces but also to less-restrictive political arrangements. Southeast Asian tropical forests exist in a setting characterized by equally diverse modes of governance ranging from Western-styled democratic systems to systems governed by military juntas. In both regions, economic development has been strongly influenced by foreign investments and fluctuations in financial markets.

Goal and Approach

The immediate goal of this scoping paper is to identify key research questions about the role of institutions in modifying the drivers of environmental change in the tropical forests of Southeast Asian forests and the boreal forests of Canada, US and Russia. The ultimate goal is to develop a research agenda that will contribute towards improving forest governance.

The next section of the paper outlines a conceptual framework for exploring these relationships and introduces some key concepts. This is followed by descriptions of the major issues and identification of priority research questions. For simplicity, the issues have been organized under four broader research themes, namely, decentralization, globalization, international institutions, and environmental feedback. The paper ends with a summary of the proposed research agenda and how it might be implemented.

CONCEPTUAL FRAMEWORK

Systems of forest governance and actual practices modify the influences of the political and social structures and processes, which ultimately drive changes in forest land-use and conditions (Figure 1). Changes in forest condition and the social outcomes of forest management and land-uses influence the institutional drivers of future change in a system that feeds back on itself.

Environmental governance is the way society deals with environmental problems and involves the interaction of formal and informal institutions and actors within society. Systems of forest governance included things like systems for granting concessions for logging or the right to convert forested lands to plantations and agricultural uses.

Political transformations involve changes in the power relationship among various social groups and institutions in society. Key social actors include the state, central and local governments, local communities (farmers, ethnic minorities, logging industry employees), non-governmental organizations, the military, domestic and international business.

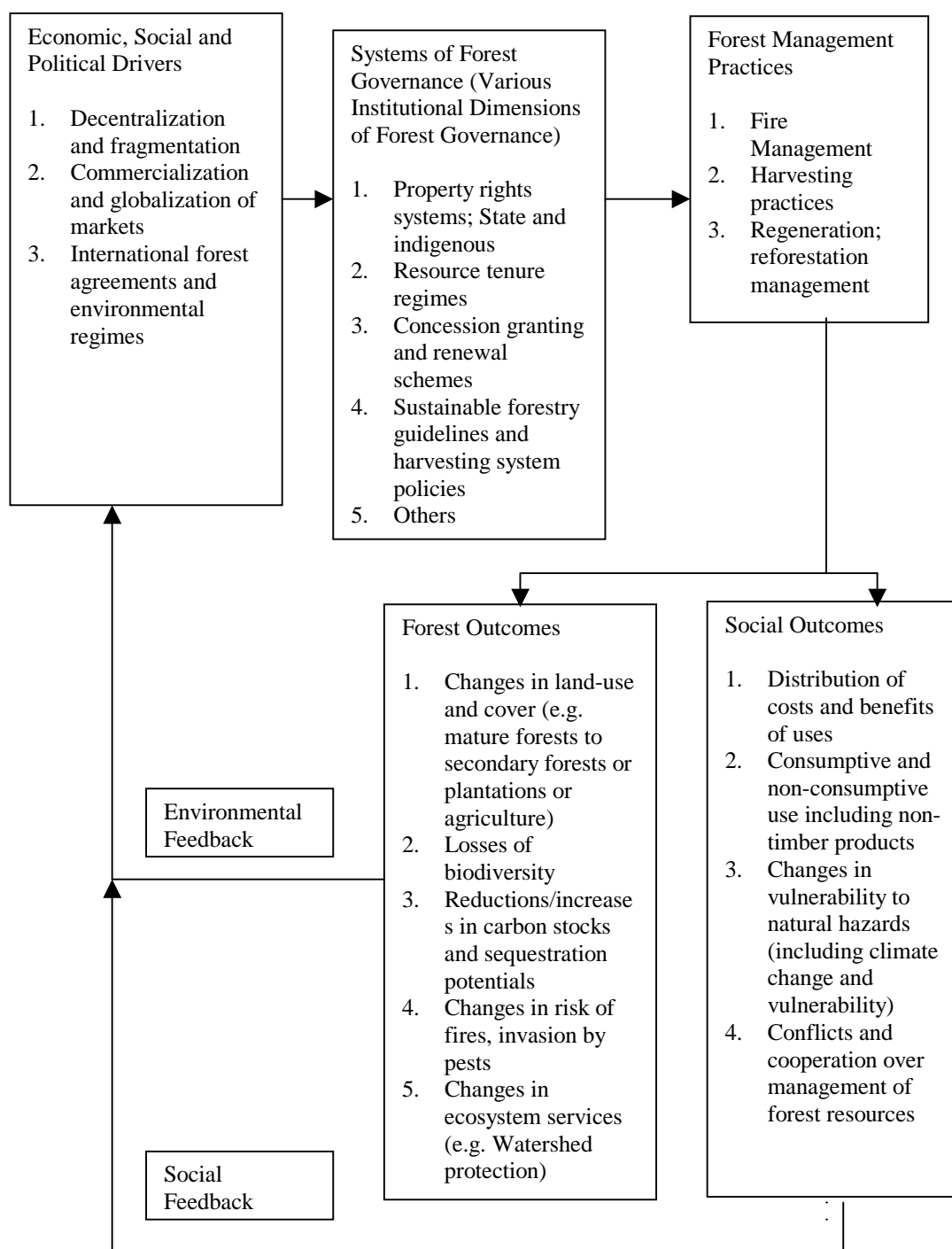


Figure 1. Conceptual framework describing how the relationship between the institutional drivers of changes in forest conditions and social outcomes are modified by systems of forest governance and actual management practices

ISSUES

The problem of forest governance is a problem of how power is structured and institutionalized in relation to how forests are managed. Good governance is achieved when these institutional arrangements are able to promote sustainable forest management practices, which in turn maintain or improve forest conditions, while at the same time also promoting human welfare. A thematic approach reveals four major areas of concern in scoping the issues. The first three areas are concerned on the effects of institutional drivers and processes of transformation, namely *decentralization*, *economic globalization*, and *international institutions*. The fourth theme highlights the issues associated with *social* and *environmental feedback* on these processes and forest governance (See Figure 1).

THEME 1: EFFECTS OF DECENTRALIZATION ON FOREST

The manner by which power is distributed between the state and other actors is an important factor that cuts across many issues, including how forests are defined, how benefits and costs are distributed and how rules are made. One of the emerging institutional arrangements in forestry is political and administrative reform in which central state agencies or provincial administrationsⁱ are devolving power to more local bureaus, local communities or civil society actors. Civil society itself is centralized in major urban areas with the result that members often hold quite different perspectives on forest values from rural communities closer to the forest frontier in their daily livelihoods. Openness and a larger degree of freedom and participation in the public policy process are observable in most countries in the region, except perhaps Burma. Although accountability and transparency in public affairs are not yet the rule, social countervailing forces are growing.

As consequences of recent economic crisis, economic institutions, especially in the financial sector, have undergone serious reform. Other political and administrative institutions are under increasing pressure. It is premature to suggest how long will it take until this process of reform fully bears fruits in terms of sustainable use of natural resources. However, there are positive signs for the improvement in environmental governance. In some countries, there has been greater recognition of individual's and local community's rights to take part in decision-making on large-scale development projects involving the use of natural resources and environment. Devolution and decentralization, therefore, has potentially profound impacts on systems of forest governance, management practices and ultimately the state of forest resources and the welfare of people that depend on them.

Research Questions

- ◆ *Under what social and environmental conditions does decentralization result in better forest management practices and outcomes?*
- ◆ *Why do some forms of resource tenure promote sustainable forest management practices and outcomes, whereas other institutional arrangements lead to degradation?*

Process for making rules. A key issue in decentralization is the process of making rules. The process by which rules are made, either through state policies or through customary laws and traditions, are functions of the manner by which power in society is centralized or decentralized. The state has always been the dominant mode of institutionalizing power, since it is the institution that is bestowed with the sole authority to possess legitimate and coercive power. Forest resources have always been considered in most tropical countries as state domains and properties, as comprising part of the national patrimony.ⁱⁱ

However, the state does not exercise monopoly of power over "rule-making" over forest resources. Civil societies, which in this context refer to the broader array of institutions governing collective action particularly in those communities which are traditionally forest-dependent, have developed and long upheld mechanisms and processes, or what can be called as "institutional arrangements," which govern the allocation of access and control rights over the resource. This is the reason why property rights" is much better defined as a bundle of rights that govern access and use, as widely understood by community members to be legitimate, rather than as a fixed document of ownership issued by the state to its citizens. The difference in the source of authority, with that of the state derived from law and that of civil society derived from custom and collective consciousness, undoubtedly lead to differences in the manner by which forests are managed, and consequently their condition.

The military, with an influential role in political institutions, and also in business, has played key role in the development of forest and land resources in many Southeast Asian countries. The threat of force has been a potent weapon in limiting internal and external political debate about forest lands and the lack of accountability provided opportunities for corruption. Under military influence power over natural resources shifts from other stakeholders to the military and its business cronies. The use of force as means of coercion secures the interests of the military elites who in turn protect the interest of what is called "crony capitalism". Public property rights as well as traditional systems of property rights under this pattern of political change are often disregarded by the military elites. Resource use under such conditions is unaccountable, and unsustainable. Depletion of forest in Thailand, Indonesiaⁱⁱⁱ during 1960s-1990s to large extent may be attributed to military dominance in governments.

Property rights on natural resources, particularly land have changed. Common property on land has been transformed to public and later private property. This transformation of property rights has profound implications for land use, therefore

environmental change. In short, nation state has effectively established public and private property rights. Simultaneously it has abolished or disregarded the pre-existing forms of property rights. Other forms of pre-existing property rights in societies, thus, have been affected in different ways. Communal property rights on forest land and coastal resources, for example, are largely unrecognized, superimposed by public and private property rights. Open access rights that have been in existence among indigenous people long before the emergence of local community and the state claim have been affected. The state or private firms with sanction or concession from the state often claim open access areas. Large-scale exploitation of forest and coastal resources by governments or business often cause conflicts between people whose livelihood depends on these resources and government or business. These conflicts have been occurring almost in every SE Asian country, especially Indonesia, Malaysia, the Philippines and Thailand. On the other hand, these conflicts imply unsustainable use of natural resources. Implication here is that environmental governance on forest and coastal resources has to take into consideration the various forms of property rights and the legitimate interests of indigenous and local communities whose livelihood depends on natural resources associated with these forms of property rights.

The process of state building has been characterized as an expansion of state power by sequestering away from local communities and civil society the power to legitimize institutional arrangements and transferring it to a body, which we call "government." But this process has never been complete, leaving isolated instances wherein civil society is able to sustain its hold on rule-making.^{iv} Conflicts abound in the domain of property rights and land-use not only among state-defined users such as that between commercial logging and grazing interests, and among traditional users, such as that between competing tribes. It is also occurring when traditional property rights regime clash with state-defined rights (Peluso, 1993; Lynch and Talbott, 1995; and Magallanes and Hollick, 1998).

One of the impacts of globalization is the weakening of state power and autonomy (see Theme 2). While one of the results of this is the further insertion of the state into the global system, and the exposure of policies, including forest policies, to regional and global imperatives, this also led to the increased power of civil societies. In forestry, this led to policy shifts in some states away from a statist-corporate mode of forest governance to a community-based mode wherein civil society structures and processes are harnessed not only in policy implementation but even in policy determination. This was supported not only by a global official development assistance (ODA) community that now actively speaks of sustainable development, community empowerment, and participatory development,^v but also by the unraveling of the authoritarian state amidst the onslaught of democratization and political reform. Thus, this led to state-induced adjustments in policy, such as decentralization and community participation in response both to global and local impetus. There is however a danger in this trend. State-induced policy reform, while opening up the domain of "rule-making" to include civil society structures and processes, may also corrupt the integrity of civil society systems of "rule-making."^{vi} The impacts of this on resource quality and social welfare and entitlements are a fertile area for inquiry, although data on the adverse effects of colonization and cultural dislocation abounds. However, there are also instances wherein local interpretations and norms challenge the legitimacy of state-defined "rules."^{vii}

It is in this context, therefore, that a rigorous political analysis is required to support any conclusion vis-à-vis the impacts of the transformation in "rule-making" processes. Democratization and policy reform, while steps in the right direction, may create processes which compromise the interests even of the sectors which are supposed to benefit from these reforms. Dubash and Seymour (1999) argue that the use of environmental adjustments by World Bank can be enhanced through a clear understanding of the political landscape of recipient countries, by identifying the "domestic constituencies for forest reform, and the external agents who could be mobilized around forest reform"(p. 15). Thus, and in addition, the analysis should include an appreciation of the dynamics of power relations existing between and among stakeholders at all levels.

Access to benefits and exposure to risks. In the rhetoric of political leaders, forests are considered part of national patrimony and are managed for the common good on a sustained basis. They are supported in their task by science carried out in departments of forestry. This therefore implies that a public resource like the forests should be managed to benefit the public good, or at least the good of the substantial majority. The multiplicity of goods and services that can be derived from forests and forest lands creates a complex scenario not only in terms of the technical requirements for management but also of the political requirements necessary to handle a multi-stakeholder situation. In practice, however, political actors are often primarily concerned within maintaining political power and controlling the allocation of resources, including lands, government contracts, loans and redirecting them to the benefit of themselves and their supporters.

Recent history of forest governance in Southeast Asia has facilitated centralized command and control systems in which substantial benefits are captured by the private sector and often placed the relevant public and marginalized sectors at risk. As Menotti (1999) argues, this mode of benefits distribution can be further exacerbated during crisis conditions, with the forests becoming even more vulnerable as sources of capital for states deeply in debt. Forests become attractive sources of foreign exchange earnings that can be used to stabilize currency markets. In a situation of liberalized forest trade, enormous pressure will be exerted to exact from the forest the maximum possible value which, if unfettered, may greatly compromise not only its ecological health but also the social and economic health of communities which are dependent on it.

Data shows that the present forest governance regimes in Southeast Asia are characterized by heavy state-subsidies.^{viii} A similar trend also occurs in countries with boreal forests.^{ix} Governments are losing while private logging interests are reaping the benefits. These foregone revenues could have been used not only for social development of forest-dependent communities but even more appropriately to finance environmental restoration and forest protection activities.

The emergence of community-based forest management, wherein the state decentralizes forest management to local communities, has opened up access to benefits by forest-dependent communities.^x Communities are granted tenure and are organized to protect the forest, through either preventive or restorative intervention strategies, even as alternative livelihood is provided as sources of income. However, this becomes

problematic when existing state regulations prevent communities from engaging in extractive activities and when alternative livelihood options are not sustainable due to the absence of viable markets. What exacerbates the vulnerable positions of forest-dependent communities is the reduced productivity of their lands, which are already marginal rain-fed areas, due to the ill effects of global environmental changes.

A closer analysis of the situation also reveals a different kind of labor exploitation. Forest-dependent communities are organized to become *de-facto* forest protection officers, with the performance of such job taking time away from their regular productive activities of agricultural and artisanal work.^{xi} In the guise of environmental and civic work, communities render free labor to the State, even as their effective income is reduced in the process. In the end, it is the marginal communities which subsidize the state in forest protection activities, in stark contrast to a State that heavily subsidizes the activities of private, and presumably wealthier, corporate logging interests.

What compounds the vulnerability of forest-based communities is their exposure to possible rent seeking by civil-society intermediaries that are involved in social and technical preparatory activities. Consultancy firms, as well as third party NGOs, participate in the implementation of community-based forest management projects as assisting professionals and intermediaries performing indirect and facilitating labor. However, studies in the Philippines show that in some cases, these intermediaries extract excessive and unwarranted rents (going up to 40% in some instances) which greatly compromises the delivery of project services not only for the social development of the community but also for the protection and management of the resource (Contreras, 1994; Marquez, 1994; and Rico, 1996). What aggravates this is the fact that in most instances, community-based forestry projects are funded from ODA sources, some of which are loans that have to be repaid.

It is also important to mention that community-based forest management strategies are mainly limited to technical management concerns, and do not include social development issues, particularly on health, education and protection of rights, including those pertaining not only to resource use rights but also on the broader human rights concerns. Since there is significant relationship between social development and resource management, there is a need to strengthen the knowledge base for these relationships through the conduct of more inquiries on the interactions between resource use and human rights issues, particularly of the marginalized and vulnerable sectors such as landless peasants, indigenous peoples, women and children. This inquiry should include the patterns by which the state extracts unpaid labor from communities in the context of forest protection activities, and the impacts of this on community well being.

Research Question:

- ◆ *To what extent and in what contexts (economic, social, institutional and political) are community forestry activities conducive to improved and more sustainable management of forest?*

THEME 2: THE EFFECTS OF ECONOMIC GLOBALIZATION

As society becomes more market oriented, and the formal political institutions evolve to facilitate commerce and market expansion, *de facto* control over land-use decision shifts towards business.^{xii} Patronage networks help build close links between politics and business and help further the goals of their members. Pre-existing local property rights systems are often swept aside in the interests of "the state" and business. The extent to which government intervenes and tries to control the market varies, but in time, and as global forces become more important, government's effective role is reduced or transformed. Concern over environmental degradation leads to central intervention in the form of spatial land use planning and environmental impact analyses, and at the international level, through regional agreements. The ability of governments to effectively implement these "plans" and guidelines, however, remains quite limited.

The structure of the timber political economy in Southeast Asia is characterized by the dominance of corporate forestry in countries that are also timber exporters.^{xiii} In 1996 Indonesia was the 6th and Malaysia the 8th largest exporter of forest products in the world (WRI). The timber economies of Indonesia and Malaysia largely rests on heavy state subsidies on logging and plantation forest estates which are controlled by rent-seeking elites,^{xiv} even as community-based forestry is only paid lip-service.^{xv} Corruption is noted to be high in Indonesia (Transparency International, 1998), effectively hampering forest protection and law enforcement.^{xvi} With the development of state and private forest industry in Indonesia, forest lands have been seen as, in turn, a timber resource for exploitation by logging, as land to be converted to grow trees for pulp, paper and plywood industries, and more recently for the development of oil palm plantations. Many of these transformations have been mutually reinforcing with key outcome that conversion of native mature forests to secondary forest, tree crops and other uses.^{xvii} Thus, today, non-timber exports such as oil palm surpass timber as the main export-earning primary commodity.

There are two key environmental problems associated with this transformation of forests and forest lands. The first is that the rate and scale of these transformations, in particular, rates of extraction of logs, has been clearly unsustainable, even without any consideration of impacts on biodiversity. The second is that many of the "reforestation" and "down-stream" processing schemes have not only failed to restore degraded lands and protect remaining forests, but have often facilitated more intensive and wider conversion of productive forest land.

Table 3. Average Annual Net Trade in Roundwood in Southeast Asian Countries

Country	Quantity ¹		Balance in Trade ²	
	Cubic Meters (000) 1993-95	Percent Change Since 1983-85	Cubic Meters (000) 1993-95	Percent Change Since 1983-85
Cambodia	(463)		102,495	
Indonesia	(1,375)	(38)	21,238	(88)
LAO PDR	(195)	1,910	40,709	965
Malaysia	(8,445)	(54)	1,012,700	(11)
Myanmar	(1,171)	345	192,114	142
Philippines	274	(122)	(192,636)	(281)
Singapore	(45)	(115)	(5,035)	(87)
Thailand	1,326	(1,690)	(297,842)	797
Vietnam	(248)	(2,479)	20,765	(2,083)

¹Quantity of net trade is defined as the balance of imports minus exports.

²Balance of trade is defined as exports minus imports.

Source: WRI 1998-99

Further liberalization of timber trade may either encourage or compromise progress towards sustainable forest management. Eliminating tariff barriers, for example, can provide incentives for tropical timber production in Indonesia and Malaysia, and on Canada on its boreal forest production, although there is reason to believe that lowering tariffs may have negligible effects inasmuch as the current tariff structure in timber is already fairly liberalized at low levels. Nevertheless, in situations wherein timber production occurs in an atmosphere of rent-seeking, weak environmental laws, and lack of recognition of community rights, any move towards increased production can intensify negative environmental and social impacts. This is the problem that may be faced by trade liberalization not only in timber but also for non-timber forest products.

Financial instability and recession create opportunities for foreign investors to gain access and control forest lands for logging or conversion. The declining economy of the former Soviet Union, for example, has encouraged foreign timber companies to invest in Russian forestry operations and has increased the timber flow to Japan and Korea. Large-scale forestry operations have also increased in boreal Canada. The efforts by transnational corporations to develop new sources of revenue and of northern regions to develop cash economies have led to increased forest harvest, with the short-term goals of increasing revenues, and with relatively little concern for the long term sustainability of these forests (Chapin and Whiteman, 1998). A similar situation developed in Indonesia following the regional economic crisis in Asia, which in itself was a product of globalization of speculative financial markets (currencies and shares). The structural adjustment programs of the International Monetary fund continue to facilitate what is effectively a transfer of control over forest land and resources.

Concern over further depletion or degradation of forest resources in one country may become an external driver for deforestation in another. Thus, Thailand has increasingly relied on timber from neighboring Laos and Cambodia. Likewise, limited natural resources in Japan have led its large trading companies to pursue active trade

importation from resource rich countries such as those in Southeast Asia.^{xviii} These include many of the world's largest companies. Most function as trade intermediaries and thus have substantial influence over trade networks. Their success has depended on importing huge volumes of natural resources, and by switching suppliers as sources run out. The chain of business linkages is long, with logging is done through a complex chain of sub-contracting, often facilitated by patron-client relationships. One consequence is that the logging business has been able to evade taxes and royalties and that illegal and destructive logging practices have been widespread. Corrupt patron-client networks have facilitated these unsustainable logging practices. The net result has kept prices low and the flow of benefits to the communities in the developing countries much smaller than it should have been. (Repetto 1988).

A strong and growing forestry industry, however, does not have to wait for concerns about resource levels at home to spread its operations offshore. Profit incentives and a growth strategy are sufficient. Thus, Malaysian companies are now actively logging forest in Pacific Island states.

It is clear from the above discussions that a meaningful intervention strategy requires a strong knowledge base on the interplay between global and local market forces and the linkages between state and civil societies. There is a need to understand the dynamics of these relationships, as either reinforcing, antagonistic or irrelevant. Data indicates that global market processes such as trade liberalization, reinforces the corporatist mode of forest production and governance at the local level, as in the case of Indonesia and Malaysia. This same process may antagonize the environmental and social agenda of local civil societies, and may contradict community-based forest management interventions that are now strong in the Philippines and Thailand. These may also put further stress on forest resources.^{xix}

Research Questions:

In some precise case studies:

- ◆ *What are the features and characteristics of concrete institutional, social and political processes linking local interests, institutions and actors on one side, and external drivers?*
- ◆ *What conditions, and which ones of these processes and linkages, have been conducive to improved and more sustainable forest management and how?*

On the other hand, the presence of strong civil society mechanisms may also insulate and protect the local communities and institutions from the negative impacts of globalization, even as such strategies may also be tapped to generate capital and to produce forest commodities both for local and global trade. Here, civil society does not only include NGOs and technical/research networks, but also the wider array of cultural institutions which provide communities their mechanisms for social and political consolidation towards collective action. It looks like autonomy of local institutions is

directly related to strong civil societies and their associated social capital; and that local institutional strengthening will actually protect the forest. It has been shown that social capital^{xx} and civil society mechanisms can be relied upon during periods of crisis. In the Philippines strong kinship structures and social networks provided social safety nets during the crisis. However, it is also safe to say that the faith on the strength of civil societies should be balanced by a cautionary note, particularly in the context of the fact that civil society institutions might also be conduits for rent-seeking.

Research Question:

In some precise case studies:

- ◆ *Under what enabling conditions (both local and external) are local institutions effective in protecting forest resources, local communities and forest-based interests from the adverse social and environmental impacts of economic globalization and trade liberalization?*

THEME 3: EFFECTS OF INTERNATIONAL ENVIRONMENTAL REGIMES

In theme 2, we saw how globalization, through the activities of international finance and business, and facilitated by regional and global institutions promoting further liberalization of trade and investment, had important implications for forest conditions and social outcomes. In situations where environmental protection was weak or poorly enforced, or local communities and civil society had little power, a common expectation is that liberalization may lead to worse forest and social outcomes. International agreements potentially could provide some counter-point to these forces of change from outside the borders of traditional forest management units. Thus, the central question addressed in this theme is: *How can international environmental regimes promote sustainable management of forests and forest lands in a just way?*

The logging industry has already made a start. The International Tropical Timber Organization (ITTO) was created as a result of the 1984 International Timber Trade Agreement (ITTA) which was renegotiated in 1994. Facing adverse changes in forest quality, all members have agreed that by the year 2000 they would only export or import tropical timber from "sustainably managed" sources. It should be noted that ITTA is also intended to promote industrialization and to increase timber exports. The challenge is how can the sometimes conflicting pressures coming from profit-seeking and industrialization on one hand and sustainable forest management on the other can be reconciled, and what institutional mechanisms are required to enable such reconciliation. There is the emerging regime on timber certification that can provide support to this endeavor, with NGOs and the private sector taking the lead in its development. The issue here is the receptiveness of the governments to adopt this as official state policy. There are other regional and global institutional mechanisms that emerged in response to changing forest conditions. The outbreak of forest fires, which in itself is an outcome of changing institutional policies but is also reflective of a current resource condition,

created the need to establish in-country institutions and regional partnerships to handle the problem. There is also the World Commission on Forests and Sustainable Development (WCFSD), the Intergovernmental Panel on Forests, Forest Stewardship Council (FSC) and Tropical Forestry Action Plan (TFAP), among other variedly composed institutions promoting international cooperation over the use, management and preservation of forests.

The Convention on Biological Diversity (CBD) and the United Nations Framework Convention for Climate Change (UNFCCC) both have generated awareness over deforestation issues (such as emission and biodiversity losses) and processes for continued negotiation. While mechanisms for compliance have not actually been established, these global mechanisms have created awareness, particularly among civil society players, which may enable them to put pressure on their national governments to comply. Furthermore, these conventions have also generated crucial ODA financial and technical assistance to countries in Southeast Asia to conduct their own researches on these issues. One other international regime which is relevant is the 1975 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In 1992, CITES included in its list some commercially important timber species. However, while CITES addressed issues of trade in products, one of its pitfalls is its failure to address issues relating to their habitat. One area of concern is how CITES will fare when ranged against the arguments of WTO's GATT.

Global environmental changes have caused the formation of the above mentioned international regimes with different agenda. There is a need to inquire into the horizontal dynamics which exist among these international regimes, which include not only those directly related to forest and environment but also includes trade, investment and development as they impinge upon forest and environment issues; their vertical dynamics with local institutions; the horizontal dynamics among local institutions as they react to these international regimes; and, finally, the actual process by which such agreements are arrived at, including the role of various stakeholder, community and epistemic networks.

Research Question:

- ◆ *How can the various international environmental and trade regimes be re-designed so that they interact in ways that will facilitate sustainable and just management of forests and forest lands?*

The vertical interplay between global environmental regimes and local institutions, especially, resource tenure arrangements, is critical to actual management practices. The interaction is made more complex by the fact the various stakeholders driving the development of institutions at the various scales give emphasis to different forest values. For example, the global environmental regime's emphasis on carbon and biodiversity, whereas intermediate-scale institutions are more likely to be concerned with watershed functions, and the smaller-scale arrangements with uses such as the extraction of timber and non-timber products.

As economic and ecological crises unfold, the other domains of social conflict, aside from class, are unleashed and find expression not only in rights issues but also on issues which may have a bearing on resource use and quality. Indigenous people's movements have actively carried an environmental agenda, most of which are centered on access to, control of, and sustainability of forest resources. Women's movements along the eco-feminist strand strikes deep into the heart of destructive forest practices by revealing their masculine and exploitative practices. Environmentalism, which in most instances is perceived to be a middle-class civil society discourse, could also be found in grassroots civil societies expressed in the context of livelihood struggles of the rural poor (Hirsch, 1996). Various environmental actors have taken advocacy positions, using both science as well as politics as tools to push for their agenda. In this context, it is important to inquire into the emergence of "environmentalism" as a reaction to the present globalization, as well as in the associated political tools and strategies which reflect the manner by which environmental movements and discourses shape the mode by which institutions influence and participate in the generation of knowledge and of policy.

Research Questions:

- ◆ *Under what circumstances to these international regimes tend to mutual reinforce, or conversely counter-act, the intentions and activities of local forest management practices?*
- ◆ *What are political tools and strategies used to influence knowledge and policy about forest governance and management? How effective are these?*

THEME 4: ENVIRONMENTAL FEEDBACKS ON FOREST GOVERNANCE

There are important feedback to forest governance arising from the changes in the biogeophysical conditions of forests. In fact, one of the main impetuses for institutional development and evolution is expected to be changes in the perceived state of forest resources. The key research question is no longer just the role of resource regimes and their socio-political context on the conditions of forests, but also on the impacts of environmental changes on the evolution of institutions, or how modes of governance are shaped by prevailing forest conditions.

It is clearly established in the preceding sections that modes of governance influence forest conditions in the sense that policies and laws prescribe rules on how forest are utilized and managed. Economic and political institutional arrangements, manifested in the structure of forest-based commodity flows and resource allocation rules, have direct bearing on spatial location, quantity and quality of forest resources. The social and economic structures of communities who are dependent on forest resources also have direct bearing on the manner by which the resource is used, and consequently has impact on its quality. State-determined rule-making processes which favor corporate forest management, while capable of deploying scientific management

forest practices, may also serve as the impetus for massive land conversion which may have serious environmental impacts such as forest fires and haze.

However, it is also equally valid to argue that the present conditions of forest resources shape the manner by which rules are made. Resource-rich countries define their rules and mobilize their institutions differently from resource-poor countries. Thailand and the Philippines, for example, constrained by the level and quality of their resources, have mobilized community-based and civil-society structures and processes towards forest protection, and have de-mobilized some sectors of the forest-based industry by imposing restrictions on commercial logging. On the other hand, Indonesia and Malaysia remains heavily biased in favor of the latter, even as it is beginning to pay lip service to the former.

There is no doubt that future global environmental change will further confound the relationships between forest conditions and institutions. Adverse changes in climate and its attendant shifts in weather patterns challenge the capacity of institutions. Reduced productivity, occurrence of floods and fires and other environmental effects of climate change constrain the capacity of institutions to sustain its existence by relying on established practices. What is required is the capacity to innovate and adapt in ways that increase the ability to cope with and to intervene into the processes modified by global environmental change. What complicate the picture are the conflicting pressures coming from trade liberalization on one hand and resource sustainability on the other. The conflict between state-building processes involving the maintenance of robust and stable political economic institutions, and environment-protecting processes involving the maintenance of robust and stable ecosystems finds its clearest manifestation during crisis situations, such as the one which was faced recently by Asian economies. It is in this situation that civil society emerges as a middle ground which tame the forces of the state and the market and which provide ecological discourses its institutional base for political expression. As what has been shown already, civil society mechanisms can be relied upon during periods of crisis.^{xxi}

Research Questions:

- ◆ *To what extent are existing institutions (eg. Laws) robust to changes in forest condition, and how would this effect respond to further global environmental changes?*
- ◆ *How are modes of governance shaped by prevailing forest conditions?*

It is also important to point out that the move towards changing the definitions of what constitutes forests and forest management, which have significant implications on institutional practices and rule-making structures and processes (see Theme 1), is a direct response to the changing resource conditions. The inclusion of agroforestry-related management systems, the emergence of urban and lowland forestry, the entry of tree domestication and the rediscovery of the importance of non-timber forest products significantly alter not only the science and practice of forestry, but the associated institutions which are deployed to govern resource use and allocation. It is in this context that community-based forest management becomes a legitimate forest management

strategy in the face of dwindling forest stocks with much reduced diameters and massive opening of previously forested areas.

TOWARDS GOOD FOREST GOVERNANCE: THE RESEARCH AGENDA

The paper identified themes and their associated research questions that are summarized in the following table:

THEME	RESEARCH QUESTIONS
Effects of decentralization on forest	<ul style="list-style-type: none"> ◆ <i>Under what social and environmental conditions does decentralization result in better forest management practices and outcomes.</i> ◆ <i>Why do some forms of resource tenure promote sustainable forest management practices and outcomes, whereas other institutional arrangements lead to degradation?</i> ◆ <i>To what extent and in what contexts (economic, social, institutional and political) are community forestry activities conducive to improved and more sustainable management of forest?</i>
Effects of economic globalization	<ul style="list-style-type: none"> ◆ <i>What are the features and characteristics of concrete institutional, social and political processes linking local interests, institutions and actors on one side, and external drivers.</i> ◆ <i>What condition, and which ones of these processes and linkages, have been conducive to improved and more sustainable forest management and how?</i> ◆ <i>Under what enabling conditions (both local and external) are local institutions effective in protecting forest resources, local communities and forest-based interests from the adverse social and environmental impacts of economic globalization and trade liberalization?</i>
Effects of international environmental regimes	<ul style="list-style-type: none"> ◆ <i>How can the various international environmental and trade regimes be re-designed so that they interact in ways that will facilitate sustainable and just management of forests and forest lands?</i> ◆ <i>Under what circumstances to these international regimes tend to mutual reinforce, or conversely counter-act, the intentions and activities of local forest management practices?</i> ◆ <i>What are political tools and strategies used to influence knowledge and policy about forest governance and management? How effective are</i>

	<i>these?</i>
Environmental feedback on forest governance	<ul style="list-style-type: none"> ◆ <i>To what extent are existing institutions (eg. Laws) robust to changes in forest condition, and how would this effect respond to further global environmental changes?</i> ◆ <i>How are modes of governance shaped by prevailing forest conditions?</i>

The major goal of each of the research agenda is to evaluate institutional arrangements with the ultimate objective of achieving good forest governance through a strengthening of existing institutions or designing new ones which best conserve the resource while at the same time ensuring equitable social development.

METHODOLOGY

Since this report is written within the framework of IDGEC, its theoretical and methodological basis may be found in IDGEC's science plan (IDGEC, 1999, pp. 74-80). The goal of IDGEC is to assess the role that institutions play in causing and confronting global environmental change. In regards to the changes in the conditions of forests, this is to be explicated in the political economy of forests in 2 regions of the world, Circumpolar North, and Southeast Asia. This report takes institutional approach to political economy, in order to account for why the forest conditions in these regions are increasingly unsustainable.

IDGEC has adopted methodological pluralism. It encourages the use of variety of procedures drawn from a number of social science disciplines as well as the development of explicit linkages to the work of natural scientists interested in global environmental change. With pluralism, IDGEC suggests the following methods.

1. *Recognizing alternative knowledge claims*, especially traditional and indigenous ecological knowledge. Indigenous knowledge is knowledge in practice. Researchers are encouraged to take them seriously on their own terms rather than endeavoring to assimilate them into western scientific knowledge. Traditional and indigenous knowledge is particularly relevant for investigations into indigenous people's management of forests.
2. *Case studies*. While case studies present problems of generalization, they can capture the profound complexities of interacting human and bio-geophysical systems and the dynamics of global environmental change. They also facilitate efforts to track the development of institutions over time. IDGEC anticipates that researchers working within its framework will continue to develop detailed qualitative and long-term case studies of specific institutions or clusters of institutions in a single bio-geophysical domain. Case studies are particularly relevant for the study of political economy of forests for they reveal interactions of and interplay between social, economic and political institutions. Researchers may study them at various levels and scale of social organization, from local communities to regional and international levels.
3. *Comparative studies*. Comparative analysis is a powerful method in the study of institutions operating at the same or different scales from local to global. Researchers

who approach political economy of forests from sociological and social anthropological perspectives will find comparative method particularly useful. However, those who approach a research problem from economic or political science perspectives will find comparative analysis equally useful, for it allows broad and long term analysis of problem situations in different countries or regions. A comparison between boreal forests of Circumpolar North and tropical forests of Southeast Asia is most interesting in terms of the political economy of both regions and its impacts on their forest resources. However, researchers need a good networking in order to be successful. A comparison of this scale will have strong global implications.

4. *Modeling.* A social and political model is different from models in natural science and mathematics. Social and political model is potentially useful, not to speak of economic model, given the purpose of a model is moderate, for example, descriptive, diagnostic, explanatory and predictive. Constructing a social and political model will need innovative techniques, but not necessarily too complex for researchers and policy makers to understand. Models can take advantages of scale analysis, in which model may be scaled up or down to suit its purpose and applicability. Successful forest management of one community or country may well be modeled after and applied in other communities or countries. For researchers who are more advanced and perhaps more ambitious, he or she may want to construct a model aiming at reforming an existing institution or designing a new one. For IDGEC the problem of harmonizing quantitative and qualitative models is well recognized in its science plan (p.79). It, however, anticipates that a “stand alone” qualitative model should yield understanding of the role of institutions in global environmental change, and may provide data that are useful for a construction of integrated model. For IDGEC modeling of institutional systems should also provide at least contingent generalizations (that is, generalizations expected to hold under more or less restrictive conditions) as the basis for institutional design principles and innovations that may lead to improvements in the performances of environmental institutions at all societal levels.

Data collection methods employed in social sciences usually are specific to disciplinary approach and style of inquiry. The study of political economy of forests is open to interdisciplinary approach and diverse styles of inquiry e.g. quantitative, qualitative, descriptive, analytical and interpretative. All require empirical data either of a secondary or primary nature. First hand empirical data require fieldwork in data collection. All require databases. There exist several databases on forests at national and international levels. These include, but not limited to, the following:

1. International Forestry Resources and institutions (IFRI) focus on small-scale systems, based at Indiana University, USA.
2. International Regime Database (IRD) oriented toward macro-level arrangements, based at Darmstadt University, Germany
3. CIFOR
4. World Resources Institute
5. International Tropical Timber Organization
6. FAO Forestry Program

7. APEC
8. ASEAN Review of Biodiversity and Environmental Conservation
9. Convention on Biodiversity, Forestry
10. Forestnet
11. Global Forestry Policy Clearinghouse
12. Forest Cluster Database
13. Pacific Forestry Center Home Page
14. Treelink
15. Timberweb
16. Woods of the World
17. Worlds Forests, Society and Environment
18. World Forest Institute
19. World Forum on Forests

STRATEGIES FOR ACTION

To pursue the abovementioned research agenda, the following goals or targets are envisioned:

1. To be able to develop a network of institutions to tackle the research questions from the view of science; and
2. To be able to link up with policy makers within countries and across countries in order to influence policy.

The following are the proposed strategies that need to be adopted to be able to accomplish these:

1. Use existing networks as a starting point, e.g. SARCS, ASEAN Tenure Network, Asian Forestry Network.
2. Use regular review mechanisms of international institutions (e.g. World Bank in its upcoming Asia Pacific Forest Strategy Review) as a conduit to generate interest on issues, and for possible funding exposure.
3. IDGEC should encourage interactions among scientists and policy makers within and across the two regions (tropical Southeast Asia and the Boreal forests). This paper is undoubtedly heavy on Southeast Asian experiences. The arguments herein, while useful for defining a regional research and policy action, can be enriched by an equally deep boreal analysis.
4. Finally, a follow-on workshop with the purpose of drafting the action plan for this flagship activity is both timely and necessary.

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ⁱ In Southeast Asia effective political control over forest resources has often been held by states or provinces rather than central government (e.g. Leigh 1998, Brookfield and Byron 1990). Maintaining political connections with local leaders is crucial for logging contractors to get licenses and have them renewed. The insecurity of this political rather than institutionalized system creates an economic context in

which the common strategy is to log as quickly as possible without regard to future environmental conditions or social costs.

ⁱⁱ In forest-rich countries, the state of forest resources is not only seen as a valuable economic resource but as source of national pride and identity (Dubash and Seymour, 1999).

ⁱⁱⁱ The direct business interests of the military in logging began during the timber boom in the 60s when Suharto handed out timber licenses to loyal military officers and as a way to improve military budgets (Brookfield and Byron 1990). By 1978 military controlled 12 timber companies. Since then their influence has been less, but is still substantial. For example, the Armed forces owns 51% of International Timber Corporation of Indonesia (Suharto's son 34%, Hasan 15%) which operates Indonesia's largest concession of 600,000 ha concession in East Kalimantan.

^{iv} For example, the "adat" system is very much still practiced in many areas in Indonesia.

^v The World Bank, for one, has attached forest policy reform as conditionality for official development assistance (Dubash and Seymour, 1999).

^{vi} In the Philippines, the institutionalization of participatory development has led to the proliferation of NGOs that are less committed to reform and are only interested in rent-seeking activities. Indigenous practices are now recognized, through a law passed by the Philippine Congress in 1998, as legitimate "rule-making", but there is the fear that this legislated empowerment may have the effect of "bureaucratizing" indigenous rule-making and processes, and eventually may weaken its indigenous logic.

^{vii} Luangaramsi (1997) cites the case of Thailand wherein local discourses of what constitutes community forestry has undermined the state's definition of community forestry.

^{viii} The low price imposed by government on timber concessions reflects this heavy subsidy and this causes over-extraction and has distorted the markets. To illustrate the magnitude of state subsidy, Indonesian government loses yearly an average of US\$1 to US\$3 billion. Government of other countries in the region such as Vietnam and Cambodia also heavily subsidize their logging sector, with Vietnam losing 17% of its revenue and Cambodia losing a remarkable 63% as foregone logging revenues (Sizer, Downes and Kaimowitz, 1999). Stumpage prices in the Philippines, a non-exporting country, remain below their market values.

^{ix} Canada and the United States, faced with constricting timber markets, has increased logging subsidies to maintain competitiveness (Menotti, 1991). It is also reported that Russia foregoes about US\$ 5 billion in income as it collects only 3 to 20% of potential timber revenues (Seizer, Downes and Kaimowitz, 1999).

^x This is particularly true in the case of Philippines and Thailand.

^{xi} In the Philippines, forest protection work in the context of community-based forest management is an unpaid voluntary work which rests on the strength of social capital and civic-mindedness among forest-dependent communities, and as a form of gratuity to the state for granting them tenure, albeit temporary with a 25-year duration.

^{xii} In Myanmar (and Vietnam before entering Doi Moi) the recent trend has been in the opposite direction, namely, from private business interests towards the state. Private property rights and other form of traditional rights have largely been abolished. Collective and state property rights systems were established instead. The state or its functional institutions control the use of resources.

^{xiii} In Southeast Asia, Indonesia and Malaysia remain as the two power-house timber economies. They rank 6th and 8th, respectively, among the top exporters of forest products in the region (Bourke and Leitch, 1998), with Malaysia continuing to dominate trade in tropical sawnwood, with at least 50% share of the total exports from ITTO-member countries. On the other hand, Indonesia continues to dominate 50% of total exports of tropical plywood from ITTO-member countries. However, the exposure of these two economies and their markets to the Asian contagion in 1997-98 led to drastic shedding in the values of both prices as well as volume of exports. Indonesia's plywood production shed 37% of its value in 1998. Prices for boards coming from these two countries lost 30% of its value in 1997, and another 25-30% in 1998 (Adams, 1998).

^{xiv} See Note 8 above.

^{xv} The Pembinaan Masyarakat Desa Huan (PMDH) or the community development program (CDP) introduced in Indonesia in 1991 required concessionaires to support community development activities around its areas of operation. However, this failed to articulate a participatory management approach, in the sense that what emerged was a dole-out system of assistance provided to communities (Firman, et. Al., 1997). While there is now an articulated recognition of the role of rural communities in forest management

in the Basic Forestry Law of 1999 recently passed by the Indonesian parliament, this is not matched by strong legal mechanisms for customary rights recognition and local community empowerment (Down to Earth, 1999).

^{xvi} Reports indicate that more timber is produced from illegal logging than legitimate production (Tickell, 1999).

^{xvii} In Indonesia, today, there is a complex mix of competition and mutualism in the quest for land resources. Logging concessions and transmigration schemes have helped provide access, for example, through road building and infrastructure, that facilitate subsequent invasion and conversion rather than regrowth and sustainable harvesting systems. Smallholders, state enterprises and private businesses are moving in to claim land for industrial tree plantations. Even here there is competition between those interested in development of large-scale timber plantations to supply pulp and paper mills and other secondary wood industries with oil palm. The system for classifying, planning and allocating land development permits is central to these conversion between forest land uses, and has been manipulated by the various stakeholders. The Ministry of Forestry now renamed the Ministry of Forestry and Estates gives final permission on conversion of forest lands to agriculture. In practice, however, offices at provincial and regional levels are more important. The office of the Governor and Regional Development Planning Board (BAPPEDA) have power to grant land and facilitate development projects they support through the regulatory process. They favor oil palm as it is consistent with their provincial economic growth goals. The amount of commercially exploitable timber on production forest land is easily under-stated to gain permission for conversion. In any case, oil companies often start clearing land before official approval is given, and don't stop if approval is not given.

^{xviii} The trade and investment activities of Japanese corporations have had a huge influence on the logging of old-growth forests in Southeast Asia over the past several decades. The reduced value of logged-over forest, and the provision of access provide incentives for further conversion of these secondary forests to commercial crops, other large development projects, and for spontaneous migration into frontier areas. Over 90 percent of Japanese tropical timber imports in the last four decades has come from Indonesia, East Malaysia (Sabah & Sarawak) and the Philippines. During the boom periods in each area, exports to Japan accounted for more than half of that area's log production. Japan's influence over logging in the Philippines is by now very low, but the communities there must now live with the degraded resource base, so the impact in a real sense is still very much present.

^{xix} Sunderlin (1999) and Sizer, et.al. (1999) anticipate that in the face of economic difficulties and forest trade liberalization, that there will be pressures to intensify conversion of forest lands to agri-business plantation estates. This may heighten the occurrence of fires since this method has been relied upon as the most convenient and cheapest way to clear forests (Chandrasekharan, 1998).

^{xx} Social capital refers to the shared knowledge, understandings, norms, rules and expectations about patterns of interactions that groups of individuals bring to a recurrent activity (Ostrom, 1998).

^{xxi} Civil society processes have been deployed in Thailand and the Philippines in its efforts to recuperate from its environmental degradation. Likewise, it has been deployed during the financial crisis in 1997-98 to provide coping mechanisms.