

Paths and Pitfalls of Decentralisation for Sustainable Forest Management: Experiences of the Asia-Pacific Region

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ABSTRACT

Decentralisation is widely mooted as a device to improve the democratic process of governance and the equity and/or efficiency of resource allocation. While the objectives and the key principles of decentralisation such as subsidiarity are well known, attempts to implement them have not always been successful. Furthermore, while the decentralisation paths may sometimes be conceptually well designed, in most cases they are not faithfully implemented, due to various reasons—thus, leading to serious pitfalls causing conflicts, confusions and failure to achieve the objectives. Selected case studies of experiences in the Asia-Pacific Region have been reviewed for their positive and negative aspects. The impacts on forest management and overall sustainability are noted.

The paths for successful decentralisation need to reflect the geography, culture and institutions of the country concerned, as well as the various functions of governance, bureaucracy, markets and information and their interrelationships. The forms of decentralisation are many. They can embrace geographic hierarchies, as well as joint federal-regional, interregional, or local government collectives, and other arrangements that do not conform to normal geographic hierarchies of governance. However, the preparatory demands are high in all forms of decentralisation and suggest that phasing implementation is desirable. The lessons learned from the case studies are summarised. They provide a basis for charting future paths and avoiding pitfalls in implementing decentralisation for sustainable forest management.

KEY WORDS Decentralisation, delegation, devolution, privatisation, sustainable forest management, poverty alleviation.

INTRODUCTION

Much of the current impetus for decentralisation stems from concerns regarding democratic governance. Furtado (2001) summed up the perceived advantages and disadvantages of decentralisation in relation to democratic governance, as follows:

Among other things, it was thought that decentralisation would:

- ensure the provision of social services that meet the needs of constituents in a given locale;
- draw on local knowledge and preferences;
- give interests at local levels a stronger sense of ownership over projects and programming, thus making programming more sustainable;
- enhance the public accountability of bureaucrats, elected representatives and political institutions, thus ensuring greater responsiveness in government;
- promote local self-reliance; and
- promote monitoring, evaluation and planning at the local level and enhance community participation in decision-making.

Of course, the idea also had its detractors. Critics feared that the decentralisation of public services would result in an erosion of quality and consistency across regions, leaving some regions, cities, villages and potentially vulnerable groups living in these areas worse off than others.

Today, there is a strong push in favour of decentralisation to promote improved governance or to combat corruption. However, there is no evidence that greater decentralisation automatically leads to these results.

Blair's (2000) study of democratic local governance in six countries is similarly equivocal as to the gains made. While the progression from participation to representation to empowerment to benefits for all, and thence to poverty reduction, seems appealingly logical, many of the cases studied had not progressed far beyond initial or nominal empowerment. Whether that reflects barriers or temporary inertia in a slow process is unclear.

It will be evident the precepts on which decentralisation has been commonly advanced as desirable are not yet well established. Decentralisation needs to be tailored very carefully to the situation and may not be the answer to every problem. As Rondinelli (2002) has pointed out:

Decentralisation may not always be efficient, especially for standardised, routine, network-based services. It can result in the loss of economies of scale and of control over scarce financial resources by the central government. Weak administrative or technical capacity at local levels may result in services being delivered less efficiently and effectively in some areas of the country.

The democratic process itself is a work in progress, not a known and fixed target. There is therefore no one path for decentralisation that fits all and decentralisation can take many forms. For simplicity, let us recognise three very distinct forms (Klugman 1994) and one variant:

Deconcentration: the transfer of administrative responsibility for specified functions to lower levels within the central government bureaucracy, generally on some spatial basis.

Delegation: the transfer of managerial responsibility for specified functions to other public organizations outside normal central government control, whether provincial or local government or parastatal agencies.

Devolution: the transfer of governance responsibility for specified functions to sub-national levels, either publicly or privately owned, that are largely outside the direct control of the central government.

Privatisation is a particular form of devolution to private ownership that has become prominent in recent times.

While the distinctions are often not as clear as the categorisation would imply, they enable us to narrow the focus somewhat because deconcentration has long been practiced, whereas delegation, devolution and privatisation represent the main forms of interest in terms of current policies concerning decentralisation. Much of the current interest in these forms of decentralisation reflects a concern for the amelioration of inequities and is based on the notion that decentralisation can improve fairness through the delegation of administration and/or devolution of governance from central government to local communities. Fairness in relation to rural communities is principally a concern about poverty alleviation and/or sustainable forest management. Sometimes it may be about fairness in the sense of maintaining ethnic cultures or assisting disadvantaged minority groups. Another common theme is that decentralisation can improve the efficiency of resource allocation by bringing decision-making closer to rural people.

Emphasis varies according to the resource and population base of the country concerned. Poverty alleviation is principally concerned with matters of intra-generational equity—the fairness of the distribution of income (and consumption) now—and therefore tends to be more prominent where the population pressures are high and the forest resource base low. Sustainable forest management is about both intra-generational and inter-generational equity—the fairness of the distribution of income (and consumption) across generations (Ferguson, 1996). It tends to be more prominent where forest resources are more plentiful relative to population levels. But neither emphasis is complete without reference to efficiency (sometimes termed ‘allocative-’ or ‘X-efficiency’)—the improved use of resources, which may be an important precursor or corollary to equity.

One of the principles often advocated in decentralisation is that of subsidiarity. According to this principle governance and/or administrative management should be at the lowest geographic level consistent with allocative efficiency (e.g., the geographic area that best internalises the benefits and costs of decision-making for a particular public service). But there are many interpretations of subsidiarity and what they demonstrate is that the devil lies in the detail. Hence a review of case studies from countries in the Asia-Pacific region may provide a useful initial platform on which to examine the paths and pitfalls of decentralisation, especially in relation to the sub-national aspects.

The terminology of the geographic basis of sub-national decentralisation is confused by synonyms and language-specific proper names. We have therefore adopted a generic hierarchical form for reporting decentralisation, as shown below, with the proper name being shown in brackets after the first usage for the country concerned:

- National – relating to the nation-state
- Provincial – first order geographic subdivision of the national level
- District – second-order geographic subdivision of the provincial levels
- Village – third order geographic subdivision of the district levels
- Household – independent livelihood units forming a village

Not all such levels are present in every country: some (e.g., Indonesia) have more. But the hierarchy of geographic size in terms of area and population should nevertheless be evident from these descriptors.

Particular reference will be made to the distinction between nations with *unitary* and *federal* systems of governance, because these lead to different issues. In a unitary system the central government defines, and by hypothesis may redefine, the powers of other levels of government. In a federal system, the powers of local governments derive from the constitution. That is they are not subject to change by central government. That means the federation consists of a group of semi-independent units (provinces, states, prefectures) under a central government with specified powers. Federal systems are often established to create national unity without eliminating traditional local autonomy (e.g., Switzerland). Unitary systems also have had sub-national levels of governance, but these are not constitutionally empowered; they are instituted to balance the burden of governance. During the last three decades, with the growing openness of multiparty democratic processes, the decentralisation of governance systems, and the devolution of greater authority over planning and financial management to sub-national levels have become part of the policy agenda of many nations.

Decentralisation to *community-based units* (groups of households in close proximity to forestland) needs to be recognised as a further category. The fundamental difference between this and decentralisation to a district or village level is that these communities are not necessarily coincident with either administrative district or village boundaries. They may be parts of district or collectives of parts and do not normally form part of the geographic subdivision of land areas for governance and administrative purposes. Community-based units include a variety of non-governmental membership organizations such as cooperatives, farmers associations, and tenant leagues, which are accountable to their members to a varying degree. They are based on voluntary participation and group solidarity, and generally are non-bureaucratic. Community-based organizations are institutions with an integrity of their own, having specified goals which are achieved by implementing group decisions and observing group goals. They are not substitutes for public or private sector channels of service, investment or activity.

The simplest form of community-based organizations is a cohesive group of self-identified or homogeneous members of society having some common or similar interest. While many community-based organizations are based on single functions, they can be multifunctional up to a certain point, to ensure viability and the capacity to integrate diverse service, and form networks. They are more likely to succeed if their rules and values are more participatory and egalitarian, if they are more informal in their workings and more consensual in their mode of decision-making, and if linked vertically and horizontally with other community-based organizations (Esman and Uphoff 1982)

Similarly, decentralisation through *customary ownership* of land represents another special case to be discussed separately. Customary or communal ownership, with every individual or household in the community having a right over the forest property is a decentralised

situation. Customary ownership is the common form of land tenure in the Pacific Island countries. This system can also be found in many other countries in respect of land belonging to indigenous communities.

Table 1 summarises the present situation regarding decentralisation for most countries in the Asia-Pacific region. It distinguishes between the form of government (unitary or federal), public and private ownership, the emphases of national forest policy, the prime forestry institution/s, the main approach and other supplementary approaches to decentralisation, the institutions involved at the lowest levels of administration or governance, the change in the forest area from 1990 to 2000, and any special features.

[Table 1 here]

Three features are evident from Table 1³. Firstly, there is a very wide array of paths taken to decentralisation. Secondly, the institutions and property rights involved vary widely. Thirdly, the change in the forest area from 1990 to 2000 is negative in all but five of the twenty one countries. Some of those showing positive change are open to question due to the changes in definition over that period, such as those leading to the inclusion of rubberwood plantations in the area in 2000. Thus the changes in forest area are not indicative of major improvement in one of the simplest (albeit crude) indicators of sustainable forest management.

The following case studies have been chosen to illustrate some of the paths that have been pursued to achieve decentralisation and some of the pitfalls associated with those changes. Gregersen et al. (2004) have described decentralisation in a number of the countries in the Asia-Pacific region. Two of these (Australia and Indonesia) are among the case studies discussed here because of particular issues at the sub-national level. The remainder (China, Fiji, Korea, Nepal, Philippines, Vietnam) were selected because they illustrate the diversity of approaches and outcomes.

DEVOLUTION TO DISTRICT GOVERNANCE

The Philippines and Indonesia provide two recent and different case studies of devolution from national to district governance.

Philippines

In the Philippines there have been several initiatives since the 1986 election with regard to democratic decentralisation and devolution of authority to a hierarchy of units, together with special arrangements to link community-based forestry projects (principally on upland forests) to those units. The intention of the reorganization was for the national functions of the Department of Environment and Natural Resources (DENR) to be decentralised on the regional, provincial and district levels and that environmental and natural resources issues and concerns in the field be addressed in an integrated and holistic manner. In the process, the national agency was to be transformed from a regulatory and controlling organization to a mainly extension organization supportive of the development efforts of the people and the

³ Table 1 is drawn from a longer paper by C. Chandrasekharan prepared for ITTO in anticipation of this Workshop. This paper provides much more detail on most countries in the Asia-Pacific Region and can be obtained through editor@itto.or.jp. It provided the basis for most of the case studies that follow.

private sector, with greatly reduced regulatory function. The goal, however, is far from being achieved.

DENR is a huge decentralised (partially) national organization with a bureaucratic ‘through proper channel’ style of communications. The limited powers delegated to lower echelons, and the widely scattered field units are such that decisions at the top and implementation on the ground are often separated by considerable time lags; feedback from below about field activities reach headquarters only after long time delays, impeding quick managerial decisions; and monitoring and evaluation of the progress of projects are extremely difficult to undertake.

The Local Government Code granted the new hierarchy of governance units greater fiscal and political autonomy, thereby expanding their capacity to participate in national development efforts. It has brought to the fore the critical role of district units in the management of forest and watersheds. In general, the Code has tasked them to adopt measures that will ‘protect the environment and impose appropriate penalties for acts which endanger the environment’. More specifically, the Code gives responsibility to the appropriate levels of units in the governance hierarchy, as follows:

- (a) Village (*barangay*) level: services and facilities related to general hygiene and sanitation, beautification and solid waste collection;
- (b) District (municipality) level; subject to the supervision and control of the national agency (DENR), the implementation of community-based forestry projects, management and control of communal forests not exceeding 50 sq. km. and the establishment of tree parks and green belt and other similar forest development projects; and
- (c) Provincial (province) level: the enforcement of forestry laws limited to community-based forestry projects. These provide the backbone for increased involvement of districts in the governance of natural resources in their respective jurisdictions.

The collaborative roles of districts in forestry development have become very important because all community-based forest management projects necessarily fall within the geographic jurisdiction of districts, thereby making district cooperation and support logical and vital. Other legislation has transferred certain forestry development functions to districts for implementation and the closeness of districts to the local people and their proximity to the forest resources make them powerful partners of the national forestry agency in implementation of community-based forest management (SUSTEC 2001).

The national forestry agency has already devolved some of its conservation, management and protection functions to districts and reassigned some 1,000 staff members to support them. The decentralisation did not result in the proper integration of field activities and staff (Chandrasekharan 2003). It was also planned that the agency would transfer budgets, assets, and records that correspond to the Department’s devolved functions and programs; but there has been only limited progress in this. Many district units are attempting to defer the devolution citing a lack of clarity in the new responsibilities of local authorities and of funding, inadequate office space to accommodate new staff, and complexities in administrative arrangements.

District functionaries feel that in the spirit of decentralisation they should have ‘real power’ to make important decisions relating to resources management but the Code does not adequately provide it. Real power (they say) still remains at the centre. Forest and natural resources are

optional areas for districts. As such, in most districts there is no forestry expertise or capability to deal with forestry matters. Forest related issues often impinge on the life of the local people and their livelihood activities but districts are in most cases unable to intervene. Substantial differences exist in the policy thrusts, priorities and approaches of the national forestry agency and districts relating to management and utilization of forests, and that leads to weaknesses in collaboration.

Community-based organizations have similar problems, as the case study by Saway (2004) illustrates. In the Philippines, all people-oriented forestry programs were integrated into the Community-Based Forest Management Program through an Executive Order in 1995. The program involves a partnership between the national government and the forest communities in developing, rehabilitating and managing vast tracts of forest areas. The program integrates and unifies all people-oriented forestry activities of the Integrated Social Forestry Program, Community Forestry Program, Coastal Environmental Program, and Recognition of Ancestral Domains. The ancestral domain legislation in Philippines is intended to recognise traditional connections to resources as a basis for formal tenure.

The Community-Based Forest Management Program starts from the recognition that food and sustainable livelihood, rather than forestry, are the chief priorities of upland dwellers. By bestowing direct responsibilities on community-based organizations for resource management, including its protection and conservation, community-based forest management seeks to minimise the damage caused by inappropriate farming techniques, shifting cultivation, and forest exploitation. Accordingly, community-based forest management is intended to promote:

- Sustainable management of forest resources
- Social justice and improved well-being of local communities
- Strong partnership among local communities and the national forestry agency

Community-based forest management applies to all areas classified as forestlands, including allowable zones within protected areas not covered by prior vested rights.

The community-based organizations join national forestry agency and district officials in making a forestland use plan and preparing a community resources management framework, including the organization's Mission and Objectives. Organizations are responsible for representing the interests of their forest communities and protecting and maintaining forestlands entrusted to their stewardship. Also, an Administrative Fiat has established collaboration between community-based and other non-government organizations for their mutual strengthening and capacity-building (Chandrasekharan, 2003).

As of 2002, some 4,956 sites were covered by community-based forest management schemes, comprising a total of 5.7 million hectares (ha). Tenured areas, or areas already covered by approved tenorial instruments like Community-based Forest Management Agreements and Certificate of Ancestral Domain Titles is around 4.4 million ha overall. The program has benefited a total of 2,182 project areas comprising a total of 496,175 households with about 2.5 million community members.

The community-based forest management committees and the national federation of those organizations are generally as yet ineffective paper bodies (Chandrasekharan 2003), notwithstanding the qualified success of some (Saway 2004). The existing policies designed to strengthen and support these organizations seem sufficient. The responsibility for less than satisfactory performance may therefore lie in the administrative institutions themselves rather

than in the enabling policies that govern their functions. In short, senior staff in bureaucratic structures appear reluctant to surrender decision-making power, in this case to community-based bodies.

Indonesia

One of the most rapid devolution of powers from a national government to district governments (*kabupaten*) has taken place in Indonesia (see Gregersen et al. 2004; Indonesian Ministry of Forestry 2004). The laws stipulate that district government will be the main functional level of decentralised government and provide wide ranging authority on all matters except those specified such as defence and security affairs, foreign affairs, fiscal and monetary affairs, justice, religion, strategic technologies, conservation and national standardization. According to the decentralisation laws, only national parks and nature reserves are to be managed directly by the national government. All forestry activities other than national parks, conservation and nature reserves are to be under the district government. Presently, however, the district governments are unprepared and inexperienced to manage forestry. Decentralisation in Indonesia, being a hastily undertaken process, did not have adequate preparation to build capacity at the decentralised level (Suwondo 2002).

Dauvergne (1997) and Brown (1999) have documented the extraordinary levels of corruption established prior to these changes in the allocation of concessions to relatives and cronies of those then in power in the national government, such that at least 40 percent of timber was cut illegally. Kasa (1999) and Rufi'ie (2002) provide similarly depressing summaries of the old concession system. More recent estimates by Neil Scotland and Sabe Ludwig cited by Brack et al. (2002) put the figure at 70 percent, although this is disputed by the Indonesian Government.

Brown (1999) feared that the then proposed changes, which included giving district governors the powers to allocate concessions to local cooperatives, might create a new system of corruption at the local governance level, by giving local power elites the opportunity to distribute the concessions in return for political and financial favours. According to Suwondo (2002), corruption has often shifted to district government. Not all changes were for the worse. Suwondo notes the case of a logging concession in Lombok, where local governance took over a logging concession to better effect than before.

Environmental watchdogs and the Indonesian Government disagree on the current level of illegal logging. It seems clear, however, that the rapid devolution of responsibility for allocation of concessions, coupled with other shifts in national government policies related to forests, has created a great deal of confusion in the sector, so that corrupt activities may have been facilitated at the district level. Rukmantara (2003), for example, reported that 'the decentralisation of the process by which small-scale operators were granted concessions caused conflicts on the ground because such concessions often overlapped with those being managed by existing forest concessions.' For this reason, it is probably more appropriate to refer to illicit, rather than illegal logging, because legality in the previous case is a moot point. As noted by Gregersen et al. (2004) and the Indonesian Ministry of Forestry (2003), some district governments are now rejecting the attempt by the national government, through a Ministry of Forestry decree, to repeal powers devolving the allocation of utilisation licenses.

Any move to curtail illicit logging will require a short-term ban on legal logging so that the offenders can be identified and proper controls instituted. Such a change poses a host of

difficulties for both levels of government and is only likely to eventuate if public concern at national elections is raised sufficiently, which seems unlikely given the nature of the beneficiaries of illicit logging. In the meantime, the prevalence of illicit logging has curtailed any benefit that devolution might otherwise have contributed to sustainable forest management.

DECENTRALISATION TO VILLAGE GOVERNANCE

Korea and Nepal illustrate long-standing devolution to the village level and some of the issues that can arise as the economy or political institutions change.

Korea

Dating back to 1908 under the Great Korean Empire, forestry administration has been under the Ministry of Agriculture, Forestry and Fisheries. Forestry administration follows a deconcentrated internal structure. It administers forest policy and executes laws relating to forests and forestry. It also supports and implements the formation and management of forest resources, protection and development of forests, utilization and development of forest products, research and training, sustainable forest management, and an extension service.

At its constitutional formation in 1948 the forest landscape of the Republic of Korea was badly degraded and denuded. The availability of and access to land as a factor in forestry development deserve special mention. Some 73 percent of the forest area of the Republic of Korea is under private ownership and about 58 percent of the forestland owned privately is in holdings of less than 10 ha in size, the average size of holdings being 2.6 ha. While large forest estates are managed as independent private enterprises, the small ones are managed as part of the system of village cooperatives (Village Forestry Associations), under the strong support and guidance of the government. Thus the case of forestry development in Korea is one of village level cooperation in achieving community goals with regard to the forestry movement. The system consists of a hierarchy of forestry associations at the provincial and national levels involved in all production and technical aspects of forestry with higher tiers carrying out supervisory and technical guidance functions. The system is often cited as an example of a successful system of cooperative, multi-tiered and federated structure with a comprehensive program, involving social mobilization and covering all aspects of forestry for the improvement of community life.

Forestry cooperatives are based on the 15th century rural people's self-regulated organization (*Sanrimgae*) for forest protection. The main purposes of the modernised cooperatives are the supervision of forestry related business affairs, establishment of a foundation for self-supporting operation, and structural adjustment.

In 1973 Korea embarked on an ambitious program of National Forestry Development, which was carried out by the system of village cooperatives. The system thus combined voluntary decision-making by village cooperatives with a national program for forestry development and a federation imposed from above (FAO 1982). The fundamental philosophy involves a set of procedures – discussion of the problem, election of leaders, formulation of plans in village assembly, undertaking of projects with grass-roots co-operation through voluntary participation without discrimination on gender or age. As of 1990 there were 20,287 village cooperatives grouped within 142 provincial level units, whose membership reached a total of 1,983,600. The multi-tiered system involved significant pieces of forestry and land use

legislation, which taken as a package provided national guidance and directives for a comprehensive program. It involved government at all levels through provisions of subsidies, loans and technical support, and cooperation with private organizations – thus, linking planning and action between government and village level organizations through clearly delineated lines of authority and interaction. During the 1980s and 1990s, the government supported about 770 technical forest guides at the provincial forestry association level to help forest owners and to provide them with advanced technology. The impact of the institutional reform based on mutual self-help (*Saemaul Undung*) in Korean forestry is reflected in the results achieved in forestry development (Table 2).

[Insert Table 2 here]

Table 2. Forest Resource Development in the Republic of Korea

Year	Forest Area (ha)	Growing Stock (cu. m.)	Growing Stock per Hectare (cu. m./ha)
1960	6,700,000	63,995,000	9.55
1980	6,567,000	145,694,000	22.18
2000	6,430,000	387,758,300	60.30

Source: Lee and Lee 2002

Forest owners and villages subsequently strengthened the system through the formation of self-propelling cooperatives of more homogenous membership. Landowners were not happy with the interference of government in the functioning of the coordinating bodies and at the inadequate economic performance: hence the need to modify or reestablish the system. The change was seen to improve efficiency through systematically improved use of forests, establishment of forest labour units, enlargement of the forest fund and a creation of a stronger forest sector driven by private/peoples' initiatives (Yoo 1991). The system now has only two higher coordinating levels, one is the unit level in 142 provinces, and the other is the national level.

Currently the membership of village cooperatives is 457,000 (23 percent of total forestland owners). They own 410,000 ha of forest, which is only 10 percent of the total forest area, compared to 25 percent formerly. Even though the number of cooperatives is lower, the development potential is greater because the members participate more actively than before. The ratio of extension visits by extension agents has increased about five times in two years after the transformation, giving members better access to information for sustainable forest management. The national government has also increased the financial support for the small forest owners.

Nepal

After eliminating the feudal tenure system in 1957 through a Private Forest Nationalisation Act that brought the forest under public domain, Nepal has for long experimented with systems to decentralise forestry activities to village or community level, through different routes. The Forest Act of 1961 made provisions for community forestry by providing recognition for village (*panchayat*) forests. The Forest Preservation Act of 1967 recognised village protected forests. The Forest Policy of Nepal of 1978 allowed national forests to be handed over to the care of villages. The villages (generally with a population of 2,000 to 4,000) were made responsible for planting and protection of trees in village forests (which are government-owned waste lands) and in return obtained all rights to the produce. Villages also managed the protected forests following a viable Forest Management System and in return

collected fuelwood, fodder and non-wood forest products for *bona fide* use, and received 75 percent of any revenue derived.

In the early 1980s, Nepal passed decentralisation legislation (the Local Government Act) as a means to mobilise resources and stimulate development and bottom-up planning, and in order to make the governance system more participatory. This Act empowered the village government units to make many decisions previously made by the national government. Village government units (now called Village Development Committees) were linked to the district government units (District Development Committees) that had to submit budgets and programs to a provincial level unit (District Assembly) for approval.

Towards the end of the 1980s the national government recognised forest communities (Forest User Groups), irrespective of village political boundaries, as more appropriate and effective institutions for sustainable forest management and to which forest management responsibilities could be assigned on a partnership basis. These communities were a group of households using or dependent on forest resources, mainly in the hill regions. The Forest Act of 1993 and the forest regulations framed in 1995 reaffirmed the national government's policy in assigning more responsibility to the communities by recognizing them as self-governing institutions with rights to acquire, and sell/transfer forest products. (Singh and Kafle 2000).

The village government units now play a key role in forming the committees from among the households who use a patch of forestland. Meeting the community's basic needs is the priority, and all of the benefits from managing the forests go to the communities. Their responsibilities are to prepare annual plans to manage forest; protect, manage and utilise forest produce; fund their own activities and receive grants; reinvest at least 25 percent of revenues in forest development; and set punishments for members who violate rules.

Decision-making by village government units is by consensus, but often excludes women and marginalised ethnic and caste groups. By March 2000, approximately 9,000 communities had legally taken over management responsibilities for about 12 percent of Nepal's forestlands. The community units have established a federation of community forestry users as an Association to expand and strengthen their role in the management of Nepal's forests. At present the federation's activities include training, networking, advocacy and information dissemination. The prime responsibility for extension delivery and enhancing outreach capability lies with the district staff of the national forestry agency.

Decentralisation in forestry has evolved to transferring the responsibility of managing the forests to the level of village units and thence to community units. This has raised several contradictions in the role of these units *vis-a-vis* the national forestry agency. Village officials are unclear about Community Forestry Policies and how these affect their authority over forest resources (Singh and Kafle 2000). Furthermore, while the initial decentralisation was directly from the national to the village levels of governance, subsequent measures have seen the need to introduce intermediate levels (provincial and district) in order to co-ordinate activities and allocate funds. In addition, still lower levels of community participation were introduced to more effectively address sustainable forest management, in an attempt to bypass the political wrangling that often characterised village units.

The experience of decentralisation in Nepal highlights the difficulty that national governments face in balancing participation at a village level with allocative efficiency, horizontal equity (fairness in dividing the fiscal cake), the role of intermediate levels of

governance, and the most effective level for program delivery on the ground. Robinson *et al.* (2004) provide a more recent and depressing perspective on Nepal, including the impact of the current political instability.

DECENTRALISATION INVOLVING CUSTOMARY OWNERSHIP

Customary or communal ownership, with every individual in the community having a right over the forest property, is a decentralised situation. Customary ownership is the common form of land tenure in the Pacific Island countries and hence the following case studies for Papua New Guinea and Fiji.

Papua New Guinea

Ownership of land in Papua New Guinea is vested with customary landowners who comprise a large proportion of the rural population, such that virtually all forestland (97 percent) is owned by clan or tribal groups under customary law. In Papua New Guinea the constitutionally-guaranteed customary land ownership is the key policy factor influencing forest use⁴.

Successive national governments have followed a policy of using the nation's natural resources, of which timber is one of the few that is renewable, to bring development to the rural sector. For this to happen, however, the government had first to acquire timber rights from the customary owners. Under the purchase process, the customary owners leased their right to exploit timber to the government, for periods ranging up to 40 years. Following purchase of timber rights by the national government, timber harvesting and utilization rights were granted to third parties.

Under the current Forest Management Agreement approach, the national forest authority secures the commitment of resource owners to accept recommended forest management practices, while simultaneously offering investors access to the forest for a minimum period of 35 years. Implementation involves the national government issuing a Timber Permit under which it manages the forest on behalf of the customary owners for the duration of the Forest Management Agreement. Management is generally implemented through a developer, including harvest and construction of infrastructure. The Forest Management Agreement also sets out the returns due to the landowner. Currently there are 32 logging concession projects covering 195 Forest Management Agreement areas, distributed over 19 provinces in the country.

The concept of a landowner company was developed in 1979 to increase national participation in the forestry sector. Many landowner companies have been issued with timber permits, supposedly to develop their own resources. This did not generally have the desired success as many of the landowner companies simply contracted foreign companies to conduct logging on their behalf, often on terms that were inappropriate for, or disadvantageous to, the landowner companies.

In 1995, the European Union commenced a program that has assisted villages (clans) in New Britain to establish village-based small-scale logging and portable sawmilling operations

⁴ The authors wish to acknowledge the assistance of O. Petilani and J. Warku, both currently postgraduate students at the University of Melbourne, in discussions and access to thesis drafts under preparation by them.

under a scheme that enabled the operation to achieve Forest Stewardship Council certification. By 1997, some 46 projects had been commenced. A process involving the progressive achievement of eleven steps is involved; final certification being subject to third-party auditing under a group scheme that reduces the costs for the small-scale operations involved. The process places considerable emphasis on village consultation, resolution of disputes, and planning and training. The project also supplies a project officer and trainers for forestry, sawmilling and business operations. The sawn produce is marketed through project-supported marketing centres that segregate certified from other timber and further process the timber for export or sale to domestic consumers. An initial loan of a portable sawmill is made, repayments being recouped from timber revenues. Some 6 of the 24 current operations have been certified. Other non-government organizations (e.g., Pacific Heritage Foundation and WWF) have also established certification-based village projects.

The scheme has been successful in providing employment and training of a technical, business and environmental character and in utilising the traditional clan structures as a basis for decision-making, as well as providing net revenues. However, there are limitations. Some are posed by the social norms (*Custom Wok*) of village (clan) life, in which those who earn income are expected to support others through contributions on the occasion of births, marriages and deaths. This is in effect a voluntary social welfare system in which the norms to contribute are strong. However, it may have some effect on the incentives attached to less skilled employment. Others pose greater problems. The '*Wontok*' system prevails widely. Under this system, those in employment, especially positions of power, are expected to employ family, clan or regional kinsmen in preference to others, and in that order of priority. This can seriously affect the skills base of the labour force where more skilled people are available and seeking work.

Fiji

The major factor determining the forest management and harvesting in Fiji is the pattern of land ownership. The bulk of the land, including productive forestland, is owned by some 6,000 Fijian communities (*mataqali*).

These communities do not have any corporate authority to deal in lands, and all negotiations for the use of the indigenous timber growing on their land have to be conducted through the Native Land Trust Board. Logging is allowed only by consent of both the community and the Board. Timber cutting rights are then negotiated between concessionaires or licensees and the Board, which authorises the Forestry Department to issue logging licences and to administer concession agreements. Revenues received, after adjusting the fees due to the Forestry Department for revenue collection and monitoring, are passed on to the landowners through the Board, which withholds a proportion for administration and special development purposes. The revenues passed to communities are distributed under long-established formulae to a hierarchy of chiefs and finally to community members. The Forestry Department within the Ministry of Fisheries and Forests directly manages all forest reserves and indirectly manages and regulates all forest exploitation except that of Fiji Pine Ltd. The Department advises the Board on timber exploitation; licences and controls the commercial extraction of timber and other forest produces; licences sawmills and processing units; and enforces regulations, while collecting fees and revenues.

Fiji Pine Limited is a quasi-private 'state-owned' corporation established to manage pine plantations established using national government and aid funds. The plantations are widely

distributed on land owned by and leased from various communities (*mataqali*) and have been operating and producing revenues from the sale of logs for many years. Although the communities are represented on the Board of Directors, dissatisfaction has developed among many of the individual communities regarding the magnitude of the lease and other revenues, the employment of ethnic Fijians (especially at managerial levels), and the dissociation of decision-making from the local landowners. This has led to local fire-lighting, blockades against log trucks, and an unwillingness to maintain the young plantations properly. Greater devolution had been recommended (Ferguson et al. 2001), but the Fijian Government has as yet been unable to resolve the political complexities posed by the chiefly system, communities, commercial interests and unions. The present situation highlights the difficulties of collective privatisation of management where land is communally owned and disparities exist between communities and still more between their expectations of the privatisation and those of the national government.

DECENTRALISATION THROUGH PRIVATISATION

As noted earlier, privatisation is a variant of devolution involving private ownership. China, Vietnam and Australia provide examples of some very different paths and pitfalls.

China

Since 1949, when the Peoples' Republic of China was founded, the country has gone through successive stages of reforms, moving from a centrally planned to a market-oriented system, with appropriate modifications in the institutional structure for achieving economic growth and development.

In 1949, forest had almost completely disappeared in several areas. The destruction had not only caused a drastic dearth of timber and fuel but severe ecological deterioration in the form of floods and soil erosion. Since liberation, attempts were made to reverse the situation through a series of plans for quick development of forestry. The importance of forestry as complementary to agricultural development was understood and development of forestry got a major boost. The program to make China green was started in the first five-year plan with annual planning targets. The first national afforestation program was set out in the 12-year National Plan for Agriculture in 1956, with an ambitious target.

Due to the past environmental destruction, China took purposeful action to build up the agricultural environment with great emphasis on tree planting. The 12-year program for the development of agriculture (1956-68) was built around the slogan "take food grain as the key link and ensure an all round development of animal husbandry and forestry." It meant that outside the timber export (production) areas, the main orientation of the massive forestry effort in the countryside should be in the direction of protection afforestation to support agriculture, and production afforestation to reduce dependence on imports of timber from other areas, with accent on dune fixation, shelter belts, river bank stabilization, dike consolidation and watershed afforestation. "Four-around" forestry, involving the planting of trees or bamboo around the boundaries of the farm, was practiced in the plains to meet the needs of the farmers for fuel wood and small timber. Integration of forestry with other forms and aspects of land use influenced the policies and plans of forestry development in China. This included industrial forestry (chestnut, walnut, tea oil), afforestation, and shelterbelts.

Responsibility for planning forest development is vested with agencies at various levels in a multi-tiered hierarchy, ranging from national to provincial (provinces/autonomous regions/municipalities), district (prefectures/cities), village (counties/towns) and household levels. The national forestry agency (State Forest Administration) determines the broad policy in forestry and co-ordinates the plans of various provinces. Provincial agencies (Forestry Bureaus) coordinate forestry activities according to needs and local conditions. The ownership of forests falls into three categories: national (state) forests, village collective forests and private forests.

National forests are mainly located in the Northeast and Southwest, including Heilongjiang, Jinlin, Inner Mongolia, Sichuan, Yunnan, and Gansu. Provincial forest bureaus manage large areas of natural forests, amounting to 28 percent of the nation's forest area. These forests are managed through 136 large district forest bureaus and more than 4200 village forest farms (Zhang and Jia, 2001). The national or provincial government directly regulates these forestry bureaus. Other village forest farms are spread all over the country, with the highest number located in the south. They are regulated by local governments and have the responsibility for managing secondary forests, making up about 19 percent of the nation's total forest area.

Village collective forests, making up 53 percent of the nation's total forests, are principally concentrated in southern China, consisting of Fujian, Hainan, Hunan, Hubei, Jiangxi, Guizhou, Zhejiang, Anhui, and Guangdong Province and Guangxi Zhuang Autonomous Region (Zhou 2000). Local villages own these forests and have considerable autonomy in organizing production and responsibility for their own income generation (Shen 1999). Although private ownership of forest has existed for about two decades, there are no official statistics about its extent, which is subsumed within the statistics of other categories of ownership.

From the early 1980s, China initiated a series of forest policy reforms, concerning property rights for forests and forestland, investment and timber marketing under the Household Responsibility System (Wang et al. 2004). The government decentralised power in decision-making and shifted some power to local governments and local communities as well as households. In 1981, the central government outlined a new strategy for a stable forest ownership, urging village governments to enforce and stabilise forest tenure arrangements and encourage farmers to manage forests on a contract basis. In June 1985, national government control over timber transactions was removed, freeing the timber market.

Forestry bureaus have prepared inventories of state-owned and collective forestland where use rights could be given to private individuals, while the collectives retained ownership. If the use right is held by a cooperative, the people involved in the cooperative hold shares in the enterprise. Individuals can earn shares by contributing capital and infrastructure or through their labour in building and managing the project. Profits from the enterprise are divided among shareholders.

Since the implementation of the Household Responsibility System, private forest farming has been expanding at a rapid rate in collective forest regions. By 1984, more than 56 million households joined the Household Responsibility System, and more than 30 million ha of forest were put under private farming (Zhang and Chen 2001). To date, the forest under private farming in collective forest regions accounts for 80 percent of the total area of collective forests (Kong et al. 2002). In some provinces, private forest farming has achieved remarkable progress and played an important role in increasing farmers' incomes.

Households have become the basic production units of collective forest management in most collective forest regions (Chen and Brown 2002). During this period, the use right can be inherited or transferred through a market-based system. The contract period can be 30 to 50 years and the right can be converted into shares (Zhang Kum 2000). Many of the property rights over forestland and forest are clear. Households enjoy greater freedom in decision-making and can easily respond to market signals.

Many families that received forests initially overexploited or deforested them. But after a few years both forest area and timber stocks started to grow as farmers planted more trees. Things improved more quickly in those regions that handed over forests faster, went further towards liberalizing markets, charged lower taxes and had more consistent policies.

This system provided farmers with more incentives to plant trees. But this system also has critical problems. Experience in the agriculture sector has exposed a number of limitations inherent in the system, which make the system less successful in term of economic efficiency. Forestland is divided into parcels and leased to households. Due to the large population in some forest regions, each household can only gain a small area of forest, usually less than 2 ha. The fragmentation of forest ownership and management on a small-scale generates low economic efficiency by restricting the application of some technologies such as the use of large machinery and pesticides. This may create ecological problems regarding water quality and biodiversity by fragmenting natural ecosystems (Oloff and Ritchie 2002).

Forestry development for the production of commodity products is generally considered to enjoy substantial economies of scale, so that the area required for satisfactory operation is held to be relatively large. To some degree, forest management for this purpose also requires investment and a level of training and scientific competence that lies beyond the capabilities of households because households may lack sufficient capital and expertise.

The Household Responsibility System initiates voluntary household partnerships; an informal organization formed using joint labour input through rules and arrangements among members. This kind of partnership turns the forest into a small common property, but one that lacks long-term security because of the changes wrought by births, marriages and deaths. Furthermore household partnerships tend to pursue short-term profits, to the neglect of the environmental functions of forests. At best, this option may be useful as the initial stage of private forest farming where per capita land area is limited. This stage can enable private forest owners to gain some knowledge about forestry, raise their awareness of property rights, and increase their income, thus building their forest management capacity.

Considerable practical experimentation is proceeding in China in the development of more viable forms of partnership that may also enable the development of a more efficient scale of operation and access to capital, technological improvements, and technical expertise. These include various forms of shareholding companies and joint ventures. To date, these are being encouraged by incentives and moral suasion, rather than legislation.

Vietnam

Vietnam introduced a Renovation Policy (*Doi Moi*) in 1986, establishing a multisectoral market economy. Since 1987, the economy of Vietnam has undergone radical reforms, one of the main elements of which has been the allocation of forestland under lease to enterprises

and individual households for periods ranging from 20 to 50 years, in order to facilitate development of the mountainous regions.

The redefined system of responsibility for forest management had three components. De-collectivisation of farms to individuals started in 1986. Long-term leases were granted to farmers starting in 1988. The leases were for 30 to 50 years for lands devoted to tree crops and 50 years for bare lands and degraded lands to be converted into forest plantations. Over one million ha has been allocated to about 800,000 households participating in agroforestry and farm forestry programs. The introduction of the market mechanism resulted in increased prices for forest products and encouraged private investment.

The 1991 law on protection and development of forests has further refined the criteria for forestland allocation, leading to the following allocation by 1998:

National forestry agency:	5.1 million ha
Households (over 500,000 in number):	1.4 million ha
Other users:	0.6 million ha
Local administrative and forest inspection units:	0.6 million ha
Total:	7.7 million ha

Direct responsibility for day-to-day management of forests rests with the provincial and district administrations reporting to the national forestry agencies under the Ministry of Agriculture and Rural Development (MARD), which provides technical guidance and specialised services. District (state) forest enterprises constitute the main basis of the organizational system in forestry. There are 413 forest enterprises controlling about 4.7 million ha of forests of which 2.8 million ha are natural forests: 240 district enterprises are involved in management of production forests.

However, scattered natural forests are also allocated to households, communes/cooperatives and villagers. National production forests and protected and specialised forests are essentially all allocated to the national forestry agency. The agency (through district forest enterprises, companies, and management boards of protected and special use forests) has further contracted their forestland under long term, stable tenurial arrangements for forestry purposes to households and individuals. Contracts are made on a long-term basis (usually 50 years) with households for ecological restoration, afforestation and protection on clear and specific terms (Phuong 2000). Accordingly 466,000 households have received protection contracts covering an area of 1.6 million ha. Production contracts covering 50 percent of the production forests have gone to 473,500 households and the rest to 7,442 cooperatives and enterprises. Allottees of forestland are entitled to receive credit for investment, or cost sharing on an equal basis.

Overall achievement of the forestland allocation system has been impressive—in terms of development of agro-forest farms, tree plantations and increase in household income. However, the rights and benefits of households are not well defined and this discourages some farmers from investing in forest production. Furthermore, the choice of species and business decisions is still highly centralised. Hence there has been a bias against planting bamboo on denuded hills where it may represent the best economic and/or social prospect for farmers (Woods 2003). Finally, many of those who rely on the forests for all or part of their livelihood, especially indigenous groups, are often landless and have not had the opportunity to participate in the allocation program.

Australia

One part of the national policy changes described by Gregersen *et al.* (2004) sought to encourage private sector investment in plantations and did so principally by promoting incentives in which the primary one (applicable to all primary production, not just forestry) was the capacity to charge the costs of establishment against taxable income at the time those costs were incurred, rather than waiting until the timber revenues were realised. This represents a small but significant advantage. It is also more readily policed than the alternative, as New Zealand discovered in its earlier dalliance with a (cost-of-bush) system in which the costs had to be accumulated and charged against revenues when realised. Equally importantly, the national government lent weight to the need for plantations through media campaigns and national tax office oversight of approved Managed Investment Schemes (which again apply to all primary production not just forestry). These schemes allow the raising of pooled funds from small investors through prospectuses, and their investment in plantations. This scheme essentially attracts higher income investors who seek to reduce part of their tax at the highest marginal tax rate (47 percent).

Independently of forest policies, the national (Commonwealth) and provincial (state) governments also entered into a very important joint agreement through a National Competition Policy relating to all commercial activities (not confined or specifically directed to forestry) owned by provincial governments. This agreement sets in train a process requiring all government commercial activities to be competitively neutral (i.e., no cross subsidies) and will progressively involve sanctions against those that transgress. This change coincided with, and has been accompanied by, a general shift towards commercialisation, corporatisation, and privatisation in the provincial forestry agencies that hitherto dominated the native forest and plantation resource sectors.

To date, two provinces (Victoria and Tasmania) have privatised⁵ their softwood plantations, a third (New South Wales) is likely to do so soon, another has formed a state-owned corporation (South Australia), and the remainder have commercialised their operations. These changes have had profound effects in increasing the return on investment and reducing direct forestry employment, the latter being important in a country with high labour costs. But the relevant question for this paper is how has this affected sustainable forest management and investment in the processing industries. Before attempting to answer this, it is necessary to examine the hardwood plantation sector.

Investment in hardwood plantations has grown very rapidly in the last 15 years (Ferguson *et al.* 2003), much of it through the Managed Investment Schemes referred to earlier. Hardwood (principally *Eucalyptus globulus*, *E. nitens* and *E. grandis*) plantations have proved attractive to investors because of the short rotations involved in pulpwood production (10-15 years) and consequent greater ease of leasing land from farmers.

All plantations, whether public or private, are subject to legislated codes of forest practice to ensure that operations are environmentally sensitive, with provisions for amelioration of and sanctions against any serious damage. The existence of clear provisions is an essential corollary to the achievement of allocative efficiency through (or moving towards) privatisation by providing greater certainty for investors as to their responsibilities. Many of the larger companies involved are proceeding to certification, either through the Forest

⁵ The first author acknowledges a vested interest as a director of the first and chair of the second company.

Stewardship Council system or the alternative Australian Forestry Standard, principally because of shareholder and stakeholder pressures, but also to improve access to export markets. Certification also involves checks and restraints on the sustainable yield, a matter that is generally not clearly dealt with in codes of practice. This is important in the case of takeovers because of the temptation for new owners to recoup some of the investment by overcutting substantially in the initial phases of ownership or beyond, as many cases elsewhere attest.

The processing industry also appears to have benefited by the progressive removal of bureaucratic allocation processes in supply contracts and licenses and is investing where resource opportunities present themselves. While the Australian system is still dominated by longer-term contracts, these are negotiated in a commercial vein, and the proportion of spot sales and auctions is slowly rising. This is a very important trend as the formerly dominant State forestry agencies and their administrative allocation processes for timber sales tended to 'crowd out' small private growers.

In short, the trend to privatisation in the plantation sector has demonstrated the capacity of privatisation, or the move towards it, to achieve greater allocative efficiency while maintaining and improving environmental standards, and to create a favourable environment for appropriate investment in growing and processing.

Some issues remain, however, such as the concerns of some communities about radical changes in land use, notwithstanding the policy need to encourage structural change through changes in land use. These will continue to be the focus of community, district and sometimes provincial debates as the democratic process oscillates between conflicts over local policy and collective co-operation (or grudging consensus) in the common good.

REVERSAL OF DEVOLUTION IN A FEDERAL SYSTEM

The final case study is again based on Australia and deals with pitfalls to decentralisation that arose in a long established federal system.

Australia

As Gregersen et al. (2004) note, Australia was formed as a federation of previously independent colonies. Under the Constitution, administration of all matters of land management, including forestry, were delegated to the provinces. This arrangement worked well until the 1950s, in the sense that (with the exception of special wartime powers in World War II) almost all of the public concerns relating to forest management were confined territorially within provinces; the predominant mode of management being a command and control regime under the provincial forestry agencies, who had considerable control over the publicly available knowledge base. Given the history of uncontrolled fire lighting and uncontrolled and sometimes illegal logging, this form of management was probably appropriate for the times.

The development of public concern about conservation and, later, the environment, has coincided with major changes in the information available to the public. Over the period since the 1950s, the media have become more concentrated in ownership, more national (and international) in focus and, especially through the development of television, more pervasive in informing the public about these matters both verbally and visually. All provincial land

management agencies have struggled to deal with the shift from the command and control model to one of increasing public participation that this change has engendered.

However, in contrast to administrative devolution, these changes have greatly increased the **policy** role of the national government in forestry matters. Any substantial dispute in the field of forest conservation and the environment quickly became a **national** matter through the combined influences of the media, especially television, and the national stakeholder groups (principally the forest industry, unions, landholder and non-government organizations).

This resulted in the national government increasingly using its powers under the Constitution to influence indirectly the outcomes at a provincial or district level, often over-riding or confounding the actions of the province concerned. The most important of these powers were exercised through legislation giving it the control of exports and of World and Australian Heritage matters. Where the national and provincial government concerned were of different political persuasions, both sides frequently provoked deliberate disputation, especially over the granting of export licenses by the national government. In 1992 the respective national Ministers responsible for exports and the environment had a difference of opinion and the former gave unilateral approval to a license to export woodchips. This resulted in a massive public protest by stakeholder groups, culminating in a temporary blockade of Canberra by logging trucks. The blockade was the trigger for recognition by the national and provincial governments that this type of interplay was potentially destructive of the standing of both national and provincial governments, in addition to being counterproductive to all stakeholder interests, and hence the development of the joint national-provincial agreement (the Regional Forest Agreement process).

Because both major political parties currently support the joint national-provincial agreement, the arrangements and most policy outcomes appear reasonably stable. Yet there are issues that threaten the future path. One issue is that the conservation groups, while welcoming the increase in conservation reserves that the joint agreement has brought, have renewed the debate over remaining areas of perceived high conservation value that were not included in the more extensive conservation reserves created. Two provinces have already reacted to those concerns during election campaigns and unilaterally increased the conservation reserves following elections. While that is their constitutional and democratic right, it raises questions about the standing of the agreement between the national government and the individual provinces and highlights the provincial 'sovereign risk' that continues to exist in a federal system in relation to resource security. Without Constitutional change empowering the national government to exercise sanctions in relation to such joint agreements, a change unlikely to be made, such agreements rely on the goodwill of the partnerships between the national and provincial governments and indirect controls that are subject to the same problems as those which generated the agreement.

The situation in Australia also invited comparison with that in the United States. There are almost exact parallels in the nature of the public debate over old growth forests, native forest harvesting, wildlife conservation, and hydrology—only the species are different. Yet the United States is characterised by strong centralised control over National Forests and National Parks, which are major (but not the sole) foci for these environmental concerns. Decentralisation (or the partial reversal of it in Australia) is thus neither a necessary nor a sufficient condition for addressing these debates: information and media dissemination of that information are matters to which we shall return later in this paper.

CHARTING FUTURE PATHS AND AVOIDING PITFALLS

The current manner of democratic control can best be described as a polyarchy (Dahl and Lindblom 1953)—a system in which non-leaders can exercise a high degree of control over leaders through voting, thereby reducing Michels' (1911) 'iron law of oligarchy,' in which leaders progressively assume and exercise greater powers in their own interests, and the consequent threat of tyranny. A polyarchy typically involves several overlapping sub-systems, including those dealing with governance, bureaucracy, markets, and information.

Governance

No democracy can function effectively without the rule of law, so the ways in which governance is exercised are in a sense preeminent among the systems in a polyarchy because governance creates the laws under which the various systems are to operate. The legal bases of delegation and devolution need to be fully developed and understood. While there are examples (e.g., China) where negotiated rather than legal arrangements are successfully used, these create unnecessary risks and possible inequities, and are often not transparent and therefore are not accountable. The relevant level of government (national in a unitary state, provincial or state in a federation) needs to establish the enabling legislation for organizing governance structures, representation, property rights, and recourse to ensure fairness and justice in the access of all people to them (Brunner et al. 2000). Territorial delegation of governance (and devolution or deconstruction of administration) needs to take heed of history, culture and geography, not only with respect to the area in question, but also in relation to other units at the same level in the hierarchy of governance or administration. Establishing enabling legislation creates the hierarchical framework in which national, state, community, village and household levels (or their analogues under different names and fewer or greater levels) can create their own laws and rules within the boundaries of the authorities given to them and thus operate consistently with one another, with recourse to higher level grievance procedures.

While decentralisation can delegate and devolve authority, it cannot completely delegate or devolve responsibility. Higher levels of governance and bureaucracy always retain some responsibility for lower levels, if only as the last resort when things go wrong at lower levels. The art of decentralised governance is therefore to strike an effective partnership between the respective levels of governance involved and the modes of governance and administration (i.e., bureaucracy) used for different functions and situations. There are a variety of modes of governance that can be used. These include:

- majority-rule decision-making,
- consensus through veto,
- consultative processes by third parties,
- consultative processes by the bureaucracy, and
- direct bureaucratic decision.

Much of formal democratic governance is based on voting and a 'majority rule' principle. In exercising that majority rule, majority leaders cannot completely ignore the minority, or civil rule may become unstable over deeply felt divisions, such as those often associated with ethnic and environmental concerns. Hence leaders typically establish trade-offs with minority groups to obtain their support, albeit qualified. This is sometimes referred to as 'a process of seeking consensus.' However, this is a very different process from that of a consensus through the use of veto powers because it inherently involves and embraces conflict. Conflict

leads to political action in a democracy, the promotion of information about the issue, and a better informed public and elected representatives to vote on it. Conflict through public debate is therefore not necessarily counter-productive and may be very important in promoting democratic governance.

Seeking consensus among local stakeholders is nevertheless often espoused as one of the desirable characteristics of decentralisation and, by inference, of greater democratic control. To quote Coglianese (1999):

Consensus commonly means unanimity and this is the way it has been defined by law in the United States. The Negotiated Rulemaking Act defines “consensus” as a “unanimous concurrence” of the interests represented on a negotiated rulemaking committee, or any lesser agreement that has been unanimously agreed to by the committee. The achievement of such a unanimous agreement is the defining feature of negotiated rulemaking. Before convening a negotiated rulemaking committee, agencies are required to consider whether a committee could be formed consisting of “persons who... are willing to negotiate in good faith to reach a consensus.” Once formed, the committee is legally obligated to “attempt to reach a consensus.” [Footnotes deleted]

Any one group of stakeholders can thus exercise a veto in seeking consensus. Coglianese (1999) points out that this places the central government in a different situation—that of being a facilitator of decisions or at most of being ‘just another player in the game.’ Those that are best represented in the political process tend to become dominant in policymaking, possibly to the detriment of policy making in the public interest. It is clearly more appropriate to a situation in which there are relatively few stakeholder groups that encompass virtually all interests and much less appropriate to those in which, in addition to strong stakeholder groups, there are widely dispersed and/or poorly represented interests. Furthermore, some evidence (Purnomo et al. 2004) is emerging that local stakeholder perceptions of sustainability are at least in one case different (statistically and otherwise) to those of non-government organizations, industry, and public forestry agency employees operating in the same area. Hence the notion that is sometimes voiced of non-government (or any other organization with a vested interest) representing community interests may be quite false.

To the extent that reducing conflict is a desirable goal (Fung and Wright 2003), consensus through veto may be useful, but this needs to be weighed against the disadvantages. Inequalities between groups may lead to domination or even capture of the process. Groups may only participate when it suits them—the so-called problem of ‘forum shopping.’ In espousing the need to pursue the consensus through a veto approach, elected and appointed officials may simply be protecting their own interests either for electoral support or a quieter administrative life. The veto form of consensus may reduce information for the public at large, because the interest groups are reluctant to promote the negatives to them that have had to be traded. The approach has sometimes been characterised as often leading to the ‘lowest common denominator’ solution to the possible detriment of the public interest at large.

As Coglianese (1999) points out, decentralised policy making may sometimes be more efficient when based on a participatory process in which the administrative agency simply consults with local people about the issues before drafting policy and then tests reaction to it. There are many forms which such a process can take and these have been well summarised for forest management by Mayers and Bass (1999).

There are also situations in which the majority rule, consensus through veto, and consultative approaches may be inappropriate. Crises such as wars and major natural disasters are examples to which leaders are generally expected to react promptly, often without prior recourse to voting. When the issue is major but the information is poor, confusing, or threatening, leaders have to exercise judgment in charting a policy, and implementing and explaining it, as it progresses. In such cases, leaders are ultimately at the mercy of subsequent voting.

History, culture and geography also play important parts in determining the most appropriate paths for decentralisation. Compact unitary nation-states, like France and Switzerland, adopt a two-tiered approach where the principal delegation is to the communes, which have considerable power and resources at their disposal (Sève 1999). Federations, like Australia, have a three-tiered approach partly because the constituent and originally independent States formed the second tier and local governments (shires, cities etc), the third. As noted earlier, the differing legal bases of a unitary and a federal nation-state have important implications for the legal basis of any devolved governance.

Where substantive delegation or devolution from central (or provincial) government to local government is likely to be involved, the territorial stakeholders need to be well represented, not necessarily in number, but in champions among the planners to try to ensure that the geographic basis is workable. Experience in Indonesia (Turner and Podger 2003) and Australia suggests that diverse groups of experts without major vested interests are capable of designing initial structures, which can then be subjected to refinement through consultative processes. However, such expert committees should desirably be established under a planning agency that does not have responsibilities for either regulation or natural resource provision if the process is to avoid scepticism regarding a *fait accompli*. Similarly, experience in the Regional Forest Agreement process in Australia underscores the desirability of an 'independent' body to oversee subsequent consultative processes.

Where the decentralisation changes are directed at particular communities and problems, rather than the nation, the representation involved in governance and/or administration needs to incorporate links to existing local government structures and those structures need to be included in capacity development. If decentralisation is to involve the devolution of management functions, the manner of elected representation needs to give consideration to consistency with and linkages to existing local government bodies. Nothing undermines devolution arrangements more rapidly than the perception of a new body usurping desired or existing powers of governance.

As noted in the case studies, corruption represents a major impediment to sustainable forest management, with or without decentralisation. Special efforts are needed to ensure that decentralisation does not simply enable established power elites to capture and corrupt the governance structures. Petty corruption in forest management can be curtailed by instituting appropriate measures but if, and only if, major corruption at the level of national or sub-national governance is addressed and curtailed (Callister 1999). This is a matter of political will that requires a moral strength of leadership and the support of the population at large. Where endemic, considerable assistance in education may be needed before this change can be instituted.

Bureaucracy

Governance requires an organization of non-elected officials to service governance and administer the policy outcomes. If governance is decentralised, then the previous central bureaucracy will likewise need to be deconstructed in some way. While the geographic structure of the bureaucracy tends to mirror that of governance (in our terminology—the national, provincial, district, village, household hierarchy), other structures and arrangements are possible and sometimes desirable, either involving the formation of collective institutions or quasi-private or private institutions.

Particular issues that cross local, regional or national boundaries may require collective institutions to be formed. This may lead to delegation of some powers upwards, rather than downwards. Examples include collectives of adjacent local government areas involved in the management of a public forest resource common to their boundaries, collectives of adjacent provincial agencies and national agencies to manage a major water resource common to all. Trans-national committees are increasingly being used to co-ordinate the management of reserves and forests that straddle national boundaries. Such bodies range from *ad hoc* coordinating committees to standing committees that are unincorporated joint ventures operating under a legal memorandum of understanding. In the latter, the partners typically coordinate through the unanimous decisions of a governing body, share liabilities and costs, and second staff to implement the activities.

Examples of private and quasi-private corporations are numerous in the electricity and water field. Increasingly in forestry, commercial forest management of public forest resources is being devolved to private or quasi-private organizations, partly for reasons of allocative efficiency and partly also to separate the roles of the environmental (among other matters) regulator of the government (i.e., the bureaucracy) from that of a commercial provider of goods and services. While this is sometimes referred to as a purchaser-provider separation, the relationship is more accurately one of principal-agent. The distinction is important because it highlights the importance of the legal constraints and commercial and other incentives that motivate the agent to act in accord with the interests of the principal, or otherwise.

Where publicly owned native forest resources are involved, quasi-private organizations in the form of state-owned corporations are more typical than purely private corporations. In some cases (e.g., Victoria, Australia), quasi-private organizations have also been tried in the management of providers of mainly non-commercial services, such as the management of national parks. These operated commercially through contractual agreements with the administering government department to supply services at annually negotiated quantities and prices. The particular example was not successful because of the capacity of user groups to influence these negotiations and staffing, so that the outcomes were little different to those of a typical public service organization.

Decentralisation inevitably threatens the vested interests of the established bureaucracy because it entails geographic shifts of residence for some and reductions of subordinate staff for others, potentially reducing their status and/or progression. This is a serious problem in all countries with strong central bureaucracies or covert controlling institutions (e.g., see Khan 1998). The extent of consultation and participation of the bureaucracy may therefore have to be limited and external sources used in designing decentralisation. External monitoring of subsequent outcomes also becomes essential.

On the other hand, we also acknowledge that the bureaucracy needs assistance to cope with the changes posed by delegation or devolution. A bureaucracy with insufficient resources, administrative systems and training invites poor outcomes and corruption. Without these, the accountability expected of a bureaucracy in implementing and monitoring change becomes a fiction. Finance, for example, does need to follow function. That somewhat glib phrase also underscores a whole raft of routine but vital underpinnings in finance, auditing and evaluation, and regulation and policy making that are needed for an effective bureaucracy (Gershberg 1998). To some extent, privatization of some of these service type functions may assist decentralisation, because the bureaucracy does not necessarily have to recruit and retain staff, and buy and maintain equipment. However, it needs to ensure freedom of entry and exit in the competition for those services to avoid the development and exercise of monopoly power by the providers.

Finally, the linkages between elements of the bureaucracy also need to be considered in any decentralisation. Sustainable forest management and poverty reduction programs involve integration of certain functions across departments or agencies. These need to be taken into account in designing delegation or devolution of functions.

Markets

Market-based approaches to forest use are of great importance in decentralisation. They encourage entrepreneurial behaviour, spontaneously correcting errors and enhancing the mobility of resources and the value of tradeable assets. Privatization of plantation rights has improved efficiency and created a new asset class recognised by commercial investors.

Markets can potentially play a much wider role in forest management than they have in the past if a more detailed approach is taken to the definition of rights. If need be, ownership of rights can be unbundled to retain public ownership of land while privatising the timber resource or other commercial goods and services. This facilitates devolution of harvesting and silvicultural works to local bodies (including but not restricted to local communities unless common property rights are involved) operating under contracts that require them to conform with nationally or regionally set codes of practice, sustainable yields and management plans. In this way, minimum standards of environmental care can be maintained and, if extended to involve certification, can lead to continuing improvement in those standards over time.

The more complex issue is how much of the regulation of those standards can be devolved to local communities.

Where corruption in the bureaucracy is an issue and the private markets are principally household and local in character or common property rights exist, then regulation by community-based organizations may be preferable because there are more checks and balances involved in self-regulation. Where common property rights exist, inherent incentives exist for local communities to regulate effectively. Common property rights have become increasingly important as local and indigenous communities have come to regard the protection of forest values as important and as matters in which they wish to participate in determining the balance of joint production.

Where corruption in the bureaucracy is not an issue and private markets deal with larger-scale commodity specialty products, much depends on the education, knowledge and levels of

interest in the local community. The Australian experience is that non-government organizations such as conservation groups do a remarkably thorough job in informally monitoring standards and publicising breaches on their websites but that is unlikely to be the case everywhere. Moreover, the process is informal and, because of vested interest, is not always unbiased. We therefore believe that the regulatory authority should preferably be provided by government at one level (or more) above local government in developing countries. Our experience is that if local government is weakly resourced, local regulation does not work sufficiently effectively and is open to corruption and inefficiency. We recognise that there are well-established exceptions, such as France but, to our knowledge, these only exist in countries with strong and well-resourced central and local government.

Thus rights to harvest timber, for example, can be subjected to the competitive discipline of allocation and price determination through appropriately designed auctions and tenders. Other private property rights relating to timber harvesting need to:

- be clearly defined,
- provide for transferability,
- include such sanctions as are necessary to ensure adherence to codes of practice,
- include ratchet provisions in the case of long term licenses that progressively diminish the annual volume harvested, enabling increasing sales on spot markets,
- provide for periodic competitive renewal and re-determination of price, and
- include bond provisions as a protection against environmental damage and default.

Carbon credit trading provides an example of how private property rights and competitive processes can sometimes assist in the amelioration of negative externalities, such as greenhouse gases. These permits recognise carbon sinks through a carbon credit trading system that establishes a commercial price for carbon. This then internalises the emissions costs into the cost structure of the producers of emissions.

Information

Information plays an important part in any democracy and is no less important in any decentralised parts. One of the potential advantages that decentralisation has is that information can potentially be better directed to those concerned about a particular forest, park or management issue. Nevertheless, with some notable exceptions, most aid projects have paid insufficient or even no attention to information to the stakeholders at large.

Of all the current forms of media, radio is the cheapest and most widely available form of dissemination of information available in developing countries. However, local radio companies in rural areas do not generally have the capacity or resources to undertake investigative work—their role is confined to promoting information. They need to be provided with information packages that they can revamp and use at will. In charting a communications strategy for a decentralisation program relating to sustainable forest management, the inevitable over-enthusiasm associated with additional funding and expenditure needs to be moderated by reference to the sustainability argument, and the responsibilities on the public to carry the approach through when donor funding ceases.

But the media are not the only means of promoting information, although they may be the most effective for larger rural areas. Political parties may be an important source, as well as the many other collective organizations and networks that characterise civil society in a democracy. Public meetings are another important device and are widely used to disseminate information. Opinion surveys can also be an important source for information and, to a

limited degree, a means of arousing awareness. Formal grievance procedures represent yet another source of information collection and promulgation, although often lacking in rural areas of developing countries. All represent potentially important contributors to the development of informed debate and decisions.

Governments and the bureaucracy often play a pivotal but not exclusive role in instituting and funding research that supplies the knowledge base for major programs relating to sustainable forest management and/or poverty reduction (Zhang 2001). However, non-government conservation and environment groups have become increasingly sophisticated in both the conduct and contracting of research and its promotion. They also play a vital role in monitoring and coordinating information on a larger scale.

No democratic governance unit is immune from the possibility of takeover by a power elite that may eventually tyrannize its constituents. That is why periodic free elections are so important. Even then, at sub-national levels of governance, upper levels of the bureaucracy (and citizens) must monitor financial and other aspects of performance to ensure that malfeasance or fraud or gross incompetence is not prevalent. In addition to the individual sanctions available under the laws relating to malfeasance and fraud, higher levels of governance and bureaucracy often are given powers to terminate the life of a lower governance body guilty of gross incompetence and to install administrators until free elections can be organised and held. These checks and balances highlight the fact that democratic governance is not always an automatic path of virtue.

A well functioning local democracy will normally have or develop an array of sources of information, much of it conflicting in part or in whole. While a multiplicity of sources can be confusing, the electorate seems to be able to sort the grain from the chaff effectively. Even if it does not initially, the persistence of the electoral process and debate normally ensures an appropriate change. This illustrates the role of the 'science of muddling through' or 'disjointed incrementalism' that Lindblom (1953) aptly identified as one of the likely features of democratic policy-making under conditions of low understanding and major change.

Formal education programs, whether short or long, involve a longer-term and deeper development of knowledge and skills and are therefore vital in capacity-building. But capacity-building aside, a key function that the information system plays is in strengthening accountability; accountability of the bureaucracy to elected officials and accountability of elected officials to the citizenry (Blair 2000).

LESSONS LEARNT

1. The objectives of decentralisation are good governance marked by improved efficiency and equity, transparency, accountability and people's participation; balanced and sustainable development; and empowerment of the people. Achieving an appropriate balance between empowerment of people at different geographic levels (e.g., national vs. district) or in different local communities is the issue.
2. Decentralisation is not a panacea, nor is it always efficient or equitable. It is a possible means to the end of improving democratic governance and in doing so, it may assist poverty alleviation and/or sustainable forest management but it is not a sufficient measure. Decentralisation is a long term process, to be accomplished in phases.

3. Decentralisation does not mean doing away with controls. Decentralisation tends to be more successful under a 'strong' central government, than under a weak one. It is often constrained by a tendency for centralization or 'clawing back' the whole or part of what was decentralised. Decentralisation tends to be more difficult in the case of highly stratified societies with strong ethnic, caste, tribal, income and gender prejudices.
4. Careful design and development of the legal basis of decentralisation is a desirable precursor to change, to ensure that the rights and responsibilities are clearly defined and based on adequate consultation, sanctions, grievance procedures, and systems to implement and monitor them.
5. Decentralisation measures, especially those involving devolution, need to address systemic corruption in existing and potential new structures before initiating change to ensure that corruption is not simply shifted to other levels of government to the continuing cost of poverty alleviation and/or sustainable forest management.
6. In a formal sense, democratic governance generally rests on the majority-rule principle. However, an array of other forms of decision-making exist, such as consensus by veto, consultative processes through third parties or the bureaucracy, and direct bureaucratic action in the case of natural disasters. The forms chosen also need to recognise the historical and cultural setting.
7. The bureaucracy is itself a potential power elite. Delegation or devolution without the active support of the bureaucracy is difficult to achieve successfully. Delegation or devolution to lower levels of the bureaucratic hierarchy introduces principal-agent relationships. Incentives as well as sanctions are therefore needed to ensure that the agent acts in accord with the principal's goals, and not their own.
8. Where regulation is separated administratively from delegated or devolved forest management, regulatory functions should generally be conducted at least one level of the bureaucratic hierarchy above the latter to provide sufficient independence from local politics and power elites.
9. Finance, auditing and evaluation, and regulation and policy making, should follow function in deconstruction, delegation and devolution.
10. Collective bureaucratic units may be needed to deal with trans-boundary issues or provincial/national issues in a federation and deserve special attention in terms of their legal basis to achieve an effective partnership.
11. Information is vital to the functioning of a modern democracy and more attention needs to be given to promoting information about decentralisation goals and strategies through the media and other means of dissemination to assist conflict resolution. The increasing prominence of national media may lead to a partial reversal of decentralisation, especially in federal systems.
12. The positive role of conflict resolution through public debate needs to be recognised and fostered, especially where majority-rule decision-making is involved. Consensus by veto approaches should be confined to those situations in which there are only a few stakeholders of comparable strength. Consultative processes by third parties or the

bureaucracy and even direct action may be more appropriate than either of the former modes in some situations.

13. In addition to providing a proper legal basis and resources, devolution to lower levels has to involve a meaningful transfer of authority to be acceptable and work effectively. It also has to maintain horizontal equity by ensuring a fair distribution of fiscal and other resources across the units. Too much decentralisation (autonomy) may lead to neglect of the overall national picture and failure to implement nationally planned priorities. Successful efforts can enhance participation, increase the regional share of income from forests, result in better delivery of services and improve the sustainability of forests.
14. Devolution to village levels is more likely to be effective when adapted to traditional systems of governance and aimed principally at poverty alleviation and fuelwood supply. Where aimed at commercial wood production, scale of operation may pose an impediment and require the formation of collectives of village units.
15. Devolution to customary ownership units is necessary where land or resource ownership has traditionally been customary. The formation of collectives may then have to be encouraged to provide commercial scale of wood production, leading to sensitive issues of representation in their governance. Small-scale logging and sawmilling can be operated through customary units but require substantial aid, support and a cost-effective framework for certification.
16. Privatisation represents an efficient and self-regulating form of decentralisation in relation to the supply of commercial forest goods and services and tends to be conducive to private investment in the sector. But forest production also often involves the supply of non-market goods and services, including those of environmental protection. The legal basis of property rights for private and quasi-private forest management units therefore needs to be well defined, and to include opportunities for participation by all stakeholders in developing the rules, as well as provision for sanctions and grievance procedures.

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Table 1a: Decentralisation of the Forestry Sector in the Asia-Pacific Region

Country	Form of Govt.	Forest Ownership	Forest Policy Emphasis	Prime Forestry Institution	Main approach to Decentralisation	Other (supplementary) Approaches in Use	Institutions at the Periphery	Forest Cover Change 1990-2000	Remarks
Australia	Federation (Commonwealth)	41% Private 59% State + Public	Production, Conservation	Forestry Council	Deconcentration, Delegation	Co-operation with private sector	Local Govt. Agency, Private Operators	-0.2%	75% of forest management activities by private sector.
Bangladesh	Unitary	State Ownership	Forest Rehabilitation	Forest Dept.	Deconcentration	Partnership with people	Forest Beat, Families	+ 1.3%	Homestead forestry or informal forestry important.
Cambodia	Unitary	State Ownership	Production, Conservation	Dept. of Forest & Wildlife	Devolution	Private, Market Mechanism	Govt. Agency, Families	-0.6%	Forest concession activities are currently under suspension.
China	Unitary with autonomous regions	50% State 50% Collectives	Production, Conservation	State Forestry Administration	Contract Household Responsibility	Cooperatives	Forestry Stations, Families	+1.2%	Increase in forest area accomplished through decentralised people's effort.
Fiji	Unitary	Customary, Community	Production, Env. Protection	Forest Dept.	Deconcentration	Social/Community Groups	FD Functionaires, Communal Groups	-0.2%	Customary ownership is controlled by Land Trust Board.
India	Federal	State Ownership	Env. Conservation, Forest rehabilitation	Forestry Dept.	Deconcentration	Partnership with people	Forest Beat, FPCs	+0.1%	Non-forest source of wood is important.
Indonesia	Unitary	State Ownership	Export oriented production	Ministry of Forestry	Devolution to District (Kabupaten) authorities	Recognition to 'Adat'	Forest Staff at Kecamatan, Desa levels	-1.2%	Decentralisation being a new effort, there are several hurdles to be removed.
Japan	Unitary	58% Private 42% State & Institutional	Conservation	Forestry Agency	Deconcentration & Delegation	Village Forest Owners Association	Forest Owning Families	NS	Conservation is a national priority
Korea (Rep. of)	Unitary	72% Private, rest State	Conservation, Production	Forestry Agency	Village Forest Assn., Forest Cooperative	Private Forestry	VFA, Primary Forest Cooperative	-0.1%	Strong involvement of private sector.
Lao PDR	Unitary	State Ownership	Area based local development	Forestry Service	Devolution to Province/District	Community Organisation Focal Sites	Focal sites	-0.4%	Institutional arrangements yet to be stabilised
Malaysia	Federal	State Ownership	Export oriented production	Forestry Depts.	Deconcentration & Delegation	Private sector involvement in forest management	Forest Beats, Civil Society	-1.2%	Structured and disciplined functioning
Mongolia	Unitary	State Ownership	Conservation	Unclear (Ministry of Nature & Env.)	Devolution to Provincial (Aimags) and District (Soums)	Privatisation	Village (Bagh) Administration	-0.5%	Fragmented institutional structure is a major handicap

Table 1b: Decentralisation of the Forestry Sector in the Asia-Pacific Region

Country	Form of Govt.	Forest Ownership	Forest Policy Emphasis	Prime Forestry Institution	Main approach to Decentralisation	Other (supplementary Approaches in use	Institutions at the periphery	Forest Area Change 1990-2000	Country
Myanmar	Unitary	State Ownership	Production	Forest Dept	Delegation	State Timber Corporation	Forestry Staff	-1.4%	Forest management affected by internal strife.
Nepal	Unitary	State Ownership	Decentralised development	Forest Dept	Devolution to Village (Panchayats) & Communities (Forest User Groups)	Privatisation of small enterprises	Forest User Groups, Forest Beats	-1.8%	Serious Deforestation still continues
New Zealand	Unitary	Mixed	Production	Forest Dept.	Privatisation	Delegation	Extension Agent, Private Firm	+0.5%	Privatisation has left some unresolved issues of traditional rights
Papua New Guinea	Unitary	Customary	Export Oriented Production	Forest Authority	Deconcentration	Private Forest Concessions	Local Forest Offices, Land Owner Groups	-0.4%	Land owner issues remain serious
Philippines	Unitary	State Ownership	Community Devp, Conservation	Unclear (Dept. of Env. And Natural Resources	National/District/Community Partnership	Devolution to Districts (LGUs)	CENROs, NGOs	-1.4%	Frequent changes of rules and institutional arrangement have affected stability.
Sri Lanka	Unitary	State Ownership	Rehabilitation	Forest Dept., State Forest Enterprise	Deconcentration	Community Forestry	Forest Beats	-1.6%	Decentralisation is limited to deconcentration in the govt. agency
Thailand	Unitary	State Ownership	Production, Conservation	State Forest Org. (RFD) State Forest Entr.	Delegation to Provincial & District Administration	Private Sector Participation	Farmers, Farmer Groups	-0.7%	Logging has been banned in natural forests
Vietnam	Unitary	State Ownership	Enhancement of Forest Area & Productivity	Forest Development Dept of MARD	Devolution to Households under rigid rules	Decentralised State Enterprises	Farm Families, Local Forest Org	+0.5%	Emphasis on participatory forestry development
Vanuatu	Unitary	Customary	Production/ Conservation	Ministry for Agrl. & Forest	Community Participation & Consultation	Private Logging Companies	Vanuatu Dept of Forests Staff	+0.1%	Being a small island country conservation is a prime objective

Table 2. Forest Resource Development in the Republic of Korea

Year	Forest Area (ha)	Growing Stock (cu. m.)	Growing Stock per Hectare (cu. m./ha)
1960	6,700,000	63,995,000	9.55
1980	6,567,000	145,694,000	22.18
2000	6,430,000	387,758,300	60.30

Source: Lee and Lee, 2002