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FAO LEGISLATIVE STUDY

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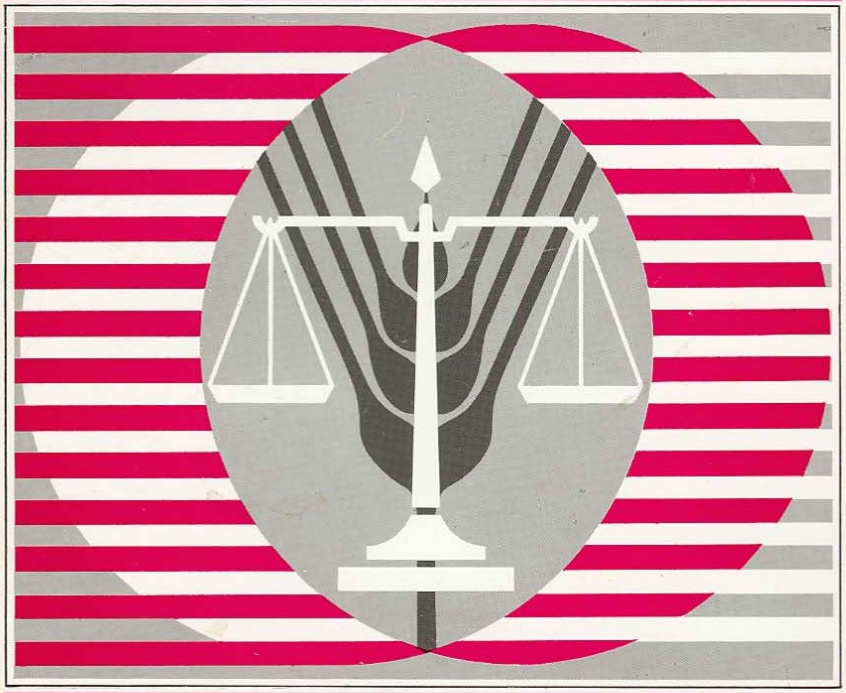

Food and Agriculture Organization of the United Nations

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by
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FOREWORD

Recent years have witnessed a significant acceleration in the revision of forest laws around the world. Moving away from a regulatory approach focused primarily on government management and policing of forests as economic resources, forest law increasingly recognizes the multiple interests involved in or affected by forest management, with greater attention given to the environmental and social roles of forest resources and to their sustainable management and use, in addition to an increased emphasis on the involvement of a wider range of public and private actors. In general, areas in which forest laws have been reoriented include local and private forest management, the environmental functions of forests, forest management planning, and forest utilization contracts.

Legal changes aimed at furthering local and private forest management have taken a variety of forms: new mechanisms for the devolution of forest management to local communities and user groups, like co-management agreements and community forestry leases; the recognition of the historical land or territorial claims of local peoples and indigenous communities; the decentralization of various aspects of forest administration to local government bodies; the promotion of private forestry, including the restitution of public forest land in countries in transition to market economies.

The environmental importance of forests, particularly in the aftermath of UNCED, is more and more explicitly reflected in forest laws. In recent legislation, the environmental dimension of forestry is enhanced through various techniques, including requirements to take account of biodiversity concerns in forest inventories and to integrate environmental criteria into forest management plans, as well as a more frequent prescription of environmental impact assessment as a tool of forest management.

There is also a discernible trend towards more explicit attention to planning in forest legislation, and a broadening of the objectives of the planning process. Increasingly, forest laws require planners to consider sustainability, ecological and social issues that have been outside the purview of traditional forest management planning, in addition to providing more opportunities for public participation in the design of forest management plans.

While older laws are generally silent on the procedures and criteria governing the granting of forest concessions and contracts, recent legislation tends to spell out the steps leading up to awarding them. In setting forth the basic elements of auction and bidding systems, such as the content of call for bids, the form and content of submissions, and the professional qualifications of auctioneers, forest laws try to promote greater transparency and accountability in decision-making.

This study attempts to identify the main trends observable in forestry legislation on a regional basis. The present volume reviews forest laws from Latin America, North America, and Asia and the Pacific. Other papers covering Africa and Europe will be published as a second volume. The study analyses existing laws and law reform processes underway pertaining to the forestry sector *stricto sensu,* with the main focus on written legislation. With a few exceptions, other laws dealing with issues of relevance to forests, such as environmental protection, land use and agriculture, or trade and taxation, are not addressed. It should be emphasised that it is not the intent of the study to present an exhaustive treatment

of *all* forestry laws in the respective regions, but to elicit from a sizable and representative *sample* the major patterns of legal change in the sector.

This publication is a joint effort by the Legal Office and the Forestry Department of FAO. Its authors, Ellen Kern, Kenneth Rosenbaum, Rossana Silva-Repetto and Tomme Young, have advised a number of governments on forestry legislation. Technical supervision of the study has been the responsibility of Mohamed Ali Mekouar and Jonathan Lindsay, Legal Officers with the Development Law Service.

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LATIN AMERICA

by
Rossana Silva Repetto

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SUMMARY

This study has been prepared to record the principles and concepts underlying Latin America's forestry legislation over the past fifty years or so, reflecting the thinking that has shaped the region's political and economic development throughout this period.

It compares and examines the development of forestry legislation in a number of Latin American countries in terms of three historical periods: from the beginning of the century up to 1975, the ten-year period 1975-1985, and the situation since 1985. The analysis shows how legislation has evolved in response to the challenges that arose during those periods and particularly the need for decentralization and devolution of powers, society's increased pressure on the forestry sector, recognition of the environmental function of woodlands and the need to protect them, the introduction of macro-economic reform, and acknowledgement of the important role of the private sector.

The study shows the way in which forestry legislation in the region has gradually shed the traditional concept of forest management as being oriented essentially to the production of wood-based products, to be replaced by comprehensive and sustainable management designed to provide sustained benefits for the well-being of the people and to pursue general development objectives.

With regard to the harvesting of natural resources, the focus of legislation ranges from the desire to achieve economic development by developing the forestry industry and generating income from woodlands and forestry operations, and forest conservation and rational use, to the latest concept of sustainable development. Greater emphasis is placed on the function of forests in protecting the environment and conserving biodiversity. Forest management forms part of a process interlocking with land tenure, land-use, rural development and macroeconomic policies, structural adjustment measures, international trade, and sustainable development policies.

This evolution also reveals recognition of the importance of enhancing the institutional status of the forestry sector to the highest decision-making, policy analysis and strategic planning levels. It acknowledges the importance of bringing the institutional aspects into line with the objectives set by forestry policy, and hence those of forestry legislation, to ensure its successful implementation. It also emerges that although laying down forestry policy and the legislation to enforce it are the task of government, the only way for them to be successfully implemented is to ensure consistency with the national realities, needs and priorities, and that this can only be done through a participatory process with the acceptance of all the parties involved.

The legislation of some countries reflects the changes that have taken place in the organization of central government in terms of the devolution of their powers. Regional, provincial and local authorities are beginning to acquire a certain degree of autonomy, self-determination and specific authority in the matter of forest resources. There is an increasing trend towards deregulation and managing public affairs along the lines of the private sector, with the active participation of indigenous and rural communities and all relevant sections of society.

However, despite the positive developments in forestry legislation in the region, there are some countries in Latin America with either a legal vacuum or enforcement problems, such as: a lack of clarity in the allocation of functions, powers and coordination procedures between central government departments, and between these and other entities (parliament, NGOs, etc.); a lack of regulation of the economic and administrative mechanisms needed to foster the conservation, protection, regeneration and multiple use of forest resources; a failure to provide incentives to set up forest plantations, in some instances; and the scant importance paid to forestry research and mechanisms for performing it. Generally speaking, non-wood forest products are given poor coverage, as is the question of harvesting forests that are not subject to a government concession or license.

I. INTRODUCTION

This study has been prepared to record the principles and concepts underlying Latin America's forestry legislation over the past fifty years or so, reflecting the thinking that has shaped the region's political and economic development throughout this period.

The paper is accordingly structured in terms of three separate periods: the first phase running from the beginning of the century to 1975; the intermediate stage between 1975 and 1985; and the recent period from 1985 to the present day. This chronological breakdown is based on the one used in document FO:LAFC/93/5 prepared for the eighteenth meeting of the Forestry Commission for Latin America and the Caribbean held in Uruguay in 1993. That document set out the main periods in the experience of the region's forestry institutions and their principal features, and the presentation was made in terms of these three stages.

This paper sets out to provide a comparative analysis of the present state and gradual development of forestry legislation in a number of Latin American countries throughout the three periods mentioned above. It shows that forestry legislation has evolved in response to the challenges that have arisen over the past fifty or sixty years, including the need for decentralization and devolution of powers, a heightened social demand on the forest sector, recognition of the environmental function of woodlands and the need to protect them, the implementation of macroeconomic reforms and acknowledgement of the important role of the private sector.

II. COMPARATIVE ANALYSIS OF NATIONAL LEGISLATION

1. The Constitutional bases

It should be noted that various Latin American constitutions enshrine provisions regarding the environment in general and forests in particular.

Guatemala's 1985 Constitution, for example, contains one article devoted entirely to reforestation (art. 126). Pursuant to this article, the reforestation of the country and the conservation of its woodlands are considered to be matters of national urgency. Legislation must be enacted laying down the form and the requirements for the rational harvesting of forest resources and their renewal, to include resins, gums, wild vegetable products and other similar products, and to promote their industrialization. Under this article, the harvesting of all these resources is only permitted to Guatemalan nationals, individuals or corporations. It also provides that special protection must be afforded to forests and vegetation on riverbanks and the shores of lakes, and in the vicinity of springs.

The 1987 Nicaraguan Constitution also devotes a whole chapter to the rights of communities on the Atlantic seaboard, giving state recognition to communal forms of land ownership by these communities, such as the enjoyment, use and exploitation of the waters and woodlands on their common lands (art. 89).

Brazil's 1988 Constitution also devotes a chapter to the environment. Under this chapter, every individual has the right to an ecologically balanced environment which is

considered to be a source of wealth for the common use of the people and an essential component to a healthy life, and the authorities and the community are duty-bound to defend the environment and preserve it for both the present and future generations. To ensure effective enjoyment of this right, the authorities are responsible, *inter alia,* for preserving and restoring essential ecological processes and promoting the ecological management of species and ecosystems; to preserve the diversity and integrity of Brazil's heritage, supervise and control the entities responsible for genetic material research and engineering, and to protect the wildlife and flora, prohibiting any practices likely to threaten their ecological functions. It also provides that Brazil's Amazonian forests, the Mata Atlántica, the Sierra del Mar, the Pantanal Mato Grossense and the Zona Costera are the national birthright and are to be used in accordance with the law under conditions that guarantee the preservation of the environment, including the use of natural resources (art, 225).

The Brazilian Constitution also devotes a chapter to the indigenous peoples. Article 231 enshrines constitutional recognition of the social organization, customs, languages, beliefs and traditions of the indigenous peoples, together with their ancestral rights to the lands they have traditionally occupied. It is the responsibility of the Union to identify and protect the boundaries of these lands, and ensure respect for all their goods. The lands traditionally occupied by the indigenous peoples are those in which they are permanently established, those which they use for their productive activities, and those which are indispensable to preserve the environmental resources they need for their well-being and for their physical and cultural reproduction in accordance with their needs, customs and traditions. The lands traditionally occupied by the indigenous peoples are for their permanent possession, and they are entitled to the exclusive use of the fruits of the land, rivers and lakes there. All acts designed to occupy, control or possess the lands referred to in this article, or to harvest the natural resources of the land, rivers and lakes on those lands, are null and void and without legal effect, except in the case of the paramount public interest of the Union, and in accordance with the law.

In the title referring to the economic system, the 1993 Peruvian Constitution devotes a whole chapter to the environment and to natural resources, and provides that both renewable and non-renewable natural resources are the birthright of the Nation and that the State is sovereign with regard to their exploitation. Special constitutional conditions are laid down for their use and their assignment to private individuals. Central government is responsible for laying down national environment policy and promoting the sustainable use of natural resources. The sustainable development of Amazonia is to be promoted by central government under appropriate legislation (arts. 66-69).

In the 1994 Argentine Constitution, provision is made for all the inhabitants to enjoy the right to a wholesome and balanced environment that is suitable for human development and in which the productive activities are able to meet present needs without jeopardizing those of future generations. Furthermore, it imposes the duty on all the inhabitants to preserve this environment, giving priority to requiring those who damage the environment to redress that damage. The authorities must ensure that this right is protected and guarantee the rational use of natural resources through the preservation of the natural and cultural heritage, and protect biological diversity (art. 41).

The 1967 Bolivian Constitution, revised in 1994, devotes one title in Part III to the agricultural and peasant farming system. One of the measures provides that the government must regulate the system for using renewable natural resources, taking precautions to ensure their conservation and to increase them (art. 170). The Constitution also acknowledges, respects and protects the social, economic and cultural rights of the indigenous peoples living in the country, particularly the rights relating to their identity, lands, values, languages, customs and institutions (art. 171).

Chapter 7 of the 1972 Panamanian Constitution, which was reformed in 1994, is dedicated to the environment, and contains an article providing that the central government must regulate, monitor and enforce the measures needed to guarantee the rational use and exploitation of wildlife on land, sea and in the rivers, as well as the forests, land and water to prevent pillaging, and to ensure its preservation, renewal and permanence (art. 116). Concessions to exploit the land, the subsoil, the woodlands, and to use water, inter alia, are designed to ensure social well-being and protect the public interest (art. 256). Hunting, fishing and the harvesting of woodlands are to be regulated by statute so that resources can be renewed and the benefits are permanent (art. 291).

2. From the beginning of the century to 1975

2.1 The development of the forestry industry, import substitution and the beginning of forest resources conservation policy

From the beginning of the century to around 1975, government legislation and institutions were influenced by the economic development model that was designed to modify production structures and foster industrialization through import substitution and protectionist policies. In the forestry sector, this was expressed in terms of the aim to **develop the forestry industry and to generate income from the woodlands** and from forestry operations to be used as investment in other national development programmes (with particular emphasis on the engineering and infrastructure construction industries).

During this period, the bases were also laid for the **conservation of ecosystems,** with the creation of national parks and reserves, and sanctuaries for wildlife and flora. Chile's Woodland Act, 1925, empowered the President of the Republic to set up national parks for tourism and forest reserves to guarantee the survival of a number of native tree species and to preserve the beauty of the landscape. It also protected the native woodlands, prohibiting land clearance by burning and the felling or harvesting of native species around springs, river banks or slopes with gradients of over 45 percent.

Venezuela's Forest, Land and Water Act of 30 December 1965 provided that regions of national importance, because of their natural scenic beauty or because of their wildlife and flora, were to be declared National Parks by the Council of Ministers. It also prohibited the hunting, killing or capture of wildlife specimens and the destruction or gathering of the flora in National Parks. It also made provision for the central government to establish for each National Park the areas of private property to be expropriated for the purposes of public utility (arts. 10-16).

Brazil's 1965 Forestry Code (Act No. 4771) provides that the authorities are empowered to declare woodlands and other natural vegetation stands to be under permanent protection with the purpose, *inter alia,* of protecting sites of exceptional beauty or of scientific or historical value, or to protect threatened flora and wildlife. For this purpose, the competent authorities are to establish National, State and Municipal Biological Reserves and Parks (art. 3(e), (f) and 5). Access to native plants - known today and treated as access to biological diversity - is regulated under the Forestry Code by a provision requiring licences to be issued by the authorities for trading in native living woodland plants. The conservationist thinking underlying this Act is also reflected in the ban on the unregulated harvesting of native forests in the Amazon Basin, permitting the harvesting of these forests only under management and operating plans laid down exclusively by the authorities (arts. 13 and 15).

The Honduran Forest Act, 1972, (Legislative Decree No. 85) includes within its classification of forest areas what it calls "Protected Forest Zones", as public or private forest areas declared to be of particular importance for the conservation of the landscape, the water or the soil, of which only limited use is permitted, and only according to forestry management plans drawn up or approved by the State Forestry Administration. In these zones, any action likely to change the vegetation, the wildlife, the landscape, the soil, or which leads to a reduction in the water, is banned unless specified in the forest management plans, or plans implemented under the direct supervision of the State Forestry Administration (arts. 11 and 42). This Law also stipulates that through the Natural Resources Secretariat, the government may grant the status of "National Park", as a particular example of protected forest zone, to exceptionally beautiful, unspoiled or agricultural sites and areas within the national territory, in order to encourage access to and enjoyment of these areas and to ensure respect for the natural beauty of the landscape and the wildlife and flora heritage, as well as for the hydrological and geological feature of the areas, prohibiting anything likely to disfigure, damage or destroy them. Priority concern for conserving natural resources is also revealed in the requirements that any private lands to be incorporated into national parks must be previously purchased by the State, or acquired on an exchange basis or even expropriated (arts. 61-63).

Peru's Forest and Wildlife Act, enacted in May 1975 (Decree-Law No. 21147), placed areas needed to protect, conserve and exploit wildlife, and areas of special importance for their historical, scientific or landscape values, under the regime governing forest resources. It therefore classified what it called the "Conservation Units" into National Parks, National Reserves, National Sanctuaries and Historical Sanctuaries. This Act also made provision for the expropriation of any private lands needed to set up these Conservation Units (arts. 14-20).

2.2 Forestry development based upon the main uses of industrial timber

During this period it was the **principal uses of industrial timber that formed the focus of forestry development.** The **export of forest raw materials** - mainly timber -, generally with little added value, and only limited to a number of species and in many cases without imposing any obligation to carry out reforestation, damaged the forest heritage of certain countries in the region.

The importance of ensuring supplies of raw materials for the forestry industry was reflected in Venezuela's Forest, Land and Water Act, 1965, which required the National Executive to set up forest reserves on wastelands and public lands "whenever necessary to ensure a continuous supply of raw materials for the national industry". It declared these natural forest reserves to be "indispensable for the maintenance of the national timber industry". The Act justified deforestation or the harvesting of products required for consumption by official public services, state enterprises or the official autonomous institutions, provided that they themselves performed these activities. The justification was particularly significant for that period because the Act provided that in these cases the Finance Ministry was empowered to waive payment of the relevant land taxes and any other taxes established by law. These waivers apply in the case of deforestation, or the removal or harvesting of forest products, to be used to develop or benefit the settlements for small farmers laid down by the Agrarian Reform Act (art. 107).

It should be noted, however, that Chile's Forest Act, 1931, had previously expressed concern for reforestation, by encouraging the first large-scale plantations by granting tax exemption for forestry replenishment. Under Decree-Law No. 701 of 1974 (Forestry Development Act), incentives for replenishment were made even more attractive to the private sector[1]. The State refunded 75 percent of the net forestation costs per parcel of land included in a management plan, incurred by any individuals or corporations whatsoever on lands classified as "particularly suitable as forest lands"[2]. The net costs of managing the land following forestation in accordance with the management plan (art. 12) were also refunded. The Act also granted exemption from "territorial taxes" on land classified as being particularly suitable as forest land, natural forests, artificial woodlands and their forest stands, and excluded them from being taken into account when assessing the putative land income (art. 13). Decree-Law No. 701 also made provision for a 50 percent reduction in taxes on profits from exploiting natural forests or man-made woodlands (art. 14).

The provisions of Decree-Law No. 701 helped to attract private capital by enabling joint stock companies to acquire shares or rights in companies of any kind whose main object was to plant or harvest woodlands. There were no statutory or regulatory restrictions on this (art. 28). Furthermore, according to article 27 of Act No. 16640 - which was repealed and replaced by Decree-Law No. 701 - artificial plantations could not be expropriated and neither could treeless lands that were particularly suitable as forested lands, on which the owners implemented a forestation programme approved by the Ministry of Agriculture. Despite all

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[1] The amendments introduced by Act No. 19561 of May 1998 also provide major incentives: (i) a one-off government grant over a period of 15 years, backdated to 1 January, 1996, for each area to cover a percentage (75 percent in some cases and 90 percent in others) of the net costs of the following activities: forestation on fragile soils or in areas undergoing desertification; forestation on degraded soils and the reclaiming of these soils; setting up wind-breaks on degraded soils or seriously windborne-erosion prone soils; forestation by "small forest owners" on land that is particularly suitable for forestry or on any kind of degraded soils; forestation on degraded soils on hillsides with a gradient over 100 percent; (ii) exemption from payment of the "territorial tax" levied on agricultural land for lands that are particularly suitable for forestry, containing reclaimed plantations and native woodlands; (iii) exemption from the same tax for lands with protection forest cover.

[2] Lands "particularly suitable as forest lands" are defined in article 2 of Decree-Law No. 701 as "lands whose climate and soil conditions are such that they must not be continually ploughed were, with or without vegetation cover, excluding lands that may be used for cropping, fruit farming or intensive livestock raising without suffering deterioration".

these incentives, it has always been argued that the best incentive for planting woodlands is security of tenure over the land that the investor can exploit.

Some countries' legislation sets out to develop and incorporate the timber industry into the harvesting of forest resources. Under Nicaragua's Decree-Law No. 1381 of 1967, timber-harvesting concessions for national woodlands are designed specifically "to integrate and develop the industrialization of timber with the exploitation of forest resources". In the Decree, "timber harvesting" refers to the extraction, storage and transport of the classes of timber indicated in the concession, "with the obligation to process and industrialize them in the country". Before a concession can be considered and granted, the essential prior condition to be met is an undertaking by the applicant to set up an industrial plant by a given deadline capable of carrying through a programme including at least the felling, transport, sawing, artificial seasoning and chemical treatment of the particular class of timber to which the concession applies (arts. 3, 4 and 10).

Even greater stress is laid on the need to incorporate added value into the timber under the provision that timber exports are only permitted in the form of saw wood, artificially seasoned and chemically treated, or when the timber is to be used for ready-made furniture or furniture components, or is in the form of laminated wood; all other types of exports are prohibited (art. 29). One point to be noted, however, is that even though this law was enacted as long ago as 1967, it requires concessions to be issued for continuous and sustainable harvesting, and states that in order to establish the period and scope of the licences, the technical and economic capacity of the applicant have to be considered, together with the nature of the industrialization work to be implemented, the ecological conditions of the woodland and the socio-economic prospects of the harvesting project. Reference is also made, to a certain extent, to management plans, by requiring the grantee of the concession to have a minimum plan of work, covering the whole period of validity of the concession (arts. 4 and 6).

Promoting and providing incentives for forestry industries are among the declared objectives of the Honduran Forest Act, 1972, which provides that forest harvesting and forest industries that already exist or are yet to be established in the country, "must be designed for the gradual processing of the raw material into processed products of the highest possible standard". The Law adds that once the Government has ascertained that the entrepreneur's original investment has been fully recouped, work has to begin on installing and running the industrial plants for the processing and transformation of the raw material (art. 106). The implication of this, however, is that forest resources without added value can be extracted and marketed as long as necessary to enable the company to recoup its investment costs. The Act also establishes a National Forestry Fund within the central government general budget to promote and facilitate programmes for the rehabilitation, protection and management of woodlands (arts. 113-116).

In Brazil's 1965 Forestry Code, provision is made for reforestation by industrial compames which, by their very nature, consume large quantities of forest raw materials, within a radius considered to be economical for processing and transporting the timber. The yields have to be equivalent to their consumption requirements under reasonable working conditions (art. 20). Under the Code, all investment in forestation and reforestation is to be deducted from taxable income for the purposes of income tax and specific reforestation tax

liability. Both natural woodlands and plantations are made tax-exempt, and the existence of these woodlands can not be used to raise the taxable values of the lands on which they stand. The value of forest products from plantations is not deemed to be taxable income when generated by the same person that planted them (art. 38). Credit facilities are also made available for forestation and reforestation projects, and for plans to acquire the equipment necessary for those projects (art. 41).

Peru's Forest and Wildlife Act, 1975, which straddles the period analysed here and the following period (the decade 1975-1985), provides that "the government must encourage the establishment and implementation of processing activities" To encourage both processing and marketing, the government is required to act in accordance with a list of priorities: firstly, the so-called 'socially-owned enterprises' (companies in which the employees are shareholders), followed in this order by the indigenous communities, the peasant communities, 'agricultural enterprises of social interest', and co-operatives. The total processing or forest products and wildlife is another activity which the State is required to encourage through the provision of technological support and any other incentives that may be necessary (arts. 66 and 68).

This Act expressly prohibits "the export for industrial or commercial purposes of forest products or natural wildlife". Exports for cultural or scientific research purposes are only permitted with prior authorization from the Ministry of Agriculture. Owners of processing plants for this kind of product can only acquire forest products and natural wildlife if their extraction and harvesting have been authorized by the Ministry of Agriculture (arts. 44, 69 and 71). There are also a number of provisions relating to promotional activities, and a special tax and credit regime is instituted. Incentives include the establishment or promotion by the Ministry of Agriculture of comprehensive technical assistance services, forestry machinery, and equipment for processing and conserving forest products and wildlife, and for marketing and processing, research and experimentation. Soft loans are made available for reforestation and forest harvesting by associations. The rural people living in frontier areas dedicated to forest activities are also given special treatment with regard to assistance and the provision of services (arts. 72-76).

2.3 The initial lack of recognition of the rights of local and indigenous populations, and the slow and gradual recognition of these rights

The concept of the public ownership of natural resources and their social function originally led to a denial of the local and the indigenous peoples' traditional and specific rights regarding income from the forests. Because of this notion, the policy for granting concessions very rarely recognized customary land use or the rights of the indigenous peoples living on public land. As a result, there was a lack of legal documentation to guarantee these rights over the forests.

In Brazil's 1965 Forestry Code, all forms of vegetation considered beneficial to the lands on which they stand are declared to be the property of the whole nation, while recognizing that when the competent authorities so declared, forests can be given permanent protection where they are designed to "maintain the environment required by forest

dwellers". The Code explicitly confers permanent protection of the forests forming part of the Indigenous Patrimony (art. 3).

In the Honduran Forest Act, 1972, the government is empowered to acquire forested lands and the relevant rights over them, by purchasing or by exchange, which best contribute to the pursuit of the specific purposes of the 'Inalienable Forestry Public Patrimony'. If a private landlord refuses permission to conclude any such contracts, the government is empowered "to expropriate the property on the grounds of necessity or public utility". The same provisions are also mandatory in order to re-establish state ownership or municipal ownership of "forested land in the public domain with privately owned tree stands or vice-versa" (arts. 40 and 41). This Act classifies as "forested areas held in trust" all the forested areas owned by tribal communities under state protection. Public forested areas include *ejidos* forested areas, which are those owned by the municipal authorities. The Act states that the income from the harvesting of *ejido* forested areas is not state property but municipal property (art. 10).

Venezuela's Forest, Land and Water Act, 1965, and the 1969 implementing Regulations recognized the existence of peasant settlements in woodlands and provided that in these cases the necessary measures be taken to conserve renewable natural resources (article 58 of the Act and article 105 of the Regulations). Plans for incorporating new lands into agriculture or livestock farming for settlement or Agrarian Reform purposes are subject to the Agrarian Reform Act (article 59 of the Act and article 106 of the Regulations).

According to Peru's Forest and Wildlife Act, 1975, "forest resources and wildlife are in the public domain and no vested rights over them exist, and they must be used consistently in the interest of society". The Act considers "forestry resources" to be any lands capable of being used primarily for forestry, woodlands and all wild flora. In relation to this "interest of society", the law provides that employees of private companies involved in harvesting or marketing forest products, resources and wildlife must have a share of at least three percent in the annual income of these companies (arts. 1, 3, 6 and 7). It also provides that the harvesting of timber in the territory of indigenous communities can only be carried out by these communities, Harvesting for industrial or commercial purposes has to be on a community basis, preferably in the form of multi-municipal companies under 'social ownership', with extraction permits issued by the Ministry of Agriculture making provision for reforestation programmes. The Ministry of Agriculture is also required to give priority to counselling the indigenous communities in this respect (art. 35).

With regard to forest harvesting for industrial or commercial purposes in the farm units selected in implementation of the Indigenous Communities and the Agricultural Promotion of the Selva and Ceja de Selva Regions Act, Peru's 1975 Act provides that a Ministry of Agriculture harvesting permit must be issued to the applicant, for which a fee is charged (art. 42). Under the same Act, the rural settlement projects to which the Indigenous Communities Act refers are required to give priority to optimizing the exploitation of the local renewable natural resources by incorporating forestry, agriculture, livestock, fish culture and wildlife activities carried out by companies under social ownership and associations, maintaining the natural equilibria and productivity of the ecosystems (arts. 61 and 62).

2.4 Requirement of government permits and licences to harvest and exploit marketable forest resources

Before private companies or state corporations are permitted to harvest and exploit state-owned forest resources, they must be in possession of government-issued concessions, permits or licences, with varying conditions, features, periods of validity, and so forth.

In Nicaragua, according to the 1967 Act, timber harvesting concessions are issued to exploit forest resources in national woodlands, while the harvesting of "non-national" woodlands - as they are called in the Act - is subject to the general provisions of the law applying to forestry harvesting in general. Under this Act, the owner of a non-national woodland must request a harvesting authorization from the Ministry of the Economy, to which it is required to reply within 20 days, after which, if no reply is received, it is deemed to have been granted (arts. 3, 4, 5, 25 and 27).

For the assignment to private individuals of the possession or ownership of public forest areas, the Honduran Forest Act, 1972, requires an order to be issued by the State Forestry Administration. This also applies to the assignment of ownership or use and enjoyment of private woodlands in areas defined as being of "relevance to forestry"[3], and also for their deforestation carried out by the owner in order to set up agricultural or grazing lands on them. In other words, deforestation and the change of use of woodlands are made subject to authorization.

In order to harvest or exploit woodlands in public forested areas in Honduras, prior government authorization is required in one of the following forms: (i) the award of a tender at the initiative of the government carried out by a public invitation to tender; (ii) contracting the supply of forest products between the government and industrial companies, with the approval of the National Congress; (iii) issuing a ten-year, renewable, permit to carry out small-scale harvesting to individuals or legal persons who may carry out annual felling of certain commercial species; (iv) issuing 12-year permits for large-scale harvesting to natural or legal persons for public forested areas subject to forest management plans; and (v) issuing harvesting licences for public forested land for all non-commercial harvesting carried out directly by the rural population for domestic use, or for their own or their household's consumption, or for house-building or agricultural use (arts. 69-81).

As far as "neighbourhood" uses are concerned, such as the development of woodlands for creating grazing lands, or for fuel wood, or timber for rural housing, where these are not incompatible with woodland conservation and improvement, they have to be permitted following the local customs and carried out on the *ejido* lands by the neighbours of the municipality owning the land, and can be granted free of charge by the State Forestry Administration or by the relevant municipal authorities (art. 71).

Venezuela's Forest, Land and Water Act, 1965, requires contracts, concessions, licences or permits to harvest or exploit forest products on wastelands or lands within the

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[3] Under article 11 of the 1972 Honduran Forest Act (Decree No. 85), the term "zones of relevance to forestry" are "public or private woodlands classified according to the criteria of outstanding economic interest, particularly with regard to the establishment of forest harvesting industrial units or management units".

public domain or private national land - but only when these are not carried out by the National Executive. Without prior approval from the National Executive, these rights are non-assignable because they are rights over lands within the public or private domain of the State. To harvest fuel wood, charcoal for domestic use, posts or props for fencing or forest products for construction purposes to be used on the same land, whether privately-owned or within the public or private domain of the Nation, a permit is required from the relevant official in the jurisdiction. Contracts or concessions and licences to harvest forest products on waste lands can be issued for up to 50 years, while permits were annual (art. 44-52,65 and 68 of the Act, and art. 107,113 and 114 of its Regulations).

The Ministry of Agriculture and Livestock is made responsible for establishing which wooded areas on privately-owned land are to be permanently set aside for forest production, and authorization to harvest them was made subject to a forest management plan approved by the competent authority (articles 73 and 74 of the Act and articles 121 and 123 of its Regulations). The Act also empowers the Ministry of Agriculture and Livestock in all instances to establish the participation of the State - the amount of the participation, the share due to the State - in cash or kind of the harvesting or exploitation of forest products on land within the public or private domain of the Nation. One can also see the interventionist mentality that characterized that period where the Act provides that the Ministry also lays down the minimum prices of the products to be harvested or exploited (arts. 103 and 104).

Peru's Forest and Wildlife Act, 1975, requires authorization for the harvesting of timber for industrial or commercial purposes in all instances from the Ministry of Agriculture, and lays down a list of priorities: (i) companies in social ownership or native communities; (ii) public corporations; (iii) peasant communities, agricultural societies of social interest and co-operatives; (iv) private companies; and (v) small harvesters. For the first four cases, renewable, non-transferrable forestry harvesting contracts are to be issued for ten years, and have to include reforestation programmes. In the fifth case, non-transferable forest harvesting contracts are issued to small harvesters who personally undertake the timber harvesting themselves for periods of not less than two years and not more than ten. One of the conditions for the termination of forest extraction contracts is failure to pay a share of the profits destined to be used for social purposes, as described above, within 90 days of the date of closure of the financial year's balance sheets (arts. 30-40).

The treatment which Brazil's 1965 Forestry Code provides for privately-owned woodlands, which are not subject to rules of use, is somewhat curious. In the southern regions and in the southern part of the central western region, it is permitted to destroy native, primitive or regenerated woodland provided that 20 percent of the area of each property are maintained under forest cover. In these regions and in deforested areas, the destruction of the woodland is prohibited if this is done to convert the use of the land to agricultural purposes, but - equally curiously - the only exception to this is the felling of trees for timber production. In areas that have not yet been cultivated, the destruction of the primitive woodland to set up new agricultural estates is permitted up to a maximum of 50 percent of the total property. The only exceptions to these rules are areas on which there are Brazilian pine (*Araucaria angustifolia*) stands. In the northern areas, technical standards have to be set by the competent authority (art. 16).

In the legislation belonging to this period, it should be noted that the conversion of land for agricultural and livestock purposes was generally considered to be positive because it meant "gaining more land". The case of the Honduran law was examined above. Venezuela's legislation also makes the Ministry of Agriculture and Livestock responsible for setting bounds on the forest woodland heritage so that it can be safeguarded "without prejudice to the necessary development of agriculture and livestock", indicating the areas which must definitively be conserved under tree cover and those which, for various economic reasons, can be used for other purposes (art. 61).

Conversely, Brazil's Forestry Code declared that restricting and controlling grazing lands in specific areas of importance to the preservation and multiplication of forest stands was a matter of public interest. The authorities are empowered to prohibit the felling of any tree for reasons of its position, rarity, beauty or value for vegetative purposes. It also specified that the assignment of land for agricultural purposes under agrarian reform plans can not include lands in the forest areas under permanent protection, or in woodlands providing timber and other forest products at both the local and national level (arts. 4, 7 and 8). Peru also prohibited the use of any land, anywhere within the national territory, for agricultural or livestock purposes where its prime use was for forestry purposes (art 5 of the Forest and Wildlife Act).

2.5 Centralization of decision-making and the framing of national policies

Decision-making, framing national legislation and policy, and enforcing national legislation was mainly the responsibility of central government alone. Neither the regional nor local authorities, nor the private and community sectors played an important role in this sphere during the period examined here.

Nevertheless, as long ago as 1965 - perhaps precisely because it is a Federal State -Brazil's Forestry Code provided that the Union will directly oversee the implementation of the Code either through the Ministry of Agriculture or by joint accord between the States and Municipalities, for which any services deemed necessary can be established (art. 22).

It should also be recalled that in Peru's Forest and Wildlife Act, perhaps because it was laid down in 1975 when there was an awareness of this need, the national territory was divided into Forestry Districts, as sub-divisions of the Agrarian Zones, in order to better administer the forestry and wildlife resources in terms of their ecological features and for operational reasons (First Supplementary Provision).

2.6 Establishment of public agencies responsible for the direct exploitation of resources and tax collection

During this same period, forestry laws were enacted which reflected the ideas analyzed above, and **public agencies were established with the specific task of collecting taxes, directly exploiting the resources and policing the forests.** The trend in governmental institutions was not to focus on the contribution of the forestry sector to national development in formulating strategies or drafting sectoral development plans. They were mainly concerned

with enforcing the rights of the State over natural resources and ensuring that the State obtained the benefits of exploiting them, both in the form of tax collection and the direct harvesting of the resources.

One of the stated purposes of the Honduran Forests Act, 1972, was to enhance the administrative and technical capacity of the State Forestry Administration. In order to perform its powers and responsibilities, the State Forestry Administration had to be staffed by specialized personnel, including forest rangers, with policing powers. The Act also provides that in order to guarantee the efficiency of the State Forestry Administration and the State Forest Rangers, measures will be introduced to promote the selection, preparation and training of technical and administrative personnel (arts. 7 and 8). Under Decree-Law No. 103 of 1974, the Honduran Forestry Development Corporation (*Corporación Hondurena de Desarrollo Forestal*, COHDEFOR) was established, through which the State was given a direct role in exploiting the forests.

As indicated earlier, Brazil's 1965 Forestry Code gave the Union responsibility for implementing the Code. This did not, however, prevent the police authorities from acting on their own initiative. The forestry officials in the exercise of their functions are given the status of Public Security Officials, and are even entitled to carry weapons (arts. 22-24). Under Venezuela's Forest, Land and Water Act, 1965, the Ministry of Agriculture and Livestock was made responsible for administering, inspecting, supervising and safeguarding renewable natural resources. Specialized members of the National Guard and other technical and administrative officials deemed necessary were made responsible for acting as forest rangers (arts. 96-99).

In Peru's Forest and Wildlife Act, 1975, the Ministry of Agriculture was made responsible for laying down rules; regulating and overseeing forest resource and wildlife conservation, and authorizing their harvesting and use. National Woodlands[4] can be used directly and exclusively by the State. The harvesting of forests, the processing and marketing of forest products by the State is to be carried out through existing public corporations and those specifically created for that purpose in the agriculture sector (arts. 4, 10 and 32). The Ministry of Agriculture is also made responsible for controlling the harvesting of forest products and natural wildlife, and for processing and marketing them, jointly with the relevant ministries. The same Act also established Peru's forest police force, as a specialized branch of the General Directorate of the Peruvian Civil Guard (arts. 89-93).

2.7 Development of the technical aspects

During this period, technical emphasis was on estimating the physical variables on which the value of forest resources depended, on obtaining the necessary scientific data to administer the resources (levying taxes in proportion to the value of these resources, contracting their harvesting, tendering them, etc.), and on solving biological problems. Forestry schools were established giving importance to timber biology, technology and industry, and research was fostered. However, there was little contact with development sciences. Emphasis was placed on the capacity to measure and evaluate forest resources, but

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[4] Under article 10 of this Law, "national woodlands" are "natural woodlands declared to be suitable for the permanent production of timber, other forest products and wildlife".

this was to the detriment of the planning, formulation and implementation of sectoral development policies.

Thus, in Brazil's Forestry Code (1965), the adoption and dissemination of the technological methods needed to enhance the useful economic life of timber, and to ensure its efficient use at every stage of handling and processing, was declared to be in the national interest (art. 4). Within two years of the promulgation of the Forestry Code, all school textbooks were required to address forestry issues, after approval by the Federal Education Council. The radio and television stations were also required to devote five minutes broadcasting each week to programmes, texts and materials relating to forestry issues which were required to be approved in advance by the competent authority. The Union and the individual States were to promote the establishment and running of forestry education schools at all levels in the education system. Provision was also made that a yearly "Forestry Week" is to be held with meetings, conferences, lectures and ceremonies to disseminate the economic and social value of forestry resources on dates to be indicated in a federal decree for all the regions of the country (arts. 42 and 43).

In the Honduran Forest Act, 1972, the Autonomous National University and the Ministry of Natural Resources were entrusted with the academic training of professional foresters, and the Ministry of Education was given responsibility for creating national awareness of the need to protect natural resources (art. 5). Peru's Forest and Wildlife Act, 1975, stated that in order to develop an endogenous technology and provide the necessary assistance to research and experimentation in forestry, the State will provide all the resources needed to carry out forestry research at the Ministry of Agriculture and in the Peruvian university system (Seventh Supplementary Provision).

2.8 Other issues as addressed by legislation during this period[5]

2.8.1 *Forest fires*

One important aspect that was dealt with in most of the legislation during this period was the issue of **forest fires,** which to this day remain a major threat to the integrity of the forest heritage. The texts analysed - in each of the three periods under study - contain provisions for forest fire prevention and protection against them, and stipulate the measures needed to combat and extinguish them.

Under the Brazilian 1965 Forestry Code, when forest products or coal are used as fuel, the necessary equipment to prevent the spread of fires in the adjacent woodlands is made mandatory (art. 11). In the case of forest fires in rural areas, where the fire can not be put out using the available equipment, it is not the responsibility of the forestry authorities alone, but of all the public authorities to provide the necessary equipment and to deploy all the personnel needed to provide assistance to deal with the fires (art. 25).

The Honduran Forest Act, 1972, extends this aspect by giving primary responsibility for fire prevention to the licensees and holders of harvesting permits and parties to forest

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[5] The issues examined in this section are not an exclusive feature of the legislation from this period; with a number of variations, they also occur in legislation in later periods.

product supply contracts, making the plans for preventing and combating fires an inherent part of the contracts and authorizations. "Fire-Prone Areas" are to be established in the country, which can include agricultural land, rangeland and forests, whether publicly or privately owned. In these areas the following are prohibited: ploughing and clearing, burning, grazing, felling, removing the bark from or mutilating any kind of vegetation, as well as extracting resins and gums. The State Forestry Administration is made responsible for combating forest fires by adopting preventive measures, extinguishing fires and repairing the damage caused. Telegraph, telephone and radio offices are required to give priority over all other communications to news and information relating to forest protection, free of charge (arts. 42-54).

Under Venezuela's Forest, Land and Water Act, 1965, the National Executive is given responsibility for implementing the technical measures needed to prevent, control and extinguish forest fires. The burning of vegetation for agricultural or livestock purposes is made subject to regulations issued by the Ministry of Agriculture and Livestock. These regulations include a ban on burning in areas recognized as being suitable for forestry or possessing a substantial amount of economically valuable species of fruit, latex, resin, essences, oils, gums, barks, medicinal roots, etc. An obligation is laid on all official and private telecommunications, radio and television services to transmit, free of charge, and as a matter of urgency, any news they receive regarding forest fires, and the measures being taken by the forestry authorities to control them. The law also instituted the National Forest Fire prevention and Extinction Council at the Ministry of Agriculture and Livestock as the agency responsible for advising, coordinating and providing consultancy services to government offices on this subject (articles 26-33 of the Act and article 66 of its Regulations).

2.8.2. *Forest reserves*

Provisions governing forest reserves were designed mainly to prevent the extinction of certain threatened forest species and to protect other species. The establishment of reserves was seen as a means of managing their rational harvesting through legislation.

Venezuela's Forest, Land and Water Act referred to forest reserves when it established that a resolution of the Ministry of Agriculture and Livestock can be issued prohibiting the partial or total harvesting of certain forest species and other plant species for a fixed period or indefinitely, in order to prevent their extinction or to regulate their exploitation (art. 53). Peru's 1975 Act also provided that the Executive, acting on a proposal of the Ministry of Agriculture, could declare that certain species of flora threatened with extinction are not to be harvested for an indefinite period of time (art. 43).

2.8.3 *Forest quarantines and plant health protection*

Another aspect developed in the forestry legislation of some countries is **forestry quarantines and related plant health measures** designed to prevent and combat both the introduction and the spread of pests and diseases which may attack forest resources.

The Honduran Forest Act, 1972, empowered the government to place areas of woodland in quarantine, or even declare a "state of forest emergency" when pests or diseases attack the national forest resources (arts. 55-58). Brazil's 1965 Forestry Code declared the prevention and eradication of pests and diseases likely to affect forest vegetation to be a matter of national interest (art. 4). Peru's 1975 Act also referred to provisions for the health control of forests and wildlife, requiring the rules to be laid down by the Ministry of Agriculture (art. 88).

2.8.4 *Forest seeds*

Legislation in some countries also dealt with **forest seeds.** In Honduras, for example, the State Forest Administration is made responsible for checking imports and exports of forest seeds, carrying out quality control, identifying their origin and also carrying out plant health checks (articles 59 and 60 of the 1972 Act).

2.9 Conclusions regarding the first period

From what has been analysed above, one may conclude that forest legislation in this period pursued the development of the forestry industry by import substitution. Throughout this period, the first forest resources conservation policies were adopted, laying the bases for the protection of ecosystems and the creation of protected areas. Gradually and slowly, recognition began to be given of the rights of the local and indigenous populations, which had been ignored in the beginning, and special emphasis was placed on developing the technical and cultural aspects of forestry.

The period under review was marked by the centralization of decision-making and national policy-making, which was reflected in the establishment of public agencies responsible for the direct harvesting of resources and for levying taxes, giving government the responsibility for issuing permits and licences for harvesting and exploiting marketable forest resources.

3. The decade 1975-1985

A number of events, which changed important features of the forestry sector, occurred during this period, and this was reflected in legislation. Three events in particular stand out: heightened environmental concern, greater recognition of the role of the local communities, and a loosening of the notion of public ownership.

3.1 The impact of the principle of sustainable yields from forestry activities in the governmental forestry institutions, and the effects of environmental factors on forest management

The United Nations Stockholm Conference on the Human Environment in 1972 generated awareness regarding the role of woodlands in the global environment, which led,

among other things, to institutional changes in the forest sector, and the linking of environmental issues and natural resources in the legislation of this period.

Nicaragua enacted a law in 1981 abolishing the system of concessions to harvest natural resources - in the public domain - which had been practised on a very large scale and had led to unscrupulous commercial exploitation, leading to a serious reduction in the extension of forest stands. The government took over direct control of forestry through the People's Forestry Corporation (*Corporación Forestal del Pueblo,* CORFOP). CORFOP's responsibilities were the harvesting, processing and sale of timber extracted from public lands, and the volume of forest product exports fell significantly under public management.

In Mexico, with the establishment in 1982 of the Secretariat for Urban Development and Ecology (SEDUE) after the enactment of the Environment Protection Act, 1981, the management of flora, wildlife and natural protected areas was transferred from the Forestry Sub-secretariat to SEDUE. This twinning of functions and powers between public institutions also occurred in Brazil, even though it initially was more theoretical than real. The Special Secretariat for the Environment (SEMA) was established by Decree No. 73030 in 1973 to direct environmental conservation and the rational use of natural resources, and was given joint responsibility for forest management with the Brazilian Forestry Development Institute, created in 1967, whose position was thereby weakened.

In Chile, environmentalists challenged the increasing harvesting which was being encouraged through the system of incentives established by Decree-Law No. 701 discussed above, and criticized its environmental cost, despite the fact that the Decree prohibited the destruction of native woodland for establishing forest plantations. This was because of the widespread practice of forest reconversion which was possible thanks to a loophole in the law, which offered the forestry authorities the possibility of approving forest reconversion in ra in which the native wooland was "not adequate for commercial exploitation".[6]

Chile's 1974 Forestry Development Act, which was replaced in 1979 by Decree-Law No. 2565, introduced an important instrument, the management plan, which regulates the use and rational exploitation of natural resources on a given area of land, in order to obtain the maximum benefit from those resources while guaranteeing their conservation, improvement and enhancement (art. 2)[7]. The management plan, which has to be drawn up by a forestry engineer or specialized agronomist, is required to be submitted within one year of the date of the certificate approving the designation of the land as being of paramount suitability for forests (art. 8).

Before a management plan could be altered, it had to be submitted to the National Forestry Corporation. Any felling or harvesting of woodlands, whether or not on land designated as being of paramount suitability for forests, had to be carried out under a management plan previously approved and registered with the National Forestry Corporation (article 21 of the Act and article 15 of Regulations No. 346). Any felling or harvesting of woodlands automatically implied the obligation to reforest or to recuperate land at least equal

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6 *"Cambios en las políticas forestales de America Latina: los casos de Chile, Nicaragua y Mexico",* G. Castilleja. UNASYL VA, 175, Vol. 44, 1993-94.

7 Act No. 19561, amending Decree-Law No. 701, added the word "conservation" of natural resources to the previous definition. It also included the "ecosystems" of these resources.

in size to the land cleared by felling or harvesting (art. 22). It should be noted that the statutory provisions governing the management plan not only referred to cutting or felling but to all the other activities needed to attain the objectives of sustainable development, because sustainable woodland management required the planning and implementation of a whole set of operations prior to and following the cut.

With regard to the procedure for approving the management plan, Chile's law provided that permission is assumed to have been granted if no reply is received within 120 days, approving or rejecting the application submitted to the National Forestry Corporation (artsicle 10 of the Act and article 10 of the Regulations). Some authors criticized the provision that permission is automatically granted unless specifically refused, while others defended it because it simplified the administrative procedures. It also figured in Chile's law regarding the designation by the National Forestry Corporation of lands of paramount suitability for forests. This Law provided that the Corporation is required to respond within 60 days of the date of the filing of an application, after which date the applicant may assume that the designation has been issued (art. 4).[8]

Several important provisions were included in Ecuador's Forest, Natural Areas and Wildlife Conservation Act (Legislative Decree No. 74 of 21 July 1981) regarding the principles of the sustainable yield of forestry activities. It provides that the areas granted under harvesting contracts must be limited in extension so that raw materials obtainable from reforestation are equivalent to 50 percent of the industrial capacity of the company concerned. In other words, the company is required to use the timber from reforestation. It also imposes an obligation on primary forestry industry processing plants to acquire and use materials only if authorized for harvesting. Changing the use of forested lands is prohibited, and the forestation and reforestation of lands suitable for forests is made mandatory and declared to be in the public interest, whether these lands were public or private, and their use for other purposes is strictly prohibited (arts. 12, 22 and 67).

Ecuador's Act was ostensibly designed to increase the level of industrialization of forest raw materials by such provisions as those which empower the Ministry of Agriculture and the Ministry of Industry to establish the minimum technical level of primary exploitation industries, promoting and controlling the improvement of the systems for using, and carrying out primary processing and industrializing forest resources. However, the law contains another provision designed to rationalize the use of forest resources, empowering the Ministries of Agriculture, Industry and Finance to prohibit the import or manufacture of machinery, equipment, tools or any other implements related to these activities, on a temporary or permanent basis (arts. 64-68). This provision seems to have been an attempt to prevent the indiscriminate harvesting of forest resources, but instead of imposing conditions on access and use, it attempted to solve the problem by preventing the import of machinery which can, in reality, help to provide value-added to timber which is legally and sustainably harvested.

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[8] These provisions were retained in Act No. 19561.

3.2 Recognition of the important role of rural and indigenous communities in terms of their participation as agents and beneficiaries of forest resource management

The World Conference on Agrarian Reform and Rural Development (1979) and the United Nations Stockholm Conference on the Human Environment (1972), at which the significant role of society to environmental conservation was emphasized, established the importance of NGOs' work in promoting an awareness of the problem, as well as the rights of the communities that depend on forests for food and subsistence, and whose livelihood is closely linked to the existence of forests, conditioning their social and cultural customs. In 1978, the Eighth World Forestry Congress in Jakarta on "The Forest at the Service of the Community" emphasized the principles laid down at the Stockholm Conference in relation to the forest environment, the importance of forestry development, and the role of local communities in this process.

FAO embarked upon a related programme during that period. According to a sturdy carried it out on forestry activities in the development of local communities, the role that the forestry sector can play in rural development varies enormously depending upon the type of society and the locality[9]. Firstly, the forest sector forms part of the broader issue of rural development; there must be a commitment on the part of governments to rural development.[10] Secondly, forestry development is very closely linked to various aspects of rural life, and solutions demand an integrated approach.[11] A policy integrating the forestry sector into rural development may therefore demand appropriate legislation dealing with land tenure, agrarian reform and land settlement. Thirdly, if development is to be achieved through the adoption by the communities of the technologies, procedures, institutions and systems that are relevant to their own societies, and if this is not to destroy their values, a much wider flow of information and opinions between the members of the communities and the organisations outside them is necessary. But this must not be just a one-way flow. Policy must be formulated taking due account of the points of view of rural people. It is essential to ensure their participation in the development process from the very outset, and the needs and aspirations of the community must be taken into account in national and regional rural development plans. Forestry activities in community development must form part of a bottom-up process, and not be imposed top-down. Lastly, since sylviculture is usually a long process, sustained commitment by government is essential.

In short, according to the FAO study, there must be a constant process of communication and co-ordination between the people and the various government entities taking part in the integrated rural development programmes. People's mentalities and attitudes and those of the civil servants involved must be changed through extension and

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9 *Actividades Forestales en el Desarrollo de Comunidades Locales.* FAO Forestry Study No. 7. FAO/Swedish Central Office for International Aid, Rome, 1978, pages 5, 14, 19, 21, 24 and 26.

10 The study points out that this does not mean that resources for investment in urban zones have to be reduced, because part of the expenditure in the rural zones would prevent emigration which would otherwise add to the pressure on the budgetary resources of the towns. Increased rural productivity would also increase the total amount of resources available for both sectors.

11 The study also notes that improvements in agricultural productivity or the organization of grazing could be preliminary conditions for freeing lands for sylviculture, in which case it would be necessary to coordinate the various technical services. In some cases it may become necessary to restructure land ownership before being able to make better use of resources.

training. Institutional and organizational structure must be equipped to ensure that it is able to encourage communication and participation. All the legal provisions regarding forest land tenure and customary rights of use must be examined, and a fresh evaluation made of education syllabuses to be sure that personnel is fully familiar with the full range of rural and social problems, and not only forestry problems.

In Honduras, as noted earlier, under Decree-Law No. 103 of 1974 - known as the Honduran Social Forestry Act - COHDEFOR was established, explicitly acknowledging the problems of peasants living in and near the forests and their right to forestry development, by taking on board the concept of the Forestry Social System. This was a landmark in the regional history of forestry.

Ecuador's Forest, Natural Areas and Wildlife Conservation Act, 1981, provides that the productive forested areas belonging to the State en which aboriginal groups have settled can only be exploited by them. The aboriginal communities also have the exclusive right to harvest resources other than timber and wildlife on lands under their 'dominio' or in their possession (arts. 36 and 38). The Act also provides that state forest areas can be licensed to co-operatives and other farming organizations which have the necessary facilities and resources and undertake to exploit the forest resources in the form of an association, and to undertake reforestation and conservation, on the understanding that the licensees can not assign the land they received to third parties (art. 37). The Ministry of Agriculture and Livestock is also required to support the co-operatives, the municipalities and the other organizations set up by farmers and to promote the establishment of new entities to undertake forestation, reforestation, forest resource harvesting and industrialization programmes. This support must also include financing. The Act also provides that the owners of forests, particularly associations, co-operatives, municipalities and other entities set up by the farmers, are to receive technical assistance and credit from the government to establish and manage new woodlands (arts. 12 and 16).

In Mexico the *ejidos* acquired the right during this period to play a direct part in harvesting forest resources and in their industrialization. Under the Mexican Constitution all forest lands, regardless of the land tenure regime, belong to the Nation, which means that it is the Federal Government that regulates the harvesting of timber. Before the Forest Act, 1986, commercial timber extraction was carried out under licence by companies working in industries deemed to be in the public interest, such as the paper industry. The licences granted by the Federal Government also included the *ejido* lands, giving rise to major conflicts between the *ejido* members and the licensees, because the economic benefits to the *ejidos* under these licences were minimal, and the commercial harvesting of timber was causing the degradation of the woodlands. Under the Forest Act, 1986, the foundations were laid for the gradual phasing out of licences and for the creation of independent forestry co-operatives by the *ejidos* themselves, to enable them to harvest their own woodlands.

This harvesting system marked a major step forward in recognizing the rights of rural communities. In the event, however, the forestry co-operatives had to deal with degraded and impoverished forests, and with needs that they could not possibly afford. Now that their rights have been recognized, however, the *ejido* co-operatives have managed to retain a substantial proportion of the value of the products extracted from their own woodlands. Another major consequence of the forestry activities carried out by the *ejidos* is that the

amount of forest reconversion has been reduced thanks to the marking out of the forested lands that they harvest on a permanent basis.

3.3 A looser notion of the public ownership of natural resources

In this period, the whole concept of public ownership and social function of natural resources, which in the previous period had led to the denial of private and community rights over both ownership and use of forest resources, began to be loosened.

Under Ecuador's Forest, Natural Areas and Wildlife Conservation Act, 1981, the State "guarantees the right of private ownership of privately-owned forest lands and forests". In other words, no difference is drawn between forest lands and forests, as "forests" can also be "privately owned". This may also be inferred from the definition given of the State forest estate: "forest lands owned by the State, natural forests standing on those lands, forests cultivated on its behalf, and the wild flora and fauna". It follows, conversely, that any natural forests standing on lands not in State ownership are private property. This interpretation seems to be confirmed by the exception made by the Act in the case of protected natural areas, where it provides that "lands and natural resources in private ownership within the boundaries of natural areas shall be expropriated or shall revert to state ownership" (arts. 1,9 and 73).

Despite this, the Act requires authorization to be obtained from the Ministry of Agriculture and Livestock (art. 35) before privately-owned natural and cultivated productive woodlands can be exploited. Exclusive forest lands or lands suitable for forestry in private ownership without tree cover necessarily have to be reforested to avoid expropriation, reversion to the State or the extinction of property ('dominio') rights over them (art. 10).

Retaining the situation as it had been in the previous period, when public agencies were responsible for directly exploiting the resources and levying taxes on them, the Act requires state-owned woodlands in permanent production to be exploited in one of the following ways, in order of priority: (i) directly or by delegation to other public enterprises or agencies; (ii) by joint private/public enterprises; (iii) under harvesting contracts concluded between the Ministry of Agriculture and Livestock with natural persons of Ecuadorian nationality or Ecuador-registered companies on the basis of public tender; and (iv) under direct negotiated tender as stipulated by Law.

Priority for exploiting these resources was given to the State and public enterprises; secondly, the State, through companies jointly owned with the private sector, in which the State has a majority holding; thirdly, private citizens (provided that they are Ecuadorian nationals) can exploit the woodlands under contracts concluded following a public offering. It should be noticed that the Act explicitly states that these contracts do not confer the ownership to the contracting parties or any other right *in rem* over the lands on which the woodlands stand, and neither can the lands be used by way of collateral or guarantee. Another feature of these contracts is their short term: not less than three years and not more than ten years (arts. 20-32).

3.4 Other features of legislation in this period

3.4.1 *Infringements and penalties*

Most of the special laws, including forestry laws, include a title or a chapter setting out the different types of infringements of the legislation constituting statutory offences. Penalties are also provided for those offences. In the legislation analysed, there are a number of interesting variations on this subject.

Ecuador's 1981 Act made provision for fines, penalties and confiscation, as well as the possibility of prosecution. The fines were set out in specific amounts, which is not sound practice because the amounts can become obsolete after a few years. It is preferable to adopt automatic adjustment procedures. The law provides that repeated offences constitute aggravating circumstances, for which licences or registrations can be revoked or cancelled. Any offences committed by public forest officials are grounds for dismissal.

The Act also lays down the legal proceedings and the authorities responsible for conducting them and for imposing penalties, as well as appeals against judgements (Title IV). The offences created by the Act include unauthorized capturing or collecting of zoological specimens and botanical samples in protected natural areas. This provision can be viewed as an example of regulating access to biological diversity, a category of rules that has been much more elaborately developed over the past ten years, since the adoption of the 1992 Convention on Biological Diversity.

3.4.2 *Forest fires and protective health measures*

Under Ecuador's Forest, Natural Areas and Wildlife Act, the prevention and control of **forest fires, pests and diseases** likely to harm natural vegetation and woodlands are entrusted to the Ministry of Agriculture and Livestock, as well as to the woodland owners, forest harvesting contractors, and persons holding or possessing woodlands. It also requires the agricultural insurance taken out by natural or legal persons owning cultivated woodlands to include cover against hazards relating to fires, pests and diseases, and it makes the prevention, control and eradication of pests and diseases a matter of national interest (arts. 60-63).

3.4.3 *Forest reserves*

Ecuador's Act of 1981 also set up reserves, for which the Ministry of Agriculture and Livestock is responsible, to protect forests and wildlife. These reserves can be partial or total, cover the short, medium or long term, and are to be decided upon when there is sufficient justification on ecological, climatic, water-related, economic or social grounds (art. 39).

3.4.4 *Forestry research and training, and forest seeds*

Ecuador's Act also contains several provisions dealing with forestry research and vocational training, to be promoted by the Ministry of Agriculture and Livestock. The same Ministry is also given responsibility for a Forest Seed Programme, to act as a technical and administrative agency responsible for promoting and setting up nurseries and seed farms, and for gathering, conserving and supplying certified seed (Chapter VII).

3.5 Conclusions regarding the second period

During the decade 1975-1985, parallel to the impact of the principles of sustainable development on government forestry institutions and forest management, increasingly governments recognizing the important role of local communities in terms of their participation as agents and beneficiaries of forest resource management.

There was some weakening of the concept of the public ownership of natural resources, and non-governmental organizations began to grow and spread their influence over forest resources. The number of NGOs increased, as did their capacity to act at the national and international levels, and they exerted significant pressure on governments, leading them to make changes to some of their policies. These changes in the sectoral features of the period were reflected, to various degrees, in the legislation analysed.

4. Since 1985

Since most of the countries in the region have suffered from very high inflation rates, excessive external debt and trade deficits, they have been implementing structural adjustment programmes that have abolished the export substitution development model and industrial expansion policy, while curtailing the operations of state corporations. Throughout this period, recognition of the role played by forests in the protection of the environment and the conservation of biological diversity has become well established, institutional structures and pricing policies have been reformed, private forestry activities have been implemented, and grater recognition has been given to the rights of indigenous peoples.

4.1 The recognition of the role of forests in environmental protection and the conservation of biological diversity

One of the features of the present period is that **all countries now fully recognize the fundamental role of forests in protecting the environment and conserving biological diversity.** This is revealed in the legislation which is being adopted in order to comply with and implement the international and environmental instruments that have been concluded and ratified by the countries in the region (Agenda 21 of the United Nations Conference on Environment and Development; the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, the Convention on Biological Diversity; the Convention on International Trade in Endangered Species; etc.).

Conservation objectives should also include maintaining the income and means of survival which the woodlands provide to the local or indigenous communities. In this regard, principle 3(a) of the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests provides that national strategies and policies must lay down a framework to step up efforts for the management, conservation and sustainable development of forests and woodlands. It should be pointed out that the concept of "sustainable development" includes the concept of multiple forest use, by obtaining benefits in addition to timber, such as the protection of watersheds, tourism, food, the conservation of genetic resources and ecosystems.[12]

The most recent legislation tends to adhere to the concept of **sustainable development.** For example, one of the stated objectives of Nicaragua's Forest Regulations (Decree No. 45-93 of 1993) is to guarantee the rational and sustainable use of the country's forest resources, and to **prevent the loss ofbiodiversity, the** Regulations require permits to be issued to exploit certain categories of forest timber, stipulating specific volumes and areas, and permits authorizing research on State lands to identify the forest resources available for forestry use. These permits can both be issued to Nicaraguan and foreign nationals resident in the country (arts. 3 and 5). The Regulations also require that industrial sawmills submit an environmental impact assessment of the possible impacts of the installation or relocation of sawmills, including the handling and use of solid and liquid waste (art. 46).

The survival of natural palm groves and indigenous forests is an absolute priority in Uruguay, where Act No. 15939 of 1987 prohibits felling and any other operation that might threaten their survival. In the case of indigenous forests, there are two exceptions: (i) when the product to be harvested is for domestic use, or for lighting the rural settlement to which it belongs; (ii) when the Forestry Directorate issues an authorization based on a technical report.

Guatemala's Forest Act, 1989, indicated that its purpose includes "the protection, conservation, use, industrialization, management, renewal, enhancement and administration of the country's forest resources in accordance with the principle of rational and sustainable use of renewable natural resources" (art. 1). It also required the government to provide incentives to anyone implementing forestation or reforestation projects or maintaining, protecting, preventing or combating forest fires or pests, and managing natural forests (art. 83). Guatemala's new Forest Act of 1996 states, in the recitals, that forest resources can and must form the fundamental basis for the economic and social development of the country, and that goods may be produced as a result of sustainable management that will help meet energy, housing and food requirements. It also considers that enhancing the sustainable productivity of woodlands and the goods and services which the woodlands provide to Guatemalan society, constitute the principle for their conservation. The purpose of this Act is to declare reforestation and woodland conservation a matter of national urgency and social concern, so that encouragement is given to forestry development and sustainable management, *inter alia*, by increasing the productivity of existing woodlands, submitting them to rational and sustainable management in accordance with their biological and economic potential,

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[12] *Reseña de la Situación Forestal en América Latina y el Caribe*, "The State of Forests in the World", FAO, Rome, 1997.

conserving the national forest ecosystems, and promoting the reforestation of forest areas currently without forest stands, in order to meet the national forest resources requirements (art. 1).

Mexico's Forest Act of 1992 stated, as an objective, the need to exploit the country's forest resources while encouraging their conservation, production, protection and restoration. With this objective in mind, it provided that the rules governing the harvesting of the country's forest resources and measures to encourage them must be designed, *inter alia,* to reach a level of sustainable management of wood and non-wood forest resources, which will contribute to the socio-economic development of the members of the *ejidos,* municipalities and other owners or possessors of these resources; to conserve, protect and restore forest resources and the biodiversity in their ecosystems; to foster the conservation, protection and rehabilitation of forests, as well as commercial and other types of plantations; etc.

One of the objectives of the 1997 Decree to reform, repeal and add new provisions to this Forest Act was precisely to strengthen the linkage between environmental legislation and forestry legislation, in order to direct the latter according to criteria of sustainability and to regulate commercial forest plantations in order to minimize their environmental impacts. Under the new forest legislation, in order to encourage sustainable development, all forestry policy and measures for regulating and encouraging forestry activities must be consistent with the principles, criteria and provisions set forth in the General Ecological Balance and Environmental Protection Act. The amendments introduced in 1997 improved the control systems for mobilizing forest products, with a view to combat illegal felling, and sufficiently transparent administrative controls to guarantee the lawful sourcing of forest products. Anyone transporting, processing or storing forest raw materials, except for those destined for domestic use, must certify the lawful origin of these products by means of the following documentation and control systems: (i) harvesting notices, in the case of round wood, squared wood or non timber forest resources (ii) deliveries of forest products, invoices or sales documents in other cases; and (iii) registers of inventories in the case of storage or processing units (art. 20).

Bolivia's 1996 Act is designed to "regulate the sustainable use and protection of woodlands and forested lands for the benefit of present and future generations, reconciling the country's social, economic and ecological interests" (art. 1).[13] This Act also contains provisions regarding the " precautionary principle" according to which if significant evidence exists to show that a practice or omission in forest management is likely to cause serious or irreversible harm to the ecosystem, the officials responsible for forest management are obliged to adopt precautionary measures to prevent them or to mitigate their effects, and may not claim exemption from liability on the grounds of a lack of total scientific certainty, or the lack of any rules or regulations, or the fact that authorization had been granted by the competent authority (art. 9). The Act also provides, *inter alia,* incentives to rehabilitate degraded lands, and specifies the conditions for granting forest harvesting rights in terms of the protection and sustainable use of the woodlands and forest lands (art. 26). Several articles refer to forest inspections and audits. Forest resources may only be used if they come from woodlands subject to a management plan (art. 27). This is in response to the demand of a

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[13] In article 3(g) of the Act, the "sustainable use of woodlands and forest lands" is defined as "the use and exploitation of any of its elements, in a way that guarantees the conservation of its productive potential, structure, functions, biological diversity and long-term ecological processes".

number of timber importing countries, which subject the importing of timber to a certification that it comes from natural forests that are sustainably managed.

The purpose of the Costa Rican Forest Act, 1996, is the conservation, protection and management of natural forests, and the production, harvesting, industrialization and enhancement of the national forest resources for that purpose, in accordance with the principle of appropriate and sustainable renewable natural resource use (art. 1). Under this statute, the government may carry out or authorize research, training and ecological tourism in the natural environment once these activities have been approved by the Ministry of the Environment and Energy, which is also responsible for carrying out environmental impact assessments (art. 18). It also provides that management plans, to be submitted to the authority for approval, must indicate the impact on the environment of harvesting the woodlands and forests (art. 20).

Cuba's Forest Act No. 85 of 21 July 1998 was enacted to "lay down principles and general regulations for the protection, extension and sustainable development of the national forest heritage".[14] Other objectives include the conservation of biological diversity resources associated with forest ecosystems, the regulation of multiple and sustainable use of the forest heritage, and the promotion of rational harvesting of non-wood forest products (article 1). The Act empowers the Ministry of Agriculture to adopt the necessary measures for the protection, enhancement and sustainable development of the forest heritage, and the harvesting, cultivation and industrial use of forests; to manage, approve and update forest inventories and forest management; to take part in determining forest species under threat or in danger of extinction, and to direct and control the work to regenerate them; etc. (art. 6).

Cuba's Forest Act also empowers the Ministry of Science, Technology and the Environment to participate in, evaluate and supervise the development and implementation of environmental protection, conservation and sustainable forestry development programmes, and to manage and control enforcement of the regulations and other measures for the protection and sustainable use of biological diversity in forest ecosystems (art. 8). In the chapter on conservation and protection, reference is also made to forest genetic resources. It provides that forests must have areas dedicated to the preservation of forest genetic resources. The Ministry of Agriculture, in co-ordination with the Ministry of Science, Technology and Environment, will be required to issue regulations for the reproduction, management and conservation of the species, sources, individuals or genes which are comprised in the country's forest genetic resources (art. 54).

4.2 Institutional reform

Institutional restructuring has been carried out using instruments designed to attain the structural adjustment programme objectives (for example, reducing inflation and the trade deficit for the purposes of economic stabilization). The instruments and components of the structural adjustment programmes include reduced public expenditure, currency devaluation and higher tax revenues. Their effects are reflected subsequently in: (i) a reduction in the

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[14] The "forest heritage" includes man-made and natural woodlands, land allocated for forestry, deforested areas suitable for forestry activities, and the trees of forest species which develop in isolation or in groups, regardless of site and ownership (art. 3).

operating capacity of these institutions, because of their reduced budgetary resources; this leads to the reduction or even abolition of tax incentives and subsidies, and downsizing in terms of personnel, equipment and powers, a weakening at the political level of the forestry institutions, amalgamating them with environmental organizations and in some countries abolishing them altogether; and (ii) a reduction in the technical capacities of the public institutions; as these tend to become less competitive in terms of salaries with the private sector, the professionals and the better qualified technicians increasingly quit them.

In 1985, Mexico's Forestry Sub-secretariat was downgraded to the status of a Directorate in an Agriculture Sub-secretariat. Further, the Forest Act, 1992, empowered the Secretariat for Agriculture and Water Resources to implement the Act. Despite the diminished status - and hence reduced resources - of the Mexican Forestry Sub-secretariat, the Agriculture and Water Resource Secretariat was given a statutory controlling, inspecting and co-ordinating role. It was made responsible for authorizing forest timber resources, the forestation and reforestation of forest lands and lands of paramount suitability for forests,[15] authorizing forestry management programmes and supervising their implementation. It is also responsible, *inter alia*, for supervising and co-ordinating forest fire prevention and control; carrying out inspections and audits on forest lands and lands of paramount suitability for forestry, and on forest raw materials storage and processing centres; ensuring that forest timber resources are exploited according to authorized management programmes; and promoting associations of members of *ejidos*, municipalities, small proprietors and other forestry producers, and between them and other investors. The Secretariat also retained its administrative functions, namely, directly managing the reserves and forest areas within state ownership and the National Parks, and the forest lands whose management was not in the hands of any other agency.

The 1997 Decree, which was issued to reform, repeal and add several provisions of the Forest Act, is to be implemented by the Secretariat for the Environment, Natural Resources and Fisheries. The Secretariat was also given other functions in addition to those set forth in the 1992 Act, including the drafting and issuing of Mexico's official forest rules and regulations, after receiving the opinion of the National Forestry Consultative Technical Council, and ensuring compliance with them; authorizing the harvesting of forest timber resources and forestation, evaluating and supervising their management and environmental impact; authorizing the change of use of forest lands; ensuring compliance with official Mexican health rules and regulations regarding forest species; and imposing safety measures and penalties for the infringement of forestry legislation (art. 5).

Under Act No. 7735 of February 1989, Brazil established the Brazilian Environmental Institute (IBAMA) as a response to the abolition of a number of public agencies for natural resource management (the Brazilian Forest Development Institute, the Special Environment Office, the Superintendency of Fisheries Development, and the Superintendency of Natural Rubber Development). IBAMA was instituted both to meet the need to rationalize public resources for the structural adjustment programmes and to meet the demand for more

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[15] According to article 3 of the 1992 Forest Act, forest lands are those covered by woodlands, forests or forest vegetation in arid zones. Lands declared to be of paramount suitability for forestry are those which, while not covered by this vegetation, may be incorporated for forest use because of their climatic, soil and topographical conditions, excluding those which can be used for agriculture and livestock without suffering from permanent deterioration.

effectiveness in promoting the use of renewable resources consistently with the principles of sustainable development. IBAMA was intended to be a means of integrating functions, maintaining the consistency of all central government and federal activities in terms of sustainable development, and promoting greater participation of individual States[16]. Under Act No. 8490 of November 1992, the Ministry of the Environment was established to plan, co-ordinate, supervise and control activities relating to national environmental policy and for the preservation, conservation and sustainable use of renewable natural resources. With the establishment of this new Ministry, the forestry sector has been incorporated into the Environment Ministry. All policy-making and law-making authority over forests have been transferred from the IBAMA to the Ministry of the Environment, which has now become a technical and operational agency. Since this occurred, the Ministry has been responsible for planning and drafting programmes designed for the sustainable use of forest resources.

In Argentina, by Decree No. 534/91 of 1991, the National Forestry Institute (IFONA) was dissolved and its functions and staff were divided between two main areas of action plantations for industrial purposes, and natural forests. The responsibilities in the first area of action were assigned to the Directorate for Forest Production at the Secretariat of Agriculture, Livestock and Fisheries at the Ministry of the Economy (Decree No. 438/92). The Secretariat for Natural Resources and the Human Environment was given responsibility for forest stand conservation recovery and utilization policies in order to maintain their quality and diversity and guarantee their sustainable use.

In April 1992, under Decree-Law No. 31-92, Honduras adopted the Agriculture Modernization Act, which introduced far-reaching changes into the socio-economic context in which the Honduran Forestry Administration operated. It transferred the management and co-ordination of the administration from the Honduran Forest Development Corporation (COHDEFOR) to the Secretariat for Natural Resources, emphasizing COHDEFOR's objectives as the conservation of public forest lands and the promotion of industrial activities through the private sector. In June 1993, the General Environment Act was promulgated under which a Secretary for the Environment was created whose powers were, *inter alia,* intimately related to forest resources. The Act set out to provide an appropriate framework for directing agricultural, forestry and industrial activities towards uses compatible with the conservation, rational and sustainable use of natural resources and environmental protection.

In Cuba, under Resolution No. 15 of 1995, the Forestry Service was established as a dependency of the Ministry of Agriculture, with responsibility for applying and supervising the National Forestry Policy, thereby separating the functions of the Central Government or public service authority, from those of production or economic activities, namely the economic entrepreneurial activity of the State, for which the unit responsible for State Forestry Corporations was established within the Ministry of Agriculture. This reflects a downgrading of state intervention in economic activities and, to a certain extent, a step in the direction of deregulation.

Under Guatemala's 1989 Act, revenues were allocated to the authority responsible for implementing the Act in the form of fees charged for the administrative services supplied by

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[16] Morell, M. G. and Paveri Anziani, M., *Evolución de las instituciones forestales gubernamentales en America Latina: como mejorar su acción.* UNASYLVA 178, Vol. 45, 1993-94.

the General Directorate of Woodlands and Wildlife (DIGEBOS), in implementation of the Act, to make up its exclusive resources (art. 18). Under the Forest Act, 1996, the National Forests Institute (INAB) was instituted as the successor to DIGEBOS. This autonomous, decentralized state agency, with legal personality, its own assets and administrative independence, is the management body and authority responsible for the public agriculture sector in respect of forestry affairs (art. 5). The Act also established that the assets of INAB will include the Private Forestry Fund (*Fondo Forestal Privativo*), the assets formerly owned by DIGEBOS, which are to be assigned to it, donations and subsidies from any other source, resources transferred from the national budget, and any property it might acquire by whatever token. The central government is required to give INAB an annual budgetary allocation of not less than 10 percent of the total funds allocated as administrative expenses for the Ministry of Agriculture, Livestock and Food. INAB was given the powers to assign under licence or to receive movable and immovable property of any kind, and to accept donations. It can also make loans, to finance and carry out commercial management operations relating to forestry activities on its own behalf or for third parties, all of which will be subject to negotiation (arts. 20,21 and 25).

Under Costa Rica's Forest Act, 1996, the Ministry of the Environment and Energy was given authority over the whole sector and for performing the functions of the Forestry Administration, which is responsible for co-ordinating forestry and fiscal control with the police authorities, the municipal authorities and the Treasury. The Act also instituted the National Forest Office as an non-state-owned public entity with its own legal personality subject to the control of the National Audit Office (*Contraloria General de la República*) in respect of the management of public funds. This Office is also responsible, *inter alia,* for submitting proposals for policies and strategies for the appropriate development and implementation Of forestry activities to the Ministry of the Environment and Energy, and for fostering programmes to step up investment in the forest sector and promote the obtaining of financial resources tor developing that sector (arts. 5-10).

4.3 Reforms in pricing policy, the capital markets, and the privatization of forestry activities

Reforms in pricing policies, the capital markets, and privatization are three main instruments used in the structural adjustment programmes to achieve long-term sustainable growth objectives. The policy to boost economic growth by de-regulation and reducing state intervention in economic activities is a challenge to sustainable forest management, as liberalization tends to encourage forestry operations in the woodlands and on public forest lands.

In Honduras, the 1992 Agriculture Modernization Act returned ownership of forest stands to the original owners with total "dominio" (absolute ownership) over the land; the import of inputs for forest production was liberalized; and the State monopoly over timber harvesting was abolished, together with the bylaws governing the marketing of forest products. In Mexico, the 1992 Forest Act formed part of the macroeconomic policy to encourage deregulation, free markets, private investment and the privatization of the *ejidos.* Article 27 of the Constitution was amended to make lands belonging to the *ejidos* freely tradable. Section 1 of the Forest Act stated that the Act regulated Article 27 of the National

Constitution (this is also set out in the most recent Act by the amendments introduced in 1997).

Along similar lines, a number of **legal safeguards for industry and for entrepreneurs** are contemplated in such recent legislation as Bolivia's Forest Act, 1996, with the issue of concessions that may be transferable and cover a long term (40 years, with the possibility of extension), under a system of open tendering. Long-term concessions are designed to create a more permanent linkage over time between producers and supervisors, generalize the concept of sustainability and guarantee future and permanent supplies to the forest industries linked to these concessions. The Act also established the National Forest Development Fund to promote funding for the sustainable use and conservation of woodlands and forest lands (art. 23).[17] The Bolivian Act provides incentives for the rehabilitation of degraded lands, provided that this is done in implementation of a management plan. These incentives consist of discounts of up to 100 percent of the forestry licence; acquiring the right of ownership of the rehabilitated lands, provided that they are public lands; a discount of up to 10 percent of the actual amount disbursed for rehabilitation purposes; adjustments to the calculation of corporate income tax; and technical assistance and specialized inputs for rehabilitation work (art. 17).

The 1987 Uruguay Act No. 15939 grants tax benefits for existing plantations or those to be planted in the future, recognized as being protective or productive in zones declared as priority forest lands, and natural woodlands declared to be protective, as well as lands occupied by or directly allocated to them. The benefits consist in exemption from all national taxes on rural real estate and from the rural real estate contribution; tax-exemption for income from exploiting woodlands for the purposes of calculating agricultural taxable income; and tax-exemption in respect of the value or extension of land for the following: (i) tax liability in respect of the putative income from farms; and (ii) wealth tax liability. The same law also grants facilities for a period of 15 years to producers and rural, industrial or agricultural undertakings dedicated to forestation, or to the harvesting or industrialization of nationally produced timber, to implement a number of activities, including the following: producing forest plants; managing plantations and woodlands; harvesting timber or using other forest products; using forest products as raw materials for the chemical or energy industries; and processing, preserving and seasoning timber. These facilities consist of exemption from the following taxes on raw materials, equipment, machinery and vehicles, etc. needed to install and operate the companies: additional customs duties and charges, harbour fees and taxes, and others.

In 1990, the Government of Nicaragua re-directed economic policies giving greater importance to the private sector by introducing incentives for foreign investment and to encourage exports. One of the measures needed to implement the new economic policies was the abolition of the *Corporación Forestal del Pueblo* (CORFOP, the People's Forest Corporation). The Forest Regulations adopted in 1993 facilitate and permit foreign

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[17] Forest Funds are designed to meet the need to encourage the sustainable development of forest resources by promoting or funding projects and activities to conserve, improve and develop forest resources, particularly in relation to inventories, management, protection, repopulation and research in this area. The Funds may obtain their financial resources by imposing one or more special taxes (for example on the sale of standing timber, the domestic and foreign trade in sawmill products, etc.), fines or confiscations are provided as penalties for offences committed under forest legislation, in addition to other resources that may be assigned from the national budget, or from legacies, donations, etc.

investment in this sector, with a concern for forest management, and giving greater security to private investors, guaranteeing the right of private ownership of woodlands and providing that the Regulations are to be implemented in respect of the rights of landowners over their own forests and woodlands, with general provisions to protect privately-owned forest resources (art. 4).

Under Act No. 139 of 21 June 1994, Colombia introduced the Forestry Incentive Certificate (CIF) as government recognition of the positive spin-offs of reforestation, on the grounds that all the environmental and social benefits generated were supposed to be enjoyed by the whole population. The purpose of the CIF is to encourage direct investment in new forest plantations of a protective/productive character on lands suitable for forestry. All natural and private legal persons may acquire a CIF, together with municipal or decentralized district and local government authorities which undertake to implement a forest establishment and management plan in accordance with the law. It provides that the areas undergoing forest development, and which are covered by the CIF, shall not be subject to agrarian reform programmes (arts. 1 and 12). The CIF covers up to: (i) 75 percent of the total net costs of establishing plantations with indigenous species or 50 percent in the case of introduced species; (ii) 50 percent of the total net maintenance costs incurred between the second and the fifth year following plantation; and (iii) 75 percent of the total costs incurred during the first five years for maintaining the natural woodlands forming part of a forest establishment and management plan. Beneficiaries of the CIF are not entitled to any incentives or tax exemptions provided under the law for forestry activities (art. 4).

In Argentina, under Resolution 778 of 1 September 1992, the Secretary for Agriculture, Livestock and Fisheries set up a system for promoting forest plantations giving preferential benefits to anyone proposing to cultivate forests, and to a lesser degree to small farmers, per unit of surface area, and dealing with the problems restricting regional forest development.

In Guatemala's Forest Act, 1989, guarantees and incentives were also provided for the same purposes. The law specified that lands would not be considered uncultivated or derelict land, or be liable to expropriation, if they were covered by woodlands or forests, whatever their state of growth, development or origin, composition, age or function (art. 4). Forestry projects - repopulating, maintenance and protection; natural woodland management; preventing and combating fires and pests - were given tax incentives for the period authorized in the management plan. Forestry Investment Certificates were issued to cover the costs laid down by DIGEBOS in accordance with the law, to be paid by the Ministry of Agriculture to the person responsible for the project. These certificates were valid for four years, during which 50 percent of the annual income tax and the vehicle circulation tax were deducted. Furthermore, the Forest Development Fund was established to finance systems of incentives and specialized projects for the establishment of industrial forest stands, the management of natural woodlands, the rehabilitation of watersheds, and mixed agro-sylvo-pastoral crops. Exemption was also provided from the single real estate tax (*Impuesto Único sobre Inmuebles*) for 10 years, for all rural land owners foresting or reforesting at least 50 percent of the land belonging to them.

The recitals to Guatemala's Forest Act, 1996, recognized that the co-ordinated participation of the private sector, in every form, in the sustainable management of

woodlands, reforestation and forest industry, would help improve the contribution of forestry to the economic and social development of the country. The aims set out to attain the objective given in article 1 include supporting, promoting, and providing incentives for public and private forestry activities to raise production and enhance the marketing, diversification, industrialization and conservation of forest resources. The Act also requires the government to offer incentives through the National Forest Institute (INAB) in co-ordination with the Ministry of Finance to landowners, including municipalities, that voluntarily agree to devote themselves to reforestation and maintenance projects on treeless lands suitable for forestry, and the management of natural woodlands. To achieve this, the Government is required to make an appropriation in the annual national budget for INAB to provide forestry incentives equivalent to one percent of the ordinary budgetary revenues of the central government. Reforestation projects qualifying for tax incentives will be able to receive maintenance benefits for a maximum of five years. In order to receive the benefits, the owner is required to submit to the Finance Ministry the certificate issued by INAB showing that the plantation was established, based on the implementation of the relevant management plan (arts. 71-81). INAB is required to set up a credit guarantee programme for forestry activities under which it will back loans to small owners issued by the banking system to encourage the forestry sector. The Act also set up a Private Forestry Fund, whose resources will come from taxes and economic and financial resources generated by the implementation of the Act, donations, specific loans, and any other resources acquired from administrative and supervisory services. The Fund can only be used for promoting forestry development programmes, setting up industrial plantations, managing natural woodlands, restoring watersheds, agro-forestry systems, maintaining reforestation, research and the implementation of technical surveys, forestry vocational training, agro-forestry education and consultancy services (arts. 82-86).

The whole of Chapter II of Paraguay's Forestation and Re-forestation Incentives Act No. 536/95 is devoted to incentives for forestry. The Government will refund, once only, 75 percent of the direct installation costs incurred by natural and legal persons of whatever kind, for every forested or re-forested area included in rural estates identified as being for priority forestry use.[18] Likewise, 75 percent of the direct costs of maintaining forested and reforested woodlands will be covered for the first 3 years, provided that the work is carried out in accordance with the approved forestry management plan (art. 7). Chapter III, dealing with the tax regime, creates a special tax system for rural estates identified as being for priority forestry use, and the woodlands planted on them. It establishes that this is the only tax system applicable, granting exemption from all other municipal or departmental taxes already existing or to be introduced in the future. The land tax is reduced by 50 percent while subject to the forestation or reforestation programme (art. 13). For income tax purposes, the Act assumes that the net rent is 10 percent of the commercial value of the felled trees or the value of the fruits or products harvested from the reforested species (art. 14). The Act also establishes that the woodlands planted on land having priority for forestry, and covered by approved management plans, are not subject to the Agrarian Reform or to expropriation, except on the grounds of public utility, and only for infrastructural works of national relevance, such as roads, bridges, canals, reservoirs and other facilities (art. 3).

Under the Cuban Forest Act, No. 85 of 1998, the National Forestry Development Fund (FONADEF) was established to encourage the sustainable development of forest resources.

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[18] That is, lands whose productive capacity is preferably forestry, based on specialized technical studies (art. 2).

The purpose of the Fund is to promote and finance projects and activities to conserve and develop these resources, particularly with regard to inventories, management, protection and research (art. 12). The Act also establishes that the Ministry of Agriculture may encourage sustainable forest development by proposing the adoption by the Ministry of Finance and Prices, where appropriate, the following measures: (i) grants for natural or legal persons undertaking forest plantations and sylvicultural works; (ii) reduction of or exemption from duties on imported technologies, equipment or their parts, and on imported inputs for national forest development; (iii) exceptional fiscal or financial benefits to companies, cooperatives, small-land owners or users and communities, to encourage forest plantations, forestation and reforestation (art. 14).

Under the Costa Rican Forest Act, 1996, the National Forestry Financing Fund was established to benefit small and medium producers by supplying loans and other means to foster forest management, forestation and reforestation, forest nurseries, agro-forestry systems, recovering areas that had been cleared of vegetation, and technological changes for the exploitation and industrialization of forest resources (art. 46). The Act also provides incentives for conservation, such as the Certificate for Forest Conservation issued by the National Forestry Financing Fund, whose purpose is to remunerate the owner or holder for environmental services generated as a result of the conservation of his woodland. Certificates are valid for at least 20 years, are registered in the name of the holder, are negotiable, and can be used to pay all kinds of taxes. Holders of Certificates also benefit from other incentives, such as exemption from real estate and asset taxes.

Lower income tax rates were initially granted to private individuals to encourage them to voluntarily incorporate their lands into national parks. Since this was not a sufficient incentive to encourage private landowners to do this in large numbers, a 10 percent fuel tax was imposed, the proceeds of which were used to set up the Fund, which was used to pay individuals who undertook to keep their woodlands intact. This meant that the forest owner would receive the same amount of money per hectare as he would have earned from deforestation, or by using the land for livestock rearing or other purposes. Subsequently, in order to increase the proceeds of the Fund, securities named "Greenhouse Gas Emission Certificates" were issued. They are sold to companies, particularly in the developed countries, to recycle their carbon dioxide emissions. Depending upon the state of growth and the type of forest vegetation, the amount of carbon dioxide for recycling is calculated in tons per hectare, and a certification company certifies that this portion of the woodland will not be deforested for 20 or 25 years, in exchange for the purchase of these certificates. So far, leaving woodlands intact has generated 140 million dollars, and these proceeds are used for their conservation and to pay private individuals who devote their farms to recycling carbon dioxide.

The same Act entitles owners managing natural woodlands to incentives to remunerate them for the beneficial environmental effects they generate, in the form of exemption from real estate taxes and asset taxes. Incentives are also given for reforestation. Any person carrying out reforestation enjoys tax exemption on all the buildings in the planted area, taxes on uncultivated lands, asset taxes and other taxes. However, the Act expressly empowers the Ministry of the Environment and Energy to set up protected woodlands on privately owned land, if there are natural resources on them that the authorities intend to protect. The lands can also be voluntarily incorporated into the protected woodlands or they may be directly

purchased when there is an agreement between the parties. If not, they can be expropriated. If adequate scientific or technical justification of public interest is shown, a statutory declaration can be issued stating that the land is essential for the conservation of biological diversity or water resources, placing a restriction on ownership by preventing the felling of trees or changing the use of the land (art. 2).

Similarly, in Uruguay, the legal protection given to private property has been reduced to give priority to forestation. Under Act No. 15939 of 1987, it became compulsory to plant protective woodlands on lands that needed them in order to appropriately conserve or recover their renewable natural resources, whether the lands were privately or publicly owned. The owner who did not wish to carry out the work could opt to sell the land to third parties or to the State. If forestation had not taken place by the deadline set for it to be completed, the land was to be declared to be of public utility and expropriated (arts. 12-16).

In Bolivia's 1996 Act, which gave priority to the principles and values of sustainable forest development, the possibility of revoking forest use rights vested in private individuals is contemplated when the public interest is at issue, with provision for a number of legal restrictions of an administrative nature, easements, prohibitions, services or other limitations related to physical or regional planning, the protection and sustainability of forest management, etc. (arts. 5 and 6).

4.4 Granting concessions as a method of forest management

In some countries, the system of concessions is again being used as a means whereby governments make it possible for private forestry operations to be carried out on public lands. The concession system is increasingly less concerned with the actual harvesting phase and is becoming more of a method to encourage forest management. This change is being brought about through the following means, which are reflected in recent legislation:[19]

(a) rationalizing the concessions system, linking the duration of the concessions to the size of the forested area granted, more specifically to the type of private operator, the degree to which the raw materials are processed, the volume of private investment involved and the socio-economic contribution of the industry concerned;

(b) strengthening long-term management aspects, establishing the volumes of timber to be cut annually, instead of basing this solely on the area of land concerned;

(c) encouraging reinvestment in maintaining forest resource productivity through plantations, combating forest fires, improving forestry infrastructure, etc.;

(d) more systematically integrating the requirements for maintaining biological diversity and guaranteeing the protection of the landscape, and regulating forest concessions;

(e) providing incentives to encourage operators to improve the sustainable use of resources under a system of regular renegotiations.

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[19] *Aspectos normativos y legislativos de la ordenación forestal sostenible*, M.-R. de Montalembert y F. Schmithusen. UNASYLVA 175, Vol. 44, 1993-94.

One good example of this trend is the earlier Guatemalan Forest Act of 1989. Under this Act, the harvesting of forest resources and their renewal, which includes resins, gums, wild and similar plant products, was permitted under concession in the case of national or municipal woodlands or forested lands, and those belonging to local government authorities, or by issuing licences in the case of privately-owned land or forests. Concessions were granted by public tender and for periods of a maximum of ten years, on a renewable basis. The concession could be assigned in the case of the death of the concession-holder only if the heir possessed the same requisites as the original concession-holder (arts. 11 and 12). Another feature of the concession is the fact that it is essentially revocable, and once revoked, the holder may not be given a new concession (art. 16). Once the concession is granted, and in order to guarantee the reforestation of the area to which it applies, the concession-holder is required to submit and maintain a guarantee equivalent in value to the amount of tax charged on the forest resources to be harvested (art. 13). According to the principles of national sovereignty set out in article 7 of the Act[20], all concessions issued to harvest forest resources on national or municipal lands or lands belonging to autonomous or decentralised government authorities and agencies could only be issued to persons of Guatemalan origin, or commercial companies legally incorporated in the country, 70 percent of whose share capital belonged effectively to persons of Guatemalan origin (art. % These same provisions applied, in so far that they did not alter their nature, to licences to exploit woodlands and other forest resources on privately-owned land.

Under the Forest Act, 1996, procedures for issuing concessions changed very little. It should be noted that the period of validity has now been considerably extended, depending upon the time needed to regenerate the woodland, up to 50 years. Forestry "concessions" are defined in the Act as the faculty which the State gives to persons of Guatemalan nationality) whether individuals or entities with legal personality, to act on their own behalf and at their own risk, to harvest stale-owned forests, with all the rights and obligations set forth in the concession agreement. Forestry "licences" are the right given by the State to individuals or legal persons to carry out the sustainable harvesting of forest resources on their own behalf and at their own risk on "privately-owned lands with tree cover", whereas the previous law referred to "privately-owned lands or forests". Two categories of concessions are established: (i) concessions over forested areas issued by INAB to Guatemalan nationals to carry out sustainable woodland management, for which a management plan is necessary; and (ii) concessions for areas which have no forest on them, whereby INAB issues under concession lands that are suitable for forestry but on which there are no tree stands, so that they can be reforested by artificial or natural regeneration. The Act provides that, all other conditions being equal, INAB must give preference to grassroots communal organizations with legal personality. The guarantee must be signed by a national guarantor and cover the value of the standing woodland species to be exploited in the five-year operational plan set out in the approved management plan. Under the Act, 50 percent of the fee paid for the concession must go to the municipality or municipalities having jurisdiction, as resources to be specifically invested in forest control and supervision programmes, while the other 50 percent must be paid into INAB's exclusive forestry fund (*Fundo Forestal Privativo*) (arts. 27-33).

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[20] Article 7 provides that for the purposes of conserving woodlands and their rational exploitation and for the reforestation of the country, the State retains sovereignty over all the national territory, and over all the goods making up its patrimony and territorial reserves as enshrined in the Constitution.

In Bolivia, the Forest Act, 1996, has established three forest harvesting rights: (i) forest concessions over State-owned lands; (ii) authorizations to harvest privately-owned lands; and (iii) felling permits. According to this Act, these rights can only be kept if their exercise protects and guarantees the sustainable use of the woodlands and forested lands (arts. 26-28). The concession is granted to harvest authorized forest resources in a continuous and uninterrupted area; if it is required to be publicly registered, it can be transferred with the authorization of the forest superintendency; the annual forest licence must be paid in cash, and all the land granted for harvesting must be protected, together with its natural resources, including biodiversity, the penalty being the revocation of the concession (art. 29). Authorization to use forest resources on privately-owned land may only be issued at the request of the owner or with his express consent, and offers the same features as the concession where applicable (art. 32). Felling permits are granted for clearing lands suitable for other uses, and for the construction of fire breaks or transport roads, installing lines of communication, electricity lines or public works, and for pest, disease or epidemic eradication (art. 35).

The Bolivian Act lists cases of incompatibility and prohibitions on the granting of concessions. It specifically prohibits the President and Vice-President of the Republic, Members of Parliament, Ministers of State, the President and Ministers of the Supreme Court, the Judges of the Constitutional Court, the Judges of Superior Courts, the *Contralor General* of the Republic, the authorities responsible for implementing agrarian reform, the members of the Agrarian Courts, the Public Prosecutor, the General Superintendent of Natural Renewable Resources, the Forestry Superintendent, the Prefects, the Sub-prefects and *"Corregidores"*, the Department Councillors, Mayors, and members of Municipal Councils, civil servants from the Ministry of Sustainable Development and the Environment, and the Forest Superintendency, from acquiring forest concessions, either personally or through nominees, while holding office and for one year thereafter. This prohibition extends to their spouses, ascendants and descendants up to the second degree of consanguinity. Foreigners, whether natural or legal persons, are also forbidden from obtaining forest rights within 50 kilometres of the national borders for any reason whatsoever (arts. 39 and 40).

The **management plans or programmes** drawn up during the previous period remain - and in some cases have been perfected - a methods of forest management. Under Guatemala's Forest Act, 1989, the management plan was the main instrument for controlling forest use. Any forestry use of timber or other wood products, except for the purposes of household consumption[21] and those taken from voluntarily created woodlands, was only possible by holders of the DIGEBOS licence and in accordance with the management plan (art. 47). Under Guatemala's 1996 Forest Act, the management plan is a detailed programme of technical actions aimed at the sylvicultural treatment of forests, with or without a market value, to ensure the conservation, improvement and development of forest resources. The Act provides that INAB must launch a public invitation to tender to issue forest concessions for which it must require a management plan to be followed for the sustainable use of the area. This plan must form a part of the concession contract (art. 30). The management plan must also include an environmental impact assessment and five-year operating plans. It also specifies that the sustainable management and harvesting of the woodland must be governed

[21] Under article 46(b), this refers to uses on a non-profit basis to meet domestic fuel requirements, or to be used as fencing posts or construction timber, and those which the harvester will use exclusively for his own consumption and that of his family.

by the management plan approved by INAB. This is a fundamental instrument for monitoring the harvesting and the sylviculture techniques applied to forests. Depending upon the nature and the magnitude of the harvest, the management plan may be drafted by a number of forestry professionals registered with INAB. At the same time, the Act provides that, if over 100 cubic metres of material are to be harvested in any year, a Forest Governor (*Regente Forestal*) must be appointed to bear joint and several liability with the licensee for the sound implementation of the management plan (arts. 48, 51 and 52). To benefit from the incentives set out in the Act, it is essential to submit the management or reforestation plan to INAB, after the land has been designated as suitable for forestry (art. 74).

In order to qualify for the tax benefits and financing facilities provided by Uruguay's Forest Act, 1987, the parties concerned must submit a management plan for harvesting and woodland regeneration to be approved by the Forestry Directorate (art. 49). The management plan is also an essential requirement, according to Bolivia's 1996 Act, for all types of forest use. It is an indispensable requisite for the legal exercise of forestry activities, it forms an integral part of forest rights and laws, and compliance with it is mandatory (art. 27).

Under Mexico's Forest Act, as amended in 1997, authorization is required from the Secretariat for the Environment, Natural Resources and Fisheries to harvest wood forest resources on forest lands or lands which are of paramount suitability for forests, including authorization of the management plan and authorization based upon the environmental impact assessment. Management programmes must be approved by the authority responsible for enforcing forest legislation, in this case the Secretariat for the Environment, Natural Resources and Fisheries. The Secretariat has 30 days, beginning on the date the request is submitted, to issue its decision. The 1992 Act provided that, if no reply was received within this deadline, authorization was tacitly granted; in other words, if no reply was received within 30 days, the applicant could take it for granted that the forestation or reforestation authorization had been issued (arts. 11-13).[22] The amended Forest Act (1997) does not expressly state which procedure must be followed with regard to requests for authorization to which no reply has been received by the stipulated deadline (Chapter II of Title II).

It stipulates that in order to carry out forestation for the purposes of commercial production on areas in excess of 20 ha, or less than or equal to 250 ha, an integrated environmental and forestation management programme is required. This is the Technical Planning and Monitoring Document which, pursuant to the Forests Act and the General Ecological Equilibrium and Environmental Protection Act, incorporates the required conditions regarding environmental impact, and describes the actions and procedures for forest management in relation to forestation (art. 17). This is a completely new and integrated instrument, created by the 1997 Act, whose purpose is to ensure that only one decision is issued by the authority competent for both matters, in order to unify all the relevant processes, procedures and criteria. To commercially harvest non-wood resources as specified in Mexico's legislation, an opinion must be sought by the interested party from the Secretariat. However, for the harvesting of forest raw materials, resources for domestic use

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[22] Costa Rica's 1996 Forest Act expressly provides that, with regard to natural resources, this presumption of authorization based on a failure by the authorities to reply a request did not apply. Whenever the State Forest Administration does not issue an opinion on requests submitted to it within the deadline laid down by the General Civil Service Act, the official responsible may be punished by the penalties provided in the relevant laws (art. 4).

and sylvo-pastoral activities in forest lands, the official rules and regulations laid down by the Secretariat apply (art. 13).

4.5 Reconversion of certain agricultural and livestock land uses to forestry

Changes in the economy that have taken place in recent years in the region, such as the opening up of national economies countries and their participation in global markets, have affected the sylvo-agricultural sector, making it more competitive. This has also led to a **reconversion of certain agricultural and livestock sub-sectors, in the direction of forest-oriented land use.** Agro-forestry systems are becoming increasingly more important as alternative forms of land-use.

One of the purposes of Nicaragua s 1553 Regulations is to ensure and developed consistently with its capacity, without becoming degraded. In accordance with these Regulations, forest lands covered with tree stands may not be changed in terms of their use except for projects of national interest in accordance with a prior environmental impact assessment (arts. 3 and 54). Bolivia's Forest Act, 1996, also requires that lands must be used in accordance with their greatest use capacity, whatever the ownership or land tenure regime, save in the case of land whose agricultural or livestock use is changed to forestry or protection purposes (art. 12).

The classification of woodlands provided by Guatemala's 1989 Forest Act recognized the existence of a type of woodland or forest called "natural forest under agro-forestry management", with combined forestry and agricultural use. The Act required DIGEBOS to ensure that lands suitable for forestry, which were being used for agricultural and livestock purposes, were duly forested; and, at the same time, to advise the users to incorporate them into the management of the environment wherever forestation was not possible, guaranteeing that the soil conservation practices required by these lands were in fact used (art. 40). It also provided that on lands with tree cover associated with other uses, such as the production of maize or livestock in enclaves on the outskirts of woodlands in particular, DIGEBOS was required to develop management plans which would make it possible to incorporate the peasants into a mixed agro-sylvo-pastoral production system. On lands suitable for forestry, sometimes associated with agricultural crops, DIGEBOS was required to define the land use capacity, establishing whether it was possible to incorporate them into reforestation subsequently, through the sylvo-agricultural-livestock system, or whether they should be kept for combined agro-sylvo-pastoral purposes.

Under Guatemala's Forest Act, 1996, the purposes to be attained include reducing the deforestation of lands suitable for forestry and curbing the advance of the agricultural frontier by increasing land use in accordance with the particular suitability of the land, without neglecting its soil, topographical and climatic features. Land covered by woodlands, whatever their state of growth, development, origin or composition, age or function, can not be considered uncultivated or idle land (art. 2). The National Institute of Agricultural Processing (*Instituto Nacional de Transformación Agraria,* INT A) is required to obtain a resolution from INAB before granting land for agricultural use, declaring the land to be assigned as unsuitable for forestry (art. 44). INAB's approval is required in the case of wooded areas larger than one hectare, on which it is intended to replace the cover by non-forest cover, for

which a survey must be submitted signed by a professional or technician which states that the land with wood stand is not suitable for forestry. When the change of cover is approved, the permit holder is required either to pay the Exclusive Forest Fund, or to reforest, an area equal in size to the one whose use is changed. In the higher areas of the watersheds with forest cover, woodlands may not be cleared, as these are areas enjoying special protection (arts. 46 and 47).

In accordance with the Mexico's Forests Act, as amended in 1997, the Secretariat for the Environment, Natural Resources and Fisheries may only authorize a change of use of forest lands, as an exceptional measure, after receiving the opinion of the relevant Regional Council, based upon technical surveys demonstrating that biodiversity is not endangered, soil erosion is not caused, the quality of the water is not diminished and the amount of water captured is not reduced. The permits must be in accordance with the corresponding ecological rules and regulations, official Mexican rules and any other legal provisions (art. 19bis-1 1).

4.6 The democratization of forest resources

The success of any policy or legislation depends on their capacity to respond to and their consistency with the reality, needs and priorities of a country, which can only be done through a participatory process in which everyone - the woodland owners, concession holders and persons responsible for managing the resources, and the beneficiaries themselves (the national community) - are involved both in the formulation process and during its implementation, in view of the wide diversity of interests relating to woodland conservation and use.

Bolivia's Forest Act, 1996, introduced a number of interesting advances in this area. It enhanced the democratic nature of forestry resources by enabling greater participation by citizens in supervision, providing information relating to the National Forestry System, giving them the possibility to file petitions and make reports, or take the initiative in relation to the competent authorities, and provides that concessions and licences be issued by public tender. The Act also makes provision for the participation of the prefectures and municipalities in woodland management, giving benefits to the local communities and indigenous peoples, enabling them to acquire forest concessions, and introducing the payment of a minimum licence fee over the lands being exploited. It also vests the prefectures, *inter alia,* with powers for formulating and implementing departmental forestry development plans set out in nation-wide strategies and plans; formulating and implementing public research, technical and scientific extension investment projects in the areas of forestry and agro-forestry; formulating and implementing public investment programmes to rehabilitate watersheds and forest lands, forestation and reforestation, environmental conservation and preservation, etc. Municipal authorities are empowered to make proposals to the Ministry of Sustainable Development and Environment regarding the boundaries of reservation areas, for 20 percent of the total of permanent forestry production publicly-owned lands in each municipal jurisdiction, to be subject to concessions granted to local social groupings; the right to inspect forestry activities and raw material supply and processing programmes in the areas under their jurisdiction; to inspect *in situ* compliance with the terms and conditions set forth in harvesting permits or clearance permits, etc. (arts. 8, 24 and 25).

Under Guatemala's Forest Act, 1996, concessions are issued by public tender after evaluating the forestry resources in question, under conditions which the invitation to tender specifies and after payment of the fees established. It also provides that the Municipal Environment Commissions are responsible, if specifically appointed by the Mayor, to support INAB in implementing the Act without, in any case, acting as the decision-making bodies (art. 8). The Municipalities will issue the licences to cut trees within their urban perimeters for volumes of less than 10 cubic metres per licence per farm per year. The municipal authorities are also responsible for carrying out the monitoring needed to prevent unlawful harvesting of forest products at the level of each Municipality, with the support of INAB, and must support the activities of INAB in controlling the authorised harvesting of forest products (arts. 54 and 58).

Nicaragua's 1993 Forest Regulations require the institutions responsible for enforcing it, *inter alia*, to; (i) involve the local people perticularly the owners of forest lands *and* forest industries, in planning, decision-making and managing the woodlands through the Municipal Forest Councils; (ii) ensure that the local people are the prime beneficiaries of jobs in forestry and of economic and social benefits derived from this activity; (iii) encourage the participation by women and indigenous peoples in implementing and managing forestry projects; and (iv) make forest management a means whereby the local populations are given access to appropriate technologies, funding and entrepreneurial management in the forestry sector (art. 4). The Regulations also provide that the *Instituto de Recursos Naturales* y *del Ambiente* (IRENA, Natural Resources and Environment Institute) is given a co-ordinator from the National Forestry Service (SFN-IRENA) in the Departments and Autonomous Regions with functions that include the following: (i) issuing, registering and supervising the use of and monitoring forest harvesting permits; (ii) providing the population and woodland owners with technical assistance and training in sustainable forest management, soil conservation and the rational use of natural resources; and (iii) promoting and co-ordinating local projects to improve and rehabilitate woodlands (arts. 20 and 21).

One particular way of democratizing forest resources which enables governments and even natural and legal persons to manage and administer natural, reserved and protected areas is set out in Mexico's Forest Act, 1992. This Act provides that the Secretariat for Agriculture and Water Resources must conclude agreements with the governments of individual States and the Federal District to administer reserves, zones or parks, entirely or partially, as well as national forest lands whose administration is not dependent upon any other authority, sited within their own territorial jurisdiction. The Secretariat was also empowered by this Act to agree that the administration of natural protected areas should be wholly or partly transferred to natural or legal persons to be given responsibility, under its supervision, for their conservation, protection, enhancement and supervision, so that they can be devoted to research, tourism or other purposes (art. 26).

Under Mexico's Forest Act, as amended in 1997, the purposes of forest legislation and policy include promoting co-ordination between different tiers of government and co-ordinating them with the various areas of society in order to achieve the purposes for which the law was enacted (art. 1). It also provides that the Secretariat for the Environment, Natural Resources and Fisheries is required to institute a National Forestry Consultative Technical Council, with representatives of the Secretariat and other federal government agencies, as well as representatives of academic institutions and research establishments, producer and

entrepreneurial groups, non-governmental organisations and social and private organisations related to forestry. The Council shall provide consultancy services to the Secretariat. The Secretariat is also required to set up Regional Councils comprising representatives of the governments of the States and municipalities, the *ejidos,* communities and small landowners and any other interested natural and legal persons (art. 6).

In the chapter dealing with social participation and the right to information in the title dealing with forest resource management, provision is made that both the Secretariat and the interested parties may request opinions and comments from the Regional Councils regarding requests for wood forest resource harvesting permits or forestation permits before a decision is taken. The Consultative Councils or the Regional Councils may submit proposals to the Secretariat regarding guidelines for promoting the participation of social and private sectors in planning and implementing activities to enhance the quality and effectiveness of conservation, management, harvesting and forestry development in the region or the State in question (arts. 19bis-8 and 19*bis*-9). This Act also lays down the right to forestry information, governed by the corresponding provisions of the general Act on Ecological Equilibrium and Environmental Protection (art. 19bis-10).

Under Costa Rica's 1996 Forest Act, the Ministry of the Environment and Energy is responsible for governing this sector and performing the functions of the State Forestry Administration, organizing it into forest regions. This demonstrates the trend toward decentralizing forestry functions by the central government which was also seen in previous periods. It also provides that the Regional Environmental Councils, which were established by law in 1995, must meet at least once every two months. Their additional functions are, *inter alia,* to collect information and analyze forestry problems in the region where they have been established and to help control and protect forests, playing an active part in designing and formulating regional policies to encourage reforestation (ARTS. S AND 12).

With regard to joint action and co-ordination in the process of formulating and **managing forest legislation,** Ecuador is an interesting case where a participatory process has been put into place to update national forestry legislation and policy. In order for this policy to have the impact needed to correct current inadequacies, Ecuador requires both the political backing of the government and the support of society and of the interest groups most closely related to the use of forest resources and areas, placing particular emphasis on the groups of population living in the woodlands and forests.

Peru's Forestry and Wildlife proposed act is also based on a participatory preparatory process, which involved continual co-operation of such institutions as the National Forestry Chamber, the Peruvian Association of Forestry Engineers and the Agricultural University. It also has its antecedents in workshops at which representatives of the Forestry Authorities, the University, entrepreneurs from the sector, NGOs, native and peasant communities, professionals and, generally, the users and beneficiaries of forestry resources were all involved.

4.7 Recognition of the rights of indigenous and local peoples

As far as **social matters** are concerned, the legislation in this period has laid down the conditions for recognizing - or in other cases reaffirming - the traditional rights of local

peoples and their capacity to carry out collective management, and for promoting wide-ranging peasant participation in the form of user groups with regard to decision-making and taking responsibility for conservation and management, guaranteeing their access to timber forests, and ensuring that the prosperity generated by these resources is fairly distributed between all the local population groups.

Nicaragua's 1993 Forestry Regulations, for example, emphasizes the need for local development of the of local communities' rights. If a community can demonstrate that it possesses the land it occupies in accordance with the Regulations, it requires rights over those lands and may - at least in theory - decide either to assign them to a company interested in forestry use of those lands, or to conclude contracts for the sale of a given quantity of timber.[23] Under Decree No. 38-92 of 26 June 1992 issued by the President of the Republic of Nicaragua, establishing major forest reserves, the ethnic communities with historical settlements on lake-sides and river banks that penetrate into these reserves may continue with their traditional subsistence and harvesting practices for domestic pupos in respect of the flora and fauna resources that they have traditionally extracted in areas now declared to be forest reserves.

Costa Rica's Forest Act, 1996, provides for the promotion of the establishment and development of groups or associations organized to develop the forestry sector, emphasizing the involvement of peasants and small producers in the benefits of harvesting, marketing and industrializing forest plantations. It also makes provision for promoting programmes for rural communities and to involve small landowners in reforestation programmes (art. 8).

Bolivia's Forest Act, 1996, lays down that areas which have been traditionally occupied by indigenous peoples will not be considered as *defacto* occupation, nor will be the lands to which they have had long-standing access to practise cropping and for their subsistence (art. 14). The Act provides that the areas possessing chestnut, gum, palms and similar resources will be granted as a matter of priority to traditional users, peasant communities and local social groupings. The local communities that have been legally established are given priority for the granting of forest concessions on government lands under permanent forest production (art. 31). Indigenous peoples are guaranteed exclusive rights to harvest the forests on their community lands of origin which are recognized by the national Constitution, ratifying Covenant 169 of the International Labour Organization on Indigenous and Tribal Peoples in Independent Countries (art. 32). No prior authorisation is required to acquire the right to the traditional and domestic use of forest resources for subsistence purposes by rural populations in the areas they occupy, or by the indigenous peoples in their own community forest lands of origin. This right is also guaranteed to the owners on their own property for non-commercial purposes (art. 32).

Chile's Act No. 19561 of 1998 introduced the concept of "small forest owners", defined as any person qualifying under Act No. 18910 as a small agricultural producer, and working and owning one or more rural estates no larger than 12 hectares under basic irrigation. The qualification of small forest owners also extends to the agricultural communities (regulated by Ministry of Agriculture Decree with the force of law No. 5 of 1968), indigenous communities (governed by Act No. 19253), communities living on

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[23] *Cambios en la políticas forestales de America Latina: los casos de Chile, Nicaragua y México,* G. Castilleja. UNASYLVA 175, Vol. 44, 1993-94.

commonly owned land resulting from the Agrarian Reform, and the rainfed farming companies. Small forest owners are exempted from submitting the technical reports and management plans to which the Act refers, provided that they comply with the studies or standard plans drafted by the National Forestry Corporation (*Corporación Nacional Forestal*) for this purpose. Under the Act, the National Forestry Corporation can lay down management standards of general application for particular species or forest types, which the interested parties may adopt. It may also provide technical assistance, free of charge, to the small forest owners (art 29).

With regard to **forest ownership,** Mexico's Forest Act, 1992, restated what had already been established in the 1986 Act regarding the ownership of forest lands and lands of paramount suitability for forestry, by specifying that the law applies to these lands independently of ownership (art. 3). Members of *ejidos,* municipalities and other owners or holders of forest lands or lands of paramount suitability for forestry, who, because of a lack of financial resources or the small size of their lands, are unable to contract private technical services, are also authorized to request the Secretariat to provide technical consultancy services for their management programmes (art. 24). One of the purposes of the 1997 Decree amending the Forest Act is, as the recitals state, to facilitate the participation of the social sector and provide legal certainty, by strengthening the procedures for issuing authorization to harvest wood and non-wood forest resources, bearing in mind their traditional uses by indigenous communities. The purposes set out in the amended Act include the intention to promote the participation of communities and indigenous peoples in using, protecting, conserving and sustainably harvesting forest resources in the territories to which they belong, drawing on their traditional know-how in respect of these activities.

In the title on incentives for forestry, the new Act provides that the Secretariat for the Environment, Natural Resources and Fisheries, jointly with the other competent agencies of the federal government, are required to introduce measures, programmes and economic instruments, in accordance with the value, potential and cost of forest activities and resources, to encourage, induce and incentívate investment and participation by social and private sectors in the conservation, protection, restoration, sustainable harvesting and multiple use of these resources, as well as the promotion and development of forestation in accordance with priority objectives. These include incorporating the *ejidos,* indigenous communities and other lawful owners or holders of forest resources into sylviculture and the production, processing and marketing of forestry resources, improving their organization and raising their social and economic status (art. 33). For these, purposes the *ejidos,* communities, small land-owners, producers' organizations and other interested persons may submit forestry development policy, financing or incentive proposals for joint implementation with the Secretariat and the agencies with jurisdiction for their application (art. 33*bis*-1).

Cuba's Forest Act No. 85 of 1998 makes provision for the Ministry of Agriculture to take responsibility for promoting and providing incentives for community participation, in coordination with the local government bodies of the *Poder Popular,* for the protection, harvesting and development of woodlands, and to ensure that these communities benefit, on a regular basis, from the goods and services provided by these authorities (art. 7(h)). In Chapter VI, on rights and duties in relation to forests, the Act provides that persons living in woodlands are entitled to use the forests for activities which do not affect its integrity or the biological diversity resources associated with them. This right consists in the gathering of

fruit, dead natural resources, dried wood, edible ornamental and medicinal plants, as well as practising agro-sylvo-pastoralism using one's own animals, provided that no damage is caused to trees, shrubs or the soil, or to natural regeneration. The marketing of the gathered products is prohibited, and its quantity must be restricted to the needs of the individual beneficiaries and their households (arts. 46 and 48).

4.8 Other features of the legislation of this period

4.8.1 *Prohibition on the seizure, prescription and alienation of forest land*

Some laws deal specifically with these principles. For example, Costa Rica's Forest Act, 1996, emphasizes the fact that the state's natural heritage - which includes forest lands -may not be seized or assigned, establishing that the possession of state forest lands by private individuals does not create any rights in their favour and that the right of claim by the State over these lands may not lapse (art. 14). Bolivia's Forest Act, 1996, also provides that the *de facto* occupation of forest lands, whether publicly or privately owned, does not give any right of ownership by virtue of possession or squatters' rights, as the right to seek the repossession of such lands never lapses.

Furthermore, one of the most significant recent amendments (1997) to Mexico's Forests Act is section 3, which states that the owner of the lands is also the owner of the forest resources on them. It specifically provides that the ownership of forest resources throughout Mexico is vested in the *ejidos*, communities or the natural or legal persons that own the lands on which the resources are found, without changing or affecting the ownership of the lands in question.

4.8.2 *Offences and penalties*

While Uruguay's 1987 Act devotes a whole Title to procedures, controls and penalties, it does not create any specific offences against the law or lay down penalties for them. It states that any offences or infringements against forestry legislation or regulations are subject to fines ranging from one-tenth to fifty times the theoretical amount of reforestation per hectare calculated at the time of the offence, without prejudice to possible further civil and criminal action. It also establishes the authorities that are responsible for ascertaining the offences, and for establishing, imposing, and enforcing the penalties (art. 69).

Cuba's 1998 Forest Act contains a chapter, divided into three sections, dealing respectively with administrative penalties, civil liability and criminal liability. The administrative penalties are imposed upon natural and legal persons committing any of the

offences set out in the legislation that will complement the Act[24] (arts. 66-68). With regard to civil liability, the Public Prosecutor's Office (*Fiscalía General de la República*), the Ministry of Agriculture or anyone who has personally suffered loss or damage may claim reparation or damages. It is emphasized that priority will be given to actions undertaken to rehabilitate the forest heritage as the preferred form of civil damages (arts. 69-71). Criminal liability is incurred by committing socially dangerous acts or omissions which are sanctioned by the law with criminal penalties, and which damage the forest heritage, as provided by current criminal legislation (art. 72).

In the chapter dealing with offences and penalties in Nicaragua's Forest Regulations of 1993, in addition to explicitly indicating the types of administrative offences and related penalties, provision is made for anyone committing offences against the laws implemented under the Regulations, or the technical and administrative rules issued by SFN-IRENA to be liable to the penalties set forth in the Regulations. It also provides administrative penalties such as fines, seizures, and the suspension or cancellation of registration, etc. Repeated offences constitute an aggravating circumstance. The Regulations also provide a simple and streamlined administrative procedure for imposing penalties, with the possibility of appealing to the Director of the IRENA Forestry Service, whose decision is final and binding (Chapter XVI).

The 1995 Paraguayan Forestation and Reforestation Act introduced fines in proportion to the official evaluation of rural property for delays in initiating forestation or reforestation plans as approved, or for failing to implement, for reasons attributable to the reforester or the owner, the reforestation programme set out in the forestry management plans (art 20). Felling or harvesting woodlands on land for priority forestry use requires the owner to reforest at least an equal area of land to the one felled or harvested, under the conditions set out in the approved management plan (art. 24). Under the Act, the National Forestry Service is empowered to impose penalties and fines. All the proceeds from the fines are to be placed in a special account held in the name of the Ministry of Finance to implement the forestation and reforestation programme created under this Act (art. 26).

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[24] On this subject, Cuba's specific law-making technique should be noted here. On 3 March 1993, Cuba adopted Decree Law No. 136 on Forest Heritage and Wildlife. This contained no provisions regarding offences, but on 4 March 1993, Decree No. 180, Offences against the Regulations on the Forest Heritage and Wildlife, was issued. The preamble cited Decree-Law No. 99 of 25 December 1987, on Personal Offences, which empowered the Council of Ministers to regulate the implementation of its provisions in different branches, sub-branches or activities. The operative part of the Decree listed the offences against regulations governing the forest heritage and wildlife, and the main and accessory penalties for each were indicated (for example, fines and the seizure of instruments used to commit the offence, the seizure of felled timber, the obligation to reforest, etc.). An aggravating circumstance was if the offence was committed in any kind of protected area. It established the authority responsible for ascertaining the offences and imposing the penalties (the members of the Forest Rangers) and the authority with responsibility for taking cognisance of and to rule on appeals against administrative penalties imposed (the Chief Forest Ranger). The final provisions of the Forest Act No. 85 of 1998 required the Ministry of Agriculture to submit to the Council of Ministers, within 60 days, proposed amendments, in accordance with the Act, to the offences provided for in Decree No. 180.

Bolivia's Forest Act, 1996, provides that any offences against the National Fo Laws[25] are subject to administrative sanctions such as a written warning, progressively increasing fines, the revocation of any rights already assigned and the annulment of any licences already granted, depending upon the gravity or the number of repeated violations. The scale of fines is based on incremental percentages of the amount of fees charged for licences, in accordance with the Regulations. It creates crimes and aggravating circumstances in reference to criminal offences set forth in the Criminal Code, ensuring the application of the same penalties provided in the Criminal Code for the corresponding offences (arts. 41 and 42). Implementing the principle of the right of appeal, administrative decisions issued by the Forest Superintendent may be appealed at a higher instance and if necessary quashed. The appeal is filed with the same Forest Superintendent. If no reply is received by a specific deadline, it is assumed that the response is negative, and the complainant may not therefore request the order to be revoked. Appeals against the refusal to revoke a withdrawn licence may also be filed with the General Superintendent. The General Superintendent's decision is the final stage in the administrative process (arts.43-45).

Mexico's Forest Act, 1997, contains two chapters dealing with this issue: the first lays down offences and sanctions, while the second lays down offences and the imposition of penalties. The first chapter describes conducts in violation of the Act which constitute administrative offences, together with the relevant penalties, which are also administrative in nature, depending upon the gravity (warnings, fines which can be automatically adjusted depending upon the minimum daily wage in the Federal District at the moment the offence is committed) and accessory penalties (temporary, partial or total suspension of any forest resource harvesting or forestation permits, or of the registration; the seizure of the forest raw materials obtained and the instruments, tools, machinery and means of transport used to commit the offence; the temporary or permanent, partial or total, closure of the installations, machinery or equipment, or of the storage and processing units where the activities are performed giving rise to the offence). Recidivity is an aggravating circumstance, and the offender may chose between paying a fine or carrying out work or investing an equivalent amount of money in conservation, protection or restoration of forest resources. The second chapter deals with joint and several liability by all those taking part in preparing or performing the offences, laying down guidelines for establishing the seriousness of the offences, and hence the penalties for them. Provision is made for appeals under the General Ecological Equilibrium and Environmental Protection Act and the Federal Administrative Procedure Act. The powers of the Secretariat include the imposition of penalties for offences committed in matters relating to forestry, and reporting criminal offences in this area to the prosecuting authorities (art. 5-VXII).

Guatemala's Forest Act, 1996, also contains a special title on criminal and other offences in relation to forest resources. The penalties for forestry crimes apply in accordance with the Criminal Code. Other types of forest crimes are also created (against forest resources, forest fires, collecting or using and marketing undocumented forest products, against the national forestry heritage committed by the authorities, falsifying documents for the fraudulent use of forest incentives, failure to comply with forest management plans, the change of land-use without authorization, felling trees of protected species, etc.). Other non-

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[25] "A set of public order rules regulating the sustainable use and protection of woodlands and forest lands, and the legal procedures for issuing rights of use to private individuals, clearly setting out their -rights and duties" (art. 3(e)).

criminal offences are the violation of administrative measures, for which the relevant penalties are laid down.

Costa Rica's Forest Act, 1996, provides that natural and legal persons have civil liability for any ecological damage caused, pursuant to the Civil Code, and that the authorities responsible for enforcing the law will be deemed to have aided and abetted the commission of the offences if it is shown that while they were aware that the offences against the law were being committed they did not proceed to punish the culprits, either by negligence or by having reached agreement with them (art. 57). Penalties include imprisonment, and ancillary penalties are laid down such as the seizure of property or loss of rights. The penalties are increased by one-third in the case of civil servants.

As far as offences and penalties are concerned, Chile's 1998 Act, amending Decree-Law No. 701, provides that if a management plan is not implemented for reasons attributable to the forester or the owner, the fines imposed shall be based upon the calculation of the UTM. It also makes it a serious offence at all times to fail to comply with the obligation to reforest land and to take the protective measures set out in the management plans and in the technical studies for the identification of land to be used as a matter of priority for forestry purposes. The Act also indicates the authority responsible for imposing sanctions and fines (the local police magistrate who must also be a trained lawyer), who is also responsible for receiving any complaints made by officials of the National Forestry Corporation (*Corporación Nacional Forestal*) or the Chilean police (*Carabineros*). However, the Act does not provide a general list of types of conduct constituting forestry offences, but only deals with those relating to the management plan.

4.8.3 *Forest fires*

As briefly indicated above, legislation in this period also contains provisions relating to **forest fires.** For example, in Costa Rica's Forest Act, 1996, action taken to prevent or to extinguish forest fires is deemed to be a matter of public interest (art. 35). Uruguay's 1987 Act provides that the central government shall lay down statutory fire prevention measures and other forms of protection for woodlands and forests (art. 29), and that the statutory funding available for forest protection work must extend to all the other activities needed to protect woodlands against fire (i.e., watch-towers, fire prevention roads, communications equipment, long-distance signalling devices, etc.) (art. 31).

Nicaragua's 1993 Forest Regulations provide that holders of harvesting permits are responsible for drafting and implementing a minimum forest fire prevention, control and defence plan. Once the harvesting is completed, this obligation lies with the landowners, and is their responsibility (arts. 52 and 54). Guatemala's Forest Act, 1996, requires anyone knowing of the existence of a forest fire and all transport services to report the fires. The civil and military authorities are obliged to furnish all the assistance that may be required and supply all the resources at their disposal to prevent and combat forest fires. The fact that forest protection is a national priority is demonstrated by a provision which establishes that the telegraphy and radio communications services, both public and private, are under a statutory obligation to disseminate or broadcast immediately all information relating to forest fires and to do so free of charge (art. 36). All owners, lessees or occupants of rural lands and

farms, by whatever title, are obliged to permit unfettered and free access to, passage through or permission to remain on their properties to all the personnel working to combat fires, and to co-operate in every possible way to extinguish the fires (art. 37).

Mexico's Forest Act, as amended in 1997, vests the Secretariat for the Environment, Natural Resources and Fisheries with the responsibility to issue official rules and regulations regarding forest fires, and supervising, co-ordinating and implementing actions to prevent, combat and control forest fires. To this end, it is required to enlist the assistance of all the other agencies of the Federal and State governments, Federal District and municipalities, and social and private institutions and citizens in general (arts. 27 and 28). Persons owning or possessing forest lands or lands which are of paramount suitability for forestry, and their bordering lands, and anyone exploiting or harvesting forest resources, or undertaking forestation and reforestation, are obliged to adopt measures to prevent, combat and control forest fires (art. 29).

In Cuba's Forest Act, No. 85 of 1998, the whole of the Section II of Chapter VII, entitled "Conservation and Protection", is devoted to forest fire prevention. The forest fire protection system comprises preventive, control and fire-fighting activities, as well as research and training in this field. These activities are regulated under a national programme drawn up by the Ministry of Home Affairs in coordination with the Ministries of Agriculture and Science, Technology and the Environment, and the National Chiefs of Staff of Civil Defence, and is approved by the Executive Committee of the Council of Ministers (art. 60). The Act gives responsibility to the Ministry for Home Affairs to organize and manage the forest fire protection system and, jointly with the Ministry of Agriculture, to lay down specialized prevention measures (art. 9). It also provides that in periods in which forest fires constitute a particular hazard, the competent authorities may prohibit or restrict individuals and vehicles from circulating or stopping in woodlands or in their environs (art. 64).

4.8.4 *Forest reserves*

Another aspect developed in Mexico's Forest Act, as amended in 1997, is the question of forest reserves. According to this Act, the federal government may establish forest reserves based upon technical surveys drafted by the Secretariat for the Environment, Natural Resources and Fisheries, acting upon the opinion of the National Forestry Technical Consultative Council, and after ensuring that the owners or possessors of the forest lands affected provide guarantees of compliance. Whenever the Secretariat ascertains the existence of degradation or desertification, or serious ecological damage on forest lands or lands of paramount suitability for forestry, it must draft and implement ecological rehabilitation programmes in order to ensure that the required action is taken to recover and re-establish conditions that will ensure continuity to the natural processes taking place there. The decrees establishing forest reserves must specify the features, time-scaling, exceptions, limitations and constraints on the acreage and forest resources included in the reserves, as well as the measures to be adopted by the federal government to support the communities affected by these measures (art. 32*bis*).

Costa Rica's Forest Act, 1996, also provides that the State Forestry Administration may set up reserves for forest species threatened with extinction, or which threaten the

extinction of other species of plants, animals or other organisms, on the basis of scientific and technical studies (art. 6).

4.8.5 *Health protection measures*

Uruguay's 1987 Act contains a number of provisions relating to forest health (art. 28). Provisions of this kind are also found in the 1996 Guatemalan Act (arts. 39-42), the 1997 Mexican Act (arts. 30 and 31), and the Cuban Act of 1998 (arts. 52 and 53).

4.8.6 *Forest seeds*

Guatemala's Forest Act, 1989, comprised several sections devoted to **forest seeds.** These are dealt with, in many countries, under special seed legislation which generally covers all kinds of seeds. According to the Guatemalan Act, anyone dealing in or marketing forest seeds must be registered with DIGEBOS. Likewise, seed forests had to be registered and supervised by DIGEBOS, which was also made responsible for establishing, maintaining, developing and supervising woodlands specifically used for high-quality seed production, even though these woodlands could also be managed or set up by private individuals or legal persons (arts. 58 and 59). However, the Forest Act, 1996, contains only one section on incentives to and production of high-quality seeds, giving INAB - similarly to DIGEBOS in the earlier Act - the duty to develop and supervise woodlands specifically destined to high-quality seed production. INAB is required to issue specific certificates of accreditation for the high quality of forest seeds, and to keep the necessary registers (art. 59).

4.8.7 *Promoting the industrialization of forest resources*

In contrast to the first period, in which the main uses of timber and export of forest raw materials was generally permitted, current legislation, as already indicated, is designed *inter alia*, to include the industrialization of forest resources, and is concerned with the total use of the tree and the export of value-added forest products.

For example, Paraguay's 1995 Act provides that the Government shall provide credit as an incentive to the private sector to undertake indigenous native woodland management, forestation, reforestation, and the industrialization of forest products (art. 19). Bolivia's 1996 Act provides that the holders of forestry rights issued by the State must try to gradually move towards the comprehensive and efficient use of woodlands.[26] Likewise, forest product processing centres must guarantee industrial diversification and increase the value-added of their products (art. 10).

Guatemala's 1996 Act delegates INAB with the task of providing incentives for the comprehensive use of trees by encouraging industrialization systems and equipment which

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[26] "Comprehensive and efficient use of woodlands" is defined as "the sustainable and ecologically recommendable and commercially viable use of the widest possible variety of forest resources, restricting the waste or loss of resources harvested and preventing unnecessary damage to the remaining woodland" (art. 3(f)).

give the greatest possible value-added to forest products (art. 62). It is prohibited to export round wood, carved wood or saw wood greater than 11 cm in thickness, regardless of its length or breadth (art. 65). Costa Rica's Forest Act, 1996, devotes a whole chapter to forest industrialization, with the declared purpose of optimizing the industry by ensuring the most efficient forest resource harvesting techniques (art. 52).

Cuba's 1998 Forest Act creates the National Forest Register to be kept by the Ministry of Agriculture to organize and control forestry storage, harvesting and industrial activities. The main purpose of the Register is to ensure that the centres performing these activities are properly registered and authorized, and that they qualify in terms of all the security measures governing the processing of forest products. Natural and legal persons managing storage, harvesting and forestry industry centres are obliged to record themselves in the Register (arts 40 and 41). Natural and legal persons responsible for the primary processing of timber are also obliged to comply with the technical standards governing the Conservation of forest products, in order to guarantee their most appropriate use and a substantial increase of their useful life (art 42).

4.8.8 *Promoting a forestry culture and job creation*

The **promotion of a forestry culture** and **job creation** are important novelties in Mexico's Forest Act, 1997, which expressly states that the policies and rules to be observed in terms of regulating and encouraging forestry activities must be designed, *inter alia*, to promote a forestry culture through educational and information programmes which will enable the people to appreciate the importance of the conservation, protection and sustainable use of forest resources; to encourage technological development and research in forestry, and establish programmes to generate and transfer forestry technology; to establish the conditions for capitalizing and modernizing forestry activities and generating employment in the industry for the benefit of the *ejidos*, communities, small owners, indigenous communities and other natural and legal persons who are owners or lawful holders of forest resources (art. 1). It also gives the Secretariat the power to promote programmes and projects for education, training, research, communication and dissemination of the promotion of forestry culture, co-ordinating this with its relevant agencies (art. 5).

Costa Rica's Forest Act, 1996, also sets out, amongst its objectives, the need to generate employment and raise the living standards of the rural population by effectively involving them in sylvicultural activities (art. 1). The National Forestry Office is responsible for running training and information campaigns for the national community regarding the benefits of appropriate management and of the conservation and extension of forest plantations.

Chapter IV of Cuba's 1998 Forest Act on "Woodlands and their Classification" provides that scientific research and educational activities may be carried out in any category of woodland, depending upon the purposes of the research, in compliance with the rules governing forest management (art. 29). Furthermore, the Act creates what are known as Educational and Scientific Woodlands within the category of conservation woodlands, which are defined as woodlands standing in botanical gardens and groves, whose main function is to serve for educational and scientific purposes (art. 26).

4.9 Conclusions regarding the third period

As the legislation analyzed above demonstrates, this period is characterized by the recognition of the role of forests and woodlands in the protection of the environment and the conservation of biological diversity. This has led to the enactment of rules to ensure the sustainable use and harvesting of forest resources as a main objective. During this period, major institutional reforms have occurred, stemming from the application of instruments designed to achieve the objectives of the structural adjustment programmes. There are also reforms in relation to pricing policies and capital markets, and in most of the countries concerned, many forestry activities are being privatized.

The concession is a major instrument used for forestry management. Certain agricultural and livestock subsectors are reconverting the land for forestry use, and encouragement is being given to industrializing forest resources, while legislation is concerned with the comprehensive use of the tree and the export of forest products with value-added. Similarly, a forestry mentality and culture is being actively promoted, as is the generation of employment in activities relating to the sustainable use of forest resources.

What has been called the "democratization" of forestry resources is the consequence of recognizing the diversity of interests that exist in relation to the conservation and use of woodlands and forests. This democratization is reflected in the fact that all the parties involved - the workers and the beneficiaries - take part both in the process of formulating and framing legislation and in implementing it. With regard to social issues, one of the main features of this period is the recognition of rights of indigenous and local populations. Legislation in this period lays down conditions which acknowledge or restate these rights and the collective management capacity of these communities, promoting wide-ranging participation by user groups in taking decisions and responsibility for conservation and management, guaranteeing their access to timber forests, and the fair distribution of the benefits generated by the resources among these groups.

We are therefore in a period faced with a much better articulated and more comprehensive set of legislation which takes on board current social, economic and environmental demands and, by and large, provides the necessary mechanisms and procedures for achieving the objectives they set out to attain. However, it must be noted that **environmental impact assessment** studies must be carried out, according to all modern legislation, in cases in which investment, work and activities in the forestry sector are likely to damage the forest heritage or affect the habitat or living conditions and reproduction of forest species. This must be done in accordance with specific investment and environmental legislation. It must be borne in mind that, while the greater importance given during this period to the function of the forest as a protector of the environment is plausible, this function must not lead to a lesser appreciation of the productive function of the forest or the capacity of forest activities to compete for some of the scarce investment resources.[27]

At the time this study was being prepared, Argentina was on the verge of promulgating two corpuses of legislation to deal with the problem of severe deforestation which, some claimed, could leave the country without any native forest species by the year 2036.

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[27] *Aspectos normativos y legislativos de la ordenacion forestal sostenible,* M.-R. de Montalembert y F. Schmithusen. UNASYLVA 175, Vol. 44, 1993-94.

The first body of legislation, the defence of the forest heritage, included a number of provisions to restore the woodlands degraded by public works, by providing funds to owners wishing to reintroduce native species. In order to fund this programme, a special Forest Fund is to be set up through which international organisations and bilateral co-operation agencies can contribute by providing donations. It would appear to be the intention of the authorities responsible for natural resources that a special item in the national budget is to be devoted to this purpose as well. Under the proposed law, a system of forest monitoring is to be set up under which environmental impact assessments will be obligatory for all forest use projects which are likely to have an impact on the environment. A National Commission for the Prevention of Forest Fires is also to be set up. In the second legal corpus, all native woodlands on government-owned land are designated as "protected forests". The contribution of woodlands to the conservation of biodiversity and the general public good is recognized, and consequently their conversion to other uses is prohibited. The proposed law also introduces incentives for forestry and penalties for offences.

Another piece of legislation that is being developed is Chile's Native Woodland Recovery and Forestry Development Bill. The main purpose of this Bill is to encourage the protection and rehabilitation of native woodlands by proper management, so that they may perform the functions of sustainable forest production and protect the soil, ecosystems and environment associated with them.

III. REGIONAL AND SUB-REGIONAL ORGANISATIONS AND FORA

The world's woodlands are of inestimable value to the whole of humanity, whose activities and developments have repercussions ranging far beyond national borders, both at the regional and global levels. Most of the forestry issues therefore affect several countries or even single regions, making it all the more necessary to establish group co-ordination.

Schmithusen and Montalembert (1991) have noted, in this regard, that national forestry issues and problems require national efforts and solutions, whose implementation necessarily demands the backing and support of the international community. Forest-related issues of relevance to several countries or to a whole region require regional-level co-ordination. In other words, it is necessary to introduce co-ordination and co-operation procedures that are acceptable to all the countries concerned. Global problems require global-level measures, which must be taken up by the whole of the international community.

In Latin America, such regional and sub-regional organizations *anáfora* as the Central American Commission on the Environment and Development (*Comisión Centroamericana de Ambiente y Desarrollo*), and its Central American Council on Woodlands and Protected Areas (*Consejo Centroamericano de Bosques y Areas Protegidas*), and the Amazonian Cooperation Treaty (*Tratado de Cooperación Amazónica*) are helping to produce the necessary changes required for sustainable development in an integrated co-operation framework.

1. The Amazonian Co-operation Treaty

The Amazonian Co-operation Treaty (ACT) was the reaction to the global tendency towards increased consumption of wood products, which made it necessary to implement programmes for forest organization and the rational management of forest resources, including the implementation of appropriate models and technologies. At Brazil's initiative, on 3 July 1978, Brazil, Bolivia, Colombia, Ecuador, Guyana, Peru, Surinam and Venezuela signed the ACT in Brazilia, enabling them to act jointly to promote the rational use of their natural resources in the Amazon Basin, on the understanding that, for the comprehensive development of their respective territories in Amazonia, a balance had to be maintained between economic growth and environmental preservation.

In Article 1 of the Treaty, the Parties agree to make the necessary efforts and to undertake joint action to promote the harmonious development of their Amazonian territories so as to produce equitable and mutually beneficial results, to preserve the environment, and conserve and rationally utilize the natural resources in those territories. Aware that the immense patrimony of Amazonia is an irreplaceable source of progress and economic prosperity for their peoples, the Parties declare in the Preamble to the Treaty that they have drawn inspiration from the common desire to pool their efforts to promote the harmonious development of Amazonia in order to guarantee the equitable distribution of the benefits of this development between the Parties, to raise the standard of living of their peoples and to fully incorporate their Amazonian territories into their national economies.

The ACT has made rapid substantial progress thanks to co-operation in both policy and technical matters. The ACT Secretariat, which is exercised for the time being by the Contracting Party in whose territory the next ordinary meeting of the Amazonian Corporation Council is to meet, has continually encouraged all the parties to play a full part in it, giving the maximum effect to the co-ordination function.

The ACT triggered off the Tarapoto process for the sustainability of the Amazonian forest in which eight Treaty countries participate. Under the February 1995 Tarapoto proposal the Amazonian countries are endeavouring to attain the objectives of the ACT by identifying and defining criteria and indicators meeting the particular features of the ecosystems in the region as well as other social and cultural factors. The Proposal is a multi-disciplinary and comprehensive declaration that is able to give a decisive impetus to the regional and national initiatives and efforts being made to obtain a major instrument for sustainable development planning. It is an important step forward in formulating proposals for the sustainable development of forests, which are compatible with socio-economic development and clearly based on environmental criteria.[28] The Tarapoto Proposal is also a valuable guide for the Amazonian countries both in formulating policies and adopting common stances in international *fora*.

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[28] Samanez/Mercado, Roberto. "Criteria and Indicators for Sustainable Management of the Amazon Forest".

2. The Central American Commission for the Environment and Development and the Central American Council for Forests and Protected Areas

The Central American Presidents set up the Central American Commission for the Environment and Development (CCAD) in 1990, made up of the Ministers of Natural Resources and Environment as the highest policy-making body in the sub-region for environment and development. In 1992, in the context of the Earth Summit, the XII Summit of South American Presidents took place in Managua, at which the Convention for the Conservation of Biodiversity and the Protection of Priority Forest Areas in Central America was signed. Under this Convention, the Central American Council for Forests and Protected Areas (CCAB-AP) was created, composed of the directors of the services of protected areas of each country. Subsequently, on 19 October 1993, the XIVth Presidential Summit meeting in Guatemala signed the Central American Convention for the Management and Conservation of Natural Forest Ecosystems and the Development of Forest Plantations, under which the sub-region will consolidate its actions in the area of forestry, using a participatory and decentralized model.

The objectives of this Convention, which reveals an integrated approach to environment and development, are to promote national and regional mechanisms to prevent the change of use of the areas with forest cover occurring on lands which are suitable for forestry and to recuperate the deforested areas, to set up a homogeneous system of soil classification by redirecting the policies for settling in forest lands, to provide disincentives for activities which help to destroy the forests on lands which are suitable for forestry, and to promote a process of sustainable land use management. In the Preamble of the Convention, the Parties recognize that the potential of forests in Central America to generate goods and services is not being fully exploited, neither are they being used in a sustainable and rational manner, and that the genetic diversity, scenic beauty and productive potential of wood and non-wood products can form the basis not only for the conservation of forest resources, but also for enabling them to make a decisive and sustainable contribution towards ending underdevelopment in Central America.

It should be noted that the Convention makes no mention of the industrial use of woodlands and forests, but it does encourage the development of small-scale plantations as a means of meeting the primary needs of rural populations. Forestry programmes must therefore give priority to fuel-wood supplies for domestic consumption and other forest products for local consumption in the communities.

The Convention contains one chapter on financial aspects, under which the Parties undertake, *inter alia:* (i) to encourage the establishment of national specific funds to provide financial support for national priorities identified in the Convention; (ii) to establish mechanisms to assure the reinvestment of income generated from forest resources (forest supplies, eco-tourism, drinking water, hydro-electric power production, biotechnology and others); (iii) to establish mechanisms in accordance with the economic possibilities of each country to ensure the delivery of credit to groups such as ethnic groups, women, youth, civil associations, local communities and other vulnerable groups, in order to be able to implement programmes in accordance with the guidelines set out in the Convention; and (iv) to put into place mechanisms to prevent the illegal traffic in species of flora and fauna, timber and other products. In the chapter dealing with public participation, the Contracting States are required

to promote the participation of all the parties concerned, including local communities and indigenous populations, entrepreneurs, workers, trade unions, professional associations, nongovernmental organizations, private individuals and the people living in forest zones, in planning, implementing and evaluating the national policy resulting from the Convention.

Although the text of the Convention is very short and the obligations are barely more precise than those set out in the sub-region's other Conventions, it does have an important value. In fact, it is the first Convention dealing specifically, in a global manner, with the issues of forest management. Furthermore, it is one of the first environmental agreements concluded since the 1992 United Nations Conference on Environment and Development. Whereas the prospects for a universal forests and woodlands convention are still only slight, this Convention demonstrates the desire of a group of developing countries to promote sustainable forest management based on the principles established at the Rio de Janeiro Conference (Amien, 1995).

Under the Convention, the Central American Commission on Environment and Development is asked to create, in conjunction with the national environmental and development administrations, a Central American Council for Forests and Protected Areas, made up of the directors of the forestry services of each country and the co-ordinators of the National Forest Action Plans, who have overall responsibility for monitoring the Convention. In 1995, that Council was set up to oversee the political and technical aspects of all regional environmental co-operation projects. Its ordinary meetings were attended by representatives of the Central American Forestry Professionals' Association, the Central American Chamber of Timber Entrepreneurs, the Consultative Council on Women and Development, the Indigenous and Small Farmer Co-ordination Community Agro-forestry Body, and the Federation of Central American Municipalities.[29]

3. Covenant for Sustainable Development

As a sub-regional response to the concern for environmental issues, an Ecological Summit was held in Managua in 1994, at which the presidents of Central America and the Prime Minister of Belize signed the Covenant for Sustainable Development (ALIDES) as a new framework for regional integration and co-operation based on seven fundamental principles: (i) the respect for life in all its forms; (ii) the improvement of the quality of human life; (iii) the respect and sustainable use of life forms and biodiversity; (iv) the promotion of peace and democracy as basic forms of human coexistence; (v) the respect for multi-culturalism and ethnic diversity in the region; (vi) the enhancing of economic integration between the countries of the region and between them and the rest of the world; and (vii) the accepting of inter-generational responsibility for sustainable development.

The Covenant is a unique model which gives Central America the possibility to take on a development model in which CCAD and CCAB agree to contribute to the development of the forestry sector in accordance with the new Central American policy.

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[29] Segura, O., Kaimowitz, D. and Rodriguez, J. *Políticas Forestales en Centro América: Análisis de las Restricciones para el Desarrollo del Sector Forestal,* EDICPSA, San Salvador, 1997.

IV. CONCLUSIONS

1. The development of forestry legislation in Latin America shows that the traditional concept of forest management, based essentially on production of wood-based products, is being set aside and replaced by a comprehensive and sustainable form of management, designed to ensure a permanent flow of benefits for the good of the people as well as for general development objectives.

2. The scope of natural resource exploitation ranges from the desire to achieve economic development by developing the forestry industry and generating incomes from woodlands and forestry operations, to their conservation and rational use, through to the concept of sustainable development,

3. Greater importance is gradually being given to the function of forests in protecting the environment and conserving biodiversity, and in more general terms, forestry management is seen as part of a process of inter-dependency with land use, land tenure and rural development policies; macroeconomic policies and structural adjustment measures; international trade policies; and sustainable development policies.

4. While a number of obstacles still exist, these trends also demonstrate a recognition of the importance of giving the forestry sector institutional status at the highest levels of decision-making, policy analysis and strategic planning. The institutional aspect should also be geared to the objectives of forestry policy and hence forestry legislation, in order to ensure its successful implementation.

5. The development of forestry legislation in Latin America shows that even though it is the task of government to elaborate forestry policy and draft legislation to ensure its enforcement, it is recognized that the only way to guarantee successful implementation is to make them consistent with the actual situation, needs and priorities of the country, which can only be done through a participatory process. This tendency towards the participation of all the parties involved is present in Latin America's most recent legislation.

6. In forest legislation in the past few years, the decentralization process has also been gradually involving the rural population in forest resource management, conservation, enjoyment and use.

7. The legislation of certain countries also reflects the changes that have occurred in the reorganization of central government with the devolution of powers. The regional, provincial and local authorities have been given a degree of autonomy, powers of self-determination and specific types of jurisdiction over forest resources.

8. The developments reflected in the legislation, aside from reduced central government intervention and increased decentralisation achieved through devolving ever greater responsibilities to state and local authorities, also involve deregulation, making public administration more similar to private sector administration, and the active participation of indigenous and local communities and other social agents.

9. Despite the positive aspects in the development of forestry legislation in the sub-continent, some forest legislation in Latin America still contains loopholes or presents enforcement problems such as a lack of clarity in the distribution of functions, powers and co-ordination mechanisms between central government agencies, and between these and other agencies and branches of government - the legislature, NGOs, etc. There is also a lack of regulation of the economic and administrative mechanisms needed to foster the conservation, protection, restoration and multiple use of forest resources, a lack of incentives to set up forest plantations in some cases, and a lack of concern about forest research and the procedures for implementing it.

10. In general, non-wood forest products, their harvesting and use are dealt with only to a limited extent. The same goes for systems for harvesting woodlands which are not under concession, and the protection and management of areas that have been returned or not requested. It is important to note that the lack of concern for non-wood products can, and indeed does, lead to these being marketed through informal channels, and their main use continues to be limited to narrow local economic levels.

11. Provisions regarding offences and penalties (creating typical offences and grading the penalties according to their seriousness, procedures relating to ascertaining and enforcing penalties, the possibility of withholding resources, etc.) are not contemplated in some countries' legislation, leaving this to secondary legislation in some cases, or ignoring it altogether. In this regard, it should be recalled that creating specific statutory offences - in this case against forest legislation - and setting penalties for those offences, is a major function of the lawmaker, namely, the legislature, in accordance with the relevant basic Act.

LEGISLATION REVIEWED

Argentina

- 1994 Constitution
- Resolution 845/92: Nation-wide Provisions for Promoting Forest Plantations in 1992, 14 September 1992
- 1997 Forestry Bills

Bolivia

- 1967 Constitution, revised in 1994
- Forest Act No. 1700, 12 July 1996
- Regulations to the Forest Act, Supreme Decree No, 24453,21 December 1996

Brazil

- 1988 Constitution
- Brazilian Forest Code, Act No. 4771, 15 September 1965
- Act No. 7735 of 1989 on the Brazilian Environmental Institute (IBAMA)

Chile

- 1925 Woodland Act
- 1931 Forest Act
- Decree-Law No. 701,15 October 1974, governing forested lands (Forest Development Act)
- Regulations to Decree-Law No. 701, 26 December 1974
- Decree-Law No. 2565, 21 March 1979, repealing Decree-Law No. 701, with the same number
- Act No. 19561, 16 May 1998, amending Decree-Law No. 701

Colombia

- Act No. 139 of 21 June 1994 instituting the Forest Incentive Certificate and other measures
- Decree No. 1824 regulating Act No. 139, 3 August 1994

Costa Rica

- Forest Act No. 7575, 13 February 1996
- Regulations (Executive Decree No. 25721/MINAE) to Act No. 7575,23 January 1997

Cuba

- Decree-Law No. 136 on the Forest and Wildlife Heritage, 3 March 1993
- Decree No. 180: Offences and related penalties in respect of the Regulations on the Forest and
- Wildlife Heritage, 4 March 1993
- Resolution No. 15 of 1995 on the Forestry Service
- Forestry Act No. 85, 21 July 1998

Ecuador

- Forest, Natural Areas and Wildlife Conservation Act, Legislative Decree No. 74, 21 July 1981
- General Regulations to the Forest, Natural Areas and Wildlife Conservation Act, Decree No. 1529, 16 February 1983

Guatemala

- 1985 Constitution
- Forest Act, Congress Decree No. 70-89, 23 November 1989
- Regulations to the Forest Act, Governmental Agreement No. 961-90
- Forest Act, Legislative Decree No. 101-96, *2* December 1996

Honduras

- Forest Act, Legislative Decree No. 85,18 November 1971 (*Diario Oficial,* **4** March 1972)
- Decree-Law No. 103 of 1974: Hondurian Forestry Development Corporation (COHDEFOR)
- Decree-Law No. 31-92 of 1992: Agriculture Modernization Act

Mexico

- 1986 Forest Act
- Forest Act, Legislative Decree, 9 December 1992
- 1997 Decree reforming, adding to and repealing various measures in the Forest Act (*Diario Oficial de la Federación*, 20 May 1997)

Nicaragua

- 1987 Constitution
- Conservation, Protection and Development of the National Forest Heritage Law, Legislative Decree No. 1381, 23 August 1967
- Regulations on the National Forestry Fund, 1 February 1977
- Decree No. 38-92: Establishment of Forest Reserves, 26 June 1992
- Decree **No.** 39-92: Forest **Moratoria,** 26 June de 1992
- Forest Regulations, Decree No. 45-93, 15 October 1993

Panama

- 1987 Constitution, revised in 1994

Paraguay

- Act No. 536/95 for the Development of Forestation and Reforestation, 20 December 1994
- Decree No. 9425, 21 June 1995: Regulations to Act No. 536/95

Peru

- 1993 Constitution
- Forest and Wildlife Act, Decree-Law No. 21147, 13 May 1975
- Flora and Wildlife Conservation Regulations, Supreme Decree No. 158-77-AG, 31 March 1977

Uruguay

- Forest Act No. 15939, 15 December 1987

Venezuela

- Forest, Land and Water Act, 30 December 1965
- Regulations to the Forest, Land and Water Act, Decree No. 1333, 11 February 1969
- Partial Reform of the Regulations to the Forest, Land and Water, Decree No. 2117, 12 April 1977.

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NORTH AMERICA

by
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Contents

SUMMARY

This chapter reviews recent developments in fôrestry legislation in the United States and Canada. Two national and sixty sub-national governments create laws affecting North America's varied landscapes. These jurisdictions have had to respond to changing social demands for forest resources on both private and public lands.

The nations are party to several treaties affecting their forests. The UNCED instruments have raised the profile of the concept of sustainable development. Trade agreements have raised issues of whether forest laws and policies affect commerce unfairly. Technical cooperation and wildlife agreements have promoted resource conservation.

Domestic legal developments have been diverse, but some patterns emerge. Forest management objectives embodied in law have become broader, with emphasis on sustainable use of a growing list of commercial and non-commercial resources. Planning and environmental impact assessment requirements have become more detailed with more opportunity for public participation, though this has sometimes slowed forest planning and sparked reactions to limit the public role. Jurisdictions have sought equitable and expeditious ways for concerned citizens to appeal government actions affecting the forests. Aboriginal people have won recognition of legal rights to some forests, particularly in Canada. Pollution issues have entered into forest management, sometimes leading governments to increase regulation of forest practices. Laws aimed at biodiversity protection have changed policies across the sub-continent and have significantly changed forest practices in some regions. Governments have set more lands aside as natural areas. Lawmakers are re-examining the influence of taxation on private forest management. And some jurisdictions are creating new forest offences, such as laws prohibiting sabotage by opponents of timber harvest.

I. BACKGROUND

1.1 Biology, Society, and Government

United States and Canadian forest issues play out in a complex theater of geography and law. Four factors contribute to that complexity: the nature of the forests, resource demands, tenure patterns, and federalism.

1.1.1 The Forests

The forests of North America are vast and varied. Together, the United States and Canads contains over 13 percent of the world's potently productive forests (FAO1337: Id 12). The forests range from high latitude taiga to mangrove swamps. In between are the giant conifer forests of the Pacific coast, the temperate hardwood forests of the eastern United States, the upland pine and bottomland cypress swamps of the far south, and many other forest types.

Some of the forests, such as those in the far north or the high mountains of the west, are far from human settlements, and include trees older than European colonization. Some, in the northeastern and southeastern United States, are plantations growing on former farmlands.

Relative to forests in Europe, North American Forests tend to be more biologically diverse. In part, this is because North American geography allowed more forest tree species to survive the climate changes of the ice ages. In part, it may be because North America has more large areas of forest relatively unfragmented by human activity, and more areas of old, undisturbed forest.

1.1.2 Resource Demands

The social demand for forest resources is varied and changing. In some regions, such as in British Columbia or Maine, timber production is a major pillar of the economy. The production and use of timber products in the two nations is well quantified. For example, in 1994, the United States produced the equivalent of 422 million m^3 of lumber, plywood and veneer, and pulpwood; it exported 65 million m^3; and it imported 102 m^3. The net consumption of forest-derived fiber was 460 million m^3. Another 88 million m^3 was consumed as fuelwood. Canada was the largest supplier of U.S. timber imports and the second largest consumer, after Japan, of U.S. timber exports (U.S. Bureau of the Census 1997: 691-92).

In 1995, Canada harvested 188 million m^3 of merchantable timber.[1] In 1996, Canada was the world's largest exporter of forest products, producing 20 percent of the forest products in international trade. By value, 71 percent of the exports went to the United States, 11 percent to Japan, and 9 percent to the European Union.[2]

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[1] Statistics Canada, <http://statcanxa/english/Pgdb/Economy/Primary/priin41 .htm>.

[2] Natural Resources Canada, N, R. Fact Sheet, <http://www.nircan.gc.ca/mms/nrcanstats/factsheet.htm>.

Other forest resources, while less easily quantified, are still important. In some regions, such as around the national parks along the Rocky Mountains, the forest is a major source of recreation and a magnet for tourists. Some forests provide habitat for endangered species, such as the red-cockaded woodpecker that lives in old pines in the southeastern United States. Some are critical to fisheries, such as the several species of pacific salmon that breed in forest streams from Alaska south to northern California. Some are used for grazing. Some protect high-quality public drinking water supplies. Some have religious significance for indigenous people,

Forest land also has value simply as land, and people have cleared some forests for urban expansion or other purposes. However, others have brought non-forested lands back to forest cover in recent years, including lands formerly used in agriculture. Between 1980 and 1995, the overall forest area actually increased by 2.6 percent (FAO 1997:17).

Although production of timber and forage remains significant, in the last thirty years other forest uses have grown in relative importance. An increasingly affluent and urban population has increased the demand for forest recreation, biodiversity, and other non-consumptive uses. Environmental non-governmental organizations (NGOs) have become prominent advocates of protection of these forest uses, and they compete with industrial interests in attempts to sway government forest policies.

1.1.3 Tenure Patterns

Forests in North America are split among public and private owners. Canada's 417.6 million hectares or Wests are mostly owned by the provincial governments. Private owners hold about six percent of the total forest land, which include about ten percent of the forests capable of commercial timber production. Only in Nova Scotia, a relatively small province, is most of the forest in private hands. The federal and territorial governments own 23 percent of the total forests, largely in the far north, and those contain only two percent of the commercial timberlands. The provincial governments own 71 percent of the total forests, containing 88 percent of the commercial timberlands.[3]

In the United States, the Federal Government is the largest forest owner, but most of the lands suitable for timber production are in private hands. The United States contains 298 million hectares of forests, and about 198 million hectares are classed as biologically and legally suitable for commercial timber production. The states and municipalities have the smallest share of the potential timberlands --about 7 percent. The Federal Government owns about 20 percent, largely in the west, and including some major areas for softwood production. Private owners hold about 73 percent (U.S. Bureau of the Census 1997: 690). The 100 million hectares of forest classed as not suitable for commercial timber production is mostly in federal hands, mostly in the west, and includes large areas set aside as parks or wilderness where timber harvest is illegal.

Government tenure in the United States is further complicated by having federal lands managed by multiple agencies with different legal charters. Thus, though most of the federal forests are part of the national forest system managed by the U.S. Forest Service, large areas

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[3] Natural Resources Canada, "State of the Forests: Canada's Forests - An Overview", and "State of the Forests 1996", p. 31, <http://nrcan.gc.ca/cfs/proj/ppiab/sof/sof96/>.

are managed by the U.S. Fish and Wildlife Service, National Park Service, Bureau of Land Management, Bureau of Indian Affairs, Department of Defense, and other agencies. Some laws, such as the environmental impact assessment provisions of the National Environmental Policy Act or the species protection provisions of the Endangered Species Act, apply to all agencies. Some laws, like the planning procedures and goals of the National Forest Management Act or the Federal Land Planning and Management Act, apply only to specific agencies.

The reason for the strikingly different tenure patterns in the two countries is a matter of history reflected in law. When the Canadian national government was formed, the provincial boundaries were largely set as they are today. The Constitution Act of 1867 granted the provinces ownership of the public lands within their borders, and the provinces continue to hold the majority of forest land.

When the current United States government was formed, the majority of the land now part of the United States was subject to conflicting claims by states and colonial powers. As part of the compromise that formed the U.S. Federal Government, the thirteen original states along the Atlantic Ocean gave the national government their claims to land west of the Appalachian Mountains. Subsequently, the Federal Government also got the title to any public lands in territories that the U.S. acquired by purchase or treaty. During much of the country's history, the Federal Government encouraged settlement by selling these public lands at low prices or giving away land to settlers and developers, most notably to railroad companies. Hence today, though the U.S. Federal Government remains the nation's largest single owner of forest land, much of the really productive forest is in private hands.

1.1.4 Federalism

Authority to regulate forest use in North America is divided among different levels of government. Both the United States and Canada have federalist governments, and authority to govern is split between the Federal Government and the states or provinces. In both nations, the constitution limits the Federal Government to specific, listed powers. In both, law and tradition discourage the Federal Government from regulating "local" matters, such as the use of private land.

The countries differ in the balance of power between levels of government. In the United States, the Federal Government is relatively strong, compared to Canada. The federal power to regulate interstate and foreign commerce (U.S. Constitution, Article I, sec. 8, cl. 3) has been interpreted to reach activities that might affect such commerce even if they happen entirely within a single state. This commerce authority is the basis of U.S. federal legislation on wildlife, water pollution, wetlands, pesticides, and air pollution, all potentially important to forest management. The federal power to tax income (U.S. Constitution, amendment XVI) has a significant effect on commercial forest management decisions. The Federal Government has the power to implement treaties, including treaties affecting forests, unless the treaty requires actions expressly forbidden in the Constitution.[4] On federally owned forests, the Constitution gives the Federal Government the primary regulatory power, and the state role is secondary (U.S. Constitution, Article IV, sec. 3, cl. 2).

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[4] Missouri v. Holland, 252 U.S. 416 (1920) (upholding a statute implementing the Migratory Bird Treaty).

In Canada, the provinces have a much stronger role in forestry matters compared to the U.S. states. Under the Constitution Act of 1867 (secs. 91,92 and 109), the provinces own most of the public lands within their borders and have legislative authority over management and sale of public lands and their timber. The Federal Government affects forestry on provincial lands indirectly. For example, under its authority to protect fisheries, it could prohibit deposit of logging debris in streams where that harms fish.[5] The Federal Government has the power to make treaties, but unlike in the United States, the Federal Government has no automatic authority to implement treaties if that requires actions outside the normal federal powers. A "peace, order, and good government" clause gives the Federal Government general power to address problems of national importance and scope, but the courts have not used this liberally to increase the federal powers. The provinces dominate forest regulation, both as owners of most of the land and as primary authors of forestry legislation.

1.2 Consequences for Forest Regulation

The result of the interplay of these four factors is that forest owners face a range of issues and legal constraints. These vary with forest type, use, ownership, and jurisdiction. With 50 states and 10 provinces, jurisdictional variation alone means there are at least 60 different legal frameworks on the sub-continent. Add to that the variation that comes with different laws for public and private ownerships, and specific laws that apply to specific land types, such as wetlands or critical wildlife habitats, and the complexity increases. The discussion below outlines some of the common patterns and issues in this array of laws.

II. INTERNATIONAL AGREEMENTS

The United States and Canada are party to several international agreements that bear on forests. Often, the primary effect of a treaty is to promote new forest policies; new legislation may eventually follow. A few treaties, particularly those dealing with trade, may have powerful indirect effects on forest resources. And at least one wildlife treaty has served as the basis for claims in recent lawsuits concerning forest management.

2.1 The 1992 UNCED Documents

The 1992 United Nations Conference on Environment and Development in Rio de Janeiro produced a series of agreements with potential effect on forests. These include the Convention on Biodiversity, the Rio Declaration on Environment and Development, Agenda 21, the Forest Principles, and the Framework Convention on Climate change.

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[5] But see Fowler v. R. [1980] 2 S.C.R. 213, where the court struck down a federal law banning deposit of logging debris in streams home to fish, because the law did not require demonstration of actual harm to fish. In contrast, a broad federal prohibition on deposit of logging debris in coastal waters has been upheld as part of the federal government's power to legislate on matters of national concern. R. v. Crown Zellerbach Canada Ltd.[1988] 1 S.C.R. 401.

2.1.1 The Convention on Biological Diversity

Canada was the first industrialized nation to sign and ratify this Convention. It ratified it with the consent of all of its provinces, apparently assuring them that compliance would not entail major legislative change. Canada's approach to compliance has taken place more on a policy than a legislative level. In 1995, a federal-provincial working group produced a Canadian Biodiversity Strategy. Some provinces, including Ontario and Quebec, are developing their own implementation strategies for the Convention.

The United States signed the Convention on 4 June 1993 but has yet to ratify it. The government's principal concerns expressed before Rio had to do with economic rights to biodiversity-related assets.[6]

Specific domestic legislation related to forest wildlife and biodiversity in the two nations is covered in more detail later in this chapter

2.1.2 The Rio Declaration, Agenda 21, and the Forest Principles

These three documents expressed a consensus of the world's governments on the need for sustainable development of natural resources. The documents are general in scope, and applying the idea of sustainable development to specific situations often leads to disagreements about just what sustainable development is.

In anticipation of and subsequent to the Rio Conference, governments and NGOs around the world began efforts to apply the idea of sustainable development to forest management. Eleven nations, including the United States and Canada, formed a Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests, informally called the Montreal Process. In 1995, in the "Santiago Declaration," they endorsed a set of non-binding national criteria and indicators for sustainable management.

United States government actions to promote sustainable development have included creation of a President's Council on Sustainable Development and a federal Interagency Working Group on Sustainable Development Indicators. In 1993, at Helsinki, the United States committed to the goal of sustainable forest management of the nation's forests by the year 2000. Ongoing discussions within federal resource management agencies have led to reports and recommendations on sustainable forest management and compliance with the Santiago Declaration.[7]

Canada, in 1992, produced a National Forest Strategy, which included a commitment to sustainable development. Federal, provincial, and territorial governments all endorsed the strategy. The Canadian Council of Forest Ministers, which includes all the provincial

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[6] United States, Declaration made at the United Nations Environment Programme Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity [22 May 1992], 31. I.L.M. 848 (1992).

[7] See, for example, the discussions on the U.S. Forest Service web site: <http://www.fs.fed.us/land/sustain_dev>.

ministers with jurisdiction over forests, is developing and implementing a set of indicators to track national progress towards sustainable management.

Domestic legislation echoing the international call for sustainable management of forests is described later in this chapter.

2.1.3 The Framework Convention on Climate Change

The Framework Convention on Climate Change and the subsequent 1997 Kyoto Protocol have not yet led to concrete changes in forest management. Trees remove carbon from the atmosphere and so help slow climate change caused by greenhouse gases. Laws requiring mitigation for greenhouse gas emissions and recognizing ownership of carbon sinks could promote reforestation and forest management. At least one U.S. State, Oregon, has made greenhouse gas mitigation a factor in awarding rights to site a fossil-fuel burning power generation plant (Oregon Admin. Rules sec. 345-023-0010(2)).

2.2 Trade Agreements

Though both countries are well endowed with forests, both import forest products from the other. Each year millions of cubic meters of lumber, millions of tons of paper and woodpulp, and hundreds of millions of square meters of plywood cross the border in each direction (U.S. Bureau of the Census1997:692).

Trade disputes between the two countries over timber date back at least to the 1930s (Random Lengths Publications 1997). Since 1982, the United States and Canada have argued over whether canadian forest management policies, laws, and stumpage prices amount to a subsidy on timber exported to the United States. At least three times since 1983, the United States has charged Canada with unfairly influencing softwood timber prices by selling timber off government lands at reduced rates or by restricting exports (Sinclair 1993: 195). These challenges led to an agreement that from 1987 to 1991 required provinces to let the United States review and approve their forest management plans if the provinces wished to avoid surcharges on timber exported to the United States[8]. Environmental critics charged that this discouraged the provinces from investing in reforestation and forest management, because the United States claimed such actions subsidized the timber industry (Sinclair 1993: 211-12). An agreement presently in effect imposes fees on Canadian exports if they exceed agreed-upon quotas.

General free trade agreements, first the Canada-U.S. Free Trade Agreement[9] and now the North American Free Trade Agreement (NAFTA),[10] have rewritten the ground rules for trade disputes between the two countries. These agreements remove trade barriers but require the countries to provide a "level playing field" for commerce, i.e., one where industries are

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[8] Sinclair 1993: 197, citing U.S.-Canada Memorandum of Understanding on Trade in Softwood Lumber with Amendments.

[9] Signed at Ottawa, Washington, and Palm Springs 22 and 23 December, 1987 entered into force on 1 January 1989. 27 I.L.M. 281 (1988).

[10] Signed at Washington, Ottawa, and Mexico, December 8, 11, 14, and 17, 1992; entered into force on 1 January 1994. 32 I.L.M. 289 (1993).

not favored by direct or indirect government assistance amounting to subsidies. The United States and Canada are also parties to the broad-ranging, multilateral General Agreement on Tariffs and Trade and the World Trade Organization.[11]

Environmental critics of free trade agreements fear that countries will use such treaties to challenge environmental controls as a form of export restriction or other distortion of normad trade. They also[1] fear that competitive international markets will create political pressure to reduce national environmental controls that increase the cost of forest products.

Proponents of free trade agreements hope that such agreements will improve environmental performance. They argue that domestic political pressures will keep nations from weakening existing environmental laws and that international trade will create pressure to observe international norms of forest protection. They credit expanding trade for spurring recent efforts by environmental NGOs and industry in both countries to establish nongovernmental certification of sustainable management. They also credit free trade for encouraging countries to seek agreements on the criteria and indicators of sustainable forestry, such as the above mentioned Santiago Declaration.

NAFTA recognizes the rights of the parties to implement legitimate domestic environmental protection legislation (art. 904). To further address environmental concerns, the NAFTA signatories also entered into the North American Agreement on Environmental Cooperation (NAAEC).[12] Article 3 of NAAEC calls on each nation to establish "high levels" of environmental protection; article 5 requires effective enforcement of environmental laws; and part V of NAAEC establishes a procedure to challenge a party for failing to enforce its environmental laws.

However, these provisions have limited application to forestry. "Environmental law" as defined in article 45 of NAAEC includes laws for protection of flora and fauna, habitat, and natural areas, but excludes laws for "managing the commercial harvest or exploitation, or subsistence or aboriginal harvesting, of natural resources." The exact dividing line drawn by the definition is unclear, but many forestry laws are probably beyond the jurisdiction of the agreement (Johnson and Beaulieu 1996: 189-192).

Whether NAFTA and NAAEC will have a long-term effect on North American forests is difficult to predict. No one can yet point to a forestry law revised and made weaker due to NAFTA. But there are still concerns that the doctrine of free trade may someday be invoked against these laws or that economic pressures generated by free trade will incidentally affect forests. Environmental NGOs and the forest industry are watching the situation closely.

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[11] These agreements include the General Agreement on Tariffs and Trade: Multilateral Trade Negotiations (The Uruguay Round), Final Act Embodying the Results of the Uruguay Round, 33 I.L.M. 9 (1994) and Agreement Establishing the Multilateral Trade Organization (World Trade Organization), 33 I.L.M. 15 (1994).

[12] Signed at Mexico, Washington, and Ottawa September 8, 9, 12, and 14, 1993; entered into force on 1 January 1994. 32 I.L.M. 1480.

2.3 Technical Cooperation

The United States and Canada have come to recognize that some forest management issues ignore national borders. The two countries have entered into treaties of technical cooperation on forestry and related matters between themselves[13] and with other nations of the hemisphere. These have led tö cooperative programs linking the forest, park, and wildlife management agencies of the two countries with each other and with their counterparts in neighboring countries. For example, both the United States and Canada have actively aided Mexico in conserving the forests that serve as wintering habitat for monarch butterflies from as far north as southern Canada. A program called "Partners in Flight" helps conserve migratory bird habitat in the hemisphere.

The United States (but not Canada) is party to the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, usually called the Western Hemisphere Convention. This 1942 multilateral treaty requires signing nations to establish protected natural areas, adopt laws for the protection of flora and fauna, and take other steps for the protection of wildlife and significant natural, cultural, and scenic areas. The United States appears to be in compliance, but the treaty has not been a major influence on the United States in pursuing these ends. More significantly, the treaty has served as the foundation for technical cooperation within the hemisphere. It has led to a series of international conferences on nature protection and other bi- and multi-lateral cooperative initiatives.

2.4 Migratory Bird Treaty

Since 1916, the two countries have had a bilateral agreement for the protection of migratory birds.[14] In the United States, this treaty, coupled with the federal government's constitutional power to implement treaties, has allowed the Federal Government to pass laws protecting these birds. Environmental NGOs have recently tried to invoke the U.S. implementing legislation --the Migratory Bird Treaty Act- in law suits challenging timber harvests that threaten nesting migrants.[15] The law is framed as a criminal statute, though, and has not proved to be as potent a tool in NGO civil suits as other wildlife laws such as the U.S. Endangered Species Act, discussed below. In Canada, the federal Migratory Bird Convention Act, passed in 1917 and revised in 1994, implements the treaty but does not seem to be a major factor in forest management.

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[13] Memorandum of understanding on cooperation in the field of forestry-related programs (signed by the United States and Canada at Washington, May 17, 1990), U.S. State Dept. Treaties and Other International Acts 11723.

[14] Convention for the protection of migratory birds in the United States and Canada. 39 U.S. Statutes at Large 1702; Treaties Series 628; 12 Charles I. Bevans, ed., Treaties and Other International Agreements of the United States of America 1776-1949, at 375.

[15] E.g., Sierra Club v. Martin, 933 F. Supp. 1559 (N.D. Ga. 1996) (U.S. Forest Service may not enter into timber contracts allowing cutting during nesting season that would directly kill birds in violation of Act) *reversed* 110 F.3d 1551 (11th Cir. 1997) (Forest Service is not a "person" subject to the provisions of the Act); Mahler v. U.S. Forest Service, 927 F. Supp 1559 (S.D. Ind. 1996) (mere destruction of migratory bird habitat held not to be a violation of the Act).

III. DOMESTIC LEGISLATION

This section on domestic legislation begins with a short overview of the legal framework governing forests in the United States and Canada. The discussion that follows covers laws in more detail and identifies recent legislative trends.

3.1 The Basic Legal Framework

The basic forest laws in both the United States and Canada begin with the laws of property. The threshold question in any legal analysis of actions in forests is: who owns the land? The owner has the right to treat the resources of the land as the owner wishes, subject to existing legal constraints. Sometimes those constraints are few; sometimes they are so strong that they almost swallow up the ownership rights.

The first layer of constraints comes from general property law doctrines, such as nuisance and trespass. The basic property laws in both countries come from British common law, except in the state of Louisiana and the province of Quebec. These two are civil law jurisdictions basing their law on the French civil code. Some southwestern U.S. states also show the influence of Spain in their property laws, dating from when the territories were part of Mexico. The most widespread influence, however, is from common law doctrines.

Other general laws governing property and commerce affect forestry. For example, tax laws strongly influence private forestry management decisions. Federal income tax treatment of timber stand improvement expenses is an active issue in the United States, discussed below. States, provinces, and some local jurisdictions levy annual taxes based on real estate value. Taxes that reflect the value of the trees encourage owners to cut their trees at a relatively young age to reduce the tax. Taxes that reflect the value of the land, if put to a hypothetical "best use", may encourage owners to convert forested lands to uses that generate higher and more regular income. The response, taken by many timber-rich jurisdictions since the turn of the century, has been to grant special low tax rates to forest lands.

Most, if not all, state and provincial governments try to influence private forest management in non-regulatory ways. Most have qualified people working for the government who offer free basic forestry advice to landowners. Most governments will help owners fight forest fires. Some offer subsidized planting stock. Some establish voluntary codes of good forest practices.

Private owners face a range of regulatory provisions depending on the state or province. Some jurisdictions impose almost no regulatory limits on forest management. California goes as far as requiring landowners to hire licensed foresters and submit management plans for approval before harvesting trees.

The two federal governments seldom regulate private forest management directly, but may regulate some of the incidental impacts of forest management. For example, federal water pollution laws, as discussed below, may affect disposal of logging debris or construction of logging roads. In a few cases, such as a United States law prohibiting destruction of the habitat of certain endangered animals, the incidental law may severely constrain forest uses.

Government-owned forest lands are managed for a variety of purposes, from protection of wilderness character to production of timber. Statutory law may specify how the government should manage particular lands or may give management discretion, of varying degrees, to the government. For example, laws creating national parks in both countries call for the preservation of natural features for the benefit of park visitors. Laws governing the national forests in the United States call for management for multiple uses, including recreation, wildlife, and timber harvest, and give the managing agency a fair amount of discretion in selecting particular uses. The laws impose specific procedures for the agency to follow in making management decisions, however, including procedures assuring transparency and opportunity for public comment.

In general, the governments do not conduct forest harvest operations themselves. Instead, they sell concessions to private companies to harvest the timber. In the United States, these are usually short-term sales of timber, with the government in charge of long-term management objectives. In Canada, they may be longer term concessions, with the concessionaire responsible for preparing management plans, with government approval.

3.2 Discussion of Main Issues

3.2.1 Management Objectives

The forestry profession around the world has long been committed to sustainable management of the forest. What has changed over the years is the notion of which forest resources need sustainable management.

Historically, that has meant adding resources to the list we expect forest managers to develop and sustain. The legislation governing U.S. national forests illustrates this. In 1891, the original federal forest reserve law authorized the President to create reserves to protect timber and water supplies (Act of 3 March 1891). In 1944, Congress passed the Sustained-Yield Forest Management Act, allowing private land owners to enter voluntary management agreements with federal land managers to create federal-private "working circles" producing a constant volume of timber for local industry, to promote economic stability (Act of 29 March 1944). In 1960, Congress passed the Multiple Use-Sustained Yield Act (16 U.S.C., secs. 528-531) which added recreation, range, fish, and wildlife to timber and water as the aims of federal forest management. It also declared that use of the forests should be "without impairment of the productivity of the land."

The last thirty years have seen a shift in emphasis among these objectives away from the domination of timber. Part of this has been achieved through ongoing congressional or presidential designation of federal lands off-limits to timber harvest, including wilderness areas, parks, monuments, and scenic rivers. Part has been achieved by stricter wildlife protections such as the Endangered Species Act, discussed below. Part has been achieved through more involved planning requirements, also discussed below. These allow the planning agencies to hear and respond to a diverse set of public opinions on desired land uses. The planning laws also include some new substantive directives favoring non-timber resources, such as the directives in the National Forest Management Act to "provide for diversity of plant and animal communities" and to protect "bodies of water from detrimental changes ... where [timber] harvests are likely to seriously and adversely affect water conditions or fish habitat."

States on the whole have been slower than the Federal Government to move away from timber-centered management of publicly-owned lands, but some have. Wisconsin amended its laws in 1995 to have sustainable forestry replace the growing of timber crops as the guiding star of state forest land management (Wisconsin Statutes, sec. 28.04). Some western states' constitutions declare that state forest lands are to be managed to provide income for the state-run school systems.[16] These states may respect minimum requirements to protect other resources, but they focus on the most lucrative use of the forests, usually timber production. In 1997 Oregon, which has such a provision in its constitution, held public hearings on the management direction the[1] state should take. The state Board of Forestry concluded that timber production was still to be an important use of state forests, but that the state should put more emphasis on protecting fish, wildlife, recreation, and other resources eventhough they do not directly produce income for the state.

Most states give private owners a free hand in making forest management decisions, but those states that do regulate have shown a trend towards requiring protection of a broader range of resources. In the first half of the century states with forestry laws largely focused on fire protection or timber regeneration. In the last thirty years, the leading states have produced quite sophisticated forest practice laws with buffer strip requirements for streams, areas set aside along scenic highways, and wildlife protection. Oregon[17] and California's[18] laws are good examples.

U.S. federal and state governments also use non-regulatory approaches to encourage multiple resource management of private lands. Most states have extension services affiliated with their universities to give land owners free advice on management. Many states have established voluntary "best management practices" codes for minimizing soil erosion and harm to water quality. Washington State in 1997 authorized a demonstration program to create multi-species landscape management plans for up to seven private landholdings, prepared with public participation (Revised Code of Washington, secs. 76.09.350-360).

The Federal Government has several programs to encourage better private forest management. It runs many of them cooperatively with the states, by making federal funds available to states willing to carry out the programs. These programs include giving advice to landowners; assisting in insect, disease, and fire control; subsidizing private land management costs; and acquiring conservation easements on environmentally important forests.[19] The Federal Government encourages farmers to keep certain environmentally sensitive lands under natural vegetative cover. These included forests on wetlands and highly erodible land. In 1985, the U.S. Congress passed a Law that denies agricultural subsidies to farmers who clear such lands for farming (16 U.S.C., secs. 3811-3823).

Canada too has experienced a shift in the objectives of forest management. For a great part of Canada's history, the dominant concern of forestry laws has been the timber resource. One legal scholar has identified four phases of timber-centered forestry regulation in the country. In the first phase, forest use was unregulated, except for the overall laws of property. In the second phase, the resource was regulated to produce economic "rents", i.e., income for

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[16] E.g., Oregon Const, art VIII, secs. 2 and (5)(2); Washington Const, art. IX, sec. 3; Idaho Const, art. 9, sec. 4.

[17] Oregon Forest Practices Act, Oregon Revised Statutes secs. 527.610-.992.

[18] Z'berg-Nejedly Forest Practices Act of 1973, California Public Resources Code secs. 4511-4628.

[19] The Erodible Lands and Wetlands Conservation and Reserve Program, 16 U.S.C. secs. 3801-3862.

the government, from timber harvest. In the third phase the emphasis was on conservation of the timber resource, including promoting natural regeneration and avoiding waste. In the fourth phase, the law promoted active management of the timber resource, including artificial regeneration and long-term management planning (Ross 1995:63).

Some would argue that timber is still the central concern of forestry law in Canada, but especially since UNCED in 1992, Canadian provinces have increased attention to management of non-timber resources on government lands. The 1994 Forest Practices Code of British Columbia Act declared the purposes of forest management to include timber, forage, recreation, scenery, wildlife, water, fisheries, biological diversity, and cultural heritage. Ontario's 1994 Crown Forest Sustainability Act declares one purpose of the Act to be "to provide for the sustainability of Crown forests". Quebec amended its Forest Act in 1996, declaring as a new purpose of the Act, "to foster recognition of the forest as a common heritage and promote sustainable forest development". Saskatchewan's 1996 Forest Resources Management Act included as its purpose "to promote the sustainable use of forest land".

Some changes in management objectives have occurred as a matter of policy rather than law. For example, after facing strong domestic and worldwide public objections to intensive timber harvests on provincial lands around Clayquot Sound, the British Columbia government convened a scientific panel to recommend more sustainable forest practices. The panel recommended steps to reduce logging impact on water quality and wildlife, and in 1995 the government endorsed those recommendations (Dudley, Jeanrenaud and Sullivan 1995: 66).

This shiftl in emphasis to include non-timber resources is reflected in changes in forestry administrations in about half the provinces. Since 1990, Newfoundland, Nova Scotia, New Brunswick, and Quebec have all merged their forestry agencies into broader natural resource agencies. Alberta has merged its forestry agency with its environmental protection agency (Ross 1995: 57).

As in the United States, the majority of Canadian provinces have chosen not to regulate management of private forest lands. However, some have created incentives for certain management activities. For example, Quebec's Forest Act includes several provisions to give advice and assistance to private forest owners who pursue modern forest management.[20]

The above discussion has focused on broadening management to include resources other than timber, but there are also questions about what constitutes sustainable management of the timber resource. For example, the United States and Canada both have areas of natural forest with large-volume trees much older than the commercial rotation age. It is theoretically possible to harvest these old growth forests in a short span of time without destroying the productivity of the land, but the annual volume harvested will have to decline to a lower, sustainable rate after the last of the old growth is cut. It is also possible to set the allowable harvest volume at the lower, sustainable level from the beginning. This policy requires that the old growth stands be cut more slowly, over a longer time span. British Columbia law and policy embraces the first interpretation of sustainability, focusing on productivity of the

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[20] Forest Act, Revised Statute of Quebec chapter F-4.1, sections 118-124.40. These provisions reflect the Act of 19 December 1986, 1986 Statute of Quebec, chapter 108, and subsequent amendments, notably the Act of 20 June 1996, 1996 Statute of Quebec, chapter 14.

land.[21] U.S. federal law requires the second approach on the national forests, focusing on a constant harvest level, which has tended to slow the harvest of old growth (16 U.S.C., sec. 1611(a)).

3.2.2 Planning and Environmental Impact Assessment

The United States has a multi-layer system of planning and environmental impact assessment that applies to federal lands. The core law is the 1970 National Environmental Policy Act (NEPA). It requires an environmental impact statement (EIS) for major federal actions significantly affecting the quality of the human environment. Case law and regulations (40 C.F.R., pts. 1500-1508) require opportunities for public participation in the process.

The U.S. Forest and Rangeland Renewable Resources Planning Act of 1974 and the National Forest Management Act of 1976 (NFMA) and their planning regulations (36 C.F.R., pts. 215-221) require the Forest Service to prepare national Renewable Resource Assessments and Programs; regional plans for the national forest system; and land and resource management plans for the 125 or so forest units of the system. The Forest Service must prepare these forest plans with public participation and with an EIS. The plans must be updated every 10 to 15 years. Significant individual management actions, such as road construction or a timber sale, must either be contemplated in the forest plan or must have a separate EIS.

Both NEPA and NFMA require the government to take an interdisciplinary approach to analyzing environmental problems. One result has been a dramatic increase in the number of professionals other than foresters working for the Forest Service. The numbers of wildlife biologists, hydrologists, ecologists, and recreation specialists have increased, and they have brought more biocentric, less utilitarian values to the agency (Brown and Harris 1998).

The planning process has been criticized as too cumbersome. It has generated much litigation, and the preparation and implementation of plans has taken longer than the Congress envisioned. On a few occasions, Congress has created temporary planning shortcuts in response to perceived emergencies. For example, in 1995 Congress created an expedited process for planning timber sales needed to salvage timber damaged or threatened by insects, disease, or fire. The provision expired at the end of 1996 (16 U.S.C., sec. 1611 note).

These suspensions of planning laws have proved highly controversial. Bills now before Congress (e.g., sec. 1253, 105th Congress, 1st Session 1997) that would permanently reduce the number of layers of plans and narrow public participation opportunities have drawn strong objections from environmental interests. The Secretary of Agriculture has recently convened a panel of senior scientists to hold public hearings across the country and make recommendations for planning reforms.[22]

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[21] See Sierra Club of Western Canada v. British Columbia (Chief Forester), 13 Can. Envtl. L. Rep. (n.s.) 13 (B.C. Sup. Ct. 1993).

[22] The official notice of this committee's formation and invitation to the public to nominate members appears at 62 Federal Regulation 43691 (15 August 1997).

A related issue is the relative weight in planning that should be given to local compared to national interests. Local interests are often more concerned than national interests with the local economic consequences of planning. In a recent case in northern California, an ad hoc committee, the Quincy Library Group, representing industry and local environmentalists, came up with a comprehensive management proposal for local federal lands. The Group asked Congress to adopt the proposal and to exempt the local forest from other federal planning requirements. National environmental NGOs have opposed this as side-stepping the planning process outlined in federal law.

Forestry on state and private land in the United States is subject to a variety of planning and EIA regimes. The federal NEPA law does not apply to state or private actions unless the actions require federal funding or the approval of a federal agency. In many states, the state forestry agency has a free hand in managing state forests and private owners do not have to give any sort of notice or prepare plans prior to undertaking forest management.

A few states have requirements for notice, plan submission, or public review. For example, Maine's 1999 law requires that plans be prepared by licensed foresters for clear-cut harvests of more than 50 acres, but the plans are not necessarily available to the public. Oregon's 1991 revisions to its Forest Practices Act require notice to the state prior to commencing most forest operations and submission of plans for operations in sensitive areas. Washington State's 1975 law divides forest practices into four classes. Class I practices require no notice or plans; Class II practices require prior notice to the state; Class III practices require notice and plans; Class IV require compliance with state environmental assessment laws. In California a private party must present a forest management plan prepared by a licensed forester. The plan must meet various requirements for conservation of forest resources. The plans are available for public scrutiny and comment and must be approved by a state board (Z'berg-Nejedly Forest Practices Act of 1973).

In Canada, the Federal Government created an Environmental Assessment and Review Board by cabinet decree in 1973, and EIA became a federal statutory requirement in 1979.[23] However, the federal laws seldom require full EIA of forest projects. Some provinces have adopted general EIA laws,[24] but only three or four apply the laws to forestry activities (Ross 1995: 115; Ross and Saunders 1993: 76).

Specific forest planning requirements vary from province to province, but the trend has been to increase the requirements for planning and the opportunity for public participation. The 1994 Forest Practices Code of British Columbia Act requires companies holding rights to harvest Crown lands to prepare management plans consistent with silviculture prescriptions determined by provincial forest district managers. The companies must give the public notice of the plans and accept public comment. British Columbia also has a 1994 Environmental Assessment Act, but forest plans have been exempted from its provisions by regulation. An attempt in the early 1990s by the B.C. Commission on Resources and the Environment to bring a variety of interests to the table to draw up regional land use plans failed to reach consensus.

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[23] Ross and Saunders 1993: 76-79, citing a Cabinet decree of 20 December 1973; an amendment to the Government Organization Act; and the 1984 Environmental Assessment and Process Review Guidelines Order.

[24] E.g., Environmental Assessment Act, Revised Statute of Newfoundland (1990).

Ontario's Crown Forest Sustainability Act of 1994 requires those holding rights to harvest Crown lands to have a management plan prepared by a certified forester. It also directs creation of local citizen committees to advise the Minister on forestry matters and requires the province to give public notice before granting rights to harvest forest resources.

Saskatchewan's Forest Resources Management Act of 1996 requires integrated land use plans for provincial forests. These plans must allow the public to participate in plan implementation, monitoring, assessment, and revision.

Quebec has been experimenting with a "Forest to Inhabit" project. Through contracts, it transfers limited authority over provincial lands to local governments. The premise is that local governments are closer to the people and more receptive to their participation than the provincial government. The object is to promote forest management that benefits local residents.

3.2.3 Private Challenges to Government Action

After the government makes a decision affecting private or government forests, the law may allow citizens to challenge the decision. The law may allow citizens to bring such challenges administratively (within the agency making the decision) or judicially (by initiating a law suit).

The United States Federal Government has a long tradition of allowing challenges to agency actions. For example, the U.S. Forest Service has long allowed informal and semi-formal administrative appeals of agency decisions. These appeals have been open to anyone affected by a decision. A citizen or NGO that used a forest for recreation or enjoyed its biodiversity could appeal a timber sale to a third party. Non-judicial, line officers of the agency conduct the appeals, and the parties do not need legal assistance to initiate them. Often, the agency conducts the appeal entirely "on paper," without calling a hearing or other face-to-face meeting of the parties involved.

In the 1980s, environmental NGOs used the appeals process freely to challenge timber sales. The timber industry complained that anyone with a postage stamp could delay a timber sale; anyone with a copying machine could churn out enough appeals to tie up dozens of sales. Many of these appeals had merit, though.

The legislative response in the 1990s has been to streamline the appeals process and to encourage interested parties to become involved in agency actions before appealable decisions are made. For actions implementing forest plans, the Forest Service must give public notice and allow 30 days for comment. Only parties that comment are now eligible to file administrative appeals. The agency tries to settle the dispute informally. If that fails, it launches into an expedited formal process.[25]

Agency decisions are also appealable to the courts. The U.S. Supreme Court in the 1970s ruled that NGOs whose members have environmental or aesthetic interests affected by

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[25] 16 U.S.C., section 1612 note (a directive from Congress to revise the appeals process); 36 C.F.R. pt. 215 (agency regulations for appeal of plan implementation).

agency actions have standing to challenge the actions in court.[26] The Court in the 1990s has tended to trim back environmental standing, requiring the plaintiffs to show direct and specific injury from the agency action and clear, non-speculative benefits if they win the suit.[27] The Court has also required the action to be "ripe" - a final agency decision about to have concrete effects, A person objecting to Forest Service long-term, general forest management plan may bring an administrative appeal as soon as the Forest Service decides to approve the plan. But under the ripeness doctrine, the person cannot bring substantive challenge in the courts until the Forest Service takes a specific step to implement the plan.[28]

On at least two occasions, where court suits were threatening to delay large groups of timber sales on federal land, the U.S. Congress has crafted temporary restrictions on appeals. One restriction was the 1989 spotted owl provision (Public Law No. 101-121, sec. 318), discussed below in the section on biodiversity. The other was the 1995 "salvage" provision (16 U.S.C., sec. 1611 note), discussed above in the section on planning. Both these restrictions were highly controversial and were not renewed.

In Canada, the administrative appeals tradition is not as firmly rooted as in the United States. Some provinces have no special mechanism for administrative appeal of agency actions. Those that do may limit participation. For example, the 1994 British Columbia Forest Practices Code Act gives a person subject to a government order the right to an administrative appeal, but a third party affected by the order has no such right,

The Canadian courts have been fairly open to hearing environmental NGO challenges to government forest actions. Courts allow NGOs to bring suits when they are acting to address a serious threat of irreparable harm to a public interest.[29] However, some Canadian courts have been less willing than U.S. courts to enjoin commercial activities related to the forests, giving more weight than U.S. courts do to the harms caused by economic disruptions or judicial intrusion into government policy.[30]

3.2.4 Recognizing Aboriginal Peoples' Rights

The aboriginal peoples of North America occupied and used the continent's forests for thousands of years before European colonists came. The Europeans brought new notions of law and rights to land. The rights to the forests have been a subject of greater or lesser contention ever since.

The legal status of aboriginal people in both the United States and Canada is complex. Sometimes they are treated as sovereign nations, with relations governed by treaties between tribes and modern nation-state. Sometimes they are treated like sub-national governments, subject to federal laws. Sometimes they are treated like wards of the state.

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[26] Sierra Club v. Morton, 405 U.S. 727 (1972).

[27] E.g., Lujan v. National Wildlife Federation, 497 U.S. 871 (1990).

[28] Ohio Forestry Ass'n v. Sierra Club, 66 U.S. Law Week 4376 (U.S. Sup. Ct 18 May 1998).

[29] Sunshine Village Corp. v. Canada (Minister of Canadian Heritage) [1996] 20 Can. Envtl. L. Rpts. (n.s.) 171 (Fed. Ct. App.) (challenge to skiing development in national park).

[30] Algonquin Wildlands League v. Ontario (Minister of Natural Resources) [1996] 21 Can. Envtl. L. Rpts. (n.s.) 102 (Ont. Ct. Justice, General Division).

In the United States, treaties signed in the nineteenth century settled most of the land claims of the aboriginal people. Often the treaties reserved the right to hunt and fish, or have access to lands for religious purposes. These rights occasionally are the basis for legal action over forest management. For example, in the 1980s a tribal association challenged the construction of a road through an area of federal forest considered sacred to tribal members. The suit raised issues of tribal rights and free exercise of religion. Some of these issues reached the Supreme Court.[31] Aboriginal rights to fisheries, particularly the salmon fisheries of the Pacific coast, have led many tribes to participate in forest management planning as advocates for conservation of habitat.

In the United States outside of Alaska, aboriginal lands are largely consolidated into "reservations." The United States holds the title to these lands, but they are held in trust for the tribes. The courts will enforce this trust responsibility. The federal Bureau of Indian Affairs in the Department of the Interior is responsible for land management (Morishima 1997: 4-9; Gordon et al. 1997: 10-14). Under the 1990 National Indian Forest Resources Management Act, forest management of these lands is to be under the general direction of the tribes occupying the land. In Alaska, a 1971 federal law, the Alaska Native Claims Settlement Act, created native-owned corporations and assigned them direct ownership of large portions of the state.

In Canada, the Constitution Act as amended in 1982 affirms existing aboriginal and treaty rights of aboriginal people. Canada like the United States has "reserved lands" that it holds in trust for aboriginals. The Indian Act governs the trust relationship. The Indian Timber Regulations govern granting of timber licenses on these lands. The nation is trying to negotiate with the tribes, now called the First Nations, to give them more autonomy in the use of reserved lands.

Indian claims are not limited to reserved lands. In Canada there are claims for large amounts of other lands, including forests. Uncertainty over the nature of these claims has led to many court cases. Where an aboriginal group holds a valid claim, it may exclude others from the land and put the land to modern uses, such as forest management, that can be reconciled with the group's traditional attachment to the land.[32] The courts have ruled that the federal and provincial governments may regulate aboriginal land use only if the regulations have a "compelling or substantial" purpose, which may range from promotion of economic development to protection of the environment.[33] The regulation also must be consistent with the Crown's fiduciary responsibility to the First Nations.

In a recent case in New Brunswick, a provincial appellate court held that members of the Micmac tribe had a treaty-based right to cut any and all trees on provincial land.[34] This right includes lands on which the province has granted tree cutting tenures to non-aboriginal interests. A recent British Columbia Court of appeal case held that aboriginal claims to trees may constitute an encumbrance to title that precludes the province from issuing a tree farm

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[31] Northwest Indian Cemetery Protective Association v. Peterson, 565 F. Supp. 586 (N.D. Cal. 1983) *affirmed in part and vacated in part,* 795 F.2d 688 (9th Cir. 1986), *reversed and remanded sub nom.* Lyng v. Northwest Indian Cemetery Protective Association, 485 U.S. 439 (1988).

[32] Delgamuukw v. British Columbia [1997] 3 S.C.R. 1010, 1083.

[33] Delgamuukw v. British Columbia [1997] 3 S.C.R. 1010, 1107-11; R. v. Gladstone [1996] 2 S.C.R. 723; R. v. Sparrow [1990] 1 S.C.R. 1075.

[34] R. v. Paul [1997] 193 N.B.R.2d 321 (New Brunswick Queen's Bench).

license to a private interest under the province's Forest Act.[35] The British Columbia Supreme Court recently overturned a provincial cutting permit that would have allowed a private firm to harvest trees in a traditional aboriginal hunting and gathering area.[36]

The uncertainty and the awkwardness of relying on law suits to establish tribal rights have prompted many First Nations to begin negotiations on new treaties delimiting forest ownership (McKee 1996). Over 40 such negotiations are currently underway in British Columbia. The recent court decisions in favor of aboriginal interests have strengthened the aboriginal position in these talks.

3.2.5 Control of Forest-Related Pollution

Though not usually thought of as forestry laws, pollution control laws are forcing increased government oversight of forest practices, particularly in the United States. Both the United States and Canada have developed extensive pollution control laws to protect air and water quality. Both countries' programs focused initially on large industrial sources such as factories and mills, but both extend to the sorts of pollution that might come from forest management, such as water pollution that comes from disposal of logging debris or air pollution that comes from prescribed burning. The need to address small sources to achieve air and water quality goals is giving these laws growing importance in forest matters.

The U.S. federal Clean Water Act sets up a national program of water pollution control States with federal approval take the lead in implementing the program. If a state does not Wish to regulate in this area, the Federal Government will run the program in that state. The law requires the government to set water quality goals for each body of water, including rivers and streams. The law was designed to meet those goals by imposing technology-derived standards on point sources like factories and mills. However, where these standards are not enough to achieve a water quality goal, the state or Federal Government must seek to control other sources or impose stricter controls on point sources.

The federal Clean Water Act calls for states to establish "best management practices" (BMPs) for activities causing diffuse, nonpoint water pollution, such as forestry and agricultural operations. Most states have established forestry BMPs through their forestry laws and forestry agencies, rather than through their pollution control laws and agencies (Environmental Law Institute 1997: 32-36). In many states, compliance with BMPs is voluntary. The government's role is simply to educate landowners and loggers about good practices.

A few states have adopted "bad actor" laws that allow state authorities to issue special orders to make BMPs or other requirements enforceable if evidence of environmental harm exists. For example, in Virginia, the State Forester, after holding a hearing, may issue a special order against a particular person to abate silvicultural practices not recognized as BMPs that are causing or about to cause pollution (Code of Virginia, sec. 10.1-1181.2).

In other states, BMPs are mandatory and apply broadly to forestry operations. For example, in Nevada, logging permits require compliance with BMPs as a condition of the

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[35] Haida Nation v. British Columbia (Minister of Forests) [1997] 98 B.C.A.C. 42.

[36] Metecheah v. Ministry of Forests (B.C. Sup. Ct. 24 June 1997).

permits.[37] Oregon requires logging operators to follow BMPs and allows the public to petition the state Board of Forestry to adopt stronger BMPs (Oregon Revised Statute, secs. 527.724 and 765).

The federal Clean Water Act also outlaws deposit of material in wetlands without ä permit. The Act has a narrowly construed exception for "normal" silviculture activities. However, the filling of a wetland to create a pine plantation or the clearing of a forested wetland for conversion of the land to agriculture (and the associated shifting of soil and deposit of cleared vegetation) are not considered normal silviculture and require federal permits (33 C.F.R., sec. 323.4). The permit program is designed to minimize environmental harm from these kinds of activities. To get a permit for an activity that would harm a wetland, a developer might have to agree to mitigate the harm by restoring an area of degraded Wetlands nearby (33 C.F.R., sec. 320.4(r)).

United States air pollution control, like water pollution control, is driven by a federal system with invited state participation. Most states do participate and take over from the Federal Government the primary role of air pollution control, imposing standards as strong or stronger than those in the federal laws.

A major air pollution concern in the United States and Canada has been the threat that acid precipitation poses to natural ecosystems, including forests. Most of the pollutants causing acid rain in North America come from large coal-burning power plants. The largest concentration of these is in the Ohio River Valley in the United States and prevailing winds carry it to the northeastern United States and southeastern Canada. The northeastern state of Maine specifically empowers its State Forester to monitor the forests for air pollution effects (12 Maine Revised Statute, sec. 8101(1)(A)).

In 1990, pressed by Canada, the United States enacted an emissions trading program for acid rain precursors from large industrial sources (Clean Air Act, title IV, secs. 401-415). As this program phases in during the 1990s, emissions of the precursors will be cut in half, greatly reducing acid rain.

Another air-related emerging issue for forestry operations is a provision in the federal Clean Air Act designed to protect air-quality-related values in parks and other reserved lands and, in particular, to protect visibility (42 U.S.C., secs. 7401-7671q; 42 U.S.C., secs. 7491 and 7492). Particularly in the western United States, which has a greater number of parks than the east, visibility protection is an issue. The Federal Government has recently proposed new rules that would require the states to make "reasonable further progress" towards eliminating human-caused regional haze that affect protected areas.[38]

One source of visibility impairment is the use of fire to dispose of logging debris or to remove unwanted vegetation. The state of Oregon, for example, has rules requiring prescribed forest burning to be consistent with the state's Smoke Management Plan (Oregon Admin. Rules sec. 629-615-0300).

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[37] Nevada Revised Statute, section 528.042 (requires permit); Nevada Admin. Code, section 445A.340 (requires permit to include BMPs).

[38] Environmental Protection Agency, Regional Haze Regulations Notice of Proposed Rulemaking, 62 Fed. Reg. 41138 (31 July 1997), *public comment period extended*, 62 Fed. Reg. 55202 (23 October 1997).

Fire is a natural factor in some North American forest ecosystems. Some foresters have come to believe that decades of fire exclusion by forest managers has altered these ecosystems, changing their species make-up and making them prone to catastrophes like insect outbreaks. They believe that managed reintroduction of fire is necessary for the health of these forests. This desire for ecosystem health will have to be reconciled with the demands for improved air quality.

Canada also has some forest-related pollution control issues. In Canada, the federal government's main authority over water quality derives from its authority over fisheries. In 1980, the Supreme Court ruled that this authority allows the government to regulate disposal of logging debris in inland waters only if the disposal would cause harm to fish.[39] However, the Federal Government can (and does) outlaw dumping of logging debris in coastal waters, because the courts have ruled marine pollution to be an area of national concern.[40]

The provinces have the lead in regulating both water and air pollution. As in the United States, their water pollution laws are mostly focused on industrial pollution sources. Provincial forest practice laws often include provisions to protect Streams or aquatic habitats. However, forestry water quality issues (as distinguished from habitat protection issues) seem to have a lower profile among the provinces than among the states.

3.2.6 Endangered Species and Biodiversity

In the United States, the central federal biodiversity laws affecting forests date to the 1970s. Under the Endangered Species Act of 1973 (ESA), as amended, the United States maintains a list of threatened and endangered plants and animals. Citizansand NGOs may file petitions requesting that species be listed, and the government must respond in a timely and reasoned manner.

Listing of a species triggers several obligations. The law requires the Federal Government to designate critical habitat and create recovery plans for listed species. Federal agencies have a duty to help conserve listed species and must follow formal consultation procedures to seek the advice of federal wildlife officials if a project may adversely affect a listed species. The law also prohibits trade in listed species and implements the Convention on International Trade in Endangered Species (CITES).

The ESA has broad prohibitions on "taking" listed animals, and the courts have enforced these with injunctions, presuming protection of the species to be in the public interest.[41] The U.S. Fish and Wildlife Service has interpreted "take" in the ESA to include

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[39] Fowler v. R. [1980] 2 S.C.R. 213. The water quality provisions that may affect logging are in the Fisheries Act, Revised Statute of Canada 1985, chapter F-14, sections 33(3), 35 and 36. The *Fowler* case declared the general prohibition in section 33 against depositing logging debris in fish habitat too broad, as it covered actions that might be harmless to the fish.

[40] R. v. Crown Zellerbach Canada Ltd. [1988] 1 S.C.R. 401. The current statutory provision regarding ocean disposal of logging debris is in the Canadian Environmental Protection Act, Revised Statute of Canada 1985, chapter C-15.3, section 67(2).

[41] Tennessee Valley Authority v. Hill, 437 U.S. 153 (1978) (The U.S. Supreme Court held that the Endangered Species Act creates a presumption of public interest in protecting listed species; the proper remedy for an incipient taking is an injunction).

"significant habitat modification or degradation where it actually kills or injures wildlife" by impairing important behaviors like feeding or breeding (50 C.F.R., sec. 17.3).

On the federally-owned national forests, the planning regulations of the U.S. Forest Service go further than the ESA to protect biodiversity. For planning purposes, theses lands are divided into about 125 separate forests. Each forest must have a long-term land and resource management plan, and the forest plan must provide for "viable populations of existing native and desired non-native species" (36 C.F.R., sec. 219.19).

Species listings and planning regulations have had major impacts on forest management in many regions of the country. Species of concern in forests include populations of pacific salmon (in the Northwest), the marbled murrelet (in the Northwest), the red-cockaded woodpecker (in the Southeast), and the Mexican spotted owl (in the Southwest).

The most dramatic example of the power of wildlife laws and the role of NGOs and courts in implementing them involves the northern spotted owl in the forests of Pacific Northwest. The U.S. Fish and Wildlife Service (FWS) listed the owl as threatened under the ESA after NGOs sued the government for arbitrarily denying a citizen petition to list the bird.[42] NGOs then sued the Forest Service, challenging that the standards for managing the owl in the national forests were inadequate under the NFMA and NEPA.[43] Congress responded by temporarily exempting certain timber sales in the affected region from these laws and limiting appeals and judicial review (Public Law No. 101-121, sec. 318), but this controversial provision was allowed to expire. Next, NGOs successfully sued to force the FWS to designate critical habitat for the species.[44] Subsequent NGO suits against federal land management agencies virtually stopped harvests on federal forests with owl habitat.[45] Eventually, President Clinton ordered preparation of a plan to protect biodiversity in Northwest forests while addressing the economic and social disruption to local communities dependent on the timber industry.

Habitat protection is largely responsible for significant reduction in timber harvests on the national forests between 1989 and 1994 (U.S. Bureau of the Census 1997: 689). The largest drops occurred on spotted owl forests.

The ESA prohibition on taking listed animals also applies on private lands. In a case concerning protection of spotted owls habitat on private forests, the Supreme Court upheld the government's interpretation of "take" to include habitat alteration.[46]

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[42] Northern Spotted Owl v. Hodel, 716 F. Supp. 479 (W.D. Wash. 1988). The Government chose not to contest naming the species as the lead plaintiff in this suit. It could have. From time to time you will see a species named as a plaintiff in U.S. courts, but no U.S. Court asked to rule on the question has yet given a species the right to sue.

[43] Seattle Audubon Society v. Robertson, Civ. No. 89-160 (W.D. Wash 24 March 1989) (order temporarily enjoining timber sales).

[44] Northern Spotted Owl v. Lujan, 758 F. Supp. 621 (W.D. Wash. 1991).

[45] Seattle Audubon Society v. Evans, 771 F. Supp. 1081 (W.D. Wash. 1991) *affirmed* 952 F.2d 297 (9th Cir. 1991); Seattle Audubon Society v. Moseley, 798 F. Supp. 1473 (W.D. Wash. 1992) *affirmed sub nom.* Seattle Audubon Society v. Espy, 998 F.2d 699 (9th Circular 1993).

[46] Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 115 S. Ct. 2407 (1995).

Some private land owners have claimed that federal attempts to regulate private land use for wildlife under the ESA amount to federal confiscation of land in violation of the federal Constitution. They have sought compensation in the courts for the loss of land values. The courts have struggled to draw a line between permissible regulation and impermissible confiscation of lands. Federal legislators have proposed bills that would require the government to pay landowners if environmental laws reduce the market values of land by more than twenty percent.[47] These bills have not been enacted. Courts have generally been reluctant to order such payments unless the regulation deprives the owner of all economic use of the property.[48]

The Federal Government has been trying to head off controversies over endangered species by making agreements with private land owners. The ESA allows the government to approve habitat conservation plans (HCPs). Under an HCP, land owners promise to take specific steps to help conserve and recover a listed species on their land. In return, they are allowed to undertake actions, such as timber harvest, that might incidentally take a limited number of the protected plants or animals. The Government has had the power to adopt HCPs for over 20 years, but only in the last five years has the government aggressively used this tool.

Some members of Congress and the Secretary of the Interior have agreed on a package of reforms for the ESA.[49] Some of the reforms are widely supported. For example, forest owners in the southern pine region now have strong incentive to cut trees before they become old enough to attract the protected red-cockaded woodpeckers. Under the current law, once a woodpecker arrives, the habitat becomes protected *under* the proposed law, a private landowner would be able to adopt an ongoing management plan that called for harvest of trees at an older age, providing temporary habitat for the woodpecker at the end of each tree-growing cycle, without fear of losing the ability to harvest trees. Other provisions of the reform bill soften current protections and trouble the environmental community. On the other side of the issue, NGOs representing property owners do not think the bill goes far enough. The bill's prospects are uncertain.

The states have a varied role in protecting biodiversity (Defenders of Wildlife and Center for Wildlife Law 1998). All fifty states have cooperative agreements with the Federal Government covering specific projects to help conserve federally listed species. Forty-five of the states have their own endangered species laws, though most of these only prohibit harming or buy and selling listed species. A few such as California have laws modeled on the federal act that include habitat protection, planning for recovery, and other features (California Fish and Game Code).

One administrative trend among state fish and wildlife agencies has been to create or expand non-game divisions that promote habitat conservation and wildlife-related recreation other than hunting and fishing. Still, these divisions usually have less funding than state game programs.

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[47] E.g., H.R. 9 and S. 605, bills introduced in the 104th Congress, 1st Session (1995).

[48] E.g., Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992) (compensation owed for land use law preventing any development on coastal barrier island property).

[49] Introduced in bill form as section 1180, 105th Congress, 1st Session (1997).

A few states have innovative biodiversity initiatives. Florida has a Preservation 2000 Act, first passed in 1990 and amended in 1995 and 1997, that directs the acquisition of land to protect habitat and ecosystem integrity, The acquisitions are funded by sale of state-backed bonds. In 1992, Colorado voters amended the state constitution to require state lottery profits to be spent on habitat and parkland acquisition. California has begun a bioregional planning effort stemming from an Agreement on Biological Diversity signed by state and federal agencies.

Oregon has developed a Coastal Salmon Restoration Initiative covering many heavily forested areas along its Pacific coast. The adoption of this plan initially convinced the Federal Government to delay placing the state's coho salmon populations on the federal endangered species list. However an NGO won a trial court ruling that the ESA does not allow the Federal Government to rely on a largely voluntary program to protect and recover a species. The Court ordered the Federal Government to reconsider listing the salmon.[50]

In Canada, there is no single strong federal law addressing endangered species. The constitutional allocation of authority over resources to the provinces makes it questionable whether the nation could ever have a federal law as strong as the United States'. The Government introduced Bill C-65 to create a federal endangered species law in Parliament in 1996, but the bill was controversial and it was not enacted.

Nonetheless, Canada does have some important federal laws and initiatives to protect endangered species. The Canada Wildlife Act gives the Minister of the Environment broad discretion to act in cooperation with provincial authorities "for the protection of any species of wildlife in danger of extinction." A national Committee on the Status of Endangered Wildlife in Canada (COSEWIC) compiles a list of species of concern.

In 1992, Canada passed a federal Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act, and in 1996, upon securing the approval of the provinces, the government promulgated implementing regulations. Among other things, this serves as the implementing legislation for CITES in Canada. Also in 1996, federal and provincial ministers agreed in principle to a National Accord for the Protection of Species at Risk. The accord creates a ministerial-level Canadian Endangered Species Conservation Council and commits the provinces to enacting complementary species protection laws.

Some provinces do have endangered species laws, but not as uniformly strong as the U.S. law. One study by two NGOs compared the British Columbia law with the U.S. law as the two stood in 1993 (Haddock 1995). It found that in British Columbia listing species was a policy matter left entirely to the discretion of the Cabinet, that the law had no protections for critical habitat, and that the law did not require the government to prepare a recovery plan.

3.2.7 Protected Areas

Both the United States and Canada have a history of placing areas off-limits to timber harvest or other significant habitat modification. The U.S. Congress gave the Yosemite Valley to California as a state preserve in 1864 (Act of 30 June 1864). California later returned it to the Federal Government to create a national park. The Congress created the first

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[50] Oregon Natural Resources Council v. Daley, CV-97-1155-ST, 1998 WL 296838 (D. Or. 1 June 1998).

national park, Yellowstone, in 1872 (Act of 1 March 1872). The state of New York set aside a huge Adirondack forest reserve in the 1880s and amended its constitution in 1894 to declare the reserve to be kept "forever wild."

In the 1960s, Congress created two new designations for federal lands limiting development. Congressionally designated wilderness areas cannot have so much as a road built through them (Wilderness Act). Congressionally or administratively designated wild or scenic river corridors have a range of restrictions on use, the most stringent being equivalent to wilderness status (Wild and Scenic Rivers Act).

An ongoing issue in the United States has been what to do with federal lands that still are wild and roadless but have never been legally set aside from exploitation. In the 1970s and early 1980s, the courts effectively stopped timber harvests on these lands because the managing agencies had failed to comply with environmental impact assessment laws.[51] Congress in the 1980s reviewed the status of these lands on a state-by-state basis and passed laws designating parts of the areas wilderness and opening the remainder to timber harvest (e.g., the California Wilderness Act of 1984). In 1997, though, the Secretary of Agriculture declared a limited moratorium on timber harvest in these lands. The timber industry has not been happy about this action. The long-term fate of these lands probably rests with Congress.

Another ongoing issue is whether the set-aside lands truly form a representative selection for protecting values such as biodiversity. Most of the parks were set aside for recreation purposes. Many of the wilderness areas are high-altitude lands that stayed roadless into the twentieth century because they were inaccessible or had low value even as timber land. Also, scientists have come to recognize that some species, such as grizzly bears, require huge tracts of land to support viable populations. Even such large areas as Yellowstone Park may not be large enough.

Not all protected land is in public hands. Some is held privately by NGOs, such as the Nature Conservancy or the Trust for Public Land. Purchasing and holding land is expensive, though. Most states recognize NGOs as charities and do not levy property taxes on their landholdings. Most states recognize a special property interest, the conservation easement. A private property owner may transfer an easement to the government or to an NGO and thereby give up the right to develop the land. The easement may also require the owner to allow public access to all or part of the land. In return, the owner usually reaps tax advantages. A federal conservation reserve program offers farmers subsidies if they commit environmentally sensitive lands to conservation purposes, for example, by planting trees near streams to benefit water quality (16 U.S.C., secs. 3830-3862).

In Canada, the trend has been to increase the amount of protected areas. The Canadian National Park system has long held some world famous reserves, such as Banff and Jasper. In 1992 the Canadian Council of Ministers of the Environment, the Canadian Parks Ministers Council, and the Wildlife Ministers Council of Canada committed to set aside representative protected areas within their jurisdictions by the year 2000. British Columbia has designated over 100 new parks and other protected areas since 1992, and as of October 1994, 8.6 percent

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[51] Wyoming Outdoor Coordinating Council v. Butz, 484 F.2d 1244 (10th Circular 1973) (Forest Service's first national Roadless Area Review and Evaluation (RARE I) held not to satisfy impact assessment requirements); California v. Block, 690 F.2d 753 (9th Circular 1982) (Forest Service's RARE II held similarly inadequate).

(82,000 km^2) of the province had some sort of protected status (Dudley, Jeanrenaud and Sullivan 1995: 66). The Federal Government has announced that twelve percent of the federal lands now have some sort of protected status. One environmental group, the B.C. Sierra Club, has called this statistic misleading, including a large amount of lands with insufficient legal protection.

3.2.8 Taxation

Taxes affect the economic decisions of private owners of forest lands. General taxation systems, such as real estate taxes or income taxes, can actually discourage investment in long-term forest management unless the systems include special provisions for forestry. Though jurisdictions have made relatively few major changes in timber taxation in recent years, many reforms are under discussion.

Income taxes can affect forest management decisions in complex ways. The tax is based on the amount of income less the amount of deductible expenses. Forest owners prefer management expenses to be deductible in the year in which they are incurred (as opposed to the year in which the timber is sold).

The United States federal income tax code allows landowners to amortize reforestation costs. They may deduct the costs from income over a period of eight years, rather than deduct them far in the future when the timber is sold, and may take some of the costs as a direct credit against tax (26 U.S.C., secs. 48(b) and 194(a)).

However, passive loss rules, added to the U.S. tax code in 1986, limit the deductibility of expenses unless the tax payer personally devoted a minimum number of hours in the year to the business incurring the expense (26 U.S.C., sec. 469). These rules make forestry a less attractive investment for small landowners that do not devote large amounts of time to their woodlots every year (Byrne 1991: 729).

Canadian federal income tax law generally treats woodlot owners like farmers. It too limits deductions of woodlot losses when the woodlot is a minor part of the tax payer's income (1985 Income Tax Act; Ross 1995: 217-19).

In the United States, small forest owners seek changes in the estate (i.e., inheritance) tax laws. When a forest owner dies, the tax due on the owner's estate may force the heirs to sell the land or prematurely cut the timber to raise money to pay the tax. Current owners would like to see estate taxes reduced or postponed if the heirs commit to keeping the land forested. The U.S. Congress partially addressed this problem in 1997, reducing estate taxes on certain lands subject to conservation easements (26 U.S.C., sec. 2031(c)).

States and provinces generally levy annual property taxes based on the value of real estate. These tax laws, well suited to land uses that produce annual incomes, can discourage forest management. If the value of the land reflects the value of the trees, the tax encourages the owner to cut the trees before they grow too valuable. Once the owner has cut the trees, the prospect of an annual tax with no significant income from the land for several years may discourage reforestation and encourage the owner to find another use for the land. If the tax is based on the land's value on the open market (for example, what price the land might fetch if

sold for agriculture or urban use rather than as a forest), the high tax may increase the owner's incentive to sell the land or convert it to a higher income use.

The legislative response to these problems began early in this century, with refinements continuing up to the present. One approach has been to stop the annual tax on the value of the trees and substitute a yield tax due when the trees are sold or cut. Some jurisdictions have reduced tax rates for owners who commit to forest management. Some have promised to assess such lands at their "current use" as forests, regardless of their market value for other uses. Jurisdictions that have adopted variations of these approaches include British Columbia,[52] New Hampshire,[53] and New York,[54] but there are many others.

3.2.9 Forest Offenses

The United States has not used criminal law extensively as a tool for forest regulation. For example, the present U.S. federal criminal laws on forests take up only twelve sections of the U.S. Code and, with the exception discussed below, have not seen significant substantive amendment in decades (18 U.S.C., secs. 1851-1863). The laws establish penalties for theft or destruction of timber or forest products, willful or negligent setting of fires, destruction of fencing, unauthorized grazing, interference with land surveys, collusion or fraud in land transactions, and trespass on enclosed lands.

In contrast, the 1994 Forest Practices Code of British Columbia establishes criminal penalties for violations of over fifty provisions of the law. It establishes fines of up to one million Canadian dolíais and three years imprisonment for the most serious offences, with doubled penalties for second and subsequent offences. Violators may also face compliance orders and orders to pay restitution for actual damages.

The British Columbia law also recognizes a general offense of irreparable damage. This offense consists of causing one or more hectares of Crown land to be unable to support the growth of trees of the same species, health, and vigour as before. There are exceptions for certain lawful activities such as road building. The penalty is a fine of up to one million Canadian dollars per hectare damaged.

One recent development in forest offences common to both the United States and Canada has stemmed from the rise in citizen protests against logging, particularly against harvest in especially old stands. A few of these protests have taken the form of non-violent civil disobedience, where citizens physically block access to the forests by chaining themselves to road gates or to trees. More rarely, the protests have included tree spiking. By placing spikes in the tree trunks, protesters make the trees dangerous to harvest. These spikes destroy any mill saws that encountered them, at considerable danger to the mill workers.

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[52] Assessment Act, Revised Statutes of British Columbia (1996), chapter 20, section 24.

[53] New Hampshire Revised Statutes Ann., chapter 79 (Forest Conservation and Taxation - establishes yield tax) and chapter 79-A (Current Use Taxation - values certain forest and agricultural lands at current use).

[54] New York Real Prop. Tax Law, section 480(a) (reduced valuation and yield tax for certain forest lands).

Jurisdictions in both the United States and Canada have moved to increase the criminal penalties for this behavior. British Columbia, for example, criminalized tree spiking in sections 103 and 144 of its 1994 Forest Practices Code Act. In 1991 Maine added tree spiking to its criminal mischief law. The United States Congress has made tree spiking a federal crime (18 U.S.C., sec. 1864).

IV. CONCLUSION

What can be learnt from the experiences of the United States and Canada in recent years? In some ways, the North American forest situation is unusual, with large areas of relatively undisturbed temperate forests existing within highly industrialized, urbanized nations. However, the diversity of jurisdictions and forests offers models for many different forest situations: public lands managed for multiple uses, public lands managed for dominant timber uses, private lands managed for timber, private lands managed for various independent uses, and intermixtures of public and private lands.

In all these areas, the governments have had to deal with the growing worldwide push towards more consideration of non-timber values such as biodiversity. The jurisdictions have each responded in their own way, but the general trend has been towards broadening management objectives, strengthening wildlife laws, employing EIA or planning tools, and increasing opportunities for public participation in public lands management. The jurisdictions have also tested a variety of tools to encourage private land owners to become better forest managers.

As our knowledge of the forest and our demands for forest resources change, our laws will also have to change. North America offers at least sixty legal laboratories where one can study these changes, and learn from them.

LEGISLATION REVIEWED

CANADA

- Constitution Act, 1867.
- Constitution Act, 1982.
- Environmental Protection Act, Revised Statutes of Canada 1985, chapter C-15.3.
- Fisheries Act, Revised Statutes of Canada 1985, chapter F-14.
- Income Tax Act, Revised Statutes of Canada 1985,5th Supp., chapter 1.
- Indian Act, Revised Statutes of Canada 1985, chapter 1-5.
- Indian Timber Regulations, C.R.C. 1978, chapter 961, as amended.
- Migratory Bird Convention Act, Act of 23 June 1994, chapter 22,1994 S.C., Vol. 2, p. 173.
- Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act, Act of 17 December 1992, chapter 52,1992 S.C., Vol. 2, p. 1563.
- Wild Animal and Plant Trade Regulations, SOR 196-263,130 Canada Gazette, Pt. II, 1758 (14 May 1996).
- Wildlife Act Revised Stales of Canada 1985, chapter W.9

British Columbia

- Assessment Act, Revised Statutes of British Columbia (1996), chapter 20.
- Environmental Assessment Act, 1994 Statutes of British Columbia, chapter 35.
- Forest Practices Code of British Columbia Act, 1994 Statutes of British Columbia, chapter 41.

Newfoundland

- Environmental Assessment Act, Revised Statutes of Newfoundland (1990), chapter E-14.

Ontario

- Crown Forest Sustainability Act, 1994 Statutes of Ontario, chapter 25.

Quebec

- Act of 19 Dec. 1986, 1986 Statutes of Quebec, chapter 108 (amending the Forest Act).
- An Act to Amend the Forest Act and Other Legislative Provisions, Act of June 20, 1996, 1996 Statutes of Quebec, chapter 14.
- Forest Act, Revised Statutes of Quebec, chapter F-4.1

Saskatchewan

- Forest Resources Management Act, Act of 25 June 1996, 1996 Statutes of Saskatchewan, chapter F-19.1.

UNITED STATES

- U.S. Constitution
  - Amendment XVI (income tax).
  - Commerce clause, article I, section 8, cl. 3.
  - Property clause, article IV, section 3, cl. 2.
- 18 U.S.C., sections 1851-1864 (regarding offences on public lands and forests).
- Act of 30 June 1864, chapter 184, 13 Statute 325 (granting title of the Yosemite Valley to California to create a state park).
- Act of 1 March 1872, chapter 24, 17 Statute 32, codified as 16 U.S.C., section 21 (creating Yellowstone National Park).
- Act of 3 March 1891, chapter 561, sections 24 and 26 Statute 1095, 1103. (empowering the President to create forest reserves).
- Alaska Native Claims Settlement Act, 43 U.S.C., sections 1601-1642.

- California Wilderness Act of 1984, Public Law No. 98-328, 98 Statute 1619.
- Clean Air Act, 42 U.S.C., sections 7401-7671q.
- Environmental Protection Agency, Proposed Regional Haze Regulations, 62 Federal Regulation 41138 (31 July 1997).
- Clean Water Act, 33 U.S.C., sections 1251-1387.
- Corps of Engineers regulations concerning activities in wetlands, 33 C.F.R., sections 320.4(r), 323.4.33.
- Endangered Species Act, 16 U.S.C, sections 1531-1544.
- Fish and Wildlife Service, regulation interpreting meaning of "take", 50 C.F.R., section 17.3.
- Erodible Lands and Wetlands Conservation and Reserve Program, 16 U.S.C., sections 3801-3862.
- Federal Land Planning and Management Act, 43 U.S.C., sections 1701-1782.
- Forest and Rangeland Renewable Resources Planning Act, codified with the National Forest Management Act at 16 U.S.C., sections 1600-1614 and other scattered sections of Title 16.
- Internal Revenue Code, U.S.C., title 26.
- Migratory Bird Treaty Act, 16 U.S.C, sections 703-712.
- Multiple Use Sustained Yield Act, 16 U.S.C, sections 528-531.
- National Environmental Policy Act, 42 U.S.C, sections 4321-4370a.
- Council on Environmental Quality NEPA regulations on environmental impact assessment, 40 CF.R.,pts. 1500-1508.
- National Forest Management Act, 16 U.S.C, section 1600-1614.
- 16 U.S.C, section 1611 note (1995 provision regarding procedures for timber salvage sales).
- 16 U.S.C, section 1612 note (directive from Congress to revise the administrative appeals process).
- Forest Service planning regulations, 36 C.F.R., pts. 215-221.
- National Indian Forest Resources Management Act, 25 U.S.C, sections 3101-3120.
- Public Law No. 101-121, section 318, 101st Congress, 1st Session, 103 Statute 745 (1989) (temporary provision regarding timber harvests on federal forests with habitat for spotted owls).
- Sustained-Yield Forest Management Act, Act of 29 March 1944, chapter 146, 58 Statute 132.
- Wild and Scenic Rivers Act, 16 U.S.C., sections 1271-1287.
- Wilderness Act, 16 U.S.C, sections 1131-1136.
- H.R. 9, 104th Congress, 1st Session (1995) (bill to compensate property owners for declines in land value due to environmental regulation).
- S. 605, 104th Congress, 1st Session (1995) (bill to compensate property owners for declines in land value due to environmental regulation).
- S. 1180, 105th Congress, 1st Session (1997) (bill to reform the Endangered Species Act).
- S. 1253, 105th Congress, 1st Session (1997) (bill to reform national forest planning).

California

- California Fish and Game Code, sections 2060-2116 (provisions regarding endangered species).
- Z'berg-Nejedly Forest Practices Act of 1973, California Public Resources Code, sections 4511-4628.

Colorado

- Constitution, Article XXVII (regarding expenditure of state lottery funds for land acquisition).

Florida

- Preservation 2000 Act, Florida Statute, section 259.101.

Idaho

- Constitution, article 9, section 4 (regarding management of state lands).

Maine

- 12 Maine Revised Statute, section 8101(1)(A) (provision regarding monitoring of orests for air pollution impacts).
- 12 Maine Revised Statute, section 8869(3) (provision requiring submission of plans for large clearcuts).
- 17-A Maine Revised Statute Ann., section 806 (provision making tree spiking an offense).

New Hampshire

- New Hampshire Revised Statute Ann., chapter 79 (Forest Conservation and Taxation).
- New Hampshire Revised Statute Ann., chapter 79-A (Current Use Taxation).

New York

- Constitution, article 7, section 7 (1894) (concerning the Adirondack preserve).
- New York Real Prop. Tax Law, section 480-a (reduced valuation and yield tax for certain forest lands).

Nevada

- Nevada Revised Statute, section 528.042 (provision requiring permit for forest activities).
- Nevada Administrative Code, section 445A.340 (requires permit to include water quality best management practices).

Oregon

- Constitution, article VIII, sections 2 and (5)(2) (regarding management of state lands).
- Forest Practices Act, Oregon Revised Statute, sections 527.610-992.
- Oregon Admin. Rules, section 345-023-0010(2) (greenhouse gas mitigation).
- Smoke Management Plan, Oregon Admin. Rules, section 629-615-0300.

Virginia

- Code of Virginia, section 10.1-1181.2 (provision regarding water pollution from forestry activities).

Washington

- Constitution, art. IX, section 3 (regarding management of state lands).
- Rev. Code of Washington, sections 76.09.350-360 (1997 provision authorizing state-funded forest management demonstration projects on private lands).
- Rev. Code of Washington, section 76.09.050 (provision concerning notice, planning, and EIA of forest practices).

Wisconsin

- 1995 Wisconsin Act 257, codified at Wisconsin Statutes, section 28.04 (regarding management objectives on state forests).

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- R. v. Crown Zellerbach Canada Ltd. [1988] 1 S.C.R. 401.
- R. v. Gladstone [1996] 2 S.C.R. 723.
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- Metecheah v. Ministry of Forests (B.C. Sup. Ct., 24 June 1997).
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New Brunswick

- R. v. Paul [1997] 193 N.B.R.2d 321 (New Brunswick Queen's Bench).

Ontario

- Algonquin Wildlands League v. Ontario (Minister of Natural Resources), 21 Can. Envtl. L. Rpts. (n.s.) 102 (Ont. Ct. Justice, General Div., 1996).

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- Lujan v. National Wildlife Federation, 497 U.S. 871 (1990).
- Ohio Forestry Ass'n v. Sierra Club, 66 U.S. Law Week 4376 (U.S. Sup. Ct. 18 May 1998).
- Missouri v. Holland, 252 U.S. 416 (1920).
- Sierra Club v. Morton, 405 U.S. 727 (1972).
- Tennessee Valley Authority v. Hill, 437 U.S. 153 (1978).

Circuit Courts of Appeal

- California v. Block, 690 F.2d 753 (9th Circular 1982).
- Wyoming Outdoor Coordinating Council v. Butz, 484 F.2d 1244 (10th Circular 1973).

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ASIA AND THE PACIFIC

by
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Contents

SUMMARY

This chapter highlights trends and innovations in forestry legislation, focusing primarily on legislation and legislative proposals in sixteen countries in Asia and the Pacific: Bhutan, China, Cambodia, Fiji, India, Indonesia, Laos, Malaysia, Mongolia, Myanmar, Nepal, Papua New Guinea, the Philippines, Tonga, Vanuatu, and Vietnam.

Major legislative trends include (i) decentralisation of forest operations and management, (ii) adaptation of forest practices, institutions and markets to changing economic situations and approaches, and (iii) embracing new concepts of sustainability of forest resources and maximisation of biodiversity. These trends are reflected in many diverse elements of forest legislation, including provisions that promote the adoption of community and private forest systems, provide clearer recognition of customary use rights, provide for broader public participation in the management planning process, and allow for greater flexibility in the control of forest use and management. Although this chapter does not assess the changing national policy environment which produces laws and regulations in each country, these legislative documents appear to evidence basic underlying changes in forestry policy and forest management.

Legislative innovations to achieve these policy goals have included the redefinition of "forests", the requirement of legally-binding management plans, the integration of environmental impact assessment into the forestry sector, establishment of forestry funds and provision of financial and technical incentives to nongovernmental forest-using entities. This study concludes by summarising some of the areas for further legislative reform and highlighting those obstacles which are likely to be faced in changing forest legislation in the region.

I. INTRODUCTION

Asian forests and forestry span a wide range on nearly every scale which can be applied. The variety of forest types and topographies is only equalled by the variety of forest objectives and approaches. Governmental objectives run the gamut from the primarily commercial (Myanmar, Cambodia, Malaysia) to a primary emphasis on conservation and recovery (Bhutan, Mongolia, Vietnam).

Moreover, the socio-economic factors which shape the countries' needs and attitudes with regard to the forest sector are extremely diverse and in many cases undergoing dramatic changes. In many countries an increase in the importance of market factors is a result of direct governmental transition from centrally planned economic systems. In others, a variety of factors (including proximity to transitional economics) may be shaping or re-shaping forestry markets and the legislative approaches needed to deal with them.

Finally, principles and commitments are described in a number of recent international documents, including (in addition to the Rio Forest Principles), the Framework Convention on Climate Change (Rio 1992), the Convention on Desertification (Paris 1994), Agenda 21, and the Convention on Biological Diversity (Rio 1992). All have informed and affected governmental policy throughout the region to a degree. As a result, greater emphasis on environmental and social principles (conservation, local empowerment, etc.) is apparent in the legislation.

This chapter focuses on some Asian countries whose forest legislation has been adopted or revised during the last 15 years or so. Its objective is to describe "trends and innovations". As such, while it attempts to identify concepts which are common to all or even a majority of the countries studied, it will also identify useful approaches that are innovative, as well as those which have been implemented in only a few countries, where appropriate. Identification of trends has been based on a review of the legal documents themselves and of recent scholarly evaluations of those documents. This chapter makes no attempt to evaluate implementation or underlying policy. It presumes, however, that the existence of national legislation evidences a governmental intention to address the problems discussed below.

Overall, the trends in Asian forestry law can be considered in three categories: broadening of private rights with regard to the ownership and use of forest lands and forest resources; re-examining the structure of the sector in light of national economic and social changes; and emphasising non-timber forest values (ecological, social) as a complement to timber production uses.

The following discussion utilises these categories for organizational purposes. However, in a very real sense, it is impossible to separate them as many (perhaps most) of the more specific provisions discussed below have impacts and objectives under all three headings.

II DECENTRALISATION, DEVOLUTION AND PRIVATISATION IN FORESTRY

A clear trend, reflected in nearly every country studied is that of decentralisation -both in forest administration and in forest management and use. With the exception of countries already fully utilising decentralised institutions and approaches, all countries appear to have taken, at least, some steps toward enhancing the roles of local administrations and forest users in the creation and implementation of forestry objectives, legislation, planning, projects and management. Even in countries where the state's ownership monopoly on forest lands and products remains essentially intact, rights of community and private forest use and management have been enhanced, and governmental commitments to their extension have been voiced. These developments are legislatively reflected in changes in forestry administration, enhanced opportunities for forest ownership, and public participation in forestry decisions.

2.1 Decentralisation of Forest Administration

Decentralisation of governmental responsibilities by increasing direct authority at local and district levels has always required a balance between the advantages of local administration (local responsibility, awareness and flexibility) and the need for oversight of local officials. Governmental responsibilities in the forest sector involve the granting and policing of rights to a valuable resource; hence, the need to ensure scrupulous compliance often leads to a minimisation of the power and authority of local officials, who have sometimes been forbidden to take any action without central approval. Although central authorities continue to bear primary responsibility for forest planning and management, reorganization of the forest administration has emerged as an important element in recent forestry law reforms. In several countries, this restructuring is embodied, at least in part, in laws rather than rules or administrative documents (Myanmar, Law 1992, articles 9-11; Philippines, Code 1975, articles 4-12; Fiji, Decree 1992).

Recent legislation generally tends to extend the role of local officials[1], who are given direct permitting, project and other sectoral responsibilities in certain situations. In the Philippines, for example, responsibilities relating to all community based upland development projects were devolved or transferred to local government units pursuant to the Local Government Code of 1991. Following devolution, the need for serious review of implementation of these projects has been noted (Bacalla 1993: 77).

In a number of countries (e.g. Vietnam, Mongolia), decentralisation in forestry is ongoing as part of a national restructuring process. In some countries, the extent of decentralisation is expected to be very great. Vietnam, for example, contemplates transferring management responsibility to local authorities and users with regard to lands in every forest category, including protected areas (Decision 1992; Young 1998: 103).

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[1] Some of the largest countries (China, India) disseminate central responsibilities to and through provincial and state authorities, which have a great deal of autonomy in implementing centrally mandated programmes. Given that these divisions are larger than some of the countries represented in this chapter, the devolution of central authority to state or provincial governments will not be considered "decentralization" for purposes of this chapter.

2.2 Broadening Private and Community Rights and Opportunities

There is a general trend in the region towards greater recognition of private and community interests in forestry activities. This trend is clearest in relation to forest ownership/use rights, community forestry, and customary rights in forests.

2.2.1 Ownership and other Long-term Use Rights in Forests

Recent legislation extending private and community rights in forests is part of a much longer-term trend away from the generally monopolistic approach to forest ownership and use in colonial times, toward a balance of government, community and private rights and uses. For a variety or reasons, there is an increasing (though still ambivalent) focus on extending and securing private and quasi-private rights in forests, and, by fostering non-governmental participation in forestry, enhancing co-ordination between national planning and the needs and objectives of users.

There is wide diversity within the region with respect to the treatment of ownership issues. Although in many countries, actual ownership of most forest lands and resources generally resides with government, there are examples of private ownership being recognised by national law. Additionally, of course, other rights in forests are regularly granted, involving (to a greater or lesser degree) some components of forest ownership. The following discussion gives an idea of the variety of approaches to this issue throughout the region.

In many Pacific countries, for example, strong patterns of customary land ownership have generally prevailed, in contrast to the state-ownership patterns found elsewhere. Thus in Fiji, Tonga and Vanuatu, recent national legislation has focused on the establishment of new conservation oriented forestry programmes, utilising co-operation with private landowners. In Papua New Guinea, virtually all forests are privately owned pursuant to customary rights (mostly involving community ownership). The forest owners are forbidden from harvesting timber themselves, however, being legally required to contract for this service with the PNG Forest Authority, which has the exclusive right of cutting and removing timber (or granting concessions to third parties to harvest timber) from their lands (Forest Act 1992, art. 60, quoted by Lynch and Talbott 1995).

Even in "state-ownership" countries, however, limited private ownership of forests may be permitted, as evidenced by recent forestry laws in Bhutan, Lao PDR, Myanmar and Nepal. In the Lao PDR, for example, although the state owns natural forests and associated land, individuals and non-governmental entities may possess, use, transfer, own and inherit trees and forests planted by them under certain conditions and with the State's acknowledgement (Law 1996, art. 5). Chinese law although first stating that forests may be owned either by collectives, or by the whole people of China, later refers obliquely to forests "owned and used by individuals" (Law 1985; Provisional Measures for Forest Land Management 1993).

More commonly, private and community rights in forests are generally given in the form of leaseholds, concessions, licenses, contractual use rights, easements, profits and conditional privileges over forests as government-owned property. In many cases, these rights

are long-term and legally durable. The trend in this area is clearly toward increased private and community rights, by recognising new categories of ownership and use; allowing the grant of longer term longer-term use rights, akin to ownership; and increasing the users' commercial security with regard to his interest.

New categories of user: Although the recognition of new user categories is sometimes an element of forestry policy, such categories are often created under other authority. In China, for example, following the decision to convert the sector to market-based operation, commercially utilised forest areas which had been "government production units" have been distributed among a number of contract-created, profit-oriented forest management entities (Young 1998: 12).

Broader definitions of the term "person" extend participation rights, and permit broader delegation of forest management and decision-making to a variety of nongovernmental entities. In Myanmar, any person or organization has the right to carry out forest plantations with the Government's permission (Law 1992, art. 14(b)). Forests in Nepal may be made available through auction to national and international governmental or nongovernmental entities, so long as they carry out the work plan (Forest Regulations 1995, art. 20). Many countries now give forest officials fairly broad authority to delegate forest management duties and implementation as in Nepal, where the warden is generally authorised to carry out his duties "by himself or through others" (Buffer Zone Management Regulations 1996, art. 7).

Duration of forest use rights: Many countries face problems of inspiration of confidence in forest entrepreneurs. Often the memory of some prior practices prevents forest users from making any significant investment in reforestation or management. Additionally, the termination of some government programmes has created a level of business uncertainty and a disincentive to potential investors from within the participant countries, whose available capital is limited.

In several countries (e.g. China, Mongolia, Vietnam) governments have in the past reallocated lands for a variety of purposes. As a result, investors are generally wary of entering into any new projects involving a long cycle between investment and recoupment/profits. Forestry is a classic example of a long turn-around on investment since, for many species, the growing cycle can be longer than 50 years.

The converse problem has a similar impact. In centrally planned economies, farmers and foresters had a certainty that the government would purchase all of their output of crops, timber and forest produce, so long as harvesting was done in accordance with the central plan. As those countries convert to market orientation, these assurances are being phased out (or, in some countries have been peremptorily discontinued). The forest users have little guarantee that they will receive any profits or even a return of their investment. While the need for investor confidence is not generally a problem which can be solved by legislation, some legislative attempts may be found in the region. For example, in Mongolia and Vietnam, the adoption of limited statutory guarantees and repurchase covenants is being considered.

Commercial security: The availability of methods to foster the investment of time, effort, and money in private and community forests is another barrier to management efforts.

Often, in addition to the nature of his interest (as grant, lease, etc. rather than freehold), a second type of limitation restricts the forest user's dominion over his holdings - legislative restraints or prohibitions on the user's ability to mortgage or transfer his forest use rights (e.g. Nepal, Forest Regulations 1995, arts. 31(l)(a) and 45(l)(a)). This type of restriction may have an (expected or unexpected) impact on the user's ability to commercially manage his forests, and may also limit his ability and incentive to manage forests for long-term utilisation.

Sources of and justifications for these restrictions vary. In some of the countries in the region, these restrictions have a constitutional basis, and may apply to lands more generally. In others, they apply specifically to forest lands and rights, motivated by the goal of maximum government control over who may use the country's forest resources. From a perspective of sustainable forestry, the current validity of these justifications should be reconsidered, and attention given to the goal of providing a secure basis for financial management of forest activities.

In the meantime, in many countries, the most direct tension between the need for more secure use rights and the legislated restrictions on alienation is tempered somewhat by provisions which may allow forest users limited rights to pledge their interests as collateral for obtaining loans from financial institutions (e.g. Nepal, Forest Regulations 1995, art. 31(2)). This "solution" is hardly a final one. As yet, the legal tangle which may arise where alienation of forest lands is forbidden, but hypothecation is permitted, has not been addressed in any of these countries.

2.2.2 Community Forest Rights

As discussed in Part IV, the legislative and practical development of "community forestry" programmes is one of the most significant trends in the region. One critical component and impact of community forestry is the creation of a locally important "stake" in the sustainability of forests - a mechanism for local groups (rural residents and/or traditional or customary forest users) to obtain recognised status as holders of forest use rights. The mechanisms used in this process vary across a broad spectrum. In Bhutan, for example, a community users' group will lose that status if its membership falls below 10 households (Proposed Rules 1997, art. 41). Other programme in Vietnam and the Philippines are designed to enhance the ability of individual households to acquire use rights in specific forest lands. The objectives of community forestry programmes cover a broad spectrum, in some countries focused on providing a legal source to meet the demands of local use, in others anticipating commercial involvement.

Recent legislation often extends eligibility provisions, allowing a more diverse group of local residents to qualify under community forestry authority, usually by forming a "users' group" in accordance with statutory requirements. To some extent, the nature of these eligibility criteria is a function of the policy objectives underlying the legislation.

In Nepal, for example, there are two separate sources of community forestry authority -one general, and a second focused on communities located in buffer zones surrounding national parks. Under the 1993 Forest Act, which is directed at preserving and fostering rural economies,

current users of a forest who wish to utilise that forest's products, by developing and conserving the forest for the collective interest may constitute and register a users' group (arts. 41 and 42). By contrast, Nepal's buffer zone provisions arise out of a desire to protect the national parks. The goal is to create a stable forest harvesting area which local residents will use in lieu of illegal harvesting inside protected areas. In light of this objective, eligibility to form a users' committee must be more limited, in order to avoid abuses and other problems. Hence, the term "user" means a person living in a (national park) buffer zone who qualifies as a "direct beneficiary [of]... forest resource use and projects to be implemented for the local people's community development." (art. 2(e)). Similarly, in Myanmar's Community Forestry Instruction of 1995, the definition of "users' group" restricts participation to those households residing in the community (art. 3(g)).

Formation of a legally recognised entity gives the village, users' group or community the legal status required by entities entering commercial transactions. This may be accomplished with or without additional formalities. In Myanmar, a statutory provision bestows legal status on any users' groups which holds a currently effective community forest certificate (Instruction 1995, art. 20(2)), In Nepal's community forests, a procedure has been adopted for formally constituting and registering user's groups, which are thereafter autonomous, corporate bodies, able to hold property, sue, or be sued (Act 1993, arts. 41-43). In buffer zone forests, registration with the National Park Warden is required (Buffer Zone Management Regulations 1996, art. 9).

An added level of complication arises where some commercial operation is anticipated Here, the eligibility must be more closely monitored, to prevent abuses by outside individuals with commercial interests, who might otherwise attempt to qualify as "users' group" or to obtain an interest in one.

2.2.3 Recognising Customary Rights

A difficult element in many countries' forestry legislation is the intersection between legal delegation of forestry use rights and traditional or customary rights. Often, the exercise of customary rights conflicts with legislative-based timber concessions, leading to tensions between traditional forest users and concession holders (Lynch and Talbott 1995; Fox 1993). A trend in recent forest legislation toward recognition of customary rights, and reconciliation of those rights with more recently acquired rights and legislation, is in keeping with the international consensus on customary rights in forest resource use and management[2].

Recent legislation which recognises and (where possible) formalises traditional and customary usage is intended to minimise such conflict. One method is formal documentation of customary claims. Community forestry programme may accomplish this goal, since much of the justification and method of community forest programmes is based on customary land and forest rights. In fact, many of these programmes have been created as a legislative

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[2] "National forest policies should recognize and duly support the identity, culture and the rights of indigenous people, their communities and other communities and forest dwellers. Appropriate conditions should be promoted for these groups to enable them to have an economic stake in forest use, perform economic activities, and achieve and maintain cultural identity and social organizations, as well as adequate levels of livelihood and well-being, through, *inter alia*, those land tenure arrangements which serve as incentives for the sustainable management of forests" (Rio Forest Principles, art. 5(a)).

response to such tensions. Community forestry often provides a system by which traditional claims can be identified in a concrete and enforceable manner, after which the issuance of forest leases and concessionary rights can better be planned to avoid conflict.

For example, certain traditional uses of forests and forest land are recognised in the Lao PDR, and given priority in the Forestry Law of 1996. Legal status is given to the long-standing use of forests, forest land and forest produce as acknowledged by the society or law, specifically including wood collection for fence, firewood, forest produce gathering, hunting and fishing of non-restricted species for family consumption or other traditional uses (art. 30). Subsidary/ legislation further legitimises customary forest use rights, defined as "those rights and obligations held by an individual, a group of households which have their root in custom and [are] generally accepted by law, and generally not written, but customary rights are nonetheless true rights that exist on their own merit" (MAF Decision of March 1996, art. 2). "Custom" is defined as a set of practices which are regular, old (a minimum of one generation), widespread and perceived as creating rights and obligations (MAF Decision of March 1996, art. 3, and MAF Recommendations of April 1996[3]).

A number of countries have opted to facilitate the exercise of forest users' customary rights, in all forests, without or regardless of specific allocation. In Bhutan, the Minister may make rules to permit the taking of forest produce for one's own domestic use from any Government Reserved Forest without a permit (Act 1995, art. 12(2); Proposed Rules 1997, art. 21(a)). Royalties may still be required, however. Similar household use exceptions apply in many countries (e.g. Mongolia, Law 1993). In Myanmar, within prescribed quantity limits, no permit is required to extract forest produce for personal use or for agricultural or fishery enterprises on a non-commercial scale (Law 1992, art. 17).

Critics have sometimes argued that customary rights should not only be codified, but should be given legal priority. Some recent forest legislation has accepted this idea as well. Hence, in the Philippines, the rights of traditional and customary users (indigenous tribal communities and lowland migrants) are fully retained under many laws (Bacalla 1993: 70). Since, "ancestral lands and customary rights and interest arising shall be accorded due recognition," government authority over traditional use areas may be exercised only in co-operation with traditional groups (National Integrated Protected Areas System Act 1992, art. 14).

In Nepal, the priority of traditional and community rights is expressed directly. Government is forbidden to lease any part of the National Forest which would be suitable for handing over to a users' group as community forest (Act 1993, art. 30). Moreover, the final choice between potential users groups is made on social criteria rather than either traditional or legal status - in case of competing interests over the same forest area, priority is given to the community with the majority of people living below the poverty line (Regulations 1995, art. 39(6)).

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[3] Both of these documents were promulgated under forestry statutes which the new Forestry Law replaced in 1996. They do not appear to contradict the Forestry Law and, under Laotian legal interpretation, are still legally valid.

In other countries, particular difficulties with formal co-ordination with and recognition of customary rights are still unresolved. In Indonesia, forestry law recognises customary rights where they are still in use and do not contradict national objectives (General Explanation of the Basic Forestry Law 1967). Development activities such as the Indonesian policy of Forest Concession Rights, however, supersede customary rights in practice and in law. Without resolving the conflict, the 1970 Government Resolution on forest concession rights freezes the exercise of community rights and requires that customary rights do not "disturb the implementation of forest exploitation" (Resolution 21/1970, arts. 6.1-6.13; Hutapea 1993: 65-66). Clearly, greater legislative attention to integration of customary forest use rights within the forestry framework remains a general need.

Customary rights are also difficult to ascertain and codify. Determining them based on passage of time is complicated by large population movements in some countries (e.g. India, Laos and Cambodia) due to external or internal wars. Few villages in certain provinces of the Lao PDR, for example, have been in their present location for the past thirty years (Eggertz 1996).

Countries in the region share numerous difficulties regarding the integration of customary rights into forest management, including community forest programmes. Many central Governments resist recognition of customary rights. In some cases, formal recognition of customary rights are seen as contrary to official national policies based on political ideals like the need for a strong central Government to unite diverse populations and, in some cases, constitutional guarantees of freedom of movement. In other cases, forest owners whose legally recognised claims are near community forest pilot projects may be effectively forced to forfeit pre-existing sovereign land claims.

2.3 Public Participation

The third element of the trend toward greater local responsibility in the forestry sector is increased provision for public participation in forest-related laws in the region. Public participation takes many forms, from participation in decisions and planning processes, through participation in physical implementation and sharing in the benefits.

Participation in decision-making has been adopted only in a limited form, as governments try to evaluate its operation. Overall, however, there is a trend toward opening up the forest planning and management processes to nongovernmental actors and non-forest Governmental interests. In the Lao PDR, the law states as an objective to promote "the participation by individuals and organizations in the preservation, revival, forestation and development of forest resources by outlining policies, regulations and measures aimed at developing forests into wealthy, valuable and sustainable resources" (Law 1996, art. 6). By requiring public meetings and other public involvement in forestry administration and decisions, forestry officials both (1) open a dialogue for incorporating public concerns in government decision-making, and (2) devolve onto the public the responsibility for ensuring that their concerns are raised at the appropriate time. By nature, public participation is a decentralised (local) activity, since one can rarely expect rural and remote forest users to come to national capitals or other commercial centres. In some instances, even where legal

provisions are not available, similar impacts can be obtained through practical action, as is the case in Bangladesh (Farooque and Bhuiyan 1993).

In many cases where national forest legislation does not address the issue, greater participation occurs through experimentation and decentralised implementation, often in subsidiary legislation such as regulations, orders, notices, instructions and circulars. The strength of such documents as binding legal authority varies and is sometimes difficult to ascertain[4]; however, in many countries, details in manuals used by forest departments may be as important as regulations. In Nepal, one regulation specifically states a duty of forest lessees, concessionaires and others to comply with manuals issued by the Ministry (Forest Regulations 1995, art. 67). Moreover, given that persons most familiar with implementation draft these documents, they may be more likely to be more fully and promptly implemented, than centrally drafted laws and regulations. This less formal "legislation" is often the primary vehicle for promoting international objectives such as the participation of women in sustainable resource use programmes[5].

III. NEW DEVELOPMENTS IN FOREST MANAGEMENT AND ADMINISTRATION

Throughout the region, forest management planning (FMP) forms an integral part of the operation of the forestry sector. In some countries in the region, introduction of the FMP concept is relatively new. In a majority of the countries studied, however, FMP is a well established concept. Several recent innovations, implemented in some of these countries, are indicative of apparent trends in this area. Other administration issues include enhanced reforestation mandates, greater roles of licensing and permitting, and an increase in the use of forestry funds.

3.1 Forestry Management in Countries Undergoing Economic Transition

Several countries in the region are currently in the midst of a national economic transition from central planning to a market-based system. This transition has many direct impacts on forestry, some of which are addressed in legislation. In addition to increasing individual and community opportunities in the forestry sector, this transition has necessitated a basic change in the way forests are managed and policed at every level and stage of operations. Although there are many common issues among these countries, their differences are equally important. Even the interpretation of the phrase "transition of forest industries to market-oriented economy" involves very different approaches. In Mongolia, for example, the

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[4] Although in some countries (e.g. Mongolia), such documents are not considered sources of law in a strict sense, they are invaluable in interpreting and guiding legal implementation. In the Philippines, a significant legislative interpretation affecting the legal rights of recent migrants and upland dwellers who occupied public forest lands was made, not in formal legislation, but in a Letter of Instruction (Gasgonia 1993: 53).

[5] E.g., Gujarat's Resolution No. FCA-1090-125V(3) of 13.3.1991 requires that the village working committee have at least two women as members (India's Update 1992). Similarly, art. 5(B) of the Rio Forest Principles states that "full participation of women in all aspects of the management, conservation and sustainable development of forests should be actively promoted".

transition proposed is a very abrupt, almost complete transition from central control to market-driven forest industry - a transition that has occurred in documents, but not, as yet, in practice. By contrast, in Myanmar, the state-owned forest enterprise will retain virtually all forest harvesting and marketing as its exclusive or near-exclusive prerogative. In Vietnam, private forest holders obtain not only the right to use forests, but also in most cases a nearly complete decision-making power regarding forest harvesting and management. In China, where conversion to market is happening on an industry-by-industry basis, (occasionally even on a trial or interim basis) forest industries have been "privatised" vertically, but many related systems and infrastructures have not (Young 1998).

A major obstacle to forest management in countries-in-transition involves local understanding and application of the concept of FMP. Substantial difficulties arise in this area, owning to the prior usage of the word "planning" - a term used extensively in a different context under the old system. When operated as central planning systems, these governments had significant experience in "planning", including forestry planning, using that word to mean a process, undertaken by economists and focused on (1) determination of demand and (2) concomitant development of production quotas and financial inputs needed to achieve these production goals. Even today, discussions of "forestry planning" in these countries focus on the development of production quotas.

Post-conversion laws and policies also call for planning of an entirely different order - an FMP process focusing on technical forestry issues, and the diverse needs of sustainable development. While economic projections form a component of this process, they are a small effort compared with the major work of FMP - evaluating ecological effects of forestry management, balancing consumption against annual regrowth, identifying activities and controls needed to ensure sustainability, setting reforestation goals and mechanisms, and enunciating standards by which local, provincial and central forestry officials can apply the plan for the benefit of the forests and the forest-dwelling or forest-dependent people, etc.

These concepts, although included in new legislation are not explained in any detail. In China, for example, forest management measures call for the creation of "plans of forest land preservation and utilisation," and a "long-term plan of forestry development" by all Departments of Forestry above the county level (Provisional Measures for Forest Land Management 1993). In Mongolia, the 1994 Law on Environment Protection requires the adoption of a "financially secure national programme for environmental protection" which includes, *inter alia*, the identification of "maximum levels of natural resource use" (art. 10). The 1993 Law on Forests, although it contains no direct mention of FMP, does require the government to prepare a number of documents on a variety of issues, which, if integrated into a single consistent document, might form the basis for FMP development. Given the history, however, the term "planning" has taken on a particular meaning for government officials. Hence, particularly where the law is so unspecific, these officials often expect either that the conversion to market-based economies will eliminate the planning system or that the "natural resource management planning" referred to under new law is essentially the same as former "central planning". As a result, government officials - almost entirely trained under the former governmental system - frequently apply the principles, programmes, protocols and procedures of the former system.

Serious gaps in the overall forest plan still exist, however, in all countries-in-transition. Virtually none of them has yet established any legal infrastructure to support a direct-access market in timber, lumber and forest products. Such infrastructure must be developed, to ensure that market-oriented processes are properly effected and generally successful. Legal mechanisms common in the rest of the region (governing transportation of forest goods, establishment and control of local markets for timber, and marketing alliances among forest users) are needed in these countries.

3.2 Innovations in Forestry Management Planning

Several countries have amended or enhanced their FMP programmes in a number of ways. Trends include the use of multi-level planning, increased scope of extension services, and greater technological specificity of forestry data-gathering processes.

3.2.1 Staged Approach to FMP

Recent legislation requires management plans for commercial forestry, community forestry and conservation, at both national and local government levels. In addition, as mandated by legislative provisions, individual licenses and agreements to use forest resources (e.g. timber concessions, community forest agreements) must incorporate these principles in the creation of user management plans which must be approved by government as a prerequisite to forest utilisation and management activities. In Bhutan, for example, the government must prepare a full national management plan addressing its forests, wildlife and related natural resources in totality. In addition, private or community management plans must be developed by the user (in conjunction with the government) for each area to be utilised for extraction or reforestation, and protected area management plans (co-ordinating, *inter alia*, forestry elements of protected area management) for all conservation areas (Act 1993, art. 5(a); see also Nepal's Forest Regulations 1995, art. 28, and Buffer Zone Regulations 1996, art. 13).

3.2.2 Reforestation Incentives and Reforestation Programmes

Many of the countries have enunciated clear and high-priority objectives in the area of reforestation and plantation. In some cases, these priorities are combined with community forestry programmes. Among the methods being implemented or considered are:

- the establishment and regulation of government-owned and private owned forest farms[6];
- the development of market-based incentives and other mechanisms for financing more general and conservation-based reforestation activities (rather than relying solely on government funding);

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[6] The term "forest farm" is used here instead of "forest plantation" because, in some countries, the word "plantation" is never used to mean "an area or estate which is under cultivation for agricultural or other use", but only used to mean "the act of planting".

- preparation and proposal of legislation and institutions to support reforestation activities and to authorise necessary government enforcement activities; and
- (where possible) empowering local groups and community forestry projects to undertake these activities. ,

In addition to the empowerment of community and rural reforestation programmes, legislation may in some way enhance incentives to participate. Several countries have noted legal inconsistencies (usually as a result of many unrepealed forest laws still on the books) such as provisions which say that all trees in the country are the property of the state, regardless of who planted them. Such persistent inconsistencies decrease public confidence that their reforestation efforts will be financially recompensed.

3.2.3 Extension Services

One notable trend found in forestry legislation requires governments to provide technical and financial assistance to users' groups and other nongovernmental forest users to prepare and implement management plans (Nepal, Act 1993, art. 69; Forest Regulations 1995, arts. 28(3) and 38; Buffer Zone Management Regulations 1996, art. 13(2)). In many instances, this assistance can take a concrete form, where in addition to advice, the forestry department is required to provide seeds and seedlings to such persons or groups (Bhutan, Proposed Rules 1997, arts. 29, 41 and 46; Myanmar, Instruction 1995, arts. 21(a) and 21(b)). Although current legislation in this area focuses on community users, more general obligations may apply to more entrepreneurial private forestry, as well. In Myanmar, efforts to privatise some aspects of commercial forest harvesting were halted when it became clear that training and extension mechanisms were needed and lacking. Similarly, in Mongolia, the single biggest need in the forest industry may be training for forest entrepreneurs in how to operate and finance their businesses (Young 1998: 69).

3.2.4 Collection and Use of Forestry Data

As forestry objectives (market development, ecological sustainability, social contribution to rural communities, biodiversity development and conservation, etc.) become stronger, more diverse and sometimes conflicting, the need for technical (scientific and sociological) data on every element of forests, forest ecosystems and forest-dwelling communities is accentuated. Recent legislation appears to anticipate that the bulk of national forestry planning and decision-making will be based on information acquired during forest resource inventories at national and local levels. Several countries in the region have enacted legislative mandates for the regularisation of that process, specifying both the breadth and frequency of national forest surveys (e.g. Lao PDR, Law 1996, art. 10; Myanmar, Law 1992, art. 11). A significant part of this data comes from forest users, in the form of the detailed recordkeeping and reporting required under national and subsidiary legislation in all countries (e.g. Nepal, Act 1993, art. 44; Bhutan, Proposed Rules 1997, arts. 39 and 43).

Recent forest laws, like their predecessors, include principles of maximum sustained yield in their requirements for sustained yield annual allowable cuts. Standards are stated in the laws, however, to guide the government in identifying these levels. In the Philippines, for

example, the 1975 Code states that "all measures shall be taken to achieve an approximate balance between growth and harvest or use of forest products in forest lands" (art. 21).

In addition, although many elements of central planning remain in countries-in-transition, some have been changed or added. For example, "consumption quotas" (i.e. formal upper limits on the amount of timber and forest produce that may be harvested in a given year) are now required in addition to or in place of former production quotas (minimum amounts required of each local or regional production unit).

3.3 Licensing and Enforcement

Despite often strict (and regularly increasing) legislative penalties, forestry laws tended to be poorly enforced. A combination of factors (poorly designed concession conditions, conflicts with customary rights, ineffective or non-existent Government monitoring, and lack of financial and human resources) contributed to this problem. In fact, recent changes to forest laws which legitimise customary rights and establish community forest programmes do so in part to reduce the burden of enforcement. This has been accompanied in a number of cases by new approaches to the use of permits, licences, concessions and other instruments concerning private use of forests.

3.3.1 Licences, Permits, Concessions, etc.

The need for oversight of private and governmental entities in forest use has led recent forest legislation to emphasise licensing as a management tool. (As used here, the term "licence" is an umbrella term including permits, concessions and similar types of instruments). Licence cancellation or suspension, a purely administrative internal activity, is often a more practical penalty for violation than criminal prosecution. Moreover, it can be a much greater deterrent to license violators, who view loss of license as a significantly greater penalty than legislated fines. Greater emphasis on permits and licences requires an effective regulatory entity with well-trained, well-paid staff. While the recent forest laws cannot address this directly (only civil service reforms could), stiff penalties are often stated to punish corruption within forestry staff (Myanmar, Law 1992, art. 46: 1-7 years imprisonment).

Commercial timber licences are now increasingly used to achieve resource goals such as reforestation or social infrastructure, not just economic production objectives. Concession and lease conditions require environmental restoration or reforestation (Philippines, Code 1975, art. 27). In addition, several countries include a list of statutorily-mandated minimum conditions for such agreements, including anti-pollution, anti-erosion and other environmental protective measures (e.g. Philippines, Executive Order 1987, art. 5).

Typically, the creation and approval of a management plan is specified as a precondition to permit issuance (e.g. Bhutan, Act 1995, art. 6). Longer licence periods are being specified to maximise benefits to commercial loggers and to the government, and to encourage reforestation and afforestation if permissible under the general legal framework. The maximum term for a forest lease in Nepal, for example, is forty years (Forest Regulations

1995, art. 50(1)). In the Philippines, the maximum period for a forestry concession or timber harvesting permit is fifty years (Code 1975, arts. 27 and 28).

Additional conditions in recent forest legislation require permit and licence holders to prove, through banker's guarantees and bonds, that they have adequate financial resources to fulfil financial and environmental obligations (Vanuatu, Act 1982, art. 14; Nepal, Act 1993, art. 31 and Forest Regulations 1995, art. 48; Philippines, Code 1975, art. 60; Fiji, Decree 1992, art. 13(2(c)). These provisions are beginning to have a wider application as well. Nepal requires applicant users' groups to post a bond prior to certification under community forest provisions (Forest Regulations 1995, arts. 27(6) and 29).

Breach of any of these conditions or environmental obligations can lead to a variety of consequences, such as permit or licence suspension or cancellation as well as criminal penalties. In the Philippines, the President may, after prescribed due process, suspend any agreement for violation of any conditions, including reforestation, pollution or environmental protection (Code 1975, art. 20; also, Nepal, Act 1993, art. 33).

3.3.2 Enforcement

With permits and administrative oversight taking some forest-related pressure off courts and police, traditional enforcement efforts are increasingly focused on those problems most likely tö contribute to serious deforestation. For these violations, the trend is to increase the severity of crimes from misdemeanours to felonies and to attempt to set high enough fine amounts that they constitute real deterrents (rather than being viewed by violators as just another potential cost of doing business). Legal reforms enacted have also focused on matching punishments with severity of offences; on suspending or revoking licences as sanction instead of or in addition to fines and imprisonment; on requiring compensation by the offender for damage to public good; and on requiring confiscation of illegal produce and equipment (Bhutan, Act 1995; Lao PDR, Law 1996; Myanmar, Law 1992; Nepal, Act 1993).

Despite progressive elements in recent forest legislation, forestry administrations still try to include strict controls and punitive measures in enforcement sections of forest legislation. Thus, for example, Nepal's Forest Act's extensive community forestry provision retains, from its predecessor law, the special power of forest officers to shoot offenders below the knees (art. 56).

3.4 Forestry Funds and Other Incentives

Commercial timber production continues to be a major revenue producer for many countries in the region. Increasingly, national laws utilise forestry funds to return forest revenues to forest protection, maintenance and management. The impetus behind such legislation (and designated financial sources) may run the gamut from restructuring former central planning allocation processes to providing a financial basis for reforestation and other public benefit projects. Legislation mandating such funds may be associated with other national reform of the public expenditure process. In the Lao PDR, the Forest and Forestry Resource Development Fund is capitalised with contributions from the State budget, as well as from

individuals, juridical entities, collectives, social organizations, international organizations and others. The Fund must be used for forestry activities, including the preservation of protected and reserve forests, reforestation, forest regeneration for the preservation of water sources and the environment, preservation and development of aquatic and wildlife, education on forestry policies, regulations, laws and techniques, protection of water sources, the environment and others related to forests and forestry resources (Law 1996, art. 47).

Similar funds, some with rather specific use limitations, are found in many countries. The fund in Vanuatu focuses on reforestation, and is funded by a reforestation charge (Act 1992, arts. 27 and 28). In China, all "units that cut or purchase or sell trees or bamboo" are required to contribute afforestation funds to be managed at the provincial level by the province's forestry department, agriculture department, finance department, and banking department, acting in a co-ordinated fashion (Provisional Measures for the Management of Afforestation Funds 1972). These fluids are to be used both for subsidising afforestation activities, and for the culture and preservation of state-owned lands. The mechanism for collecting these funds varies. In China, for example, collection is entirely at the discretion of provincial governments.

The decision to make a statutory commitment of forest revenues to forest conservation and management is controversial in many countries. National and local economic and social development plans include forestry as a major contributor to the country's development and in some cases to its economy, hence, even funds from forest operations are not always applied to forest programmes first.

In many instances, external assistance with forest programmes (conservation, development, infrastructure, etc.)[7] is easier to obtain if the country has established a fund, and of sufficient (legislative and other) controls and assurances regarding its inviolability and ultimate use only for specified purposes (Joshi 1993: 113). The Legislature, in creating such funds, is often desirous of similar assurance of proper use. However, it may be difficult to meet these requirements in some countries, in which the establishment of a forestry fund is limited or prohibited by Constitutional restrictions on the use of government revenues (Burchi 1992).

Another difficulty relates to the distribution of revenue to provincial, district and local levels for direct implementation activities, and especially to villages or communities utilising community forest authorisation. In Nepal, this difficulty is avoided through the use of separate funds for each users' group (Act 1993, art. 45). This mechanism permits the return of income to communities, as an incentive to engage in community forest activities. These separate users' group accounts may include government grants, proceeds from forest produce sales, fines and donations or assistance from any person or organization (Forest Regulations 1995, art. 36). Each users' group decides on allocation of its own funds although they must be used, first, for community development projects (Act 1993, art. 45). Similar provisions are found in Bhutan (Proposed Rules 1997, art. 41) and Myanmar (Instruction 1995, art. 28).

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[7] The need for and provision of such assistance is another element of international consensus expressed in the Rio Forest Principles: "The agreed full incremental cost of achieving benefits associated with forest conservation and sustainable development requires increased international cooperation and should be equitably shared by the international community" (art. 1(b)).

3.5 Co-ordination with Non-forestry Legislation

One particular problem, found in many countries in the region, is the number and extensive coverage of new laws being enacted. In Mongolia, for example, in the first six years following the formal shift, the Ministry of Natural Resources and Environment alone has successfully sponsored 23 laws through Parliament, and adopted more than one hundred regulatory documents to implement these laws. Similar situations are found in Vietnam and Laos, as well (Young 1998). The initial problem arising from such a situation is simply one of human capacity to absorb information. In nearly all instances, laws in these countries are being implemented and enforced by the same officials who operated under prior laws. The demands of the job often make it difficult for such officers from spending the time to become completely familiar with even one new or amended law. Where massive changes have been adopted, they may be completely overwhelmed, and may continue to enforce the superseded provisions for a long time. Forest users may be similarly unaware of and unequipped to deal with changes.

In addition, nearly all countries in the region experience difficulties and overlaps with the legislation of other sectors, including (but not limited to) the areas of lands, transportation, finance, entity creation, market development and controls, environmental protection, pollution control, export/import, taxation, foreign investment, intellectual property law, governmental powers, quality control and grading standards, consumer protection laws, banking and securities laws, etc. Particularly in countries in which a lot of new forest legislation is being developed, other sectors are being revamped as well. The forestry agencies' operations necessarily combine ecological and commercial objectives. Hence, this sector is affected by many other laws and sectors. Inter-sectoral co-operation and protocol development is a challenge throughout the region.

IV. EMPHASISING ENVIRONMENTAL AND SOCIAL VALUES IN FORESTRY

The Rio Forest Principles sum up international consensus on the holistic nature of forest resource management and conservation in several linked principles[8]. In keeping with this international consensus, legislation reviewed here reflects new attention to environmental and social responsibility in the management of forest lands and resources. This reorientation away

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[8] The main relevant principles in this regard are:

Principle 2(b): "Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. These needs are for forest products and services, such as wood and wood products, water, food and fodder, medicine, fuel shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs and for other forest products. Appropriate measures should be taken to protect forests against harmful effects of pollution, including airborne pollution, fires, pests and diseases, in order to maintain their full multiple value";

Principle 8(e): "Forest management should be integrated with management of adjacent areas so as to maintain ecological balance and sustainable productivity";

Principle 3(c): "All aspects of environmental protection and social and economic development as they relate to forests and forest lands should be integrated and comprehensive";

Principle 6(b): "National policies and programmes should take into account the relationship, where it exists, between the conservation, management and sustainable development of forests and all aspects related to the production, consumption, recycling, and/or final disposal of forest products".

from purely commercial timber extraction purposes to include non-timber values such as environmental amenities and biodiversity may be the most fundamental and prevalent shift in legislation throughout the region, affecting countries from the most commercially active, to those with the strongest conservation focus (e.g. Fiji, Decree 1992, art. 7(1); Bhutan, Act 1995, arts. 5(b), 9; Myanmar, Law 1992, arts. 4 and 5; the Philippines, Code 1975, art. 19).

In a real sense, this shift constitutes a transition to resource management, from exploitation. The trend is evident not only in cosmetic changes, but can also be seen in the continued emphasis on centralised forest administrations, which are perceived as protecting the national interest in forests as environmental resources against short-term narrow local interests. Recognising that forests are linked with other resources (and laws regulating them), forest management legislation has extended beyond its traditional concern for the protection of natural areas and species. In many cases, it may now be thought to integrate into the holistic nature of resource management, utilising commercial timber licences to achieve social welfare objectives and environmental conservation goals and to access the impact ofcommercial forestry practices on other resources and species.

4.1 Meeting Social Welfare Objectives: Community Forestry

A critical connection, recognised in nearly all the legislation examined in this chapter, exists between forest resource management and the welfare of rural communities in forest and afforestation areas. Perhaps the strongest recent trend in the region mandates the use of forests in a manner that fosters sustainable community development as well as sustainable forest management. The primary mechanisms of this trend are community-based forestry programmes.

Community forestry addresses three essential goals: sustainability, equity and participation. The legislative trend toward community forests often appears to be the first step in a closer integration of forest management and conservation of forest resources with rural development and the involvement of rural communities. While the bulk of these programmes are enacted under forest mandates, a few provide similar results under other types of authority. Thus, for example, although Nepal's Buffer Zone Management Regulations were promulgated under its National Parks and Conservation Act - and not its Forest Act under which separate community forest provisions have been developed, applicable to forests in non-buffer zones[9] -, they provide a relatively complete system of community forestry to be applied in buffer zones. Their coverage is, in fact, more attendant on forestry resource utilisation issues, than on conservation, as evidenced by the fact that they are administered by the forestry administration. Similarly, India's "Tripura Resolution" provides for community forestry in the context of addressing rural poverty issues (Resolution F 17(14) For-Dev/90-91/470-30-529, in Update 1992).

Several countries in Asia and the Pacific have been leaders in the community forestry movement, and similar programmes elsewhere in the world have studied their pioneering

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[9] The exact relationship between the general provisions for community forests and the provisions for buffer zone forests is not specified in the Regulations. The absence of any reference coupled with the comprehensiveness of the buffer zone provisions is telling, leading to the assumption that the general community forestry provisions are not applicable in the buffer zones.

community forestry programmes. Following their example, Bhutan, Laos and Nepal have formalised commitments to community forestry in recent and proposed legislation.

In other countries, community forestry has progressed in spite of a virtual absence of explicit support from forest legislation. In Malaysia, for example, the National Forestry Act does not address community forestry, which is only minimally present in the National Forestry Policy. Utilising other authority, however, Malaysia has gained experience in the area with four programmes containing community forestry components (Ismail 1993: 79-84). In Mongolia, although community forestry is a recognised policy objective, the forest administration has made an affirmative choice not to seek legislative provision, instead building its community forestry programme on general governmental authority to enter into lease and contractual arrangements for resource use. It is anticipated that early experiences under this approach will form the basis for later legislation, if needed (Young 1998:9).

Where community forestry has been codified in formal legislation, underlying policy issues may still require resolution. In particular, if community forestry is considered primarily as a means to relieve pressure on forests and forest resources, rather than a means to promote sustainable livelihood for local population, support for the programme may be sectoral and limited. Progress on these points is often greatest at provincial and local levels and in subsidiary legislation.

The most common features in recently-enacted and proposed national legislation supporting or tolerating community forestry have addressed the most intractable problem of past legislation: insecurity of land and tree tenure (discussed above), uncertainty of rights to local resources, and restrictions on land use, species, harvesting, processing, transport and marketing. Principles common to much of the recent community forest legislation in the region include the questions discussed below.

4.1.1 Resource Management and Rule-making Powers

Actual decentralisation of management decisions characterises a number of community forestry provisions. In Nepal the functions, duties and powers of users' committees in buffer zone forests include making rules governing forest access, fees and use (Buffer Zone Management Regulations 1996, art. 11). In Myanmar community-developed management plans must contain rules on forest access, use, users' group membership and penalties (Instruction 1995, art. 14(2)(d)-(f)).

These issues can be politically difficult. In particular, the provisions giving community management and rulemaking authority focus on an especially sensitive issue in many countries. Central governments in most of these countries have often harboured the suspicion that local-level forest management and autonomous community decision-making threaten the long-term sustainability of the forest resource base (Lindsay 1994).

The first generation of community forest-related laws organized efforts on the basis of local political subdivisions. Such subdivisions change and do not always reflect the actual forest use area or patterns. Thus, under some recent forest legislation users' groups are specifically separated from political subdivisions - in Nepal, for example, by a specific

statement that political boundaries shall have no effect on the constitution of a users' group (Forest Regulations 1995, arts. 27(4) and 29(3)). Generally, when users' groups are congruent with local administrative units, they have additional rulemaking powers under relevant laws. In Laos, for instance, the village committee has the power to issue rules which are not contrary to statute laws (Decree 1993, art. 9(4)). In recognition of this disparity, when users groups and local administrative structures differ, recent forest legislation has specified the rule-making powers of the users' group (Nepal, Act 1993, arts. 41-43 and Buffer Zone Management Regulations 1996, art. 11; Myanmar, Instruction 1995, art. 14(2)(f)).

4.1.2 Secure Rights of Long-term Use

Several laws address public doubts about the long-term dependability of forest-related use rights - an issue which, given the long growing cycles of many forest species, has a major impact on community incentive to undertake long-term forest management. Myanmar, for example, sets an initial term for community forest certificates at 30 years with possibility of renewal (Instruction 1995, art. 18). Concerns about the security of community forest rights remain, however. The Myanmar Community Forest Instruction offers a comprehensive programme, and is the basis for, several ongoing projects. Even so, doubts about long-term-use rights are strong, leading to an often expressed recommendation that that Instruction be given a stronger legal position. Adoption as a Rule is likely, as is the possibility of inclusion in revisions to the Forest Law, of more direct statements regarding the strength of community forestry authority and contracts.

4.1.3 Security against Arbitrary Interference

Governmental concerns have usually focused on mechanisms to ensure that users' groups do not improperly exploit their special status; only recently has any attention been given to the reciprocal concerns of users' groups about interference by government. Nepal's Buffer Zone Management Regulations of 1996, while allowing the Warden to dissolve a users' committee that violates its approved work plan or fails to accomplish its responsibilities, also provide a procedure requiring notice to the committee, giving a set deadline for cure, and a right of appeal (art. 14). The Bhutan draft rules limit the government's right to revoke a community forestry users' group's authority. This power of revocation may be utilised only in cases of serious and continuing violations of the management plan which have gone unremedied after notice.

4.1.4 Protection against Outsiders and Non-participants

Local management can be stymied by outsider activities, particularly illegal entry and commercial competition. Bhutan addresses the first problem by making it an offence to destroy or take forest produce on community forest land (Act 1995, art. 18). It does not empower the communities to enforce this provision, which is referred to local forest officials. The Lao PDR limits the ability of outsiders to take advantage of a programme designed to address rural well-being, by restricting transfer of community forest rights to persons or entities outside the community (MOA Decision 1996, art. 5).

Exclusivity provisions address related concerns about the value of participation, recognising that there is no apparent value to the members of the users' group if non-members can obtain similar benefits without participating or paying. In this regard, Myanmar provides that, while community forest certificate is in effect, no conflicting rights over the managed resources shall be granted to non-participants, and specifically adjures the Forest Department to assist in vigorously enforcing the law and preventing the unauthorised use of the community forest by persons outside of the users' group and to assist in settling disputes between the users' group and outside parties. (Instruction 1995, arts. 19,20(1) and 21(c)-(d)).

4.1.5 Special Exemption from some Permit Requirements

The existence of definite and detailed community forestry programmes often means that some of the normally applicable timber harvesting and transit permits and other requirements are duplicative or even inconsistent with the objectives of the community forest creation. Many laws specifically exempt community forests from permit and transit requirements for limited amounts of wood or other forest produce taken for personal or noncommercial purposes. In the Lao PDR, tree felling and forest produce collection within village production forest for family's use is automatically authorised, although the individual must abide by village regulations and those of District Forestry Officer (Law 1996, art. 28).

Myanmar allows community forests extraction without a permit, when it is for personal use or use in non-commercial agricultural or fishery enterprise (Law 1992, arts. 17 and 23(b)(2)). No removal pass is required for non-commercial amounts of "minor forest produce (Law 1992, art. 23(b)(2)). Where a pass is required, however, a receipt from the users' group will be substituted for the removal pass when transporting the extracted timber (Instruction 1995, arts. 30-32).

In Bhutan, although a permit is required for sales of forest produce from community forest, the users' group itself is authorised to issue such permits (Proposed Rules 1997, art. 42.1). Transit of such produce is subject to permit requirements, however, with exemptions only for non-timber forest produce and firewood being transported by a person for his or her own uses (art. 42.3).

In Nepal, community forest users' groups may issue transit permits themselves, and each has its own registered marking stamp with which to authorise timber for transport (Forest Regulations 1995, arts. 34 and 35). In the buffer zone forests, although the intra-community transport of users'-committee forest produce is permitted without a forestry permit, permission from National Park Warden is required before any transport out of the buffer zone (Buffer Zone Management Regulations 1996, art. 22(12)).

4.1.6 Royalty Adjustments and Reductions

For a variety of policy reasons, royalty arrangements for community forestry are frequently quite different from those generally applicable. In some cases, the legislation provides a complete waiver for timber harvested by users' groups in accordance with legal and plan requirements (Bhutan, Proposed Rules 1997, art. 42), while in others the waiver is

limited to produce harvested for use by group members or others in the local community (Myanmar, Instruction 1995, arts. 24 and 25). In Nepal's buffer zone forests, rather unique provisions give the users' committee the power to set royalties, payment of which may entitle the purchaser to use (according to work plan) resources grown or conserved by that committee (Buffer Zone Management Regulations 1996, arts. 21(10) and (11)).

4.1.7 Police Powers

The extent of the users' group's authorisation to take direct action in the support of its legal rights is an important component of laws related to community forestry. Relevant provisions may address the actions of outsiders, as well as those of non-complying members. In Nepal's community'forests, the'users' group has power to impose sanctions against its members for violations of work plan (Act 1993, art. 29). In buffer zones, however, users' committees are limited to recommending that the Warden issue stop or cure orders (Buffer Zone Management Regulations 1996, art. 18). Myanmar's provision goes farther expressing a "right and duty" of users' groups to enforce by-laws and impose penalties (Instruction 1995, art. 20(l)(b)).

4.1.8 Financial/Technical Assistance and Incentives

The creation of a users' group fund is the most common financial incentive provided under recent forest legislation. Many countries also continue to provide general incentives for commercial forestry interests, which may apply to community forest, as well. In the Philippines, incentives for industrial tree plantations include a nominal filing fee, rental payment holidays, substantially reduced forest charges and priority in obtaining credit from Government programmes (Code 1975, art. 36).

4.1.9 Regulatory Flexibility

In some instances, community forestry programmes authorise contract-based adjustment, under which the users' group can obtain special authority, or exemptions with regard to otherwise applicable administrative rules, whether generally available under permit arrangements, or negotiated on case-by-case basis. Legislation in Bhutan (Act 1995, art. 17(d)) and Myanmar (Instruction 1995) exemplify two forms of this flexibility.

4.1.10 Other Issues of Concern

Recent community forest legislation continues to face a number of common difficulties which will require continued legislative attention. Particular concerns focus on dispute resolution issues, since the laws generally lack a specific means of resolving disputes within the users' group, between the users' group and outsiders, or between the users' group and the Government. With regard to the latter, given the contractual nature of community forest designation, it has generally been thought that contractual law will govern defaults by the users' group. However, the special nature of the rural communities involved, and the

special objectives of community forest programmes suggest that strict application of contract law may not be appropriate. Hence, close attention must be given to the recourse available when community forest arrangements are broken. Current issues of concern include the designation of community forests, the balance between community and environmental objectives, and new demands on government resources.

Selecting land/forests for designation as community forests: In making this determination, a number of factors must be considered by forest officials, whose responsibility includes determination of the balance of uses of forests throughout the region. Nepal's Forest Regulations note the need to consider factors as diverse as the distance between forest and village, local users' wishes and local users' management capacity (art. 26). In some countries, critics claim that only the most degraded lands, unsuitable for utilisation, have been designated for community forest purposes (Talbott and Khadka 1995: 10). Some countries (e.g. Vietnam) count reforestation as one of the primary objectives of the community forestry system, which is geared towards providing communities with forest lands, some limited immediate financial incentives to reforest those lands, and/or long term interests in the forest product (Young 1998). In others, the objective of providing communities with commercial options is stymied if only degraded lands are available to the programme.

Balancing community forest needs and ecological requirements: Fragile forest lands are sometimes identified, after designation as community forest. In some cases, such lands must be protected for reasons ranging from hydrological importance, and biodiversity protection, to unexpected forestry impacts. Security of the users' group's rights can be compromised, unless the government is obligated to provide compensation or secure equivalent rights elsewhere. This issue, although often addressed in the context of private forests, is rarely mentioned with regard to community forests. In Bhutan, the Forestry Act provides for monetary compensation or alternative land rights when the government declares private registered land as Government Reserved Forest (art. 9). No similar rights appear to apply when community-used land is taken.

Infrastructure and commitment of government resources: In the welter of attention to the benefits of community forestry programmes, relatively little attention has been given to the additional costs of the programme. While community forestry programmes are thought to decrease the need for government policing by giving the community incentives to control illegal harvesting and other activities, they can be expected to increase the need for extension services and other sorts of assistance, including legal assistance in ensuring compliance with organizational requirements.

Other needs include provision for alternative sources of supply of forest produce or income, improvement of measures to protect community forest users' rights, integration of customary rights with community forest programmes, and specification of legally enforceable, longer-term forest tenure rights in the continuing absence of community forest land ownership.

4.2 Increasing Ecological Focus and Mandate

The earliest environmental protections and protectors were almost universally found in the forest sector. To this day the highest forestry official in many countries is titled the "Conservator" of Forests. It is therefore unsurprising to forestry officials that many conservation

and environmental matters have been included within their province. Since the 1970's, however, many laws have divided responsibilities between forestry agencies (resource use) and environmental agencies (resource conservation). Recent trends show a return to a stronger expression of the ecological responsibilities of the forest sector, and its unique ability to contribute to the countries' conservation objectives.

4.2.1 Ecologically-oriented Definitions and Purposes

Recent legislation in the region almost uniformly reflects a reconsideration of the definitional elements circumscribing the actions of forestry officials. In stark contrast to colonial-era laws[10], definitions of "forests" and "forest resources", and "forest lands" recognise that forest governance is about more than timber harvests. In the Lao PDR, for example, "'Forests' constitute the nation's precious natural resources and include plants, tree species growing in nature or grown and which existence is necessary for the environment's preservation and for humans' livelihood" (Law 1996, art. 2); and "Forest resources" include animate and inanimate resources, such as land, plants, trees, aquatic animals, wildlife and others existing in forest land (art. 3). While in Nepal, the term "forest" includes any area fully or partly covered by trees (Act 1993, art. 2(a)).

At the far end of this trend, some laws extend these terms well beyond their normal use. In Bhutan, for example, for jurisdictional reasons, "forest" means "any land and water body, whether or not under vegetative cover" which meets certain government ownership criteria (Act 1995, art. 2).

While a few forest laws (Myanmar and Fiji) do not include definitions of "forests," the apparent trend is toward an expansive view which recognises the Forest Departments' responsibility to manage the whole matrix of forest-connected natural elements, and to co-ordinate the full range of forest uses and values. This change accords with various international objectives, including the Rio Forest Principles[11].

Moreover, as the States' ownership monopoly over forest resources and lands diminishes, an objective definition of "forests" which eliminates the element of government ownership, enables governments to fulfil their domestic and international obligations to conserve and manage all types of forests regardless of underlying tenure.

Beyond this, several forest laws also specifically mandate forest administrations to promote environmentally-oriented policy objectives. In the Lao PDR, for example, the purpose of the Forestry Law is stated in the form of a charge on government to set the "fundamental principles, regulations and measures for the management, preservation and use of forest resources and forest land, promotion of the revival, afforestation and development of

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[10] Some countries in the region still have colonial-era laws, e.g. India (Forest Act of 1927) and Bangladesh (Forest Act of 1927).

[11] Article 8 recognizes a need "to maintain and increase forest cover ... towards the greening of the world. All countries, notably developed countries, should take positive and transparent actions towards reforestation, afforestation and forest conservation ... [which] should include the protection of ecologically viable representative or unique examples of forests, including primary/old-growth forests and other unique an valued forests of national, cultural, spiritual, historical and religious importance".

forest resources... with the view of ensuring the balance of nature, of forests and forest land as the people's sources of livelihood and sustainable use, preserving water sources, preventing land erosion, preserving seeds, trees, aquatic animals and wildlife and the environment in contribution to the national socio-economic development" (Law 1996, art. 1).

In classification of forests, greater attention and concern appears to be authorised for conservation-oriented categories, such as forests reserved for the protection of biodiversity, watershed catchment areas, and areas designated for use of local populations (fuel and food) (e.g. Myanmar, Law 1992, art. 4). This shift in policy toward more ecologically-balanced forest management, provides an explicit legal mandate for existing forestry administrations to pursue environmental and social objectives in all aspects of forest management and use, especially those not addressed in the forest legislation. In a few countries (e.g. Tonga), it represents a further move, signalling their shift away from commercial extraction focus entirely. Tongan forestry law and institutions, although continuing to manage the remaining authorised forestry licensees and programmes, now key their efforts on reforestation and hydrological protection (Young 1996).

4.2.2 Environmental Impact Assessment and other Assessment Tools

Environmental Impact Assessment (EIA) is a tool for integrating environmental values into decision-making, which is well established in the region in policies relating to the forestry sector. Several recent trends have manifested themselves relating to the use of EIA and similar assessment tools in the forestry context. It should be noted, however, that EIA is not commonly codified in forestry laws in the region. A few countries' forestry laws do not mention anything about EIA or other assessment requirements. In Myanmar, for example, although clear statements concerning the government's environmental/conservation policy are included in the 1992 Forest Law (art. 3(b)), this makes no mention of EIA, nor does it specifically require any environmental component in forestry decision-making. Fiji's Forest Decree of 1992 conspicuously omits detailed management planning provisions recommended during the legislative drafting process, which would have achieved some of the same goals as EIA (Christy and Cirelli 1992).

By contrast, some of the countries in this study mandate other, additional impact evaluation tools, enunciating special responsibilities for ongoing audit of the environmental condition of forests and surrounding areas. Where EIA provisions require the creation of an assessment prior to any development in forest areas, and mandate forestry department participation in either the creation or review of this document, some countries have gone beyond this in a number of ways.

Duplication of basic EIA requirements: One "trend" is the renunciation of the details of EIA responsibilities in forestry legislation. While the value of applying EIA principles in the forestry context is undisputed[12], the potential for future legislative conflict between two

[12] E.g., article 8(b) of the Rio Forest Principles states: "National policies should ensure that environmental impact assessments should be carried out where actions are likely to have significant adverse impacts on important forest resources and where such actions are subject to a decision of a competent national authority".

differently worded EIA laws (one in the forest law, and another more general provision) and other inconveniences suggest that, unless significant deviation is warranted, general EIA provisions should remain applicable, with only a general reference to such applicability in the forest law. This latter approach is exemplified by the Philippines' National Integrated Protected Areas System Act of 1992, which states specifically that all activities outside the scope of the protected area's management plan require an Environmental Compliance Certificate under the Philippine EIA system, leaving all details of this process to be enunciated under the basic EIA law (art. 12).

In many countries, however, there are significant differences in how EIA requirements are applied in the forestry sector from the general application in other areas of government decision-making. As to these differences, carefully crafted provisions co-ordinating the two laws are essential.

Trends in application of EIA to forestry: Many of the countries have legislated special provisions in EIA affecting government forestry projects. Although sometimes these differentiations are part of the basic EIA law, applicable to all government projects, the forestry law may contain special provisions exempting government forests in some cases or, in others, adding more intensive levels of environmental scrutiny.

In Nepal, for example, the general EIA law may not apply to government-managed forests and protected forests. Nepal's Forest Act does not contain detailed management planning provisions which would achieve the same purposes as EIA for Government forests. This government exemption may have the effect (possibly intentional) of restricting projects and other actions only by nongovernmental forest users. The Forestry Law in the Lao PDR contains a similar provision, with similar potential effect. It requires traditional users of forests and forest lands to avoid causing "damage to the forests or forest resources" and "prejudice to the interest of individuals or organizations" (Law 1996, art. 30).

In some cases, an EIA process has been extended to include a consideration of social impacts of forestry projects, which are studied in the same manner as environmental impacts. In Bhutan, for example, the person responsible for a forest project must prepare a management plan containing an assessment of the environmental and socio-economic impact of the proposed management regime (Act 1995, art. 5(b)). This requirement applies regardless of whether the entity responsible for the project is a government official or a private or community manager. No inter-agency circulation of this information is required as a part of the plan process, however the Minister must approve all management plans (Act 1995, art. 5(a)).

Another component often addressed in forestry legislation is whether the creation and adoption of a management plan is a "project" for which an EIA is required. In Bhutan, the answer is a clear 'yes' (Proposed Rules 1997, Technical Regulation IIA, art. 5). Where not directly obligated to comply with actual EIA requirements, several laws mandate separate environmental scrutiny of the effects of the management plan, as a component of the planning process.

Future forest legislation in the region should ensure that environmental impact assessment and related decision-making tools apply equally to governmental and

nongovernmental forest decisionmakers, minimising the extent to which they constitute a barrier to public participation in the resource management process.

Evaluating effects of ongoing projects - the "Environmental Forest Audit": One of the new trends, in the consideration of environmental impacts, is the reconsideration or updating of assessments. Both Bhutan and Nepal integrate either directly or indirectly an ongoing environmental audit requirement with definite impact on the rights of the forest user. In Bhutan, this requirement is direct. Both commercial forest users and community forest users' groups are required to submit, as a part of annual reporting and records, a detailed statement concerning the "state of the environment" of the forest (Proposed Rules 1997, art. 45.3(c) and Technical Regulation IIA, art. 12).

Nepal takes a different, indirect, approach. Even where a user's group is operating under an approved forest work plan, a District Forest Officer may issue a directive ordering them to cease, within 30 days, any action under a work plan amendment which he considers likely to cause a significant adverse effect on the environment. Since the District Forest Officer, rather than the person or entity responsible for management, prepares EIAs on forest projects, his is the primary input on the subject of environmental impacts (Act 1993, art. 26(2)).

This approach to ongoing environmental impact evaluation pervades Nepal's legislation. Of Nepal's three categories of forest users - community, leasehold and religious -, the Government is required to evaluate the general impact on the environment only before handing over a leasehold forest (Forest Regulations 1995, art. 39). However, the Government has rights to "take back" any community or leasehold forest or cancel the lease, if it determines that it is being managed in a way that is likely to have a substantial adverse impact on the environment (Act 1993, arts. 27, 33 and 53; Forest Regulations 1995, art. 37). The legislation does not mention negative environmental impact as a reason for taking back a religious forest, although it may use negative environmental impact as a reason for taking back a religious buffer zone, and may restrict tree-felling in a religious forest if there is likely to be a significant adverse impact on the environment or soil erosion in a watershed area (Act, arts. 36-37; Forest Regulations, art. 50; Buffer Zone Management Regulations 1996, art. 22(3)).

V. CONCLUSION

This review has highlighted a number of areas for future forest legislation reform, including the following:

- further improving the legal framework for community forest (with attention on dispute resolution, criteria for suitability of lands, balancing potentially competing interests, finding alternative supply sources or income, improving protection of use rights, mandating longer terms);
- accommodating the coexistence of community forest rights, customary rights and government land claims;

- development of legal infrastructure to support forestry markets, particularly in countries in transition to market-based economies;
- continuing the process of reforming forest administrations, reorienting commercial forestry practices and opening forest management to nongovernmental actors;
- integrating environmental and social values throughout the forest resource management decisionmaking process and ensuring that tools such as EIA do not impede this goal; and
- sharing forest management and conservation funds with the local level.

Forest legislation by itself has limited effect, however, and is often not implemented effectively on the ground. No well-drafted, carefully designed, progressive forest legislation can overcome poorly-conceived forest policies implemented by Government institutions which do not have the political will to change for the future. In addition, policy and legal decisions in many sectors, especially, land tenure and economics, have direct and indirect impacts on forest legislation. If properly supported by governmental oversight, monitoring, and technical assistance, changes in the political system of a country, such as increased démocratisation, can facilitate acceptance and implementation of decentralised, more autonomous local control over forest resources. Without proper governmental participation, however, local control can amount to a license to decimate marginal forests.

The legislation reviewed in this chapter reflects well the consensus that formal legal reform, while desirable in the long-term, is not always sufficient to benefit communities and to attain long-term forest sustainability. Experimentation and joint forest management activities are taking place under contracts, sometimes encouraged by legislation, but often only tolerated. Better scientific data is needed to manage and maintain forests for ecological functions and social welfare. Better training and financial resources for governmental and nongovernmental institutions can improve forest resource management and assist governmental and nongovernmental resource managers to implement forest laws and policies. Legal remedies can be strengthened while encouraging existing use of media and nongovernmental advocacy tactics to resolve conflicts over forest use.

While some policy-makers may see entrenched interests in the law-making process impeding the evolution of forest management decision-making, others will recognise the need for national forest legislation which redefines the regulatory and managerial role of the State in a sector which it previously monopolised. In that sense, only national forest legislation, by pulling the State back, can facilitate private involvement in forestry, and the development of viable forest management institutions at the community level. The overall trend identified in this study toward more flexible national forest legislation, which reflects the international consensus on forests, demonstrates that significant progress has been made toward sustainable, equitable and participatory forest resource management in the region.

LEGISLATION REVIEWED

Bhutan

- Forest and Nature Conservation Act 1995
- Proposed Forest and Nature Conservation Rules 1997 (with Technical Regulations)

China

- Forestry Law 1985
- Ordinance Concerning the Prevention and Control of Forest Diseases and Insect Pests 1989
- Provisional Measures for Forest Land Management 1993
- Measures for Handling Disputes over Property Rights for Forest Trees and Forest Land 1996
- Management on Forest Country and Regeneration 1987
- Measures for the Implementation of Supervision over the Management of State-Owned
- Forest resources Assets 1996
- Provisional Measures for the Management of Afforestation Funds 1972
- Interim Provisions for the Administration of the Environment in Economic Zones Open to the Outside World 1986

Cambodia

- *Avant-projet de loi relative aux forêts,* December 1994

Fiji

- Forest Decree No. 31 of 1992

India

- Forest Act 1927
- Forest (Conservation) Act 1980 (No. 69 of 1980)
- Joint Forest Management Regulations Update 1992

Indonesia

- General Explanation of the Basic Forest Law (No. 5/1967)

Lao PDR

- Forestry Law 1996 (No. 01-96; 11 October 1996)
- Ministry of Agriculture Decision No. 0054/MAF on Customary Rights and the Use of Forest Resources (7 March 1996)
- Ministry of Agriculture Recommendations No. 0377/AF to Provincial, Municipal and Special Zone Agriculture-Forestry Services, District Agriculture-Forestry Officers on Customary Use of Forest Resources (17 April 1996)
- Prime Minister's Decree No. 102/PM on Organization/Administration of Villages (25 November 1993).

Malaysia

- National Forestry Act 1984

Mongolia

- Law of Environmental Protection 1994
- Law on Forests 1993

Myanmar

- Forest Law 1992
- Community Forestry Instruction 1995

Nepal

- Forest Act 2049 (1993)
- Forest Regulations 2051 (1995)
- Buffer Zone Management Regulations 2052 (1996)

The Philippines

- Revised Forestry Code 1975
- Executive Order No. 278 (1987) Prescribing the Interim Procedures in the Processing and Approval of Applications for the Development of Utilization of Forestlands and/or Forest Resources
- National Integrated Protected Areas System Act of 1992
- DENR Administrative Order No. 59 (1990 on Guidelines in the Confiscation, Forfeiture and Disposition of Conveyances Used in the Commission of Offenses Penalized under -[the Revised Forestry Code of the Philippines]... and other Forestry Laws, Rules and Regulations
- DENR Administrative Order No. 54 (1993) Amending Order No. 59 (1990)
- Memorandum Order No. 162 (1993) Providing Guidelines for the Disposition of Confiscated Logs, Lumber and Other Forest Produce for Public Infrastructure Projects and other Purposes

Tonga

- Draft Forest and Wildlife Protection and Management Act 1996 (FAO: TCP/TON/4454)

Vanuatu

- Forestry Act 1982 (No. 14 of 1982)
- Forestry (Orders) Order 1982 (No. 32 of 1982)

Viet Nam

- Forest Resources Protection and Development Law (No. 58/1991)
- Decree on Implementing the Law on Forest Protection and Development (Council of Ministers, No. 17-HDBT, 1992)
- Selected Government Decisions on Forestry 1992-1995 (3rd ed. MARD, 1996)
- Decision on Policies for the Use of Bare Land, Denuded Hills, Forests, Alluvial Flats and Water Bodies (Council of Ministers, No. 327/CT, 1992) (adjusted by Decision No. 556TTg, 1995)

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