Concession and Permit Forest Policy Reform

for the Colombian Pacific Coast

by

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ABSTRACT

Colombia's current Government Forestry Policy in the tropical forests of the Pacific Coast has led to major resource management problems. These are principally the following: inadequate institutional arrangements, tenure uncertainty, under valuation of the forest resources and presumably their unsustainable use. Additionally, the current forestry policy does not acknowledge the existence of collective property of Indian and Black Communities on the Pacific Coast.

This thesis proposes a reform to the Concession and Permit Forestry Policy in order to overcome its structural deficiencies, as well as its major design deficiencies so that sustainable use of the forest resources can be promoted. The reforms proposed emphasize the establishing of a new concession and permit policy framework, in which communal concessions are introduced. A justification and an assessment of the feasibility of communal concessions is developed.

Tenure issues regarding Forestry Concession and Permit Policy are analyzed in detail. The tenure characteristics considered are comprehensiveness, duration, transferability/renewability, exclusiveness and security. The analysis proceeds by systematically assessing these tenure characteristics for both land and forest property for the existing ownership types (*Resguardos* or Collective Indian property, Collective Black property, Private property and State Property), as well as for the forest use assignment schemes. The assessment is done in the light of the tenure literature, with emphasis on the environmental, economic, social and institutional sustainability. Based on this analysis, specific reform proposals in order to promote sustainable use of forest resources are made for the different ownership types.

Finally, the position of the different stake holders (Government, Communities, Private Sector and NGOs) with respect to the policies and an identification of strategies needed to make them politically acceptable are developed.

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INTRODUCTION

The Colombian Pacific Coast forests have been classified as some of the most biodiverse tropical ecosystems world wide (Gentry, 1988). Sixty-two percent of Colombia's timber products come from the Pacific Coast, of which approximately more than half are extracted illegally. These forest resources are subject to many of the same threats of depletion reported for other countries. This growing pressure is leading to environmental degradation of the forested areas.

Even though there is no well-documented evidence of unsustainable use of the forest resources, this appears to be the case. Inadequate institutional arrangements for forest management, increasing rates of illegal wood extraction, under valuation of the forest resources, and forest tenure uncertainty are at the origin of this unsustainable trend. Additionally, forest policy has paid little attention to the fact that most government owned forest have been traditionally occupied by forest dwellers. Moreover, the current policy does not consider the existence of collectively owned Indian and Black property on the Pacific Coast.

Several of these problems can be directly linked to the current concession and permit policy. In particular, two types of policy failures can be identified: structural policy deficiencies and design deficiencies. Structural policy deficiencies, such as the lack of acknowledgment of forest dwelling communities, call for the formulation of a new policy framework. Design deficiencies, such as ill designed tenure and rent policies, require the modification of current policies. The aim of this thesis is to propose a policy reform to the current Concession and Permit Forestry Policy, taking into consideration these deficiencies, and with two main objectives in mind. The first objective is to encourage the sustainable use of the forest resources. The second is to promote the socio economic development of forest dwellers.

This thesis was developed on the premise that concession and permit policies are an appropriate tool to achieve these policy objectives[1]. This is so because the most important challenges to sustainable forest use are not in the ecological and forest management constraints, but in the economic, social and political environment surrounding forest use.

The background material, as well as the information analyzed, was gathered between September 1992 and August 1993, when I was working for the Environmental Policy Division in the Colombian National Planning Department, and during the summer of 1994. The collected material not only includes documents and reports, but also a set of interviews with a sample of different stake holders of forest policy on the Colombian Pacific Coast. The interviewees included persons from the different government agencies, from Black and Indian communities, community leaders and representatives of grass root organizations, managers of forestry firms and directors of forestry associations.

The thesis is organized as follows: Chapter I provides the background material on the Colombian Pacific Coast, including information about the forest resources and the existence of collective territories. The institutional background for environmental management is also provided. Additionally, a description of the current forest policy, its resulting permit and concession structure, as well as market structure, and the existing association between the private sector and the communities is also described. Finally, this background Chapter provides a critique of the current concession and permit policy, emphasizing the topics of inadequate institutional arrangements, forest resource undervaluation and tenure uncertainty.

Building upon the background provided in the first Chapter, in Chapter II a new Concession and Permit Forestry Policy framework is proposed. This framework corrects the main structural deficiencies identified, and introduces communal concessions. Communal concessions should operate either in an association between the forest dwelling communities with the private sector, or for communities in an autonomous way. A justification of communal concessions is provided, as well as an analysis of their feasibility in the Colombian Pacific context. The following topics are covered in the analysis: previous communal concessions and community forestry experiences on the Colombian Pacific Coast; community organization and cohesiveness in a communal management context, and the limitations and challenges of communal concessions; issues of access to finance and to markets; and special considerations regarding joint ventures between communities and private firms. The purpose of this Chapter is to provide a policy

[1] / I acknowledge the fact that there are relevant ecological, silvicultural and technical obstacles to forest management.

framework, in which the major requirements for its functioning are indicated (e.g. Access to credit and Markets). The intent is not to develop fully the details of how the policy would operate, or to propose specific communal concession projects.

Policy design deficiencies with respect to tenure are addressed in Chapter III. Tenure is considered a key issue, but has not received its due importance in forest policy analysis or design (Vincent and Binkley, 1992). In fact, forest rents have traditionally received much more importance, even though tenure may be equally or more relevant in shaping the tenure holder behavior over the forest resources. Chapter III provides a discussion in the light of the forest tenure literature of the tenure characteristics that are considered relevant. These are the following: comprehensiveness, duration, transferablity/divisibility, exclusiveness and security. After providing this theoretical background, the current land and forest tenure conditions are analyzed in detail. The emphasis of the analysis is on the differences between the existing property regimes, as well as the features of the forest use assignment schemes. This classification and analysis are the basis for the rest of the Chapter, in which each of the tenure characteristics is analyzed individually as it applies to the context of the Colombian Pacific Coast. For each of the tenure characteristics specific reform proposals are made.

The comprehensiveness of land and forest use rights is a critical issue determining forest owner behavior. An analysis of the current forest policy makes clear that there is a bias towards timber, at the expense of a more comprehensive use of forest resources. Other policy problems were identified, both regarding property characteristics and forest use assignment schemes. Duration is also of relevance because it determines, among other things, the time frame the forest owner uses for his investments and forest use decisions. The assessment of the current duration policy indicates that it does not provide appropriate incentives for sustainable forest use. Reforms to modify these incentives are proposed. The reasons why the transferability of land and forest use rights are discussed. Of these reasons, one of the most relevant ones is the liquidity over the asset that the forest owner has. Transferability provisions are proposed in order to promote policy objectives. Exclusiveness determines, among other things, the capacity of an owner to exercise his rights over a tenure granted. Issues of exclusiveness are discussed with respect to the current forest policy and the policy reforms proposed. Additionally, there is a discussion of the relevance of exclusiveness in the context of collective property and its contrasted with open access forests, as State property forest may be. Finally, issues around the security of the political system that determines forest policy are treated. This last point is of particular interest because it shapes the acceptability of the policy reforms proposed.

The final Chapter provides the conclusions, emphasizing the political economy of the reforms proposed. The analysis proceeds by identifying, for the different stake holders, what their most probable position will be with respect to the reforms proposed, and determining strategies to win their support for policy reforms.

Chapter I: BACKGROUND

A. GENERAL BACKGROUND OF THE COLOMBIAN PACIFIC COAST

1. General Information

The Colombian Pacific coast region is located in the western part of the country, between 7.5 and 1 latitude north, corresponding to a total area of 10'259.575.24 ha. There are four main departments present in this region, which are from North to South: Chocó, Valle, Cauca and Nariño[1].

Ninety three percent of the Colombian Pacific Coast is covered by tropical forests (IGAC, 1992) that together have been classified as one of the most biodiverse tropical ecosystems world wide (Gentry, 1988). In contrast to its richness in natural resources, the Colombian Pacific coast is, in economic terms, one of the poorest and least developed regions of the country. In fact, although approximately 800,000 inhabitants of 32 million Colombians live in this region (*Departamento Nacional de Estadísticas*--DANE, 1985), it only accounts for 0.2% of the GDP. This low economic growth is linked with extreme poverty levels. In 1985, DANE estimated that 77% of the households in the region did not have basic services such as running water and sewerage. The level of poverty calculated with the index of unsatisfied basic needs was 82.2%. Of the total poor population, an estimated 479,309 persons[2], the largest proportion of the poor population, live in the Department of Chocó (49.5%), followed by Nariño (27.5%), Valle (16%)

[1] / Parts of the North Western region of the department of Antioquia can also be considered part of the Colombian Pacific Coast.

[2] / Because migration is common in these parts of the country census data are very unreliable, and may underestimate the real population. The total population estimated by DANE in 1985, may be lower than the real figure, which may be more close to 1.4 million people nowadays (Interview--Field Work, 1994.)

and Cauca (7%) (DNP, 1993b.) The contrast between the natural resource richness and poverty levels is enormous but not surprising. By analyzing the available data, one can conclude that most of the wealth generated from natural resource extraction in the Pacific has benefited people outside the region.

The main traditional productive activities of those who dwelling of this region are heavily dependent on the natural resource base. These activities are agriculture, mining, river and sea fishing, hunting, non timber product collection and timber extraction. The relative importance of these different activities in the region's economy has not been precisely estimated (Pombo, 1993). In particular regions there is usually one main productive activity which represents the main source of income, and other complementary ones. The more common major productive activities are mining and agriculture, while timber harvesting, fruit collection and commerce tend to be complementary. The different regions within certain parts the pacific coast (e.g. Medio Atrato) are characterized by a predominance of one of these activities year round. Usually however, more than one activity is undertaken (Restrepo, 1992). Thus, there is a regional shift in the amount work as well as income contribution to households derived from them year round. These shifts are not only linked to the traditional migration behavior of some communities, but also to production cycles and environmental conditions[3].

Agriculture takes place mostly through itinerant crop growing. Major crops are: plantains, corn, beans, rice and yuca. Mining techniques vary according to whether the mineral resource is alluvial or loaded. Within the mining activities, those done by using individual labor, such as *baharaqueo*; other more sophisticated techniques, such as alluvial wash through channels, are based on communal work. River fishing is concentrated in the San Juan, Patía and Mira rivers. Non timber products are usually extracted from the forest for domestic use. Herbs are used for medicinal purposes, fruits are collected mainly for domestic consumption, woody climbers are used to manufacture tools and construct houses. Timber is extracted both for domestic use and for commercial purposes by specialized timber cutters, on a selective basis.

The typical labor organization for these traditional activities has been individual, or family based, rather than community based. Even though literature describes these organizations as communal organizational labor forms (Sánchez et alt in DNP, 1993a) they actually correspond more to traditional mechanisms of paying back favors (Field work, 1994). Also, related to the organization of production, males in the communities have the tradition of migrating year round.

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[3] / For example, the harvesting of wood usually occurs taking advantage of the rainy season to use streams to transport the logs out of the forest.

This behavior is also regulated by social and parenthood relationships (Restrepo, 1992). There is however, an enormous cultural diversity in the region, and even though the production organization described may be the dominant one, not all regions in the pacific Coast have these characteristics. In fact, there are local pockets where collaborative labor has been reported in the harvesting of forest resources, and people are traditionally sedentary (Del Valle, 1993).

Other economic activities have been developing more recently in the region. These include plantations of perennial crops such as palm oil, hatcheries (mainly shrimp), industrialized gold and timber extraction. These are large scale, capital intensive economic activities, which are usually financed with capital from outside the region. They normally leave very low local economic profits and high local environmental degradation (DNP, 1993b).

2. Forest Resources of the Colombian Pacific Coast

Of the total area of the Colombian Pacific Coast, 93% of this land corresponds to forested areas. Of this percentage, 43 % have been classified by the Geographic Institute Agustin Codazzi (IGAC) as protective, 35 % as protective-productive , 15 % as productive and the rest suitable for multiple use (IGAC, 1992). The following Chart No. 1 summarizes the types of forests present in the region, their extension and their localization in the different departments, as well as the name of the species or predominant families in the ecosystem types.

A description of these ecosystems can be found in Inderena (1994a & b) and other specific studies (Conif--*Corporación Nacional para la Investigación Forestal* Scientific publications). Some of these ecosystems have been studied more thoroughly than others, especially *Catival* and more recently *Guandal* because of their high commercial use. In general, however, there is a striking void in the ecological understanding, and even more in their specific forest management requirements for sustainable use. Additionally, Inderena (1994b) reports that nowadays all ecosystems are becoming more subject to mining than to harvesting. The following section will focus on the institutional, economic and political problems of forest use.

Of the overall forest resources in the region, a total of 25,487 square kilometers (4.7%) has not been intervened (i.e. has not been harvested selectively); 6,869.5 square kilometers (1.3%) have been intervened; and 21,843.3 square kilometers (4.1%) have been determined to be not appropriate for commercial use (Inderena, 1994a).

CHART No. 1

TYPES OF FORESTS, EXTENSION AND DEPARTMENT LOCATION FOR THE COLOMBIAN PACIFIC COAST

TYPE OF FOREST	CHARACTERISTIC SPECIES OR FAMILIES	AREA (Has)	DEPARTMENT(S)
Mangrove	Rhizofora Avicennia Laguncularia Pelliceria	261,000	Cauca,Nariño, Chocó and Valle.
Natal	Mora megistosperma	N.A. (1)	Cauca, Nariño, Chocó and Valle.
Arracachal	Motricardia arborcenses	15,000	Chocó, Antioquia (2)
Panganal	Raphia taedigera	20,000	Chocó, Antioquia.
Catival	Prioria copaifera	363,000	Chocó, Antioquia.
Guandal	Myristicacea Camnosperma		Chocó, Antioquia.
	Mixed	355,000	Chocó, Valle, Cauca and Nariño
Naidizal	Euterpe cuatrosecana	200,000	Antioquia,Chocó, Valle,Cauca and Nariño
Hill and Terrace forests	Various species	2,816,225	Antioquia,Chocó, Valle,Cauca and Nariño

Source: "Lineamientos y Estrategias de Política para el Desarrollo Forestal Sustentable", Inderena, 1994a.
NB. (1) N.A stands for non available information.
(2) Antioquia, is a colliding department, and some areas of it can be considered part of the Colombian Pacific Coast.

There are few systematic assessments of whether these ecosystems have been used sustainably or not. However, it is commonly asserted that they have been used unsustainably, based often on historical observations or on casual assessments. The lack of scientific evidence of unsustainable use is linked to the scarce knowledge of these ecosystems. However, it is worth mentioning that several of the ecosystems in the Colombian Pacific Coast are reported to be degraded or under a process of degradation. Mangrove forests in the region "degraded in a major

or minor way, some are in an irreversible state of recuperation, others at a critical point of alteration, and others with possibilities of been recovered under sustainable forest management" (Inderena, 1994b). For the *Catival* association, its intervention of the ecosystem has been due 20% because of industrial harvesting, and 80% due to spontaneous colonization. The colonization has lead to land use change of 72,000 hectares. Also, in these intervened areas, additional 88,000 hectares are under the secondary *Catival* forest (Inderena, 1994b). Commercial forest use in this association has been mainly selective, in which 4 to 5 species are harvested. As for the *Guandal* association, the forests have been said to be "mined". In 1993 it was estimated that around 20% of these forests were not recoverable[4] (Inderena, 1994b). In the 1970's several large sawmills in Tumaco (Valle) had to close. It has been said that the evidence pointed out that this had occurred because of the lowered productivity of *Guandal* forests, and the exhaustion of the resource (Del Valle, 1993). As for the association *Naidizal*, it is said to have been subject to "intensive and reiterative exploitation without allowing for enough time for its adequate regeneration; this exploitation is leading it to its virtual exhaustion as a productive resource." (Inderena, 1994b)

Annually, Colombia consumes annually approximately four million cubic meters of raw wood for industrial purposes, of which 1.5 million come from plantations and 2.5 million from Natural forests (Motta, 1992). Of this volume it has been estimated that only 40% is used, and the rest is lost due to inefficiencies in the productive process, or because of the quality of the wood. Even though plantations are increasing, timber demand is also on rise with a yearly increase expected to be around 4.3%. It is estimated therefore that, by the year 2004, approximately one fourth of the demanded timber will come from plantations.

Most of Colombia's timber resources come from the Pacific region. It has been estimated that in 1992, approximately 62.4% of the total timber extracted in the country came from the Pacific (Motta, 1992). Along with its richness in forest resources, it can be observed from IGAC's figures that most of the Pacific is not suitable for agriculture. This is primarily due to the quality of the region's tropical soils, in which most of the nutrient content is stored in the forest biomass. In such soils the removal of the forest cover can cause erosion and rapid nutrient loss. Thus the conservation of the forest cover is recommended by several studies as the means for maintaining the region's environmental sustainability.

[4] / The reference does no clearly defie the meaning of "recoverable".

B. INSTITUTIONAL SETTING FOR ENVIRONMENTAL MANAGEMENT

Until 1993, Colombian natural resource management had a dual authority. Approximately 75% of the country was under the jurisdiction of INDERENA-*Instituto Nacional de los Recursos Naturales Renovables y del Ambiente* (i.e. "National Institute for Renewable National Resources and the Environment") which divided the country into regional jurisdictions and depended on the Ministry of Agriculture. The rest of the territory--approximately 25%, was under Regional Development Corporations, supervised by the National Planning Department (DNP)--the central government planning agency. Before 1993, there were numerous problems of competence among the ministries, Inderena, the Regional agencies and the DNP. There were also conflicts of interest among the corporations because of their dual role of development agency and guardian of the natural resources.

With the creation in 1993 of the Ministry of the Environment (MinAmbiente), this whole institutional setting was modified and is currently in transition towards the new structure. In this new institutional setting all of the country has been divided, and jurisdiction assigned to regional corporations. These new institutions are now called Autonomous Regional Corporations (CAR: *Corporaciones Autónomas Regionales*), which are more or less independent regional management agencies under the supervision of MinAmbiente.

Regarding the Colombian Pacific Coast, some of the old Corporations are still in place. Some of them have suffered some modifications, in responsibilities as well as in their jurisdiction. Others have taken over functions as well as territories previously under Inderena[5]. The Corporations that remain in place are Codechocó (*Corporación Autónoma Regional para el Desarrollo Sostenible del Chocó*, i.e. Autonomous Regional Corporation for the Sustainable development of Chocó), Corponariño (*Corporación Autónoma Regional del Nariño*), CVC (*Corporación Autónoma Regional del Valle del Cauca*, which has an enlarged jurisdiction), and CRC (*Corporación Autónoma Regional del Cauca*).

This new institutional setting is a transition towards a more decentralized scheme of natural resource management, and is currently been implemented. Many other transcendent changes were introduced by the MinAmbiente Law. These can be detailed in the Law 99 of December of 1993, by which the new environmental ministry was created. In this section only the relevant issues with respect to concession and permit policies will be signaled.

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[5] / The relevant norms and legislation that have been applied in the Colombian Pacific Coast, thus correspond to Inderena, Codechocó and Corponariño.

Under this new institutional setting, MinAmbiente has the responsibility of formulating the national policies of natural resource management in order to assure their sustainable use, as well as coordinating the rules of sustainability that apply to the other sectors in the corresponding ministries (Article 5, Law 99, 1993). MinAmbiente has also the responsibility to determine the minimum fee, as well as the formula, to determine the rents that can be charged by the CARs. Also, it should fix the global quotas of forest use to be adopted by the CARs when granting permits and concessions. Within MinAmbiente, the is a National Direction of Forests and Wild Life is one of the five directions within the ministry.

The CARs have the responsibility of executing the policies, programs and plans determined in the law of the National Development Plan and the National Investment Plan, or by MinAmbiente. They are the maximum environmental authority within their jurisdiction, in accordance with the norms dictated by the ministry. As maximum environmental authority, they are the ones assigning permits, concessions, authorizations and licenses for the use, harvesting and mobilization of renewable natural resources (Article 31, Law 99, 1993). CARs have also the responsibility of monitoring forestry activities within their jurisdiction. Additionally, they are the ones collecting the economic rents from natural resource use; and fixing the fee amount in for their jurisdiction based on a minimum determined by MinAmbiente, and its general guidelines. They have the responsibility of doing, in coordination with the respective local authorities, programs and projects of sustainable management, harvesting, use and development of the renewable natural resources, in the collective areas of Indian and Black communities[6] .

It is necessary to mention that in 1989 a National Forest Service was created (Law 37, 1989) but it has not been functional. Such Forest Service is intended to be a supporting unit of the recent Forest and Wild Life direction within MinAmbiente. It was conceived as a coordination body of public agencies.

C. COLLECTIVE TERRITORIES IN THE COLOMBIAN PACIFIC COAST

The Colombian Pacific Coast has a majority of Black population (90%), followed by Indian population (5%), and incoming white and half-breed population (5%) (DNP, 1993b). This section will provide general information about the Indian and Black communities, as well as the main characteristics of their collectively owned territories.

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[6] / Issues related to this crucial topic will be described in detail further in Section D.

1. Collectively Owned Indian *Resguardos*

The Indian population in the Pacific Coast lives the collectively owned lands called *resguardos* (DNP, 1993b). There is a total of sixty one *resguardos* in the region, most of which are localized in the department of Chocó, followed by Cauca and Nariño. Totally, they occupy an estimated area of approximately 1 million sixty two thousand hectares (Arango, 1992). The majority of the Indians correspond to the cultures Emberá, Noanamá, and Waunana; other with less abundant population are Katíos, Kunas, Paeces and Awa[7].

The Indian *resguardos* are collective property of the different Indian groups, some of which were created since 1890 (Law 89 of 1989). *Resguardos* have the same status as a department or municipalities, and they are internally governed by *cabildos*. Besides governing the *resguardos* they are supposed, among other things, to design the policies and programs leading to the community development and settle the internal regulations of natural resources use. They are also responsible of promoting the socio economic development within their jurisdiction Specifically regarding natural resources, they have the responsibility of supervising their conservation, and are entitled to their use rights[8] (Colombian National Constitution, 1991).

Other laws have been in general supportive of the Indian cause, and in particular the agrarian reform of 1961 (Law 135), where it is determined that territories occupied by Indian communities can not be considered "waste lands"[9] , and that they can be only tilted to Indians as *resguardos* (Arango, 1992). Further on, in 1988, the Decree 2001 modified the Law 135, and reinforced the cause of Indian territories, disposing the creation of *resguardos* by the INCORA--the National institute for the Agrarian Reform.

The featuring characteristics of *resguardos* besides being Indian collective property, is that they are inalienable, they can not be prescribed and are non seizable. Also, they do not pay taxes, and thus do not pay natural resource use fees. Additionally, they can set internal taxes and fees in order to comply with their internal responsibilities.

Since most Indian communities have been established in *resguardos* for a long period of time--even though there are numerous ones that have been recently constituted, they have more know-how of communal property management than Black communities (Field work, 1994). Also,

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[7] / In the Amazonian and Pacific Region there are a total of 100,000 Indians corresponding to 18,000 families, all in forested areas (Arango, 1992.) No separate data available.

[8] / In Chapter III of tenure detailed information of what the *resguardo* and Black Collective property will be given.

[9] / Waste land is the translation from Spanish *baldíos* which has a slightly different meaning. It implies that they are non occupied territories, owned by the State.

it is believed, that compared with Black communities, they have stronger communal bonds, which makes them more cohesive as a community. Nevertheless, recent external economic pressures have been challenging these structures. In fact, some leaders from the *cabildos* have been incurring in actions openly unfavorable to the communities without consulting them. For example, this type of behavior created a national scandal in 1992, when the leader of a *resguardo* called Chagueradó allowed an intermediary of an industrial timber harvesting firm to cut the timber from their territory for the payment of a off board motor and couple of boxes of beer, without consulting the community. This behavior has been increasing in the region (Vásquez--personal communication, 1994).

Because of these external pressures some *resguardos* have recently being designing internal regulations of natural resource use. Some of these initiatives have been pushed by local grass root organizations (GROs) and non governmental organizations (NGOs). Nevertheless, there has not been a systematic evaluation of what the results of communal management of natural resources, or if there are or not internal rules and how these may be set internally.

2. Black Communities and Future Collectively Owned Land of Black Communities (LBC)

Contrary to the Indian communities, whose traditional rights have been recognized at least since 1890, Black communities have just recently been legally recognized as an ethnic group. The new Political Constitution of 1991 entitles them to collective land titling of the territories they have traditionally occupied (Transitory article 55--*Constitución Política de Colombia*, 1991). Before 1991, traditional land settlement was not legally recognized, and right over the land was only established internally by family relationships (DNP, 1993b). People from Black communities claim they have established forms of collectively owned territories, in which internal rules of ownership exist. Such collective ownership has been constructed through the settlement pattern.

After the enactment of the National Constitution of 1991, there was a six months period negotiation between the government and representatives of the communities over the law to be proposed to congress. After these discussions and negotiations, several proposals of the law were discussed in Congress. This process resulted in the 70 Negritudes Law in 1993. This law determines very broadly what areas will be subject to collective titling, the steps for titling to occur, as well as general norms of use related to natural resources, and forest resources in particular, and other issues related to Black ethnicity. Given the broad definition the law gives of

the areas to be titled and the inaccuracy of the current information available on settlement, the amount of land that is going to become LBC is uncertain.

The main governance institution of the LBC is the communal council (i.e. *concejo comunitario*), which has the function of governing it, establishing internal rules for the community, supervise the interest of the collective property, as well as the conservation of natural resources (Article 5, 70 Negritudes law, 1993). The communal council has also the function of dividing the collective property between lands of collective use and lands of family use. The former ones have the characteristic of being inalienable, they can not be prescribed and they are not seizable. Family land is alienable, but the preferential right of occupation or acquisition can only relapse in other members of the community, and in its defect a member of the same ethnic group (Art. 7, Law 70, 1993).

The 70 Negritudes law establishes that the communities have environmental responsibilities in assuring the maintenance of the forest resources, preserving fragile ecosystems, as well as protecting and conserving wild species of fauna and flora endangered or in peril of extinction (Art. 21, Law 70, 1993). These responsibilities will be described in Chapter III on tenure. Regarding this topic, there is uncertainty on how the community's use of the forest resources will be once titling occurs, or if the current resource use schemes will prevail.

It is possible that due to the traditional settlement pattern of black communities, land use changes in the medium and long run after titling has occurred. This is so, because Black communities in some regions of the pacific coast, and in particular those dedicated mainly to agriculture (e.g. The Northern Chocó Region), have traditionally used a production system similar to shifting cultivation. Settlers open up new spaces for agriculture as the number of people in the community grow and/or when the available spaces are not any longer suitable for agriculture. They return to those lands when they are suitable again (Restrepo, 1992). If population keeps increasing, and agricultural production does not augment to make up for it, under a constrained community territory, more land will be opened up for agriculture. Increasing the source of income to communities through sustainable forest use may halt this tendency.

The 70 Negritudes law has several articles that relate to natural resource use, and in particular to forest use. The law establishes that domestic forest use by people from the communities does not require permit from the CAR. One of the most important innovations the law brings in is the figure of communal concessions (Article 24--70 Negritudes Law, 1993) in the context of commercial forest use. These concessions will require CAR's authorization, and can only be of "persistent" type, which means that the forest cover needs to be maintained. The law

additionally establishes that communal concessionaires can incur in association with privates and publics for harvesting, transformation and commercialization activities. Additionally, the law will enable those communities with land titles to impede the grant of concessions and harvesting permits within their jurisdiction, which has been common practice up to now.

The law establishes the stances and stages of government intervention with respect to natural resource use, and the communal concessions (Articles 24 and 52). The government should act: (1) establishing jointly with the communities the regulations for commercial forest use, (2) providing training and qualification to the members of the communities in the practices and techniques of the production process related to forestry activities, (3) designing financial and credit mechanisms to allow the communities to make associative and solidarity organizations of production for sustainable forest harvesting, and (4) to guarantee the equity in the relationships with the private sector[10]. These guidelines give a much more active role to the government, that in the case of Indian *resguardos* that can have more independence with respect to their use of forest resources.

Even though people from the black communities claim there has been traditional communal management, in fact there is no clear evidence that this is so. There may be traditional rules of settlement, that have lead to communal settlement behavior, but it is not clear that resource use rules exist among these communities. Forest use is done at low intensity for domestic purposes, and at an individual and family level for commercialization. The issue is whether with increased demand for timber the current structure will allow for forest conservation. Additional questions emerge over the ability of theses communities to administer their resources, not only from the administrative perspective, but also from the forest management one.

Another issue that is of concern under the new land situation and the outcome of communal concessions, is the organizational weakness of Black people in this region. Their geographic isolation, their unawareness of their economic, social and political rights, their great capacity in adapting to the environment , and their absence of consciousness as a group, socially and culturally differentiated, are some of the explanations that have been given to their organizational delay (Mission Report--Guandal Project, 1993).

[10] / The specific regulations of the 70 Negritudes Law have not yet been established.

D. FOREST POLICY

1. Current Forest Policy

The legal regulatory framework of current forest policy is a set of 58 laws and regulations. The current legislation can be divided into the following areas: (1) Norms over the defense, surveillance and harvesting of the forests; (2) Reforestation, forest plantations; (3) Forest credit and legal funds of the forest sector; (4) Creation of committee, councils and services related to the forest sector; (5) Closed seasons; and (6) Land regimes. There is not complete clarity of what norms are valid, or what institutions are the responsible for different activities[11] (Inderena, 1994b). Nevertheless, most of the essence of concession and permit current regulation is contained in the Decree-Law 2811 of 1974 and the Agreement 29 of 1975. The evolution of the forest related legislation can be found in Motta (1992) and Inderena (1994b).

The following are the most relevant aspects of the general forest legislation of interest for this thesis. In 1959 the second Law and the Decree 111, established the areas of Forests Reserves for the development of the forest economy, and determined the requirements of management plans for the grant of concessions (Motta, 1992). Further on, in 1969, Inderena dispatched the Agreement 03 of 1969 or Forest Statute, that compiles and regulates forest harvest in Forest Reserves. This agreement also determines the classification of forest resources as protective, productive-protective and productive[12]. It also determines the types of permits and concessions that are allowed, which imply different consequences regarding the maintenance and use of the resource.

The statute established two main categories of forest use: persistent and unique. Persistent forest use requires the maintenance of the forest cover. Unique forest harvesting, or conversion felling, is related to land use change, so the forest cover can be removed[13]. This piece of legislation also determines the requirements of the different types of permits and concessions, and allows for very small volume domestic permits. Additionally, it sets a permit and concession

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[11] / Some of these laws and regulations refer to government institutions that no longer exist, for example.
[12] / Protective forest are those in which natural or artificial cover must be maintained, and only fruit harvesting is allowed. Productive-protective, are those forests in which natural or artificial cover must be maintained, and that can be subject to production activities but maintaining its protective function. Productive forests must also maintain artificial or natural cover, and they are aimed at obtaining forest products for consumption, trading. In productive forests, forest vanishing and its recuperation is allowed (Law 2811, 1974). The areas assigned to these categories are determined based on rainfall, slope and soil conservation.
[13] / Unique types of permits, or permits for conversion felling, have no longer been granted in the forest reserve, even though the figure to do so exists.

policy focused on volume. After the enactment of this legislation, Inderena granted seven concessions over an area of 300,000 has nationwide, with terms between 10 and 35 years; and 22,000 permits over a total area of 450,000 has (Motta, 1992).

In 1975 was dispatched the Decree 2811 of 1974 or National Code of Renewable Resources and Protection of the Environment. This code brings in additional specifications over the permit and concessions types, and their requirements. Additionally, it introduces the granting of concessions through public auctions. The development of the Decree of 1974, lead to the accord 029 of 1975, that modifies the Forest Statute of 1969. The Decree establishes the allowable volumes and duration of the different permit types that go from 10,000 cubic meters to 200 cubic meters per user. This lead large transformation industries to prefer permits over concessions granted through auctions. This has resulted in that until now no auctions have been granted (Motta, 1992), and there has been a proliferation of small volume permits which have less environmental requirements.

Each jurisdiction had to enact their own Forest Statute, which should be at least as stringent as the Natural Resource Code--Law 2811 of 1975. There are two main models of Statutes that have been adopted by the Inderena and the CARs. They vary in the requirements and the types of permits granted, as well as the corresponding volumes. For all permit types the maximum assignment time is of 10 years, concessions can be granted for more than 10 years. Both Statutes require mobilization permits or safe conduct for primary forest products (Art. 89, Agreement 29, 1975). The regulations also specify the several bureaucratic steps required to access permits. They can be summarized as follows: (1) the CAR or Inderena gives authorization to the applicant undertake the required studies for future forest use, which freezes those areas for other studies; (2) the applicant presents the studies, which are approved or denied; (3) if the studies are approved an authorization of forest use by contract or permit is granted to the applicant. The so called Inderena model has four classes of permits which are classified by volume. The so called CVC model, has two types of permits: commercial and domestic. In the pacific coast, only the Inderena type regulations are relevant. These assignments schemes will be analyzed in detail in Chapter III on tenure.

It is necessary to clarify that forests in the *resguardos* and the LBC, are property of the communities that own these lands. These forests are subject, as well as public forests and private property forests[14], to the norms of conservation and administration prescribed by the CAR in the

[14] / Private property forests understood as those forests that have come out of the domain of the State under any valid title, and those given with before April 1917--stipulated in article 32 of the Law 200 of 1936 (Inderena, 1994a.)

corresponding jurisdiction, as well as to the policies of MinAmbiente. In the jurisdiction of *resguardos*, the *cabildos* have self governance in the use of their resource, as long as they are within the boundaries of national laws and regulations. *Cabildos* can assign permits within their boundaries without consulting the CARs, and have been relatively effective in exercising their territorial rights. Before the 70 Negritudes Law, the situation of the Black communities was quite different, as the one of the Indian population. Since they did not have any legal rights over the territory, permits were usually granted over their dwelling areas. A publicizing mechanism through which people could oppose to the granting of a permit exists, but it has not been very effective. The grant of these permits has caused considerable unrest within the Black communities, and disruptions between them and the national, regional and local authorities.

2. Resulting Permit and Concession Structure From the Current Policy

a. The shift towards volume based permits

The Accord 029 of 1975 introduced a bias in the legislation favoring small volume permits, with relatively low environmental requirement vs. large volume long term concessions. In general this shift is considered to have moved forest use towards unsustainable practices. A very complete analysis, and corresponding statistics of such phenomena is found in Motta (1992), from which much of this section derives. This section will focus on the main trends that the current policy has lead to with respect to illegal harvesting, permit distribution, and its effect in forest use.

Before the introduction of the Natural Resource Code 2811 of 1975, there were a large amount of concessions. In fact the distribution between concessions and permits applications was 40% and 60% respectively. After the new legislation, only one concession was granted (not by public auctions) for a period of 30 years, over an area of 53 thousand hectares, and a volume of 1.7 million cubic meters[15]. The rest of forest harvest has been done through permits, that can run up to 10,000 cubic meters, or through illegal harvesting.

The new policy was a failure with respect to the auction of concessions. Among the main reasons for this failure are: lack of government initiative in undertaking the auctions; interest groups have pressured against it; firms have not shown interest because of the large costs the studies to apply to them imply, linked to the unknown result of an auction; the negative incentive

[15] / Because of problems of changing the concession boundaries, encroaching the concession became non viably economically to the concessionaire--Smurfit Cartón de Colombia. The company is nowadays in the process of returning the concession, before its due time. Additionally, the concession operated also using intermediaries: 30% of the timber came from the natural forests, and 70% was bought to small permit holders in the area.

that alternative sources of timber constitute--i.e. permits and illegal harvesting; and lack of credibility over the guarantees over the tenure of the concessions.

With the disappearance of concessions, the harvesting is done through permits or illegally. In fact the amount of illegal timber cut, defined as the one done without permits is enormous. Estimates of illegal harvesting based on rent capturing, have given figures of up to 42% (Motta, 1992).

Legal timber harvest is widely distributed among different permit types, with the larger number of permits corresponding to the small volume ones. In fact, 80.2% of the granted permits correspond to the lowest volume category and to domestic permits. Followed by medium size permits, that corresponds to 13.7 %. Moreover, of the total volume legally cut, these grants correspond to 55.3% of the total volume. Only in the Codechocó jurisdiction, there is a considerable amount of timber cut through larger volume permits--37% of legally mobilized timber correspond to permits of areas between 10,000 and 20,000 has. The proliferation of small permits occurred both for the simpler CVC model, as well as for the Inderena one.

Additionally, nation wide, it has been observed that even though most of the Natural forest are on the Forest Reserve, a large number of permits are demanded and granted in private property. For example, of the overall permits granted, there are 1,9 more permits in private lands that in the Forest Reserve. This trend is particularly strong for the case of the smaller volume permits, which are approximately five times more numerous in private property. This phenomena is due to the so called "technical fraud", which is the term used to describe when timber cutting on Reserves is masked by permits over private property[16]. This occurs not only because of the lower environmental standards set on private property, but also because of the fee structure.

b. Forest Fees and Rent

Fees in private property are in fact considerably lower that in the forest reserves, and Indian *resguardos* do not pay taxes--because of the Indian Law of 1890[17]. The current rent structure has several other deficiencies, which vary depending on the CAR. The basic components of the fees are: national participation, research fee, renewal of the resource fee, and technical services of administration and forest supervision fee. Most of national participation fees are ad-valorem, based on the timber price at the nearest market, and are not charged for domestic

[16]/ An alternative explanation could be that there is more intensive forest use in private property. Nevertheless there is consensus among people in the forest sector that this is not the case.
[17] / They may impose fees locally, but these do not accrue to the CAR or Inderena.

permits. Some of these prices have not been adjusted to existing market prices, and some fees have not been adjusted by inflation.

The other three types of fees represent the largest component for most CARs. For the CARs of interest in the Pacific coast, these percentages vary depending on the timber type. They range between 20 and 46% of the total fees for Codechocó; 49 and 87 % in Corponariño; 49 and 89% for Inderena in volume terms for 1992 (Motta, 1992). Reforestation fees were calculated based on the costs of a 18 year long National forest research plan in 1983. The fee of technical services and supervision was evaluated based on the ideal team to do such tasks. Even though these fees were introduced in 1983, there is consensus that they have not been a successful policy. In fact, supervision and provision of technical services practically does not exist.

Another major inconvenience of the current fee scheme is that the fees are charged given a classification of the timber. The combinations of the fees and the categories has resulted in higher charges for the cheapest types of timber (24,4% of market price), than for the more expensive ones (7 % of market price). This type of structure has motivated selective harvesting of the forest.

There is a low level of rent capturing not only due to the out dated values of the fees, but also to the large volumes of timber cut and /or mobilized illegally. Of the total amount of timber consumed by industry, it is estimated that 42% is cut illegally. Nationwide it has been estimated that in 1991, for example, 960,000 thousand pesos (approximately 1,3 million dollars) were evaded in fees, which is a considerable amount if compared with the available financial resources of the CARs. For Codechocó, Corponariño and Inderena the rents captured by forest fees represent a significant amount of their budget--70%, 30% and 50% of self earned resources respectively, and 20%, 10% and 4% of their total income respectively (Motta, 1992).

3. Resulting Market Structures

The policy described above, as well as its implications in the way timber is used, has also shaped the way timber markets operate. In this section I will elaborate on the relationships that exist in these markets, based on the field work done during the summer of 1994. Understanding these relationships is necessary to comprehend the dynamics of the forest sector, and how a permit and concession policy can contribute to their functioning.

The main relationships that exist in the market are: timber purchase, financing in capital and in kind and collaboration for organizational purposes. The way the different people in the timber markets are related through these interactions is depicted in Figure No. 1--for sawmill wood markets; and in Figure No. 2--for pulpwood and round wood markets.

For the sawmill timber market it can be observed that the activities that people from the communities undertake (timber cutters, and minor transportation persons), are usually financed by the person bellow in the market chain. If the harvesting activity requires the elaboration of a management plan, it is the buyer of the timber, that finances the study. After he has done this, he brings in his own timber cutters and timber carriers (*arrieros* and *balseros*), to do the extraction. A less usual practice is the payment to people from the local community to do the harvesting. In either case, the payment commonly done in kind and equipment (chain-saw, motor, etc..).

This type of financing pattern is repeated in other cases, with variations of the finance provider. This person can be the proprietor of a sawmill, a timber distributor, or a middle man between the timber cutter and the sawmill or another transformation enterprise. In most of the cases the financing scheme is very unfavorable for timber cutters[18]. With this scheme of financing, the timber cutter almost never overcomes its bankruptcy, and finds himself in a vicious cycle. He usually has not the chance to buy his own working tools to earn more profit. Under these circumstances, he is forced to work for its daily needs, and has scarce options of bettering its living conditions.

This situation is aggravated by two additional issues: the fact that timber cutters usually work alone, or in very small groups--they have weak organizational capacity; and that the timber itself has close to zero price. This timber under valuation, is shown in that timber cutters are paid by their daily wage and the cost of transportation[19]. This occurs because the timber cutter is not accepted as the owner of the forest resource, but as a laborer dedicated to timber extraction. The financing pattern previously described, occurs not only because of timber under valuation, but also because a single timber cutter can not cut enough timber by himself to freight transport, and bring the timber to the market.

In the case for pulpwood (Figure No. 2), the timber cutter usually sells the wood directly to the industry, which has localized raw material gathering points. This situation does not necessarily ameliorate the situation for the timber cutter, since this industry is a monopsony and can thus fix prices. Another timber purchasing scheme used by the pulpwood industry, is through

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[18] / During the interviews, several persons from the communities signaled that when the timber cutters ask for their liquidation of the loan to the person that buys them the wood, they are already indebted with him. Additionally most timber cutters do not own their own chain saws, so they must ask for finance for it too, which includes the depreciation of the equipment.

[19] / Timber cutters operating in this fashion usually move around a certain region searching for job opportunities. Under this particular scheme there is almost never forest management. Low intensity forest management can occur when the harvested plot is going to be used by one of the large transformation industries, that make deals with the community in the area, and leave the forest managed. Nevertheless, in these operations industries usually bring in their own personnel.

timber buyers. These travel around the region looking for people willing to sell timber of the quality they require.

FIGURE No. 1

SCHEMATIC STRUCTURE OF SAWMILL MARKET

TRADE AND FINANCING RELATIONSHIPS

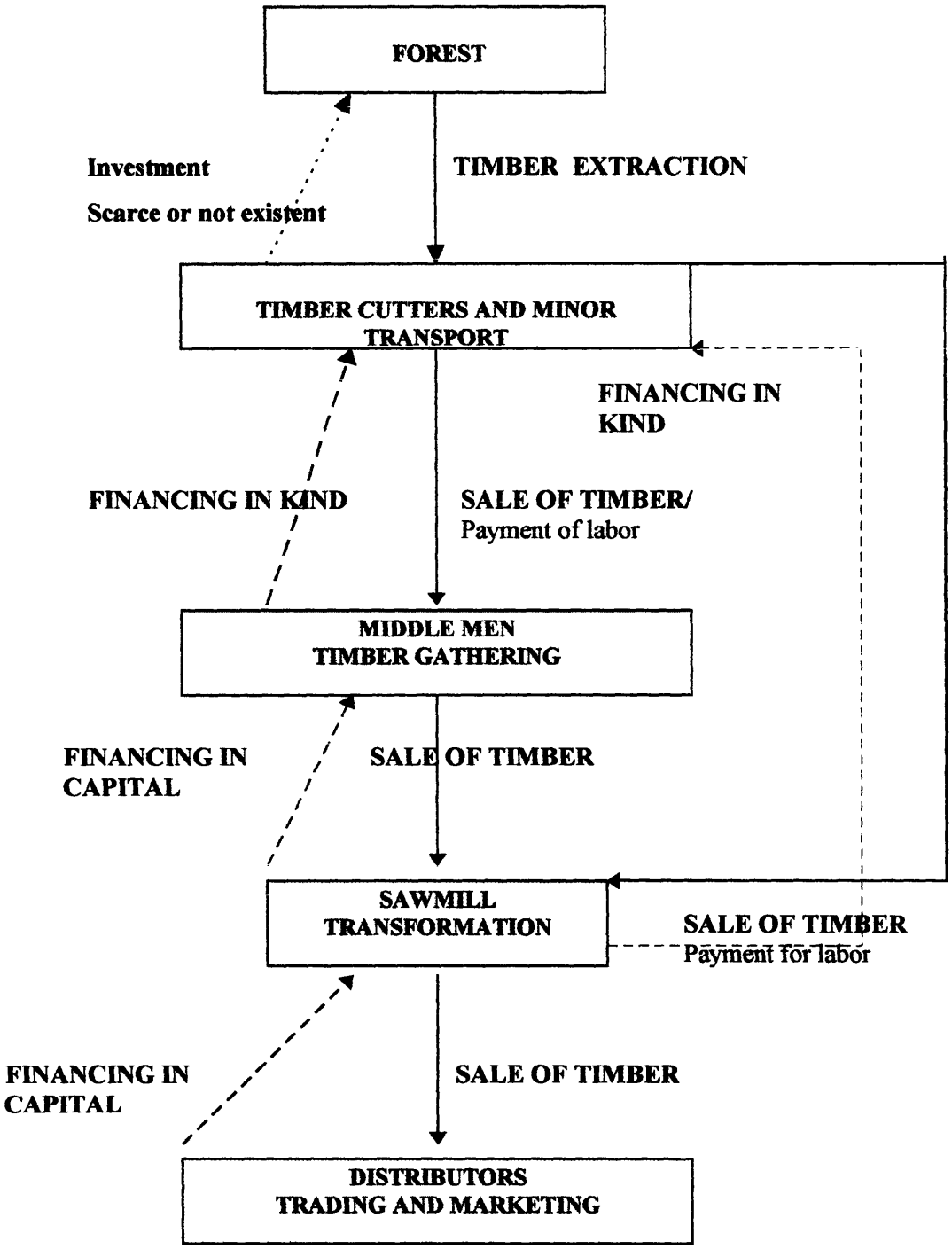
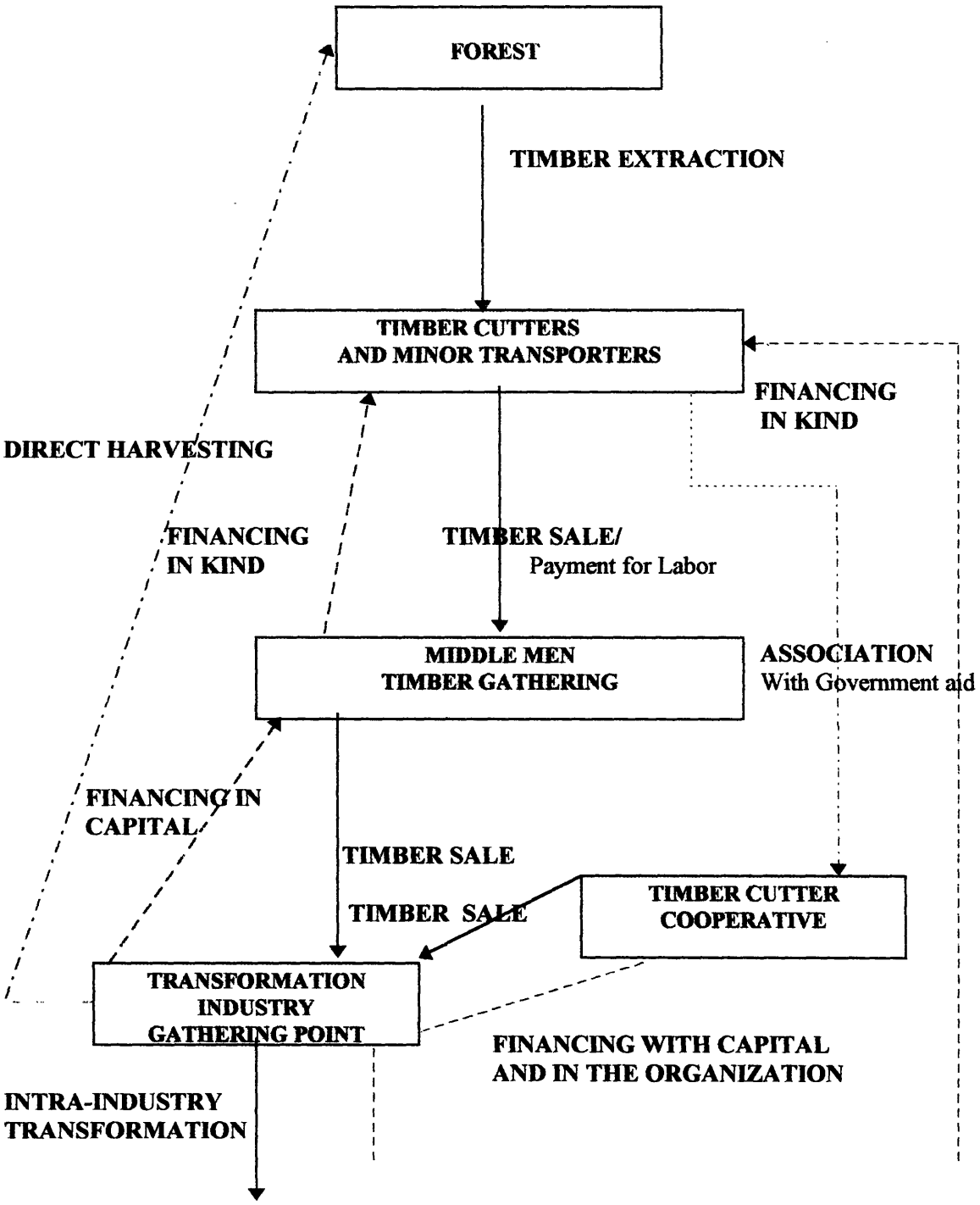


FIGURE No. 2

SCHEMATIC STRUCTURE OF ROUND WOOD AND PULPWOOD MARKETS

TRADE AND FINANCING RELATIONSHIPS



For other transformation industries, there is only one large industry that is harvesting timber trough a self owned permit, all other industries purchase are done through intermediaries. The usual system operates as follows: (1) a person in the community or the industry locates a vein of timber that has market value, or that is useful to the industry; (2) their is a field verification by the industry technical personnel of the usefulness of the vein; (3) a deal is established over the price of the timber; (4) the industry gets the CAR required harvesting permit in the name of the community, and takes charge of the necessary technical requirements; (5) the industry constructs a track for the extraction of timber; (6) the community undertakes the timber extraction, or a group of timber cutters, receiving in either case finance from the company; and (7) the company pays the community, or timber cutters, the value agreed minus the value of the track and the financing given.

As for the trading of non ~~timber forest products, it occurs mostly at the local level~~. Among the products mostly commercialized are: *Otoba*, honey, palm wax, *Palma barrigona*, *Caimitos* and at very small scale. Non timber forest products have been traded massively in the past, but most of them were depleted or the international markets for these product went down (e.g. *Tagua*: white ivory). During the interviews the main reasons for this low trade of non timber products were the following: (1) difficulties of developing non timber products beyond the local level, (2) international competition of similar synthetic products, (3) variable product quality that make trading and marketing difficult, and (4) low density and dispersion of non timber products in the forests.

In conclusion, for both types of markets, the main feature of these interactions is the financial dependence from the top of the market chain down. Another recurrent characteristic is the presence of intermediaries in almost all points of generation of aggregate value and/or transportation. From the interviews done during the field work, it can be deduced that this occurs because of the spatial dispersion of the origin of forest raw material, and to the lack of capital and/or organizational capacity of final users--sawmills or other transformation industries, to gather the raw material directly. Only large industries with built up organizational capacity, and market dominance have the possibilities of accessing timber cutters directly. It is necessary to remark that the existence of cooperative groups is rare, and has surged recently. These groups have been successful in accessing better markets , and prices than the non organized cutters[20].

[20] / Timber cutters are usually not knowledgeable of the way of measuring timber, and even though they may receive the same price than organized communities by cubic meter, they may receive more income because they have means of verifying the volume sold.

Additionally, a recent figure of servicing by sawmills has surged, in which the sawmills do not buy the timber, but give the service to the timber owner[21].

As for the expectations of future origin of timber raw material from the private sector are the following (Field work, 1994):

(1) Saw mills and small transformation industries will continue to depend on the natural forests. They do not have the interest, the know-how, nor the means to access alternative sources of raw materials like imports or plantations.

(2) The pulpwood industry will search for increasing reliability in its raw material supply. It has been already shifting to private forests plantations, and is planning to increasingly rely on this source. The issues justifying this preference are: quality of the raw material; public pressure not to use the natural forest; and most of all security in the provision of raw material.

(3) Round wood industry will continue to depend on the natural forests, with high percentages of direct harvesting (up to 65% nowadays), and the rest through intermediaries. Additionally, some of the more healthy industries are looking for alternative sources of raw material, such as: imports, plantations, direct harvesting in other countries (Gabon, Guyana, and Venezuela), and provision contracts with concessionaires in other countries.

4. Existing Associations Between the Private Sector and the Communities

As a result of the market structure the association between the private sector and people from the communities are a common phenomena in the Colombian Pacific coast for forestry activities. These associations come across the description of the market structures previously depicted in Figures No. 1 and No. 3.

Private forest firms directly involved in forestry[22] have basically adopted two alternative ways of operating. These depend largely on the technical requirements of the type of forest use. Enterprises doing harvesting with specialized machinery usually have their own working personnel, which they use in the different harvesting fronts. These enterprises do not train local workers for forestry activities. In this case, the relationship with the community, is not a labor

[21] / It was estimated by the head of the "Association of Timber foresters of the Pacific Littoral", than more than 80% of the sawmills are owned by people from black communities.

[22] / Firms have to ask for a forest permit to be able to incur in forestry operations. Normally they would ask fort the permit under their name, or alternatively under the community's name, as it was described above. Nevertheless, case were firms have incurred indirectly to illegal harvesting, through intermediaries, but firm's machinery have sprouted. This new trend is occurring because of the difficulties firms have been having in accessing the forest resources.

relationship, but more an agreement over the use of the forest based on pre made agreements. These agreements are very often done on individual or family basis, and can require a large organizational and negotiation effort from the enterprise. Additionally, power relationships and personal interests within the community, often leave people in the community with unfavorable deals. In the case of Indian *resguardos* the agreements are usually done through the *cabildos*, which face similar problems. In either case, the agreements require payments to the communities in cash, in kind or in specific constructions (e.g. school construction, health care center, road, etc..). Usually communities prefer payment in kind, which are particularly cumbersome for the private firms, because of the diversity of requirement made on them, and distributive problems inside the community. Managers of enterprises interviewed signaled that this scheme was particularly difficult for them, mainly because of the difficulties of reaching consensus within a community, due to their lack of internal cohesion and leadership, and their predominant individual behavior; and the low level of compliance of communities upon the agreements reached.

The other common scheme of firms incurring in direct harvesting is when they use people from the communities to do harvesting activities. The more important of such efforts was done during the Concession given to *Cartón de Colombia* in the region known as *Bajo Calima* in the department of Valle. The use of community work force in harvesting with a firm is not a common organizational scheme. Under this type of arrangement, besides the investment agreements between the community and the firm, the relationship between them is a labor one, mediated by the payment of a salary. The managers interviewed revealed that during forest harvesting, there were major difficulties in organizing the working teams. They even indicated that there was resistance from the individuals to sign either short term or long term working agreements, even though these offered them social security benefits. Also, that it was impossible to establish fixed working groups.

5. Critique of the Current Concession and Permit Policy

Forest resources in the Colombian Pacific Coast are apparently been used in an unsustainable manner, and with little government control. The more salient critiques of the current concession and permit policy are: inadequate institutional arrangements for forest management, increasing rates of illegal wood extraction, under valuation of the forests, forest tenure uncertainty and unaccountability of the fact that most of the government forest reserves have been traditionally occupied by forest dwellers.

a. Inadequate Institutional Arrangements

The more salient default of the current policy scheme is the abundance of uncoordinated legislation, and the lack of clear knowledge over whether they are in force or not, or their applicability (Inderena, 1994b). In fact, there are 58 laws and regulations attaining the forest sector, some of which exist since the nineteenth century, and have not been updated. This has resulted in dispersed responsibilities and disorder in the management of forest resources. The confusion not only attains users of the forest but also the public agencies in charge of their administration.

It has been estimated that at least 42% of timber extraction in Colombia is done illegally (Motta, 1992). Among the several causes of it are inadequate control over forestry activities and inefficient administrative fee collection.

The focus of the permit and concession policy on volumes, and the ease of forest harvest through permits as compared to concessions, has caused that most legal harvesting is done nowadays through small volume permits. These have the lower environmental requirements and do not require a management plan. The difficulties that forest firms face in accessing the forest resources directly, has lead timber enterprises to prefer accessing raw materials through intermediaries than through direct harvesting. In fact, concession policy based on auctions has not been operational, which has disfavored sustainable forest management. The total area of forests used unsustainable has been estimated to be at least of 750,000 has nation wide since 1975 Motta, 1992).

Additionally, the way fees are designed causes several problems. First, the fees are not adjusted within a predetermined policy, which makes forest activity very uncertain. Second, the way fees are designed promotes technical fraud. This occurs because the fees paid in private property are less than in the ones in the Forest Reserve, and also because there is no supervision that the harvesting occurs in the area where the permit is assigned. Finally, the fee structure has promoted selective harvesting of the forest (Motta, 1992).

Currently, not only the control over the use of the forest resources is meager, but there is no technical assistance over forest management, other than through specific projects by the government agencies. Moreover, the government agencies are not prepared for the upcoming challenges. In fact, the increasing timber demand from natural forest, is going to cause a greater pressure over these resources, and over the communities that exploit them. These communities do not have the means to respond, and even less to take advantage of the development opportunities that may arise, especially after collective tenure is established. The government agencies are not

prepared to assist these communities, improve their development options, or promote the use of forests in a sustainable manner.

In conclusion, there are four main issues of concern: first, the effects of the permit and concession structure in the way the forest is utilized; second, the way the fees are designed; and third, the level of illegal harvesting; and fourth, the lack of government capacity to promote sustainable forest use.

b. Under Valuation

The under valuation of the forest resource shows up in the low fee collection rate over the use of a public good, as well as in the low fees and royalties that are charged (Motta, 1992). These fees not only do not reflect the market value of the wood, but do not capture other marketable and non marketable values of the forest. Also, the fee and grant assignment schemes are sending contradictory signals to the users of the forest. On the one hand the permit-holder is obliged to return the forest in the same condition it was when the permit was granted, and on the other hand he is been charged with fees labeled as "regeneration" and "research" fees releasing him of the responsibilities over these activities. Although these fees were established to fund regeneration and research, they end up in the general corporation's budget, and are mainly used for administrative purposes. Finally, the forestry policy leads to further under valuation of the forest resource by ignoring the potentiality of non timber products harvest.

Forest under valuation is tied to tenure uncertainty, and unclear tenure, as well as the lack of its exercise by the State and the communities. These issues will be discussed in the following section.

c. Tenure Uncertainty

Another major problem of the current permit and concession policy is its failure to establish long term leases that correspond to the forest felling cycle. Although the legal basis of long term leases assigned through public auctions exists, it has not been used. Not only has the government not taken the initiative to auction the concessions, but additionally there is a lack of interest on the part of the forest users due to the high costs of the required studies and uncertainty over the concession assignment. The failure to establish long term leases not only promotes non sustainable harvest rates, but additionally creates uncertainty over forest tenure. On the other hand shorter permits do not posses a mechanism that allows for their renewal, which would mimic longer term permits.

Other elements that contribute to forest tenure uncertainty are: (1) the difficult process of large volume permit assignment, (2) the government indecision over the conditions and requirements over the grant, and (3) threat of encroachment by local forest dwellers not consulted over the permit assignment. These circumstances have lead private firms to prefer accessing the resource through intermediaries that buy out domestic and small size permits, over direct harvesting. This uncertainty over the resource tenure has acted as a negative incentive to private investment for management and protection activities.

Additionally, the current policy does not acknowledge the presence of forest dwellers, forest villages, or the existence of Indian *Resguardo*s or Black territories. The policy has been criticized of been oriented towards serving industry (Inderena, 1994b), while in reality neither party has clearly benefited from it. The current policy focuses in the Forest Reserve, without taking into account the variety of forest and land property types existing in the region[23]. It does not consider regulations over private property, neither individual or collective(Indian and Black collective property). Also, it does not acknowledge the interaction between these types of tenures, and the overall effect on forest use. This has promoted illegal behavior like "technical fraud".

These deficiencies call upon the need for a new policy framework, over which reforms can be built. In fact, the titling of productive forests established in the Negritude's Act presents an important opportunity to implement new management strategies such as community forestry as well as allowing for fruitful relationships between forest dwellers and the private sectors, that a new policy should take advantage of.

Given the wide range of problems under the current forestry policy, the Colombian government has decided to undertake an overall forestry policy reform. This reform will cover a wide range of topics, including International and national issues. Among the policies that will be reformulated is the concession and permit policy. This thesis contribute to this effort, focusing on some of the relevant aspects of concession and permit policies.

[23] / The Forest Reserve of the Pacific was created by the Law 2 of 1959, along with other seven reserves.

Chapter II: CONCESSION AND PERMIT POLICY FRAMEWORK

The major deficiencies of the current Concession and Permit policy in the context of the Pacific Coast, described in the previous Chapter, make clear the need for deep reforms. These reforms should take advantage of the new institutional setting of the Ministry of the Environment (MinAmbiente), the Regional Corporations and the Research Institutions that support its policies; the accrued knowledge in sustainable forest management practices; the challenges that emerge from collective titling to Black Communities and proliferation of Indian *resguardos*, as well as of the favorable environment for policy reform.

In the context of this thesis, only two major aspects of the required reforms will be analyzed in detail: a reform of the current concession and permit policy framework, and forest and land tenure. Other components of equal priority, such as the environmental standards and research requirements and forest rents, will only be considered marginally. As it was described in the introduction, the current policy will be analyzed and specific reforms will be proposed. The specific reforms will be structured around the new policy framework that will be developed in this Chapter.

Nevertheless, there are other elements of the current scheme that are valid and useful, which will be adopted in this framework. These are the priorities set for forest use in the Decree 877 of 1976, that specifies that domestic use should be favored over conservation and protection of forest resources, which will be in term privileged over industrial requirements according to national and regional development plans. This hierarchical priority will be respected because: (1) the bulk of forest dwelling communities are still dependent on the forest for their food, housing and transportation provisions; (2) the Colombian Pacific coast is considered one of the more

biodiverse regions in the world (Gentry, 1988; Meffe and Carroll, 1994), and (3) if sustainable forest use is complied with, conservation and protection needs do not necessarily loose to industrial requirements. Additionally, similar provisions are compulsory by law: the 70 Negritudes Law--that grants communal land titles to Black communities-- establishes that subsistence forest products should be favored over any other use (commercial or industrial).

The present Chapter will cover essentially two topics. First, a general framework will identify the types of permit and concessions that should be allowed. The second part will cover the justification and feasibility of the new concession types--communal concessions, both in Indian *resguardos* and Lands of Black Communities[1] (LBC.) This part will include a general feasibility analysis of such a figure, as well as two of its possible sub--categories: community forestry, and joint ventures between the private sector and communities on their territories[2]. Although this thesis will suggest ways in which communal concessions should operate, specific details of system operation its scope.

A fully developed concession and permit policy framework would require a proper ordering of the Pacific coast forest resources, which does not exist. The undertaking of zoning activities and of forest inventories is on of MinAmbiente's agenda[3], but these efforts will not yield usable results on the short run, and reforms are nevertheless needed. The following framework will be developed acknowledging these deficiencies, and adopting the recommendation of a recent study on the diagnosis of Colombian forest policy. This policy suggests that reform should build upon the establishment of general guidelines for possible harvest rates in relation to their geographic regions, types of forest, forest cover proportions on the region, cutting cycles, minimum diameters, and natural regeneration treatments (Inderena et alt, 1994b, p.751). Finally, this framework applies only to the forested areas determined to be suitable for sustainable forest use, either for logging or for non-timber product harvest.

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[1] / Territories of Black Communities translates from the term "Territorios de Comunidades Negras" specified in the 70 Negritudes Law of 1993.

[2] / A complete feasibility analysis would require cost estimation of such scheme, design of specific tools, and other element that will not be part of the thesis. Nevertheless, the development of the Chapter III on tenure, requires the layout of how community concessions could operate in broad terms. Additionally, this chapter will provide additional elements to the communal concession workings.

[3] / Currently there is a PNUD project on the ecological zoning of the Colombian Pacific Coast.

A. CONCESSION AND PERMIT TYPES: A POLICY FRAMEWORK

The current concession and permit forest policy has structural deficiencies--such as not having a clear definition of communal concessions; as well as design deficiencies--such as ill designed tenure assignments and rent regimes. These deficiencies were described in Chapter I. Reforms to overcome the structural deficiencies will be developed in the present sections. Design deficiencies regarding tenure will be developed in Chapters III.

Structural deficiencies should be addressed through the introduction of new permit and concession types. Chart No. 2 shows the proposed permit and concession types that the new policy should adopt, organized in relation to the ownership categories where they can be assigned. The Chart also indicates when forest product mobilization is restricted[4], as well as whether the permit types already exist, who authorizes them it and use conditions. As the Chart shows, most of the required permit and concession types are already in place, except for communal concessions in the forest reserve or in communal territories. This type concessions are introduced in order to take into account collective property regimes in the Colombian Pacific Coast. In the following section, Part B, a full justification of communal concessions is provided, including their legal and normative framework, as well as an evaluation of their feasibility.

Domestic use of the forest should be allowed in all forest ownership types, but should require authorization of the Regional Corporations (Corporaciones Autónomas Regionales: CAR's) only in the case of forest reserves and private property. This is because the National Constitution, as well as the Laws covering communities--both Indian and Black, specifically gives these people rights over the domestic use of the forests.

Communal concessions should be allowed both in the National Forest Reserve and in Collective territories, even though the rights granted, the responsibilities of control over forest use activities, and the role of government will differ between them. In general terms, concessions on collective territories will be more autonomous and less regulated than those on Forest Reserves. These details will be specified in the next section.

The new figure of Communal Concessions will have two variants: (1) direct harvesting by communities either by independent community forestry or joint ventures with private firms, and

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[4] / In areas of private ownership either communal or individual, domestic forest use should not involve forest products mobilization. If mobilization outside the property, would imply commercialization which would require commercial permits.

(2) the transfer of forest use rights to private firms. Figure No. 3, depicts those variants and shows how communal concessions could be effected with in the market. The scheme also indicates the options for ventures with the private sector. These joint venture options exist during either phases of the production process: harvesting, transformation and/or commercialization.

As these two Charts illustrate, the proposed framework has two new innovative characteristics: the possibility of communities to benefit directly from forest use activities, and their association with the private sector. In the following section a full justification of these new elements will be developed.

CHART No. 2

Proposed Permit and Concessions Types, Organized by Forest Ownership

FOREST RESERVE:

Type of Permit	**Users of Permits**	**Comments**
Domestic Permits	Forest Dwellers	• Permit exists, authorized by CAR* • Transportation controls required
Commercial Permits	Organized Communities	• New permit type, requires CAR authorization • Active role of government
	Forestry Firms	• Permit exists, authorized by CAR • Assignment of rights and responsibilities has major deficiencies

COLLECTIVE (BLACK AND INDIAN TERRITORIES)

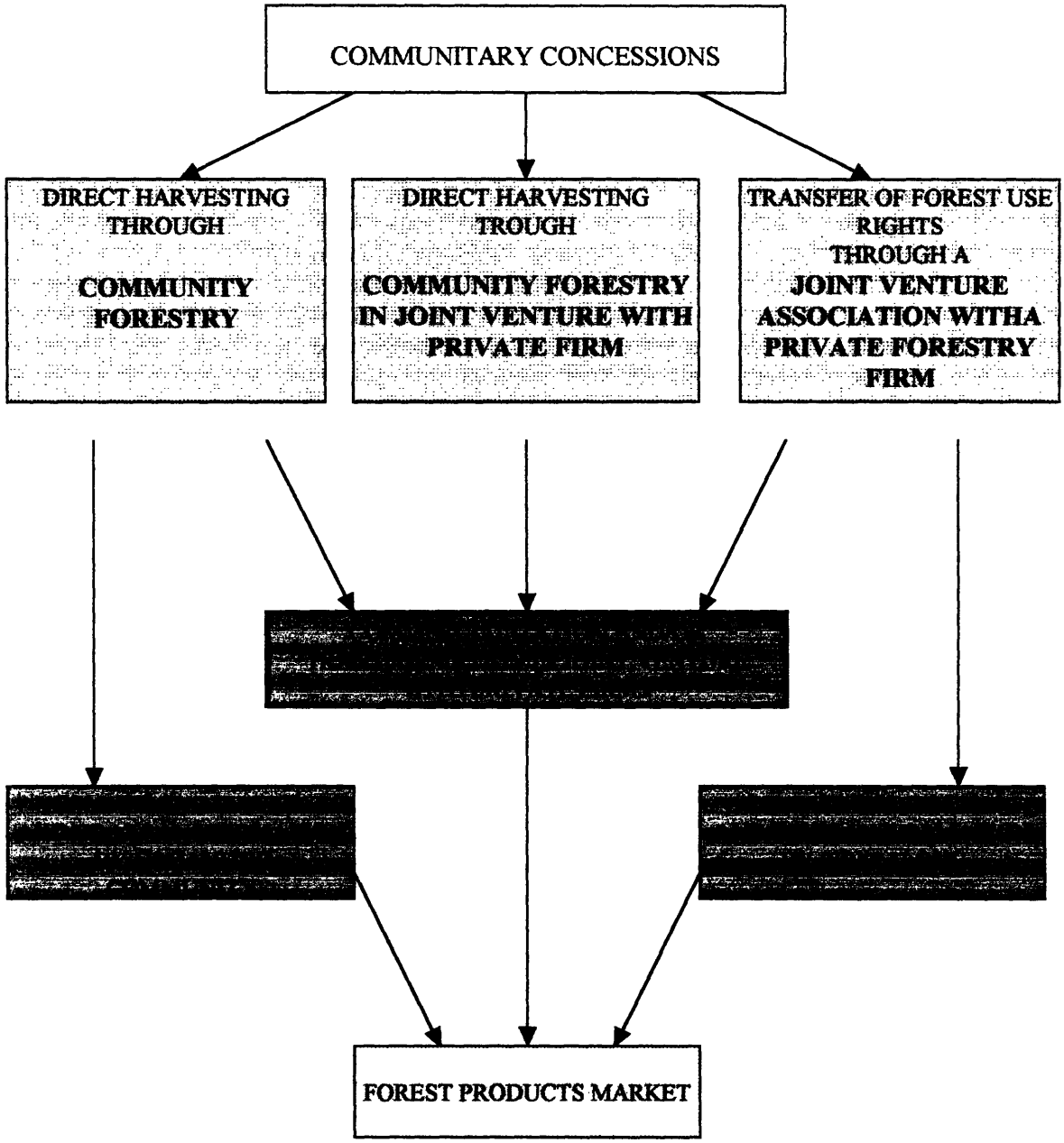
Type of Permit	**Users of Permit**	**Comments**
Domestic	Community owners	• Permit does exist, authorized by internal community regulations • Forest resource should not be mobilized
Communal concession	Community owners	• Permit does not exist, authorized by internal community regulations and by CAR • Necessarily entails commercial forest product use
Joint-Venture/Communal Concession	Community owners and Forestry firms	• Permit does not exist, authorized by internal community regulations and by CAR • Necessarily entails commercial forest product use

NON COLLECTIVE PRIVATE PROPERTY

Type of Permit	**Users of Permit**	**Comments**
Domestic Permit	Private Owner	• Permit does exist and requires CAR authorization • No mobilization allowed • Assignment of rights and responsibilities has major deficiencies
Commercial Permit	Private owner	• Permit does exist and requires CAR authorization • Assignment of rights and responsibilities has major deficiencies
	Forestry Firm	• Figure allows for this use type, and requires CAR authorization • Consists of a transfer of forest use rights from the owner to firm • Assignment of rights and responsibilities has major deficiencies

FIGURE No. 3

Communal Concessions and Market Interactions



B. JUSTIFICATION AND FEASIBILITY OF COMMUNAL CONCESSIONS

Recent literature on sustainable forest use has pointed out the need to include new schemes of forest management, a need that emerges partially from the recognition that the livelihood of rural peoples and the rational use of forests are inseparable (WRI, 1993.) Communal concessions are one of the alternatives internationally proposed, based on the enthusiasm that several community based forest management successes have generated. Even though community based forest management systems have significant limitations, they constitute an attractive alternative for promoting sustainable forest use, especially in areas where other productive activities--like non subsistence agriculture, are unsustainable. Moreover, in theory, closely linked communities are tied more closely to their land than outsiders and thus would be less likely to cause degradation of the forest. Additionally, it has been pointed out that one of the main problems in attaining sustainable forest use has been the traditional lack of participation of forest dwellers in concession and permit grants, as has been the case on the Colombian Pacific coast.

The present section will mainly be based upon the study of the Colombian legislative and normative framework, literature on community forestry, the study of International project experiences in community forestry[5], and my field work during the summer of 1994.

1. Justification for Communal Concessions

There are major environmental and sociological considerations that justify considering the feasibility of communal concessions for the Colombian Pacific coast. The more salient of these is the wide spread presence of communities in the lowland forests and in the forest reserves[6]. Moreover, with the implementation of the Negritudes 70 Law, and the multiplication of *resguardos*[7], it is likely that an important--but not yet quantified, portion of the forest reserve will be under private communal ownership. Thus a successful forest conservation strategy should necessarily incorporate the communities inhabiting the forests, and should aim at decreasing the pressures towards forest land use change. This purpose may imply making sustainable forest use more profitable to communities versus other productive activities that require land use change, such as industrial agriculture or mining.

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[5] / Community forestry projects from the following countries or regions were studied: Java, Malaysia, Mexico, Honduras, Peru, India and Senegal.

[6] / This is widely accepted at the government and community level, but there are no specific data backing it up.

[7] / *resguardos* are the collective land of Indians, given to Indian communities through Agrarian Reform Law 135 of 1961.

Furthermore, the traditional settlement patterns of black communities may lead to land use change after titling has occurred. In fact as explained in Chapter I, after titling, crowding may occur if the traditional production systems continue to operate. This constitutes another argument in favor of promoting sustainable forest use in collectively owned territories, making community concessions attractive.

One of the major arguments in favor of communal concession is helping the communities establish a communal property regime. These projects may catalyze the transition from land under open access status, to a common property one. Additionally, giving the communities direct control over the forest resources may have the following five advantages. (1) Resources can be managed as a whole, eliminating the cumulative effects of individual management (Fortmann and Bruce, 1988), and allowing the implementation of forest management plan that could thereby augment the chances for long term sustainable forest use. (2) The environmental impact of harvesting can be diminished. At the same time forest use would remain economically feasible[8], since it can be spread over a wide area rather than concentrated on a single plot. (3) Forest products benefits can in principle be distributed more evenly across the community (Fortmann and Bruce, 1988). (4) Communities can use forests as an asset to meet community needs; and (5) The community may be better equipped to protect the forest resource from outsiders, especially if a productive project with returning benefits is implemented. This last point is particularly relevant. Since it has been observed in international experiences of community forestry that the establishment of a project for productive forest use has shifted communal land from an open access status to a common property or controlled property status. Unlike controlled property Status, the former has a well defined group of authorized users, as well as the institutional arrangements for its management and use (Stanley, 1991).

Attaining these benefits from communal concessions are not easy. In fact major difficulties are linked to such a forest use scheme. These difficulties will be discussed below. Nevertheless, communal concessions can be a powerful tool in empowering the communities over their territory, as well as for facilitating their access to markets and their bargaining power. This will benefit the communities, since it has been estimated that farmers selling wood often lose a large percentage of their profits, because of their dependence on intermediaries. Additionally, regarding the CAR's communal concessions will facilitate the provision of forest-assistance services to organized communities, as well as exercising control over harvesting activities.

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[8] / Economic feasibility will be enhanced on the short run as economies of scale of organized forest management accrue, and on the long run as sustainable forest use overrides forest depletion and allows for forests to be productive over much longer periods of time.

Finally, as can be recalled from Chapter I, the current legal and normative structure of the 70 Negritudes Law requires the development of the figure of communal concessions, in particular in the case of Black communities (Art. 24, 70 Law, 1993). For Indian communities, there is not such a clear mandate for communal concessions, but neither is there any legal restriction on its development. Communal concessions should also be allowed in the Forest Reserve, in the form of commercial permits allotted to organized communities. In this respect, communal concessions would have a status similar to concessions and permits given to forestry firms, except for the fact that the government will play an active assistance role to the communities. Additionally, communal concessions in the Forest Reserve. The argument will have different tenure and rent conditions that the ones in private communal territories, as will be developed in the corresponding chapters.

2. Legal and Normative Framework for Communal Concessions

As mentioned above, the figure of communal concessions is implicit in the 70 Negritudes Act, but not present in the current forest policy scheme, and thus needs to be introduced. There are several legal and normative elements that should facilitate the introduction of such a figure which will be developed here and include communal territories governance regime, a specified role of government regarding assistance and credit for projects in these territories.

a. Collective Territories Governance

Both Indian *resguardos* and LBC have their own autonomous governance mechanisms. *Cabildos* are the governance bodies for *resguardos*. They set internal regulations, as well as establish a link between the community and outsiders. LBC have a similar figure called communal councils--i.e. *concejos comunitarios* (Article 5, 70 Negritudes Law, 1993), which also sets internal rules over the community and the link between it and outsiders. The communal councils can be viewed as a board of co-proprietors of a common property.

These two governance institutions would serve as channels for dialogue; they would be responsible for achieving consensus within the communities they represent, and thus constitute the appropriate entity through which communal concessions could be established. The major challenges to the establishment of such concessions, such as issues of community representation and cohesiveness, will be discussed in the following section. Additionally, for both types of communal territories, these governance bodies have the responsibility of promoting negotiations

and reaching consensus concerning the regulation of forest use within the community, resolve conflicts, and protect the interests of the groups from outsiders.

In the proposed scheme the communal councils and the *cabildos* will be responsible for internally assigning domestic permits, as depicted in Chart No. 2, and will be the ones receiving the non-domestic forest permits through communal concessions. Such non-domestic permits have two main characteristics. First, they are necessarily for commercial purposes even though the volume of the operation may vary. Second, they are communal, since they are granted to a community. Nevertheless, it is not necessary that all members of the community be involved in their use, although it is required that the benefits from the permit be equitably distributed to the community. With respect to this, communal concessions may cover other commercial use rights apart from forest related products, since not all members of the community use the forest as a source of income. Thus *cabildos* and communal councils, should establish internal regulations over forest use for both domestic and commercial purposes for the variety of possible uses.

b. Government Role

Giving communities the control over forest resources and even collective land titling, will not result in more sustainable use of forest resources. In fact the opposite has been observed in the specific case of community forestry (Stanley, 1991). A whole structure must be set up so that the granting of control over forest resources results in their sustainable use. This fact is recognized in the 70 Negritudes Law (1993), where it is established that the government should intervene in forestry activities in several stages (Articles 24 and 52): (1) by establishing jointly with the communities regulations for commercial forest use, (2) by providing training and qualifications to the members of the communities in the practices and techniques of the production process related to forestry activities, (3) by designing financial and credit mechanisms to allow the communities to make associative and solidarity organizations of production for sustainable forest harvesting, and (4) to guarantee the equity in the relationships with the private sector. These measures are predicted for Black communities. Nevertheless, the same structure should be used for Indian communities.

The above stipulations should constitute a basis for communal concessions, in particular in the cases where there is no association with the private sector. Communities will have to be assisted in the process of getting organized, aided with credit and of acquiring the necessary know how for sustainable forest use at a commercial scale. In the case of communities standing alone, this process should be accompanied by the government, or delegated by it to other adequate

institutions, such as non Governmental Organizations (NGOs). In the case of joint ventures, the private firm will a have a stake in leading these processes, and the role of the government should be of different nature. The government role should aim at assuring that the rights of the communities are respected, and that forest use is done within sustainable boundaries.

3. Feasibility of Communal Concessions

Besides the existence of the appropriate normative framework for communal concessions, these require other considerations which include community organization and cohesiveness, issues of finance, internal regulations of communities, access to markets and the government role. These topics will be developed in the present section. Additionally, to highlight the importance of these issues, as well as to draw useful lessons from them, previous communal projects in the Colombian Pacific Coast will be analyzed.

a. Previous Communal Concessions and Community Forestry Experiences in the Colombian Pacific Coast

Communal concessions are not a new concept in the Colombia Pacific Coast; in fact, there have been at least six known experiences of this nature (Field work, 1994.) Some of these projects have emerged from government actions, and others by community-led initiatives. Two of these projects (Proyecto Guandal in Nariño, and Proyecto CVC/Comunidad Europea in Valle) are government projects with communal characteristics. Community-led initiatives include the ACIA, *Asociación de usuarios campesinos*, and the *Palenque* project among others. Except for government led projects, neither of these can be said to be really successful. Nevertheless from all of them relevant learning experiences can be derived.

The two government promoted and administered projects have special characteristics that have made them successful. First, the intensive government presence during all phases of the project in capital, and in government paid project personnel; second, the existence of international funds, as well as international agencies involved in the project design and evaluation. Both projects have suffered the so-called "pilot project effect". In fact they correspond to unusual experiences for the region and even for the country, both because of their economic resources, and as result of personnel intensity.

Project Guandal has a research component associated with it on sustainable forest techniques, which is framed in an interactive relationship with the local communities. It has had

great deal of flexibility in its planning and implementation, and suffered numerous administrative delays. This project would not be a suitable model for community forestry for the reasons mentioned above, Nevertheless, there are very relevant elements from it that should be adopted, such as the promotion of a sustainable forest use by local communities use through technical assistance, providing finance to timber cutters in order to break the vicious relationship with middlemen, and provide technical assistance in transformation practices. This project has faced some opposition from local communities and may occur in the future for community concessions that receive funding. This happens, because local people do not understand that in a region traditionally abandoned by government, priority is given to sustainable forest use vs. infrastructure and social investment[9].

Project CVC/European Community, has a design based on the promotion of associations of timber cutters, that receive forestry technical assistance. Contrasted with project Guandal, this project has been heavily involved in covering other community needs. In fact it has been strongly criticized for the amount of personnel involved in attending community needs in road building, health, education and so forth. Even though such services are required, it is unfeasible that such a massive effort can be done region wide, both because of the financial requirements and because of conflicts that may arise with other government agencies.

Projects for communal concessions promoted by communities themselves have been traditionally unsuccessful. They may in fact create a negative precedent for the implementation of future initiatives. At the heart of their failure is the fact that they were limited to paper work, when they were created, without any provision for the study of the feasibility of the project, planning it, or finding funds to implement it (Field work, 1994.) Additionally, some of these projects (e.g. ANUC project) were promised government assistance, but never received it and their promoters were unsuccessful in pressuring for it. For example, a forestry management plan for the concession was never designed, and the concession has been fragmented in individual harvesting. In addition there has not been technical assistance to farmers, the area of the concession (46,736 hectares) and the number of people living in it (Around 5,000 families) are too large to make a communal project work; tenure of the concession has not been respected; government control has been mainly bureaucratic; and the managerial council has been dominated by personal interests. The project has the interesting feature of been organized through foot-path communities that constitute a link between the local communities and the management council.

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[9]/ The project has not been involved in activities related to these community needs.

These national experiences lay down interesting lessons for future efforts. First, communal concessions should be accompanied by a government effort in several areas if there is the political will for them to succeed. This effort should entail at least the following components: community qualification in forest management, as well as in administration; community technical assistance[10]; access to forest products markets; and access to financial resources. These elements will be developed in the remainder of the section. Second, if communal concessions are used as a strategy to promote sustainable forest use region wide, they can not be modeled on the philosophy of successful pilot projects. Rather, useful lessons can be derived from them, but a strategy should be designed with possibilities of larger impact.

b. Community Organization and Cohesiveness

i. Organizational Requirements in a Communal Context

Both community organization and cohesiveness are key elements for successful communal concessions, in particular if harvesting is done through community forestry. Once a community has decided to organize itself around a communal concession, it is critical to reach agreement over the use of the resources. If this agreement is reached, open access communal property may become a common property with determined rules of use. If there is a perceived cohesiveness in the group, agreement over the rules of use will be easier to establish.

Literature on community forestry states that these projects face four organizational challenges: leadership; shift from "crisis" management to long term planning and management; perceived "transparency" of project by the group and sound fiscal management (Cabarle, 1991.) Leadership is most important for the project's emergence. At this stage community cohesiveness around an organization or a leader may help the initiative get started. As noted by Cabarle, after people decide to organize themselves, it is essential that there exist a shift from "crisis" management[11] to long term planning in which administrative, monitoring and evaluation guides are required. In all stages of the project, in order to maintain group cohesiveness, it is required that individuals perceive benefits commensurate with their effort and/or input. The failure to maintain this transparency in the project can cause group disruption, weakness with outsiders, and eventually project failure. Finally, the communities that engage in these projects have usually had limited access to economic resources, and are not trained in management. Once the project starts

[10] / A scheme of how this assistance should be provided will be outlined in section four.
[11] / Crisis Management is usually associated with process of getting recognition from outsiders, around a project or access to the land.

to return economic benefits, but still requires capital investment, sound fiscal management is essential.

There are successful international experiences of community organization in the context of forestry. One such example the *Quintana Roo* project in an *Ejido* or collective land in Mexico. The main objectives of this project are similar to the ones of communal concessions. It encompassed sustainable forest use through the maintenance of the natural pattern of forest regeneration, and aimed at marketing new species, to replace the over harvested ones (Perl et al., 1991). The organization of this project was so advanced that they even developed sophisticated administration schemes such as: technical advisory committees, marketing cooperatives, and networking for similar projects in the region. This success was due mainly to two characteristics of the projects: the fact that there were pre-exiting community organizations, and that an objective of the project was to "strengthen the active role of the local population, to reach self responsibility and independent decisions." (Bruenig and Poker, 1989).

ii. Limitations and challenges of Communal Concessions in the Pacific Coast

In the case of the Colombian Pacific Coast, Indian communities have traditional tribal practices that make them more cohesive[12] than Black communities, whose bonds are primarily familiar (Field work, 1994). The fact that Black communities in the Pacific Coast have traditionally lacked formal organization making it difficult for them to adopt communal concessions.

Nevertheless, since the black communities participated in the negotiations of the 70 Negritudes Law, which encompassed major community participation at the regional level, communal organization has been reinforced. The activities have taken place at various levels, from the local to the national; and have been motivated by different interest (ethnicity, culture and territory, economic interests, leadership interests, etc...) Additionally, the titling process that is taking place requires each community to organize itself through the establishment of a communal council (Article 5), which is responsible to applying to INCORA--the agrarian reform agency. How well the communities organize and become cohesive depends to a great extent on the processes of collective titling, as well as the norms and implementation of communal councils.

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[12] / Even though cohesiveness among Indian communities has been traditional, external elements are weakening these communal bonds. In particular Indian *cabildo* leaders in the pacific have given away the forest without consulting the community, for an insignificant payment, and not returning benefits to the community. This trend has been reported to be increasing in the region (Vásquez--personal communication, 1994.)

Since 1991, when the National Constitution established that collective titling would occur, there has been a proliferation of community organizations. Only in the Department of Chocó they have more than doubled in number. Conflicts related to natural resource use have caused organizations to sprout[13]. In Cabarle's terms, most of the communities that will have titles will already have passed the leadership challenge. There are doubts about the representation of such organizations (Field work, 1994.) Various community interviewees stated that most of the newly formed organizations have no grass roots representation, and that they are mainly motivated by outside political and economic interests the community. This may not necessarily be negative for the establishment of communal concessions. In fact, such organizations may be capable of acquiring the leadership necessary to mobilize the community.

Despite these difficulties there are several communities that before the 70 Law have made efforts to augment their internal cohesiveness, have created instruments that allow the regulating the use of collective resources, and assign administrative roles within the communities (field work, 1994.) One of the instruments has been the formulation of regulations, especially within the Indian communities. It is expected that the titling process of LBC leads to similar trends.

In Cabarle's terms, the greatest challenge of communal concessions in all possible scenarios, will be the shift to sound management. Communities in the Pacific coast have been traditionally isolated from the mainstream market economy, and have no experience whatsoever in management, neither in commercial forestry nor in administration of an enterprise. Management in forestry activities is particularly challenging because of the long term planning that is required, as well as the coordination of labor for harvesting and forest management activities. Nor do they have they experience in the self administering of funds. This challenge may be less when there is an association with the private sector. It is nevertheless desirable that they build up this know-how. For communal concessions to be successful, a major effort should be made and/or promoted by the Government--possibly through MinAmbiente and CAR's, to make up for the lack of experience in the short run and to build up permanent solutions in the medium and long run. Section 4, on the government role, will describe a feasible strategy.

In addition to the problems mentioned above, there are other facts that make difficult the establishment of communal concessions, especially the ones related to communal forestry involving Black communities. These difficulties emerge from the traditional labor organizations in some regions of the Pacific Coast and the way production systems are structured. Thus the establishment of communal concessions, and in particular, the ones tied to community forestry

[13] / The more recurrent conflicts relate to large scale private loggers, palm and shrimp farms and mining.

may face major cultural barriers. Forestry management may require continuous labor, and thus be difficult to implement. If management is done using seasonal labor force, the difficulties may be less.

As stated in Chapter I, some Black communities have a migrating production organization. This production organization does not necessarily constitute an obstacle for community forestry, since other productive activities may be done simultaneously, but should be considered when analyzing specific projects. Nevertheless, the design of specific community forestry projects should take into account varieties of production organization in the region, and cultural diversity. Additional problems regarding communal concessions will emerge with respect to access to markets and credit, and establishment of joint ventures with private firms. These topics will be discussed in the corresponding sections below.

Besides organizational and managerial challenges, there is consensus within most communities and the private sector that communal concessions, and in particular community forestry, is a viable and desirable alternative if attention is given to the weaknesses previously mentioned (Field work, 1994). The major doubts both groups have are related to the feasibility of community organization, and their managerial capacity and/or its acquisition.

c. Access to Finance

i. Why Communities Require Access to Finance

The causes of the underdevelopment of the Colombian Pacific Coast are beyond the scope of this thesis, but it is clear that they are linked to the ineffective and/or insufficient investment in the region, and to the lack of integration of its people to the mainstream capitalistic economic trend of the rest of the country. Even though forest harvesting has traditionally been an important economic activity in the region, the benefits from it have not contributed enough to its development. One of the possible causes is that forest dwellers have not had direct control over forestry activities, but it could also be due to their lack of financial opportunities. These causes as well as the International experiences, indicate that the establishment of community forestry projects should necessarily be accompanied by financial back-up. Furthermore, the establishment of any business requires initial capital investment. If the entrepreneur does not own capital, then he requires access to financial funds. Given that it is unlikely that the communities own the

required funds, the establishment of loans is vital to the success of communal concessions whether or not the private sector is participating[14].

If sources of finance are not made available for communal concessions, informal finance will likely occur through the private sector, occurs nowadays. As highlighted in Chapter I, most timber cutters are financed either directly by processing firms or their intermediaries. This has created a vicious relationship between the cutter and the finance provider, the former been permanently indebted to the latter.

ii. Alternative Financing Schemes

Forestry projects based on harvesting an existing forest have large initial capital requirements. These are associated with the organizing process, the purchase of equipment, the design of the required forest management plans, and labor payments. Nevertheless, once harvesting activities begin, they have quick economic revenue return, as timber or other forest products are sold. Once these returns accrue, and if properly managed, the fund requirements should decrease. If successive forest plots are harvested, and forest management plans assure that there are continuous harvesting activities, this should hold true. Thus the larger credit requirements should be at the beginning of the project[15].

In the community projects analyzed at the international, level two trends of community finance were identified. When the government agencies directly derived economic benefits from the forest, such as the *tangya* system in Java, these agencies also provide the necessary inputs for reforestation and silvicultural activities. Projects related to this frame may not require any extra finance. The other trend--in which communities are given fund through credits or projects, allows communities to be more or less independent from the government, and it is expected that they become successful managers of their resources. In the Colombian context the first option is not feasible, at least in community owned territories. Moreover it is not clear that the government has the required capacity for such a venture.

There are two alternatives for making credit available to communities undertaking communal concessions. The advantages and drawbacks of these options will be discussed. The first option is to finance them through government agencies--CARs, Ministry of Agriculture, or

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[14] / The private firms associating with the communities may have the required capital funds. Nevertheless it is not convenient for the project to be financed solely on private grounds because this will diminish community bargaining power, create disequilibrium in the association, and make the community dependent on the private firms' commitment to the project.

[15] / This is situation particular to forest harvesting in standing forest, that does not apply to community afforestation projects.

PNR, by establishing projects. The second option is to finance communities directly with some form of government control over the investment.

Finance through government agencies will lead to closer control over the operations of communal concessions. Finance would very likely be tied to specific projects, where the government agency could be involved from their feasibility assessment project implementation. This scheme may lead to more successful short run results if enough funding is provided and government agents are properly trained. Nevertheless, this proposal has several major disadvantages. It will promote the already paternalistic relationship between government agencies and communities, as well reinforce the existing agencies' power over communities in this region. Additionally, such a strategy would delay the communities becoming autonomous in the administration of their concessions. In long term concessions, it is unlikely that government agencies would remain in the project for its duration[16]. Lack of community self management would be negative since it would not lead to long term management that sustainable forest use requires. On the other hand, long term government presence in such projects is not desirable. This is not to say that government should not directly assist the communities, or promote their assistance by third parties, but that its presence should not be conceived of as a permanent component of the project[17].

The alternative path of providing direct financing to communities also has limitations, but has the advantage of promoting the self management of communal concessions, if other conditions comply. The 70 Negritudes Act states that the government should establish special finance and credit mechanisms to allow the communities to organize themselves through associative forms of production for the sustainable use of natural resources, and so they can participate in equally in their associations with private firms (Article 52, 70 Negritudes Act). As previously observed communities do not have experience in project administration, so they would have major difficulties accessing funds and managing them in a sustainable manner. This deficiency should be surpassed by qualifying members of the community to perform these tasks. Nevertheless, in the short run this may be insufficient, and communities still will require assistance in their beginning stages. This assistance could be provided by government agencies, NGOs, or properly trained Grass Roots Organizations (GRO). Either one of these institutions could engage with the communities on a co-administration scheme, while the communities would

[16] / Additionally, government agents are often relentless in delegating managerial responsibilities to the communities when they are the ones controlling its finances.
[17] / Proposals to overcome this dilemma will be outlined in part four of the same section.

simultaneously receive training in management. The finance provision should be conceived as been returned by investing communities, and not as a gift.

This latter proposal is preferable to the previous one[18]. A credit line should be opened for communities to undertake communal concessions, either alone or in joint ventures with the private sector. These credit lines will require collateral. The 70 Negritudes Law in article 52 suggests that collateral could be provided by the value of the goods that are going to be harvested. In the context of communal concessions, the collateral suggested would be the forest resources subject to harvesting. This suggestion would require that the financial institutions be able to recover the funds through forest harvesting if the communities did not comply with their responsibilities. This may be difficult in practice because a structure for it does not exist. An option could be that the concession be sold to a private firm that paid the communities' debt, but this might be problematic if there were considerable unrest within the communities.

In addition to these difficulties, direct finance may not be adopted, because communities may be reluctant to undertake such a risky venture, given the unfamiliarity with the overall scheme. In this sense the role of the CARs or the chosen government agency is vital in re-assuring the communities and making the required assistance accessible.

One alternative to collateral is "good will"--government subsidized, credit lines. Under such a scheme the government would guarantee the venture by establishing a special fund in the financial agency (Inderena, 1991). This scheme has been successfully used in some projects in Mexico. It has the risk that communities may perceive credit as a gift, which may be a negative incentive to sound management. Between the two alternatives of collateral, I would recommend the first.

iii. Proposed Financing Scheme

Credit lines should be made available directly to communities that have asked permit to undertake a communal concession. Issues of access to credit and markets by communities are tightly linked to the organizational stages that communities should go through. As with the organizational challenges of communal concessions, these can go through a cooperative stage, in which the communal council gathers the timber cutters under the concession; and then moves on towards a second stage of community forestry, in which a sustainable management plan pre-approved by the CAR should be implemented. The shift towards the successive stages should be

[18] / This alternative has been suggested even by government agents themselves, in the context of a assistance project for forestry activities in a colonization front (Proyecto Priafas--Inderena, 1991.)

linked to the type of credit available to communities. In this respect, credit for cooperative community organizations should only be available once temporarily, after which they should be forced to move to the second stage--i.e. when cooperative financing should not be available. Additionally, this incentive should be backed up by higher interest rates for cooperative type projects, and lower interest rate for the second stage types of projects. Also, the quantity of available credit should augment as communities move from one stage to the other. Not all communities have to go through the cooperative stage, and they could directly initiate with the community forestry form directly. The credit incentive outlined above will also provide an incentive for communities to start at the second stage.

For communal concessions not associated with the private firms, and entering directly in community forestry, the credit and organization scheme could work as follows. A first cooperative stage would gather the individuals from the community that are currently using the forest. Initial low credit funding would allow them to organize, and to contract out aid in designing the forest management plan[19]. This management plan would be required for the second stage and would incorporate the other members of the community. The plan would be approved by the respective CAR. Once this occurs, the credit would pass a second stage in which it is tied to the implementation of the management plan, and to the specific expenditures required in the early stages of project implementation, such as the acquisition of equipment, income for proprietors involved in production, transportation. In this second stage, the interest rate would be higher than in the first one but still not the full normal interest rate. If after a year of implementation, the project has been satisfactorily supervised by the CAR, it will enter a third phase in which regular credit interest is charged. As the project becomes self sustainable, it is expected that the amount of credit the communities require to request would be lower.

As previously noted communities can be associated with the private sector in two distinct ways: (1) when there is an association in which the community cedes its forest use rights to a private firms. In this case the firm has to pay rents to the communities. (2) When the community is directly involved in production activities through community forestry. In this case, the community establishes a joint venture deal for harvesting with the private firm. In the first case, there is no need for credit funds, and the association is based upon a contract between the community and the firm. The tenure relationships in this context will be developed in Chapter III. In the second case, the communities' are in need for funds.

[19] / This proposed scheme goes hand in hand with the government assistance section in part four.

The scheme for the provision of these funds should work differently form the one described for communities standing alone, since the private firm may partially provide the required funds. Nevertheless, it is necessary for the communities to have some financial independence. Even though the particular credit requirements should be based on the conditions of the association that is made, general guidelines need to be specified.

As explained in Chapter I, most harvesting in the region is currently done through informal associations between individuals and private firms or middle men. Traditionally the private firm or the intermediary provides finance in capital and/or in kind to timber cutters, while the timber cutters provide the labor, with timber having no other value than the cost of labor and transportation (Field work, 1994). The ownership of the forest as well as the reforms that will be proposed rents will modify this relationship because the communities will make additional contributions with the value of the harvestable forest. Nevertheless, communities still require capital in order to make their relationship with the private firms equitable. Capital should allow the communities to have an association relationship versus a labor relationship with their private counterparts. Credit should cover as a minimum for half of the payment of the interventor/supervisor of the association; for the community to receive professional technical assistance in sustainable forest management and administration; for organizing its labor force around community forestry; and at least 50% of the salary of the individuals in the community who participate in the project. As for communities standing alone, the interest rate should be a regular market interest rate, and collateral can be the forest products that are going to be used. Also, the credit should be tied to the approval of a sustainable forest management plan by the CAR. The responsibility for its implementation should lay with the two associates. Thus failure to repay the debt could also affect the private firm in that forest resources will be involved.

Another critical element related to credit making it physically accessible to communities. In fact, in these areas, access to credit may be difficult for communities more because of their distant location with respect to the financial institutions than because of credit interest rates. Thus government efforts should be aimed at assuring that the communities can access credit by subsidizing the location of financial agencies in areas that may not be otherwise a desirable.

d. Access to markets

i. Why Access to Markets is Required

The difficulties communities face nowadays in accessing markets directly were discussed in Chapter I. As shown in Figures No. 1 and No. 2, people form the communities are always

localized at the harvesting extreme of the market chain, since their main participation is through timber cutting, and minor transportation activities, as well as occasional involvement in the first stages of transformation. These people do not get usually involved in transport, trading, or secondary transformation activities.

As can be seen in all these schemes, people from the community are at a disadvantage because they are locked in a situation where the industries or intermediaries are simultaneously the ones who can finance them and also buy their produce. This is why it is necessary that in all cases communities be able to access financial resources. It is also necessary that communities have better access to markets and to the means of getting organized for timber trading and marketing. In fact the difficulties of trading and marketing of forest products, and even more for traditional non-timber products, were repeatedly mentioned during interviews as one of the major difficulties that people from communities dedicated to forest use face. As can be seen in Figure No. 3 this is particularly necessary for communities standing alone in community forestry projects and or commercialization activities[20].

If communal forestry projects are established in the Colombian Pacific Coast, a careful assessment of the market situation should be done as part of the feasibility survey. Given the quantity of forest permits currently granted in the region, and the fact that approximately 62% of Colombia's timber comes from the pacific (Motta, 1992), it is clear that timber from the region has demand[21]. In the case of timber forest products, the challenge is not so much creating markets, but setting up structures and organizational processes that will allow communal concessionaires to access these markets. For the case of non timber forest products, the challenge does involve creating markets for these products so that they can become commercially viable[22].

ii. Alternative to access markets by Communities

There are two main alternatives for helping communities to access forest product markets. First, the government agency can intervene as a commercial agent; second, the communities can

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[20] / In the international projects analyzed, all that were successful involved a previously identified market for the timber products involved. These projects have operated either financing the communities, or aiding their organization to access these markets.

[21] / This demand may decrease in the medium run since: (1) timber utilizing industries are getting involved in large scale afforestation, because of the difficulties they have encountered in harvesting the timber directly in the pacific region; and (2) the Congress has passed an afforestation incentive, that may increase provision of timber through plantations. Nevertheless, the incentive is not believed to have a major impact, because of technicalities introduced to the law, regarding insurance of plantations and other issues.

[22] / Nevertheless, before this task is undertaken it is necessary to develop sustainable forest use management methods for products that have potential markets.

be given the tools and incentives to access the markets directly. The first alternative should be overruled because it would constitute an undesirable permanent government intervention in the market that would impair or delay the ability of communities to manage their businesses directly. The second alternative , on the other hand, promotes self management of communal concessions.

Nevertheless the existence of demand for timber products and the establishment of communal concessions is insufficient for communal concessionaires to access profitable timber markets directly, because of the organizational and capital deficiencies faced by communities. This is a case where government needs to intervene directly or indirectly to aid the process.

Three situations pertaining to how harvesting may be done under communal concessions, affect the ease of access to forest product markets. First, if concessions involve community forestry it is conceived of through the implementation of a management plan. Second, if people from the communities continue to do individual harvesting process is sheltered by the community concession figure, in which individuals cut small amounts of timber without following a management plan. Third is the case in which a community becomes associated with a private firm.

The first scenario is the more desirable one, both from the standpoint of forest management sustainability and from the economic standpoint[23]. In this case each community would be able to gather enough wood to freight transport and eventually reach desirable markets. Since harvesting by the community would involve a single continuous operation, timber gathering will not be an issue. Under this scenario, thus, the communal concession will require undertaking the trading operations as a minimum, and possibly even the marketing operations. For this to happen the following is necessary. (1) That people in the communal council, or their delegates manage the communal concessions, and receive basic training in trading and marketing. If there is an initial joint management with the CAR, NGO or GRO, this training will be facilitated through the joint management experience. (2) That the communal concession has access to funds to organize and pay transport, at least in the initial stages of the operation. (3) That while the process is started they are aided in identifying the markets, which is a service that a government agency, such as the Ministry of Agriculture could undertake--or even better sub-contract under its supervision. This is not a service that is required permanently but temporarily, while the process gets started.

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[23] / From the environmental standpoint, because of the implementation of management plan that will allow for more sustainable forest use than scattered selective harvesting. From the economic point of view, because the volume harvested and method will allow economic feasibility, additionally to the issues of access to markets. This same alternative has simultaneously the greatest organizational requirements.

Under the second scenario harvesting is continued by individuals, small volumes of wood are logged, and the outcomes are less desirable both on environmental and economic grounds[24]. To access markets under this scenario, it is necessary that timber cutters be able to gather enough timber to freight and trade directly. These requirements could be reached through the organization of a cooperative. As noted in Chapter I this organizational framework is beginning to take place already.

The encouragement by the government of such organizations, may create a loophole that will lead to the development of a more sustainable management alternative, like the one described in the first case. Nevertheless, regarding the communities, it may constitute a better alternative than the business as usual (BAU) scenario. Additionally, cooperatives can be conceived of as a transitional form between the BAU scenario and the more desirable one. In fact, communities accessing communal concessions could be encouraged to engage in a cooperative that would initially gather the already existing timber cutters in the community, in order to commercialize the timber from these producers. Later on this organizational structure should move towards a sustainable management scheme, leading towards the desirable second scenario.

For this move to happen, three main issues should be considered: (1) that the timber cutters perceive that they are better off under this scenario, (2) that the community as a whole has a positive perception of the process, and (3) that the communal council is forced to move in the desirable direction. Timber cutters can be encouraged to accept this new figure by: (a) assuring them a more stable source of income, that can be guaranteed if finance is assured; (b) showing them that the return for their input is augmented by collective action, and that it will be maintained over time; (c) that they perceive clear management from the communal council or *cabildo*. Major difficulties will come during this process, because of the reasons previously explained. Regardless of the difficulties that will be encountered in this process, better returns from enhanced access to markets may constitute a powerful incentive.

The main topics regarding the second issue of community acceptance, were discussed in the sections regarding communal concessions. At this point it is necessary to emphasize, that the difference from the BAU scenario for them, arises from the fact that in LBC the forest will be now common property. This means that the all people in the communities are now entitled to returns from forest use even if they are not involved in forestry, and are obliged as well as entitled,

[24] / Environmentally, this would be equivalent to what is happening now, were no forest management plan is undertaken, and forest management is almost not existent. This has been evidenced by the shift in the types of species available. In fact, there has been a decrease in the availability of the more expensive species, towards the cheaper ones (Motta, 1992.)

to assure that timber cutters maintain the endowment that the forest constitutes. For the communities to accept the process I previously described, it is thus necessary that they receive benefits from it. In fact, a part of the returns from cooperatives, and further on from sustainable communal concessions, should be returned to the communities[25] either in the form of increased income, infrastructure and/or social investments benefiting the community. Regarding the third issue of communities moving in the desirable direction, this could be promoted by the credit arrangements described in the credit section.

Nowadays, as individuals from the community--and very likely outsiders, are harvesting the forest mainly with small volume domestic permits or illegally. In the first cooperative stage, these harvesters could be gathered under a single communal permit, in a cooperative stage as indicated in the previous section. This would be a loose form of a communal concessions, in which the communal council gathers the timber cutters under this concession. This figure could be allowed temporarily, and the communal council should be informed that this is so. Under a pre-determined schedule, this temporary concession should shift to its definitive form, and the concession responsibilities should be modified. With the support from the CAR, the communal concession should shift developing the organizational, technical and management structures to do so. It is important that the initial forms are not allowed to prevail, because they are intended to aid the organizational process of the community, and not as a permanent policy scheme. Thus the timetables for the so called shift to occur should be pre-fixed, and informed clearly to the communities. CARs should play an active role in aiding the change towards the final scheme, as well as enforcing its compliance.

The issue of access to markets of communities associated with a private firm, poses a slightly different situation than the one described above. This is so mainly because the private firm may very likely be the forest product user itself, or may already have identified potential buyers for the forest products. In fact, nowadays, private firms actively reach out for forest products either directly or through their intermediaries. Interviews with private firms and intermediaries during the field work, made clear that the timber market operated with timber users actively searching the required raw material, vs. an active role of the supply side, offering certain qualities

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[25] / Internal regulations of the communities both Indian and Black, are determined by the communities themselves. In this sense it would be difficult to force them to dictate the way in which they invest their resources, as well as if they ask for a communal concession on the forest reserve. Nevertheless, desirable internal regulations could be designed schematically, and publicized among the communities, so that such arrangements are discussed, and hopefully adopted by the councils. This could be done through radio public awareness campaigns and so forth.

of woods. Thus in the short run it is expected that the market continue to operate this way, at least until timber markets develop more.

There are two cases to distinguish: communities transferring their use rights to the private sector, and communities participating in harvesting (Chart No. 2). In the case of communities transferring their forest use rights to the private sector, from the community standpoint, the market will be constituted by the private firm. In the second case of communities participating in harvesting, the private firm will be very likely continue to be the final forest product consumer, as it was described above[26].

e. Additional Considerations Regarding Joint Ventures

In the previous section aspects of the interaction of the communities with the private sector have been described, especially regarding access to financial resources and to markets. In this section additional considerations regarding this association will be developed.

Despite the difficulties private sector has encountered in working jointly with communities, and the organizational challenges from the community standpoint, there is consensus among the persons interviewed both form communities and from the private sector that communal concessions is the way to proceed. In fact most of them agreed that communal concessions would be a transition towards formalizing the current modus operandi regarding the interaction between local people and private firms. Nevertheless they signaled three major difficulties that would occur under the scheme of association in joint ventures: (1) People in the communities are used to cut down the forest without permits, and are not used to do technical forest harvesting, moreover some communities are relentless to incur in the extra cost that sustainable forest harvest implies; (2) there are major difficulties in reaching communal agreement with the communities; and (3) It will be difficult, because of power relations within communities, to guarantee that the benefits form joint ventures accrue to democratically to people in the community. These difficulties should be surpassed with the communal concession scheme proposed here. In particular, if sustainable forest use becomes compulsory for all forms of forest use, individual resistance from its implementation will decrease, since all forest users would incur in the extra costs.

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[26] / Nevertheless, this may not be necessarily so, as the forest sector becomes more sophisticated. In fact, intermediaries could become timber traders between communal concessions in joint ventures, and final forest product users.

i. Motivations for Joint Ventures

The establishment of joint ventures, or associations between communities and private firms, are motivated basically by two issues. First, the fact that these associations are a scheme proposed by the 70 Negritudes Law; and second that these associations already exist in a more or less informal way. In fact as it can be seen from the market mechanisms depicted in Figures No. 1 and No. 2 of Chapter I, there are several associative schemes already in place.

Formalizing through forestry these associations has a three fold intent. First of all, to empower and motivate the communities over the control over their forest resources, by allowing for more favorable negotiation conditions with the private firms. Second, to regulate an already existing operation in order to make it more transparent for the sake of both the private firms and the people from the communities. And finally, to bring in private capital for sustainable forest use. This last purpose is particularly relevant. Because for communities to get into a scheme of sustainable forest use it is required that they shift to environmentally sustainable and commercially feasible way of harvesting the forest. The shift towards this trend requires capital--that can be partially provided by government loans and projects, and access to reliable markets. Private firms can provide both of these requirements, if they are convinced that the proposal will serve their purposes of reliable raw material, at reasonable prices, and by getting actively committed trough sustainable forest use.

Functioning joint ventures will benefit the communities, the private firms, and should lead to sustainable forest management. Nowadays communities are basically contributing with their labor in forestry activities, and minor or no payment is done over the cost of the forest or its lost benefits when it is harvested. Ownership over the forest, reinforced with formal joint ventures with the private sector, will lead communities to earn more returns from forest use. With joint ventures private firms will also benefit, since they will have a more reliable source of raw materials and more stable operations costs that under the current scenario.

ii. When and How Would Joint Ventures Operate

As it can be seen in Chart No. 2 and Figure No. 3, under the new policy framework, the private sector can associate with communities, having communal concessions under their own territory, either during the harvesting phase, in transformation and/or in trading of forest products. During the harvesting process there are two types of possible associations. First, when the community directly participates in the harvesting activities, through community forestry, in joint venture with the private sector. The second possible association, could occur when the community

cedes its forest use rights to the private sector through their association. In this second case the community would not be involved in forest harvesting activities, which will be done directly by the private firm. For the first case the compliance of the sustainable forest management plan, previously approved by the CAR, should lie on both parties of the joint ventures, and the enforcement of non compliance will apply to both. Under the second case, with the ceding of the forest use rights, the community is also ceding the responsibility of harvesting the forest sustainably. Thus the responsibility of the compliance of the management plan will lie on the private firm.

As for associations during trading, they can occur whether the community is associated for harvesting with a private firm or not, as it can be observed in Chart No. 2. Also, if the firm is doing harvesting by itself, it may incur in transformation and commercialization on its own.

For all of these cases the association will be established between the private firm and the main governance body within the community--i.e. *cabildos* for the Indian *resguardos* and communal councils for LBC. In fact, in the case of the *resguardos* the head of *cabildo* has been traditional responsible of such deals. In the case of LBC, in the 70 Negritudes Law, article 24 specifies that it is the communal council that can get associated with the private sector, for the activities related to harvesting, processing and/or trading of forest products. All such deals should be tied to the compliance of a management plan previously authorized by the CAR, and sealed in a contract between the community and the private firm. Additionally, they all should have a qualified auditor, paid equitably between the community and the private firm. If both parties prefer so, this auditor could be the same CAR, but desirably not.

The CARs could actively get involved in such deals--e.g. organizing community forestry if it were the case, but I believe this is not advisable. Instead they should participate: (1) providing qualification and training to communities under the conditions explained in section four of the present Chapter; (2) provide guiding, advice and aid to the communities in the negotiations worth the private firms, and guaranteeing the fairness of such deals between the parties[27]; (3) complying their regular control over the use of forest resources; and (4) eventually acting as an auditor of the deal between the communities and the private firm.

Additional details regarding tenure issues will be completed in Chapter III.

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[27] / For example some communities make likely prefer that the payment be done in kind--in the form of diverse investment like it is done nowadays, rather than in money, and the private firm may agree. Nevertheless they may not have the know how of what they are selling is worth, e.g. the price of timber logs. Under this case the CAR, should play an active role guaranteeing the fairness of such a deal.

4. The Role of CARs

The role of MinAmbiente and the CARs has been outlined through the Chapter, with respect to several of the aspects of reform proposals, and in particular regarding to their role in the establishment and functioning of communal concessions. The present section will elaborate on the instances of government role indicated by the 70 Negritudes Law, with respect to communal concessions regarding the regulations for commercial forest use, and the provision of training and qualification.

a. Regulations for Commercial Forest Use

Nowadays the role of government agencies in setting guidelines for commercial forest use are meager. The government role in most of the cases, has been more bureaucratic than providing technical guidelines for commercial forest harvesting. This attitude affects the private firms as well as communities. However, in the future, communities undertaking communal concessions will resent more from this lack of guidelines. Private firms usually have the know-how to undertake commercial logging, otherwise they have the capital to access it. Communities, however, do not have neither of these options. Thus they will be in need for guidelines in this respect.

The establishment of regulations for commercial forest use jointly with the communities, as indicated in the 70 Negritudes Law, can occur in two ways. Either as a setting of general guidelines that apply to all communal concessions; or set for a case by case basis. The 70 Negritudes Law is not clear about this issues. However, it is unlikely that the CARs have the training or personnel available to do the latter. The former option, is more feasible, and is required in order to make up for the lack of knowledge in commercial logging that most communities have[28].

b. Training and Qualification

The 70 Negritudes Law establishes that training and qualification should be provided to Black communities. However, the government activities with this respect should also be available to Indian communities, as well as to *mestizos*. There are basically two instances at which training should occur. First, a permanent training and qualification service by the CARs; and second, training specifically linked to communal concessions.

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[28] / In fact in the Southern Region, the requirements may be less, because of the existing tradition of forest harvesting.

The first instance should constitute a permanent service of the CARs, or sub-contracted by them through qualified NGOs. It should have two modalities. One as a traditional extension service, in which the government agents reach out to the communities to teach them the various techniques and know-how; and two, a training and qualification provided through gatherings in forest villages around the region. In this second modality it will be people from the communities that will mobilize to attend these meetings. The design of these training programs should be based on the following: (1) determining in broad terms which are the forest management techniques more suitable for each forest association, (2) an identification of the major voids in knowledge that forest users face with respect to forest harvest, management, as well as regarding forest product commercialization (e.g. volume measurements, transport, storage) and basic transformation.

The second instance should be specifically linked to communal concessions. This service will differ in whether the project is undertaken in State property or in collective property, and whether there is or not association with the private sector. When there is association with the private sector, it can provide the know-how and capital to undertake several of the activities required for communal concessions. However, the CARs should play an active role in providing support to both parties in order to guarantee that the association occurs in fair terms. This role should take place during the negotiations of the agreement and further on during project implementation. Furthermore, it would be advisable that the CARs prepare contract guidelines to help the process, in which different associations modalities are outlined. These guidelines will prove a useful tool, especially for communities. Additionally, the CARs must promote that community leaders properly diffuse and discuss to the community the terms of the association with the private firm[29].

In the case of communities standing alone, the role of CARs will be a more demanding one. However, it is necessary to emphasize that the CARs should avoid promoting a paternalistic relationship. As described before, most communities have deficiencies in their know-how of activities related to communal concessions, such as organization, and most of all management activities. Under such circumstances the CARs or a qualified NGO or GRO, should provide them assistance through out the process. As mentioned in the credit Section, communities undertaking communal concessions in collective property, should have access to credit in order to finance their organizational and managerial requirements. Because accessing credit and administering it is a

[29] / In the case of collective property, communities are self governed, so CARs do not have the authority to interfere with internal affairs. However, it can promote that project diffusion take place inside the community.

new experience for them they should be provided with assistance. In some cases, if the community decides to, there could additionally be a co-administration during the early stages of the project. The co-administration should be not only temporary, but have a training and qualification purpose to it.

As for communal concessions in State property, the involvement of the CARs is slightly different[30], in the sense that they are directly responsible for the conservation of the Forest Reserves, and thus should play a more involved role. There are two options to consider. The first one would be a copy of communal concessions in collective property. Under this scheme, the applying community will be ceded the forest use rights under a contract. As for collective property, they can ask for a loan to undertake the project, and from then on then on the scheme would be analogous. However, due to the differences in the tenure status, the rights and responsibilities will differ, as will be discussed in Chapter III. Moreover, the rents the communities will have to pay will be higher, lowering the project profitability. The second option, is that communal concessions occur as a joint venture between the community and the CARs. Even though this option is feasible, it is not the most desirable one. Of the previous similar experiences, only those involving high personnel intensity, and large resources were successful (refer to Part B, section 3.a). As discussed before, this scheme is not extendible region wide. Additionally, it is not within the CARs role to get involved in productive activities.

[30] / Since the tenure conditions are different, not only will the role of the CARs differ but also the forest rents, and the rights and responsibilities assigned. These last issues will be furthermore elaborated in Chapter III.

Chapter III: TENURE

Land and forest tenure are the means by which property rights are assigned to a particular person or a group of persons. They determine to a great extent the degree to which the property holder is allowed to derive benefits from it. In the case of forest resources, tenure thus shapes the behavioral rationale of the forest holder, and ultimately the way the forest is used. Nevertheless, tenure has not received its due importance in forest policy analysis and design. In fact, debates over tropical timber concessions have mainly focused on rents and rent capturing, rather than on resource tenure, which has been traditionally analyzed superficially (Vincent and Binkley, 1994). Furthermore, proper design of forest rents are of little use, without enforceability of the corresponding property rights that accompany them. This is so, because property rights and their enforceability define the economic benefits that the forest user has, which is at the base of forest rents design. Moreover, resource tenure has found to be a more fundamental condition for efficient forest use, than the State's rent capture (Vincent and Binkley, 1994). Finally, tenure is not only relevant because of forest use efficiency, but it is also fundamental for equity considerations. This is so because ownership determines who holds the tenure, and thus who derives the benefits from its use.

Tenure characteristics define who has the right to access the forest resources, who determines the conditions of their use and who can benefit from them (Larson, 1993). However, tenure also determines who has the responsibility over their use, the time rights and responsibilities are allotted, whether these are transferable and/or divisible, and whether they are exclusive or not. These tenure characteristics can be classified under the following four categories: comprehensiveness, duration, transferability/divisibility, exclusiveness and security. On top of these is enforceability, which allows for the exercise of the other tenure features.

As it was discussed in Chapter I, a proportion of the forest in the Pacific coast are under private property, either collective or individual. Even though this proportion may augment

considerably with the collective titling to Black communities, still a large part of the forests will be in the State owned Forest Reserve. In the Reserve, tenure arrangements of forest permits are of particular importance, because they constitute the mean to mimic fully specified property rights (Vincent and Binkley, 1994).

The intent of this chapter is to incorporate tenure in a formal way into the design of Permit and Concession Policy for the Colombian Pacific Coast. As it was discussed in Chapter I, weak and unclear tenure assignment schemes are at the origin of many of the deficiencies of the current forestry policy.

This chapter is organized as follows. The first section will provide a detailed discussion over the relevance and the definitions of the tenure characteristics chosen. This discussion will be done building upon the literature on the field, and will still not incorporate issues related to the Colombian case. In the second section, a taxonomy over the land and forest ownership for the Colombian Pacific Coast will be given. This taxonomy will be developed using the current legal and normative structure for private and collective property, as well as for the forest assignment schemes of the current forest policy. The featuring distinctions between these assignment schemes will be briefly discussed, focusing on the differences between collective and individual property regarding forest use, and the rights and responsibilities that the property categories confer. This section will highlight how the policy reforms proposed in Chapter II, address the difficulties that emerge for the different property regimes.

After this general discussion, in a third section, the different property characteristics (e.g. comprehensiveness, duration, etc..) will be analyzed individually for the Colombian case at the light of the literature discussed in Part A. For each tenure category, the analysis will lead to the specific policy reforms proposals. These policy reforms will be complementary to the policy framework provided in Chapter II.

A complete assessment of the policy reforms proposed in this Chapter, would require a financial analysis, in which their feasibility would be evaluated from the point of view of the forest users. This assessment was not pursued because it requires a complementary forest rent policy. The financial feasibility to the forest user will depend on the rights to economic benefits that are conferred to him by tenure, which are constrained by the forest rents.

A. TENURE CHARACTERISTICS

Property rights over resources determine to a great extent the degree to which the permit, concession holder, or the owner of the forest is allowed to derive economic and other benefits from it. This view of property rights depends upon two factors: the inherent physical and economic properties of the forest that the rights allot, which determines the benefit it can yield; and the extent to which the property rights enable the holder to enjoy these attributes (Pearse, 1990). In the present chapter only the second component of such an approach to property rights will be considered. The physical and economic characteristics of the forests will not be addressed, because the topic allows for a whole analysis on itself. However it is necessary to acknowledge that a financial viability analysis of the tenure reforms proposed, would require their consideration.

The following four forest tenure characteristics will be considered in the policy analysis: (1) Comprehensiveness, (2) Duration, (3) Divisibility/Transferability, (4) Exclusiveness and (5) Security. The division of tenure into these characteristics corresponds to the traditional approach given to its analysis (See: Pearse, 1990; Halley and Lucket, 1990; Gillis, 1992; Vincent and Binkley, 1992). However, it is necessary to indicate that there are important linkages between these issues, and hence the proposed characteristics may be arbitrary for the development of certain arguments.

1. Comprehensiveness

Comprehensiveness, is a central tenure characteristic, because it defines the rights and the responsibilities given to the forest user. The rights refer to the attributes that are allotted with the property assignment. Examples of rights are: timber logging rights, water use rights and development rights.

In theory, and from an economic standpoint, if someone has only part of the benefits, as for example rights over the forest use but not over the water resources, this person will seek to maximize the economic benefits over which he can claim, disregarding those he can not claim and any external costs and benefits he may inflict on others (Pearse, 1990). Nevertheless, it is necessary to take into account that not all rights are allotted, as for example public goods. Also, it should be acknowledged that not all rights granted have a market. For example, there is not a market for water resources in Colombia. The same may occur for non timber products, which have underdeveloped or un-existent markets. In the case of non marketed goods, the grant over the

rights for the resource is problematic, because the tenure holders will not receive the correct signals and incentives in the appropriate desirable amounts and quality (Halley and Lucket, 1990). A similar outcome will occur when there are market imperfections for marketed products.

Responsibilities are an equally important component as rights in forest use comprehensiveness. From an economic perspective, responsibilities may signify additional costs to the owner or forgone benefits. For example, responsibility over persistent forest use--i.e. maintaining the forest cover, signify that the forest owner can not cut the forest at his will and sell it. Analogously, the compliance of environmental regulations may require investments, that the owner would not make on its own because they are not necessarily profitable to him. Such investments thus inflict an extra cost on him. Government regulations are the traditional way in which responsibilities are assigned. They are one of the means to correct socially undesirable behavior from forest holders (Pearse, 1990).

Rights and responsibilities also set the boundary of the options of use the forest owner faces. For example, if a person has only rights over the timber, he/she is not allowed to use the forest for multiple purposes. With this respect his/her, decisions are constrained by the comprehensiveness of the tenure. This point is relevant, not only from an efficiency perspective, but also from an ecological point of view. In fact, comprehensiveness limitations may be closing the options for more sustainable forest use alternatives.

2. Duration

Duration refers to the time over which the property rights or the tenure is exercised. Private ownership usually implies perpetual duration, but forest use leases and licenses may specify terms of varying lengths (Halley and Lucket, 1990). Regarding duration, it is thus necessary to distinguish between the ownership of the forest, which may go or not go hand in hand with land ownership; and forest use rights, which may be assigned by the government or other governance entity.

Duration of use rights over the forest is fundamental because it determines the time horizon the owner considers in its decisions. Duration will determine whether the owner accounts or not the impact of his actions in the future (Pearse, 1990). For example, if the forest owner has perpetual rights over the forest, his harvesting decision will be made taking into consideration the benefits he can obtain from harvesting the forest now, versus the benefits of harvesting it in the future. He will do such an analysis, because perpetual ownership guarantees him that he will be able usufruct future benefits. On the contrary, if the duration of his use rights are shorter, he will

only consider that period in his analysis. Thus in the present example, if the discounted net present benefits are higher for future harvests, but the current owner will no longer hold the forest rights, then he will prefer to harvest the forest before. He will harvest the forest regardless of whether or not that is the better option for society as a whole.

There are three additional critical issues for tropical forests that are related to duration. First, the fact that forest turns are so prolonged may cause the owner a bias towards cutting the forest before its time. Given the owners discount rate, he will evaluate the NPV of his actions and determine whether they are acceptable or not. Because of long forest turns, the benefits from second turn harvesting will yield a lower return, that if the turns were shorter. Lower NPV's create this bias to harvest before time[1]. If additionally, the owner holds the rights for a shorter period than the desirable harvest time, then he will prefer to cut the forest before his rights expire anyway. Thus, short forest use rights, may in principle promote forest harvesting before time. The same argument applies for those who grow forest crops. Unless their rights extend to the several decades these crops take to grow, they will face inadequate incentives to reforest (Pearse, 1990). The second issue relates to the investment decisions of the forest right holder with respect to management. An analogous argument to the one outlined above can be made for investments in management. Returns from investments in forest management are long term. Thus if the owner can not benefit from these returns, because his ownership expires, then his rational decision will be not to invest. Synthesizing this two related points, restricting the duration of a tenure is likely to result in investments being liquidated prematurely, while others will not be undertaken voluntarily by the use right holder, even though they may signify net social benefits (Halley and Lucket, 1990), or even accrue benefits to him, if he still held the rights. Duration of forest use rights is thus a critical issue in determining whether the owner faces favorable conditions for sustainable forest use or not.

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[1] / Assuming the owner faces a situation of perpetual ownership. Let B1 be the benefits if he harvests before time at t1- from the socially desirable behavior; and B2 the benefits if he harvest at the socially desirable time; and C the initial costs. Let s be his discount rate.
Assuming B1 = B2 = B (for clarity), then:

$$NPV1 = -C + B(1+s)^{-t1}$$

and

$$NPV2 = -C + B(1+s)^{-t2}$$

and since $t1 < t2$ then $NPV1 > NPV2$

thus from an economic standpoint the owner would choose to harvest at time t1 and not at time t2.

The third critical consideration with respect to duration, is its implication on the security of timber supply for transformation industries. Long term duration, or shorter term renewable rights, create a safer environment for timber processing industries. This environment will not only determine their investment decisions in the forest, as was discussed above, but also their investment decisions in manufacturing and other facilities, and hence the efficiency of the use of the resources (Pearse, 1990). In Canada, for example, it has been found that since 20 or 25 years is considered to be the maximum period required to amortize a manufacturing plant, the assignment of forest use rights for this duration have encouraged firms to establish processing facilities which are integrated with forest resources (Halley and Lucket, 1990). More efficient transformation industries, may in return have an indirect impact on the forest harvest rates, in fact, output per unit timber input may increase. Thus, in principle, less volume of timber would be required to obtain the same output.

Long term concessions have also been considered favorable to stimulate the use of non timber products and services (Panayotou, 1993). Additionally to the benefits mentioned above, long term concessions with expanded comprehensiveness of the rights to non timber products, may encourage concessionaires to do research in the use of non timber products.

These considerations have lead policy analysts to recommend long term concessions over shorter forest use assignments. For example, Repetto and Gillis have emphasized that long term concessions are necessary to motivate concessionaires to take into account the long-term impacts of their logging activities and to invest in forest management and protection (Vincent and Panayotou, 1994). From the foresters perspective, to promote sustainable use, concessions should at least be as long as the harvest cycle (Approximately 35 years in Southeast Asia), or preferably the forest rotation (Approximately 70 years) (Gillis, 1992).

The determination of the appropriate term duration depends on the objectives of the policy. For example, if the goal is to promote orderly harvesting and processing of timber resources, then duration should be at least as long as the amortization of manufacturing plants. However, if the purpose is to encourage investment in the establishment and management of new forest crops, right assignments for a term equal to the length of the forest rotation may be more appropriate (Halley and Lucket, 1990). In fact, since the terms of tropical forest rotations are longer than the required amortization time, the former should be favored hence achieving the two goals.

Nevertheless, there are negative implications associated to assigning long term forest use rights. Long term tenure assignments limit the flexibility government has over meeting changing

societal needs and preferences (Pearse, 1976, cited by Halley and Lucket, 1990). With the increased national and world wide concern about tropical forest conservation, assignment of long use rights may limit the government's action capacity upon new conservation priorities. Additionally, in areas where the ignorance over the ecological value or rarity of the ecosystems is dominant, assigning long term use rights may be antagonistic to biodiversity conservation goals.

Also, for authors such as Grut (Grut et alt, 1991), privatization of concessions or permits, is equivalent to assigning perpetual use rights, or assigning very long term forest use rights. These authors are skeptical about privatization without strong additional regulations, because they claim that the owner will always prefer to mine the forest. From their perspective, if privatization is adopted and it is tied to compulsory sustainable yield, it will only be financially attractive if the growth rate value of the forest biomass (i.e. the volume of residual mass after logging) is greater than the concessionaire opportunity cost. This is, his returns from sustainable yield will be higher than his normal opportunity cost. These authors claim that in tropical forest the outcome is likely to be the opposite. Using a 1-3% physical biomass growth per year, and a 1-2% yearly increase in real value, the increase in real value ranges between one and five percent, which is lower than the average opportunity cost of 10 to 20% per year in developing countries. If this holds true, then the concession holder will be better off by mining the forest, cutting the tradable trees, and abandoning the rest. The possibility of this outcome calls for long term concessions to have additional regulations, of which at least a minimum dbh diameter should be compulsory (Grut et. al., 1991).

The argument described in the previous paragraph has nevertheless less been strongly criticized. Some authors, such as Sedjo (1987) (Cited by Gillis, 1992) and Gillis (1992) claim that even though the rationale of the argument is right, the rates used in its calculation can be misleading. They claim that if the growth rates are higher, such as the ones existing in Malaysia (4% per year), and the growth price is higher, such as recorded increases of 3.7% per year, the argument will not hold. In fact, under such scenario the returns of sustainable yield will be higher. These returns may out compete the opportunity cost of the forest owner, and he will not face a systematic incentive to mine the forest. Also, it has been stipulated that the opportunity cost of concessionaires may not be as high as 10 to 20%, especially in economies that are close to International financial markets (Gillis, 1992). For example in Malaysia, the opportunity cost may be as low as 5 to 6 %. For these authors, the dangers of long term concessions are not so apparent.

Another negative connotation of long term forest use rights is that they may be not attractive to investors. In fact, long concessions of forest use rights limit the liquidity of an asset.

Lack of asset liquidity may be an undesirable feature for many investors. This restriction is of course associated with the transferability and divisibility of the use rights assigned, that will be discussed in the following section.

Finally, it is necessary to indicate that more than the absolute duration over a right, what is critical is whether the use rights can be renewed to mimic longer term rights. A tenure that can be systematically renewed with complete certainty is essentially the same as a perpetual one. If conditions are tied to tenure renewability (such as discretion of government agencies, or varying renewal conditions over time) uncertainty is introduced, and it can affect the tenure holder's forest use behavior. Ambiguity of the renewability conditions has been common practice, such as "favorable performance by the concessionaire", giving little security to the right holder over the continuity of his rights (Gillis, 1992). Gillis recommends concession renewability, but under before hand specified rules, and in particular structuring the agreement in such a way that the concessionaire will have a shared interest in its renewal.

3. Transferability and Divisibility

Transferability is defined as the right to sell or dispose of the property granted, as well as the products from the use of the assigned assets. Transferability and divisibility apply to the rights as well as to the responsibilities over a property. It is necessary to distinguish between the forms in which transferability can take place. Transferability may be restrained because of restrictions of the markets of the asset, which exist because of market imperfections such as oligopsony or monopsony. However, transferability can also be restricted directly by laws and regulations (Halley and Lucket, 1990). Regarding the latter restriction, two additional distinctions are required. These are limitations over the land and its forest, and limitations over a permit or use rights over the forest.

Transferability and divisibility are key tenure characteristics, because they influence the value of the forest, and also determine the forest right holder behavior. Pearse (1990) states that benefits that are absolutely not transferable do not have an economic value, because the only way their holder can benefit from them, is by directly exercising his rights (e.g. consuming all forest products himself). Transferability impediments are also against economic efficiency. Restrictions on transferability impede the rights to be used by those who can generate more value out of them. More efficient users who could offer more, and bid away less efficient ones, would not be able to do so. Thus, restrictions on transferability or marketability of the rights, are preventing them to be transferred to those who can use them more productively (Pearse, 1990). In particular for forest

resources, such restrictions can in economic terms be contributing to the under valuation of the forest, and hence decreasing the attractiveness of sustainable forest use over other land uses.

Moreover, because of the reasons stated above, transferability also affects the distribution of income and wealth. They are affected because if an asset can not be allocated to its more efficient use, it will in principle produce less benefits that it could with efficient allocation. To this extent, the income of the original owner would be less than its potential value.

Tenure transferability also affects the investments that are done in the forest, because of their long term returns. Some authors have pointed out that the major disincentives to forest management investment are not that investment periods are long, as it is usually believed, but the lack of opportunity of disposing the goods because of transferability restrictions (Halley and Lucket, 1990). Hence under transferability restrictions, investments loose liquidity, decreasing their attractiveness. In fact, allowing for transferability, would make forestry investments--including forest management, more liquid and hence more attractive to risk averse investors[2] (Vincent and Binkley, 1992). A study done in Canada in 1981 found that forest industry executives across the country were reluctant to invest in non-transferable assets which could be not liquidated before maturity (Peat, Marwick and Partners, cited by Halley and Lucket, 1990).

Nevertheless, it has been pointed out that full transferability and exclusivity (refer to section 4), from an economic efficiency standpoint, give no importance to the initial concession allocation, even though it still may have relevant equity implications (Binkley and Vincent, 1992).

Finally, transferability restrictions limit the possibility of adapting to changing circumstances. They may impede adapting to new technologies, or social tastes and preferences (Halley and Lucket, 1990). For example, the non transferability of a timber concession, may impede a conservationist NGO to buy out the concessionaire, if the value of the ecosystem for the NGO is higher than the value of the concession rights to the concessionaire.

Divisibility is associated with transferability since it allows for the transfer of the asset to "migrate" to the more efficient user in the most efficient size, allowing for consistency for the returns of scale of harvesting and management operations (Vincent and Binkley, 1992).

There are, however, strong arguments in favor of transferability restrictions. Such arguments include the that transferability restrictions can avoid excessive concentration of timber rights, monopolies, or other impediments for competition. Also, they allow for control over the balance between national and foreign ownership (Pearse, 1976, cited by Halley and Lucket, 1990). However, these benefits can also be achieved by regulating transferability. For example,

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[2] / This assumes that there is a competitive market for concessions (Vincent and Binkley, 1992).

monopoly can be avoided by obliging transfers to be registered in a government agency, which keeps track of the concession holders.

4. Exclusiveness

Exclusiveness is defined as the right of the property holder to prevent others to freely enjoying its benefits. Also, if the rights conferred are not exclusive, then outsiders are competing with the owner over the benefits of the property. It is an important characteristics, because it also determines the use holder behavior. Non exclusivity may lead the owner to exploit the forest resources too fast or inefficiently, because he feels threaten that other party may use them first. Additionally, because of the same reasons lack of exclusiveness will also deter investments in future yields (Pearse, 1990).

There are two relevant distinctions to be made about exclusiveness. First, exclusiveness features given by the laws or regulations over the property and the way the forest use rights are granted; and second their enforceability. Some policy analysts claim that the government should be responsible for protecting areas from encroachment and enforce the exclusiveness properties of the concession agreement (Panayotou, 1993). However it is not clear how this could be implemented in practice.

Exclusivity has been considered such a critical issue, that it has been claimed that without some degree of exclusivity, property rights may be of little value to its holder (Halley and Lucket, 1990). In fact, exclusivity over the rights granted is closely related to enforceability over those rights. Rights that can not be enforced do not operate in practice.

Lack of exclusiveness has been also associated with common property regimes. Some authors have claimed that everybody's property is nobody's property (Halley and Lucket, 1990). This is said to occur, because individuals have not the incentive to invest in the renewal or management of a common resource. This phenomena has traditionally been called, since Hardin (1968) the "tragedy of the commons." However, it is important to distinguish between (1) open access regimes, and (2) common property regimes; as well as between (a) lack of exclusiveness caused by unassigned rights, and (b) weak enforceability over assigned rights. These distinctions are relevant because they highlight the origin of the lack of exclusiveness. Additionally, other authors claim that common property does not conflict with the exercise of exclusiveness, once the owners agree on the rules of resource use (Ostrom, 1987).

Moreover, the establishment of complete exclusiveness has been questioned on efficiency terms. It has been pointed out that the establishment of exclusive property may be very costly, because of the transaction costs involved in defining, negotiating and enforcing them. Thus its establishment may be more costly than the benefits gained by avoiding the inefficiencies associated with common property, in which case common property should be allowed (Cheung, 1970, cited by Halley and Lucket, 1990).

5. Security

Security is the least tangible property of tenure. It refers to the perception the holder feels about the tenure he owns. It depends on the socio political environment in which the property rights are granted. Security can hence be thought to depend on the following: trust in the political system that granted the rights, past granting experiences, and probability of changes related to political factors (Halley and Lucket, 1990). Security thus influences greatly the entrepreneurial investment and operation planning of the tenure holder (Pearse, 1990).

The topic of security is closely related to duration and renewability over the rights assigned. In deed, unclear and unstable renewal conditions over a right may the tenure holder feel insecure over them. This can provoke all the negative incentives associated with short term ownership, regarding unsustainable forest use. With increased insecurity, there will be decreasing forestry investments.

In order to diminish insecurity over the rights, some countries have introduced a tenure arrangement called "evergreen renewal." This tenure arrangement has a provision that enables the right holder to replace its existing rights, and to re-negotiate the terms of the new agreement to replace the existing one when its term has only partly expired (Pearse, 1990). This provision is said to have the benefit of providing a regular opportunity of changing the conditions of the agreement, while ensuring that the forest user does not face the threat of loosing its rights. Nevertheless, in the context of political instability, or indecision over the rights granted, this provision may be insufficient to decrease insecurity.

B. CURRENT LAND AND FOREST TENURE

1. Taxonomy of Current Land and Forest Tenure

Land tenure in the Colombian Pacific Coast can be divided in four basic categories, as it can be recalled from Chapter I. These are: collective land from black communities, collective land from Indian communities, private land and *baldíos*, or State owned land. The most salient distinction between them lies in the composition of the ownership. Collective land belongs to a group, in this case to ethnic communities; private property to individuals or societies; and *baldíos* to the State.

For each of these categories land and forest tenure properties are determined by two stages in the legislation. The first one, is constituted by the legislation and norms determining the property characteristics over the land and forests that a title entails. These characteristics were classified as comprehensiveness, duration, transferability/divisibility, exclusiveness and security, using the definitions of Part A. The second stage, corresponds to the tenure arrangements that characterize the assignment authorization over the use of a resource in a given property. For example, the granting of a permit, allowing for a certain volume of timber to be cut during a certain period if time. Additionally to the legislation and norms, is the way in which these operate in practice. For example, whether the exclusivity over a use right is in fact respected or not. These subjective issues will be discussed when analyzing the property regimes.

Tenure properties over land and forests for the region of study are summarized in the following charts. Charts No. 3, No. 4 and No 5 indicate the characteristics over property that ownership entails respectively for collective Indian property--or *resguardos*, land of Black communities--or LBC, and private property. The first section of these charts indicates the rights over the land owned, and the second section focuses on the tenure properties over the forest in that land. Chart No. 6 corresponds to the use restrictions over the forest in the case of *baldío* land, or lands owned by the State. Since the current tenure arrangement by which natural resource use rights are assigned is very similar to the three types of property, it is summarized in Chart No. 7.

The content of these charts is going to be the basis of the discussion developed in the present Chapter. For ease of understanding, general comparative comments for the three types of property will be given initially, after which specific discussions over each of the property characteristics--e.g. comprehensiveness, will be discussed in the following sections.

CHART No. 3

LAND AND FOREST TENURE CHARACTERISTICS FOR INDIAN RESGUARDOS

LAND OWNERSHIP

COMPREHENSIVENESS				
	FOREST RESOURCES	WATER RESOURCES	NON RENEWABLE RESOURCES	DEVELOPMENT RIGHTS
RIGHTS	• Titling includes forest Resources (Constitution, 1991), even in the case of National Parks and Forest Reserves (Decree 662, 1977). • Right to administer the forest, as well as the right to conserve them (Law 21, 1991). • Do not require permits for forest use.	• Not included in property, since they constitute a public good.	• Not included in property. • Given ample participatory rights in the decisions over resource exploitation (Mine Code). • Entitled to Indian Mining zones.	• Assigned to the *Cabildos*, which are responsible for the economic development within their jurisdiction.
	• The use of Natural resources will not go against their cultural, social and economic identity (Constitution, 1991). • In the decisions affecting Natural Resource use the government will promote the participation of representatives from the communities (Constitution, 1991). Additionally they have the right to participate in the benefits they entail, and right to compensation (Law 21, 1991). • They have the right to participate in the use, administration and conservation of natural resources (Art. 15, Law 21, 1991). • They do not pay taxes or fees (Motta, 1992), and have the right to establish internal taxes to comply with their responsibilities.			
RESPONSIBILITIES	• They are responsible for defending forest resources (Law 81, 1958). • They have to comply with the CARs conservation and management regulations, and the forestry policies of MinAmbiente (Inderena, 1994b). • When communal property is in the Forest Reserve or National Parks, they have to comply with their norms of use.	• Conserve vegetation protective of watersheds. • They must conserve water resources (Law 81, 1958).		• Responsibility given to the cabildo.
	• They are responsible over the conservation of the natural resources (Art. 330, Constitution, 1991). • Regulations over natural resource use set internally by the Cabildo.			

"RESGUARDOS " LAND OWNERSHIP CONTINUATION

DURATION	TRANSFERABILITY	EXCLUSIVENESS
• Property is inalienable and can not be prescribed, which implies the property is given at *infinitum*.	• Property is inalienable (i.e. can not be transferred) or seizable.	• Exclusiveness granted, Indian communities. • Lands traditionally occupied by Indians can not b titled to others (Law 135, 1961), including LBC (Law 70, 1993). • In practice exclusiveness over natural resource use difficult to exercise because of encroachment by outsiders to the community.

"RESGUARDOS " FOREST OWNERSHIP

	COMPREHENSIVENESS	TRANSFERABILITY	EXCLUSIVENESS
RIGHTS	• Titling includes forest Resources (Constitution, 1991), even in the case of National Parks and Forest Reserves (Decree 662, 1977). • Right to administer the forest, as well as the right to conserve it (Law 21, 1991). • Do not require permits for forest use. • Do not pay taxes or use fees.	• Not explicitly stated as transferable, but neither prohibited. Since cabildos are self governed, transferability over forest use rights is possible. • Not stated whether the forest resources are seizable or not. • All primary forest products require safe conduct (Agreement 029, 1975).	• Exclusive in principle. • Exclusiveness in practice difficult to exercise, because of lack of property enforcement.
RESPONSIBILITIES	• They are responsible for defending forest resources (Law 81, 1958). • They have to comply with the CARs conservation and management regulations, and the forestry policies of MinAmbiente (Inderena, 1994b). • When communal property is in the forest reserve or National Parks, they have to comply with their norms of use. • Minimum commercial logging dbh. is 50 cm (Art. 5, Resolution 315, 1974)		

Sources: Inderena (1994a, 1994b) and as indicated in the individual items.

CHART No. 4

LAND AND FOREST TENURE CHARACTERISTICS FOR LAND OF BLACK COMMUNITIES

LAND OWNERSHIP

COMPREHENSIVENESS				
	FOREST RESOURCES	WATER RESOURCES	NON RENEWABLE RESOURCES	DEVELOPMENT RIGHTS
RIGHTS	• Collective property includes forest resources (Art. 7, Law 70, 1993). • Property does not include National Parks (Art. 6, Law 70, 1993).	• Not included in property, they constitute a public good (Art. 6, Law 70, 1993).	• Not included in property (Art.6, Law 1993). • Require permit for mineral resource use, and have preference over all other users (Art.26, Law 70, 1993). • Entitled to Mining zones of black communities (Art.27, Law 70, 1993).	• Granted to the communities.
	• Communities do not require permit for the domestic use of natural resources, but they must guarantee their persistence (Law 70, 1993).			
RESPONSIBILITIES	• Commercial and domestic use of forest must guarantee the persistence of the resource (Art.6, Law 70, 1993). • Communities occupying National Parks, that are allotted title must comply with a management plan, otherwise they may be reallocated. • Must guarantee the protection of fragile and extinction prone ecosystems (Art.21, Law 70, 1993). • Must comply with the regulations designed by the CAR over the collective persistent commercial use of forest resources (Art.24, Law 70, 1993).	• They must conserve, favor and maintain natural regeneration of protective vegetation of water (Art. 21, Law 70, 1993).		• The 70 Negritudes law is paternalistic towards the communities. The State will adopt the necessary measures to guarantee the communities right to develop socially and economically (Art.47, Law 70, 1993).
	• LBC have a social and inherent ecological function tied to it (Law 70) • The assignment of collective property includes the obligation of observing the norms of conservation, protection and rational utilization of renewable resources and the environment (Art.14, Law 70, 1993). • The communal council must veil for the use and conservation of natural resources (Art.5, Law 70, 1993). • Communities require permit over the non domestic use of Natural resources, and this permit is to be assigned collectively through the communal council (Law 70, 1993).			

LAND OWNERSHIP FOR LBC CONTINUATION

DURATION	TRANSFERABILITY	EXCLUSIVENESS
• Land of collective use is inalienable and can not be prescribed, which allots this property at *infinitum*.	• Land of collective use is inalienable (i.e. can not be transferred), and not seizable. • Areas assigned to family used are alienable, but with the constraint that preferential right of acquisition can only relapse in other members of the community, and in its defect to member of the same ethnic group (Art. 7, Law 70, 1993).	• Property is exclusive in principle. • The occupation of territories by people of other ethnic groups over LBC, will not be subject to titling (Art. 15, Law 70, 1993). • From the enactment of the law on, until collective property has not been properly assigned, no land occupied by the communities will be allotted without previous consent of a special commission (Art. 17, Law 70, 1993). • In practice exclusiveness over the use of the land may be very difficult to exert. There may be encroachment by persons from other ethnic groups.

LBC –FOREST OWNERSHIP

	COMPREHENSIVENESS	TRANSFERABILITY	EXCLUSIVENESS
RIGHTS	• Property includes forest resources (Art. 7, Law 70, 1993). • Domestic forest use does not require the authorization of the environmental authority. Commercial forest use does require permit (Art. 6, Law 70, 1993). • The administrative agency of natural resources will regulate in coordination with the communities the collective use of forest resources for persistent forest harvesting (Art. 24, Law 70, 1993). • Subsistence products from hunting and recollection will have preference over any other use, either commercial, semi-commercial, industrial, semi-industrial, of for sport use (Art. 19, Law 70, 1993).	• There is admittedly transfer of forest use through associations with the private sector, for harvesting, processing and marketing (Art. 24, Law 70, 1993). • Commercial permits will be granted through the communal council, so no individual commercial permits will be granted (Art. 24, Law 70, 1993). • Internal non domestic use will be administered by the communal council. • Forest resources subject to harvesting can be a collateral for credit (Art. 52, Law 70, 1993). • All primary forest products require safe conduct (Agreement 029, 1975).	• Exclusive in principle. • Until collective property has not been properly assigned, no use permits over natural resources will be allotted without permit of a special commission (Art. 17, Law 70, 1993). • Exclusiveness in practice difficult to exercise, because of lack of property enforcement.
RESPONSIBILITIES	• Forests, as part of the property, have an ecological function attached to them (Art. 6, Law 70, 1993). • Forests are subject to the norms of conservation and management of CARs in their jurisdiction and forest policy of MinAmbiente (Inderena, 1994b). • Communities are responsible for conserving, maintaining and favoring the regeneration of protective vegetation of water resources, as well as protecting fragile ecosystems. Government is obliged to make funds available for these tasks (Art. 21, Law 70, 1993). • Domestic (1) and commercial forest use must guarantee the persistence of the forest resource (Art. 6 and Art. 19, Law 70, 1993). Minimum commercial logging dbh. is 50 cm (Art. 5, Resolution 315, 1974)		

Sources: Inderena (1994a, 1994b) and as indicated in the individual items.

N.B. (1) In the 70 Negritudes Law, domestic use includes traditional practices in the water, beaches and river banks, use of secondary fruits of forests, wild fauna and flora, the use of renewable natural resources for the construction or repair of homes, fences, canoes, or other domestic purposes, for the use of the members of the corresponding community.

CHART No. 5

LAND AND FOREST TENURE CHARACTERISTICS FOR PRIVATE PROPERTY

LAND OWNERSHIP

	COMPREHENSIVENESS			
	FOREST RESOURCES	WATER RESOURCES	NON RENEWABLE RESOURCES	DEVELOPMENT RIGHTS
RIGHTS	• Forests are part of the property, but constrained to the norms and regulations of natural resources, within the property jurisdiction. • Persistent forest use requires authorization from the corresponding government agency within their jurisdiction (Art. 216, Law 2811, 1975). • Unique forest use for farming and stock breeding does not require permit, but must comply with the legal norms over soils and forest (Art. 218, Law 2811, 1974).	• Not included in property, since they constitute a public good.	• Not included in property. • Mineral resources require permit or use license.	• Full rights granted, require license for certain activities (MinAmbiente).
	• All contracts of allotment of lands previously been *baldios*, explicitly establish the obligation of observing the regulations over the conservation of the natural renewable resources, protection of native forests, protective vegetation and forest reserves. Non compliance is a cause of end of the contract and reversal of the property to the state (Art. 32, Law 30, 1988). • Private property in the Forest Reserve can be reverted to national domain in the failure of compliance of forest Reserve conditions (Art. 21 and 46, Decree 2275, 1988).			
RESPONSIBILITIES	• Use restrictions of Forest Reserves apply when private property is part of the reserve. • Must maintain forest cover for areas determined to be protective, and maintain at least ten percent of the area under forest cover if the area is greater than 50 has, and 20% for lands that were previously *baldios* (Decree 1449, 1977).	• Proprietors are subject to the norms of water and soil conservation, that the government will regulate for their adequate use, within the limits of the forest reserve and the National forests (Art. 9, 1959).		

LAND OWNERSHIP FOR PRIVATE PROPERTY

DURATION	TRANSFERABILITY	EXCLUSIVENESS
• Property is alienable, and can not be prescribed and is seizable.	• No restrictions	• Full exclusiveness assigned. • Problems of encroachment are frequent

FOREST OWNERSHIP FOR PRIVATE PROPERTY

	COMPREHENSIVENESS	TRANSFERABILITY	EXCLUSIVENESS
RIGHTS	• No permits of forest use allowed in protective areas (Inderena, 1994b). • Domestic forest use permits are not required. • Persistent commercial forest use requires authorization (Art. 216, Law 2811, 1974), and a forest ordering plan (Agreement 290, 1975). • Unique forest harvesting for farming and stock breeding does not require permit (must be communicated to the pertinent authorities), but must comply with norms pertinent to soil and forests (Art. 218, Law 2811, 1975). • Forest harvesting of artificial forest requires authorization (Art. 6, Agreement 20, 1981).	• Fully transferable and divisible. • All primary forest products require safe conduct (Agreement 029, 1975).	• Exclusive in principle. • Exclusiveness in practice difficult to exercise, because of lack of property enforcement.
RESPONSIBILITIES	• Forests on private property in the Forest Reserve are subject to their norms of use (Decree 877, 1976; Agreement 029, 1975). Land can be reverted to the State if these norms are not complied. • Proprietors are obliged to maintain the forest cover for those areas determined as protective (Art. 3, Decree 1449, 1977). • Minimum commercial logging dbh. is 50 cm (Art. 5, Resolution 315, 1974).		

Sources: Inderena (1994a, 1994b) and as indicated in the individual items.

CHART No. 6

FOREST TENURE CHARACTERISTICS OF *BALDÍOS* INCLUDING FOREST RESERVES

COMPREHENSIVENESS	DURATION	TRANSFERABILITY	EXCLUSIVENESS
• Use restrictions apply on Forest Reserves, for the corresponding allowable use categories of protective, protective productive and productive. • No unique use-i.e. Conversion felling allowed in Forest Reserves. Conversion felling allowed in all other baldíos. • Persistent forest use by delegation must comply with a Forest Ordering Plan to guarantee forest renewability (Art. 216, Law 2811, 1974).	Not Applicable	• Persistent forest use can be transferred from the State to a second party by delegate administration, association, permit or Concession (Art. 216, Law 2811, 1974). • Domestic forest use in State property requires permit, and forest products can not be subject to commercialization (Art. 215, Law 2811, 1974). • Unique (i.e. Conversion felling) in non Forest Reserve baldíos can be done directly by the State or by private individuals through a permit.	• The illegal occupation of the Forest Reserve by an individual can cause him to incur in 6 months to 3 years of prison and a fine (Decree-Law 100, 1980) • Persons promoting, or promoting the occupation of Forest Reserves, or illegally deriving economic benefits from it, will be imprisoned from 1 to 6 years and be subject to a fine (Art.243, Decree-Law 100, 1980)

Sources: Inderena (1994a, 1994b) and as indicated in the individual items.

CHART No. 7

FOREST USE ASSIGNMENT SCHEMES

TENURE TYPE	Volume per Year (M3/year)	Maximum Area (has)	Duration (Years)
Concessions			
Concession (1) (3)	Greater than 10,000	Not determined	Greater than 10
Concession (2)	Greater than 10,000	Between 10,000 and 100,000	Less than 10
Unique Permits (4)			
Unique Permit Class A (3)	Greater than 10,000	Less than 10,000	Not specified Less than 10
Unique Permit Class B (3)	Less than 10,000	Less than 10,000	Not specified Less than 10
Unique Permit Class A (2)	Greater than 5,000	Not specified	Less than 10
Unique Permit Class B (2)	Less than 5,000	Not specified	Less than 10
Persistent Permits			
Persistent Permit Class A (1) (3)	Greater than 10,000	Less than 10,000 (3)	Not specified Less than 10
Persistent Permit Class B (1) (3)	Between 10,000 and 2,000	Less than 10,000 (3)	Maximum 10
Persistent Permit Class C (1) (3)	Between 2,000 and 200	Less than 10,000 (3)	Maximum 10
Persistent Permit Class D (1)	Up to 200	Not specified	Maximum 1
Persistent Permit Class D (3)	Less than 100	Less than 10,000	Maximum 1
Persistent Permit Class A (2)	Between 10,000 and 8,000	Not specified	Maximum 10
Persistent Permit Class B (2)	Between 8,000 and 2,000	Not specified	Maximum 10
Persistent Permit Class C (2)	Between 2,000 and 400	Not specified	Maximum 10
Persistent Permit Class D (2)	Less than 400	Not specified	Maximum 10
Subsistence Use			
	Maximum 100	Not specified	Maximum 1
Domestic use			
	Maximum 20	Not specified	Maximum 1

Sources: Decree Law 2811 of 1974; Inderena (1994b); Inderena Resolution 315 of 1974; Inderena Agreement 029 of 1975; Decree 82 of 1976; Decree 13 of 1984;

N.B.

The numbers in parenthesis indicate the following:

(1) Valid for Inderena.

(2) Valid for Corponariño.

(3) Valid for Codechocó.

(4) Unique harvesting is the term used for conversion felling.

2. Featuring Distinctions Between Property Regimes

a. Composition of Property

The most important difference between the property regimes described in Charts No. 3 to No. 5, is the composition of ownership of this property. *Resguardos* and LBC are properties assigned to a collection of individuals and thus the property is defined as collective, while private property is usually individual. Besides the characteristics of the property determined in the charts (e.g. comprehensiveness, duration etc..) the composition of ownership may be determinant to the way property is going to be managed. In fact, the composition of ownership may shape the incentives individuals using the property face, and ultimately in the case of forest resources, determine the sustainability of their use. Being able to predict the owners' behavior towards a resource is necessary to design the policy instruments in order to favor the desirable features of this behavior, and diminish or deter the owner from undesirable resource use patterns.

There is an ongoing debate about the outcome of natural resource use and its sustainability under private versus common property. There are those inclined to support private property, which claim that under it, there will be unity in composition of the property--control over the resource will be given to a well defined group; and in authority--the group acts having a sole purpose in mind. From this point of view, unity will guarantee the efficient and socially optimal use of the property (Cheung, 1970; Demsetz (1967); Posner 1977; Cited by Larson & Bromley, 1990), and thus believe that privatization is the right policy for sustainable resource use. Others claim that under common property, in which more than one individual holds right to the access to the resource, rules of use can be established among the users so that sustainable pattern can be reached. This position holds that common users do not face a prisoners dilemma or isolation paradox, but that there are mechanisms (e.g. dialogue) and common interests, that can lead to agreement and rational collective behavior (Ostrom, 1987).

In the context of Colombia, both collective property and private property, are in theory private forms of property. Specifically for collective property, the existence of a well defined group of owners--the owner community-- and of a governance regime within it, establishes a form of private property. Nevertheless, in practice there is a lack of exclusiveness over the use of the property, and in particular over the use of forest resources. The fact that community members may not be completely identified, and that the extension of the property may obstruct property enforcement, makes exclusiveness elusive. If lack of exclusiveness is the dominant trend in the use of collective resources, then private property may lead to an open access situation. As it can be

recalled form Chapter I, this has not been the case for Indian *resguardos,* where there is a certain tradition of collective resource use. For LBC, the outcome is uncertain because titling has not occurred, but the institutional setting given by the law may promote the conformation of a communal land regime. For both cases, communal concessions may constitute a major incentive favoring the establishment of such a regime. It is thus necessary to promote favorable economic and environmental conditions to enhance the feasibility of communal concessions, as it was emphasized in Chapter II. In particular, it is important to attract private economic resources to finance such policy scheme.

Open access situation is not expected to be the dominant trait in either collective or private property. It may be dominant, however, for the Forest Reserves and *baldío* lands. For both of them the exercise of State property is meager, not to say non existent. Another characteristic of these lands, is that the forest resources within them appear as infinite to their users. In fact, timber cutters may perceive locally that a given specie is no longer present, but know that if they move elsewhere within the region, they may eventually find it. Thus, the situation is not one where a group of persons are using a resource on a more or less continuos basis. Rather, they are occasional users, that are cutting forest within an broad region. Under these circumstances, the open access situation may prevail over the establishment of common property, making even less feasible the establishment of rules of use by the individuals using the resource.

For forest resources in *baldíos* and Forest Reserves, there are several possible strategies to avoid open access. These are the following: (1) the establishment of private property use rights; (2) the exercise of property by the state over these resources; and (3) facilitating access to forest use in other areas, over use in *baldíos* and Forest Reserve areas. These strategies are part of the proposed policy reform in Chapter II. Additionally, State property enforcement should be strengthen and financed by forest rents.

The establishment of private property occurs partially with the creation of *resguardos* and LBC. The problems of property enforcement by owner communities can be diminished with communal concessions, and the other policy reforms that will be developed in this chapter.

Regarding the exercise of property by the State, or strategy (2), there are two mechanisms that will set up the incentives for it to become a less elusive goal. First, minimizing the role of the State in enforcement to a limited amount of critical tasks, which can be achieved by establishing appropriate forest assignment schemes. Forest assignment schemes constitute a transfer of the use right form the State to a private interest. If the receiver of the right faces the appropriate incentives for sustainable forest use, the State enforcement role will be minimized. The second mechanism

are forest rents. As it can be recalled from Chapter I, forest rent capturing in Colombia has been pathetically low, mainly because of the low level of forest fees, and the weak government administrative capacity. Setting forest fees at an appropriate level, will both enable the CARs to have funds to verify compliance and enforce rules of forest use; and motivate them to increase rent capturing. If by these mechanisms legal forest use augments, there are greater chances of compliance of the environmental requirements.

Facilitating forest use in other areas, or strategy (3), is a critical issue in the Pacific Coast. As recalled from Chapter I, the difficulties in accessing forest resources sustainably have pushed timber enterprises to low volume, environmentally damaging forest use. The new policy framework proposed will directly attack this problem, and be complemented with tenure and fee policies.

b. Featuring Distinctions Between Forest Assignment Schemes

The more salient distinction between individual and ethnic collective property, is that the latter are inalienable--which allots the property at infinitum; and that they it is not seizable-- which implies that the property can not be used as a collateral for credit, or as payment of a debt.

The most relevant common characteristic, is that all property titles are subject to the norms and legislation over natural resource use, with certain differences in stringency over the constraints in use. Of the three, Indian *resguardos* have less burden over the conservation of natural resources. This is so, because historically it has been believed that Indians are "conservationists" by nature, to the extreme that their property is not inconsistent with the existence of National Parks. On the contrary, for LBC the obligations are stringent, and the property has an inherent ecological characteristic associated to it. They have to guarantee the persistence--i.e. maintenance of the forest cover and no land use change allowed, for commercial and domestic forest use. Additionally, they also have responsibilities over the conservation of fragile ecosystems and watershed protective vegetation. As for *baldío* land granted as private property, the owner has to comply to the norms and regulations over natural resource. If he does not comply them, the property can be reverted to the State.

Regarding the right over natural resource use, the Indians have less constraints compared with other groups. Except for natural resource use for domestic purposes, LBC have to ask for a permit to the CAR in their jurisdiction. Private owners, on the other hand, must ask permit for all uses, including domestic use. But private property ownership has a bias towards land use for stock

breeding. In fact private owners must ask permit for persistent forest harvesting, but do not require authorization for unique harvesting--i.e. conversion felling; for farming and stock breeding use.

If regarding natural resource use, private individual property has more constraints, it is the opposite with respect to the transferability of the property. In fact, because ethnic collective property is inalienable, can not be prescribed and is not seizable, it has great restrictions over its transferability and divisibility. As for Indian *resguardos* collective property can not be sold or become property of individuals outside the community or from other ethnic groups. As can be recalled from Chapter I, for the case of LBC, the collective territory will be divided by the communal council into areas of collective use and of family use. Only areas of family use are alienable, but with the restriction that the receiver can only be a member of the same community, or in its defect a person from the same ethnic group. These restrictions in transferability were instituted in order to protect the cultural identity of these communities. However, they impose major limitations on the disposal of land, decrease the economic value of the property, and restricts its options of use. Nevertheless, in all cases transfer of use rights of natural resources is allowed, except for public goods (e.g. water resources), and underground mineral resources (which are State owned).

Exclusiveness over the property has more or less the same status for all property regimes. It does not cover public goods or underground mineral resources. Nevertheless, exclusiveness over natural resource use may be doubtful for Indian *resguardos*. The 1991 National Constitution says that Indian *resguardos* will be consulted and given participation when natural resource use in their territories takes place, implying that outsiders can use these resources. Additionally, in practice even though exclusiveness is accepted, there are great difficulties in exerting it specially for the case of collective property.

C. COMPREHENSIVENESS

As can be recalled from Section A.1., comprehensiveness refers to the attributes over which a property gives rights, but also entails the responsibilities that the owner receives with the property. In this sense, comprehensiveness determines the benefits from which the owner can benefit, as well as the restrictions of use attached to them. Regarding natural resources, the attributes can be broadly divided in forest resources, water resources, non renewable resources, and development rights. Charts No. 3, No. 4 and No. 5, indicate the characteristics of comprehensiveness for the three relevant property regimes. Additionally, they indicate a more

detailed section regarding the comprehensiveness attributes of forest property. The following analysis will build upon these charts.

1. Current Tenure Status Regarding Comprehensiveness

a. Comprehensiveness over Natural Resources and Development Rights

Comprehensiveness over the ownership of a property is a determinant feature of the behavior over the use of natural resources, because it shapes to a great extent the economic rationale of the owner. Lack of comprehensiveness will in principle led to a non efficient outcome from a social standpoint. The existence of property rights that do not entail some restriction are rare (Larson and Bromley, 1990), and Colombia is no exception.

For all property regimes the natural resources that have more constraints in use are water resources--which are a public good, and non renewable mineral resources, such as hydrocarbons--which are State property. Even though water resources are not an attribute of the property, they entail several responsibilities to the owner. As can be seen in the Charts, these responsibilities vary depending on the ownership, and they may signify additional costs to the owner, for the benefit of society as a whole. As for the latter case of non renewable resources, land owners require permit for their use, and must comply with the corresponding norms. One could argue that the lack of ownership over these natural resources will led the owner to a sub-optimal allocation of their use, and will bias him to use intensively those resources over which he has right, and use carelessly those over which he has no right. The land owner behavior is nevertheless also shaped by existing norms and regulations over these resources, thus limiting their illegal use.

These norms can be viewed as restrictions to the use options given to property, because they impose in principle limitations and cause costs to the owner. Nevertheless, the low level of compliance and the lack of enforcement capacity by government agencies, makes these norms less strict than they appear. I do not recommend any policy reform with this respect, as long as the other reforms take place. Moreover, the assignment of non marketed goods may not produce any additional benefits, because the tenure holder will not receive the correct signals and incentives.

As it can be observed from the charts, natural resource use norms apply for all property regimes with different degrees of enforceability. The more strict limitations are on allotted *baldíos* assigned as private property, which can be reverted to the State in case of non compliance of the norms and regulations of conservation of natural renewable resources, and other environmental regulations. Also, for the case of LBC, the ecological function of the property implies additional restrictions when compared to *resguardos*. This affects the exercise of development rights, as well

as of natural resource use rights. In fact, even though owners of LBC do not have to ask permit to use natural resources for domestic purposes, they do for non domestic uses.

All property regimes assign development rights to the owner. Nevertheless, in the case of collective property, and in particular for Black communities, there is a paternalistic position of the State on the issue, as well as important constraints tied to development rights. The paternalistic position emerges from the fact that the State is ultimately responsible for the communities' development. The State must in principle guarantee that the required economic resources are made available, and promote and implement development plans and programs. Even though there is not a regulation openly limiting the communities' development rights, active government intervention in the development process may cause constraints in their options. In particular, there is concern at the government level, that the development of the region occurs within sustainability boundaries. This is why, much of the restriction in exercising development rights in the 70 Negritudes Law emerge primarily from environmental constraints. These constraints were set in order to promote, and gear the development towards a sustainable trend, emphasizing on the sustainable use of the forest resources. Given the ecological characteristics of the region, and from an environmental standpoint this is desirable. However, it does put strong limitations on the way the region and the communities are allowed to develop. In order to achieve the goal of sustainable development of these communities within the limitations imposed on their property, a major policy reform as the one described in Chapter II is required.

Finally, it is necessary to comment that Indian *resguardos* do not pay taxes, and by the same token do not pay forest fees. This has promoted intensive forest use in *resguardos*, mostly without complying basic norms of sustainable forest use. It has also promoted "technical fraud" as described in Chapter I. It is thus necessary to design a policy to avoid this loophole. This can be achieved by setting similar or equal fees for all property regimes. In order to eliminate these negative incentives to unsustainable forest use in *resguardos*, they should also pay forest fees when undertaking commercial logging[3]. The design of these fees should take into account the ownership of the forest by these communities. As for Black communities, the 70 Negritudes Law does not make clear whether the communities will pay fees or not, since they too are collective owners of the forest. Nevertheless, the same outcome as the observed for *resguardos* would occur if they did not pay fees. Thus the same policy should apply to Black collective property.

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[3] / An increase in forest fees decreases the benefits of forestry to the owner, and thus may create a negative incentive in the way forest is used. Nevertheless, it is prioritary to resolve the problem of "technical fraud". The balance between the two goals should be considered when designing forest fees.

b. Comprehensiveness Over the Use of Forest Resources

For all types of property, the forest resources--timber and non timber, are part of it, but their use is always subject to some restriction of varying stringency depending on the property type. Additionally, there are regulations that require the owner to ask for authorization or a permit to use the forest resources. The burden of this norms, is less strong that it may appear, because of its lack of compliance and enforceability. Nevertheless, these rights and restrictions are at the base of the way forests are used, and at the origin of several of the deficiencies of the current concession and permit forest policy. The comprehensiveness issue over the forest resources will be discussed and policy reforms proposed in two steps. The first section will focus on the property characteristics, using the information of Charts No. 3 to No. 5; and the second on the forest assignment schemes of the current concession and permit policy, based on Chart No. 7.

i. Private and Collective Property

The most relevant policy reform with respect to ownership comprehensiveness, and of major impact for the Pacific Coast, was the introduction of collective titling for Black and Indian communities. In particular, before 1991, Black communities, that are 95% of the Pacific population, did not have legal rights to land property or the forest resources of the territories in which they dwell[4]. The introduction of property over the forest will affect the distribution of income deriving from its use. In fact, now communities will be entitled to use the forest directly, and should charge a value for the forest products extracted by outsiders, which has not been occurring. This will have the dual benefit of augmenting the income to communities, and augmenting the valuation of forest resources.

The comprehensiveness over the forest resources for LBC and *resguardos* varies substantially, with LBC having a much larger explicit responsibility over the conservation of the forest resources, as well as more constraints in their use. These differences emerge from the fact that Indian legislation was designed at a time of less environmental awareness, but also from the belief that Indian communities were conservationists. An example of the phenomena is that nowadays, Indian *resguardos* can occupy National Parks.

LBC and private owners require permits for non domestic forest use, which is by definition commercial use. *Resguardos* do not require such authorization. This difference has

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[4] / The territories that are going to be titled to Black communities are in *baldíos* and in the Forest Reserve, and thus state property. It can be assumed that much of them were under an open access regime.

promoted "technical fraud", and hence should be abolished as was previously explained. All property regimes should require authorization for commercial forest use on Natural Forests.

Mobilization of forest products, and in particular timber, should always be associated to commercial purposes. Transport controls can thus be used as a means to supervise the use of commercial forest resources. The mobilization safe conduct should indicate the origin of the timber mobilized. As it can be seen in Charts No. 3 to No. 5 all transport of primary forest products require a mobilization safe conduct to be shown in checking stations. This norm should be enforced and tied to the control over the compliance of forest management regulations[5]. For example it is possible to keep account of the total timber mobilized with each permit[6]. The norm should apply for all property regimes in order to avoid loopholes in the regulation.

Additionally, the 70 Negritudes Act establishes that persistent forest use in LBC will be regulated by the environmental authority in coordination with the communities. The government agencies are not institutionally prepared to assume this task. They face limitations of personnel, as well as of know-how. Thus government agencies require institutional reforms and qualification, such as the ones outlined in Chapter I, to be able to accomplish this task. In either case, it is not sensible to demand that individual forest management plans be done for each community, in coordination with them. Thus it is necessary, as a first step, to determine basic guidelines for commercial sustainable forest use for the different types of ecosystems in the region. These should be spread through extension programs targeting Black and Indian communities. These programs should go hand in hand with the promotion of communal concessions, as described in Chapter I.

Another required reform to the current norms, is with respect to forest use in private property. As can be seen in Chart No. 5, persistent commercial forest use requires authorization, but conversion felling forest harvesting for farming and stock breeding does not (even though it must comply with the norms and regulations of soils and forests). This later norm dates from 1975, when much importance was given to stock breeding as a land development tool. This norm should be modified, because it constitutes an incentive to land use change and a negative incentive for sustainable forest use. Unique (i.e. conversion felling) forest harvesting may be necessary and

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[5] / There are a variety of ways this can be done. One of them, used in Costa Rica, is through the assignment of permits, which are given with marked metal plates that are fasten to the individual logs. These plates are registered in a computer system, that is used to control mobilization around the country. The application of such a scheme in the Colombian Pacific would require a detailed analysis, but is worth while studying.

[6] / This would require a communication net in the region, and would serve to track the movements of the timber mobilized.

should be allowed in private property, but should not be an easier alternative to the owner than sustainable forest use. When forestry activities occur in natural forests, both types of use should require permit.

ii. Forest Use Assignment Schemes

Forest use assignment schemes are categorized in Chart No. 7. Except for domestic permits that are only granted in State owned property, these schemes apply for all property categories, including the Forest Reserves and State property.

The requirements of studies and bureaucratic procedures increase proportionally with the volume of timber the permit covers. In principle, so do the environmental requirements that these permits imply. The most salient feature of this assignment scheme is its basis on volume of timber, which is a narrow view of forest use. This structure has four major deficiencies regarding comprehensiveness.

The first, is its focus on timber and not on the forest. This is a major deficiency because it narrows down to the user the possibility of a more comprehensive and efficient use of the forest, by neglecting--for example, the use of non timber products. The second deficiency, is the focus on timber volumes and not on the forests as a whole. In fact, by granting the rights over certain specific species and specific volumes, the problem of lack of efficient use emerges again. The use of species is done selectively, and waste in forest use is promoted. This occurs because the user has a negative incentive for efficient use emerging from the fact that his rights only cover certain species. Moreover, this negative incentive is exacerbated by the duration of the permits.

The third problem of the assignment scheme is the separation in practice between the use permit granted and the way forest must be used. With this respect, even though for timber extracted legally all the required studies may be done, their application in the field, and moreover the use of sustainable forest use practices is meager. Thus, even though in principle environmental regulations are in place, in practice their implementation is *quasi* absent. And finally, the fact that the permit requirements are much stronger for larger volume permits, has caused a negative incentive towards them, favoring small volume permits.

These deficiencies thus require a new approach to the way permits are granted, both in the forest Reserve, and in private and collective property. The focus of the permits should move away from their volume orientation to a more comprehensive approach. Commercial permits should be granted over an area to be used and managed by an approved forest management plan, and not allotted based on how much timber is going to be extracted. In this context, non timber forest

products, and recreation rights, should be included in the permit granted, and their use specified in the management plan. In fact, giving use rights over non timber products, as well as for recreation activities will favor a more efficient allocation of the forest by the permit holder[7].

The forest management plan should include the conservation of an un-logged area of at least 10% of the total area cover by the permit. Given the biodiversity levels in the Pacific Coast, this is a minimum requirement for sustainability. In fact, the conservation of untouched forest plots, selected through the appropriate guidelines, may be key for biodiversity conservation in the long run (Ashton, 1995, personal communication). MinAmbiente should develop the guidelines to identify the areas.

The implementation of the forest management plan should in principle guarantee the ecological sustainability in the use of the forest. The responsibility over the sustainable use of the forest should be of the person, collection of persons or communities to which the forest use assignment is granted. This responsibility should not be transferable, neither to the State, as it is nowadays through the payment of fees; or to a third party. However, the implementation and/or additional actions required to guarantee the sustainable use of the forest could be sub-contracted by the permit holder.

The main policy reform with respect to comprehensiveness is thus a focus on forest management, as opposed as on volume. Complementary to this approach, the assignment should be more comprehensive, to allow for non traditional uses of the forest to be developed. Finally, the responsibilities over the forest use assignment, i.e. sustainability, should not be transferable. This focus on forest will solve the first and second problems signaled above (i.e. policy based on timber and neglect of other forest uses), and promote a more comprehensive and efficient use of the forests.

Compliance over the environmental regulations may be the most difficult challenge to overcome. This challenge is exacerbated by the weak enforcement capacity of government agencies with respect to environmental regulations. To promote compliance by forest users three strategies should be used. First, facilitate sustainable forest use over unsustainable practices. This entails a large set of issues, which are part of the new policy framework of Chapter I. As for example, facilitating the organization of communities for sustainable forest use. However, tenure characteristics, and permit use assignment schemes are also determinant with this respect. These include affecting tenure comprehensiveness, duration, transferability and exclusiveness in the

[7] / For example under such an assignment scheme multiple use may be found to be economically viable by the permit holder.

permit and concession policy, so that the forest user is not forced by the norms to unsustainable practices or illegal activities. For example, the current policy promotes illegal harvesting because it is easier for industries to access timber through intermediaries than to harvest the forest directly.

The second strategy, consists in enforcing the easier regulations--such as transport controls, and tie them to the supervision of the environmental requirements of forest use. In fact, mobilization controls, may be an easy mechanism to identify illegal harvesting. And finally, reorganizing forest use so that there are fewer fronts to control. If the policy reform proposed is applied, this is a very likely outcome, that will facilitate the CARs activities. They will be able to concentrate their efforts, in assistance, compliance supervision and enforcement.

As for the fourth problem, it will be partially solved with the new forest approach versus the volume approach. In fact, if there is a move from volume to forest management of an area, the requirements of management will differ in scale of the forest area[8].

Besides the move to a forest base approach, the new policy should distinguish only from two types of forest use: domestic and commercial. Domestic forest use must occur within certain norms, guaranteeing the persistence and sustainable use of the resource, and should in principle not involve major forest harvesting operations. Commercial forest use will occur at various scales, ranging from small scale for sawmills, for example, to large harvesting operations for pulp transformation industries. All commercial uses should be tied to a forest management plan approved by the corresponding CAR. The CAR should set before hand: (1) the guidelines of the management plan with respect to the allowable type of forest use for the different ecosystems in its region of influence[9], and (2) determine for the case of Forest Reserves, the areas that are more suitable for sustainable forest use. If the CAR does these two tasks, then the applicants will tend to make more sensible and prone to be approved proposals. The management plan should be provided by the applicant for larger operations, more than 5,000 has. For smaller areas, the permit applicant should be able to access credit to finance the management plan proposal, as proposed in Chapter II.

Finally, a policy centered on a forest based approach will have the advantage of opening up options for exploring ecologically benign alternatives, such as non timber forest use.

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[8] / There may be economies of scale in forest management, and furthermore ecological benefits of scale, meaning the management of larger areas, may cause less environmental degradation. So, the scale of the management effort may yield different results in environmental and economic terms.

[9] / Such guidelines should include for example, desirable harvesting methods and felling techniques.

2. Summary of Policy Reforms

a. Property Characteristics

- In order to avoid "technical fraud" and illegal timber extraction, the permit policy towards r*esguardos* should be the same as for other property regimes. Thus they should also pay forest fees for commercial forest use. The design of these fees should take into account the ownership of the forest by these communities. For Black communities, and private owners the same policy should apply.
- All property regimes, including *Resguardos*, should require authorization for commercial forest use on Natural Forests.
- MinAmbiente should determine basic guidelines for commercial sustainable forest use for the different types of ecosystems in the region. These guidelines should be spread through extension programs targeting Black and Indian communities.
- Only commercial forest products should be allowed to mobilize, and the mobilization controls should be reinforced and tied to the compliance of sustainability norms. The norms should apply for all property regimes in order to avoid loopholes in the regulation.
- Article 218 of the Law 2811 of 1975 should be modified, because it constitutes an incentive to land use change and a negative incentive for sustainable forest use. Conversion felling in private property should be allowed, but should not be an easier alternative to the owner than sustainable forest use. Unique (i.e. Conversion felling) and persistent forestry activities in natural forests should both require permits.

b. Assignment Schemes

- The focus of the permits should move away from their volume orientation to a more comprehensive approach. Commercial permits should be granted over an area to be used and managed by an approved forest management plan, and not allotted based on how much timber is going to be extracted. Non timber forest products, and recreation rights (when not already granted through development rights) should be included in the permit granted, and their use specified in the management plan.
- Additionally, the forest management plan, should include the conservation of an un-logged area of at least 10% of the total area covered by the permit. MinAmbiente should develop the guidelines to identify these areas.

- The responsibility over the sustainable use of the forest should be of the person, collection of persons or communities to which the forest use assignment is granted. This responsibility should not be transferable, neither to the State, as it is nowadays through the payment of fees; or to a third party.
- The implementation and/or additional actions required to guarantee the sustainable use of the forest could be sub-contracted by the permit holder, but he or she remains responsible for the forest sustainability provisions.
- The new policy should distinguish only two types of forest use: domestic and commercial.
    - Domestic forest use must occur within certain norms, guaranteeing the persistence and sustainable use of the resource, and should in principle not involve major forest harvesting operations.
    - All commercial forest use should be tied to a forest management plan approved by the corresponding CAR. The management plan should be provided by the applicant for larger operations, more than 5,000 has. For smaller forests, the permit applicant should be able to access credit to finance the management plan proposal, as suggested in Chapter II.
- The CARs should set in their jurisdiction:
    - The guidelines of the management plan with respect to the allowable type of forest use for the different ecosystems in their region of influence.
    - Determine in the Forest Reserves, the areas that are more suitable for sustainable forest use, to promote forest use applicants to make appropriate and apt to be approved proposals.

D. DURATION

It is necessary to distinguish between the duration over the property of the land, and the duration over the permit granted to use the forest resource. From Charts No. 3 and 4, it can be observed that for both types of collective property, the lands allotted are inalienable (i.e. Non transferable), and can not be prescribed (i.e. the right granted does not expire). These two characteristics give *ad infinitum* collective property to communities.

Regarding the forest use assignment types, from Chart No. 7 it can be seen that the maximum assignment is given for a period of 10 years. Concessions can be granted for longer

periods, but as discussed on Chapter I, they are not operational[10]. As for small permits, Class D, they are for maximum one year. Additionally, there are no provisions allowing for the renewability of the permits. Hence in real terms, 10 years is the time the forest use faces for his investment decisions under the current policy[11]. The critical question now is what is the behavior of the forest user given the time horizon he faces.

Duration is the time over which a tenure is granted. As can be recalled from Part A, duration over the right to use the forest is a key variable in determining the forest user decision making. Duration will determine the time horizon he considers, his harvest intensity, as well as his decisions over investments in forest management and equipment.

1. Forest Rights Duration and Forest Use

Tropical forest have long term forest returns, and such is also the case for the ecosystems in the Colombian Pacific Coast. The forest harvest cycles and the growing rotation for the different ecosystems are shown in Chart No. 8. The available information can be summarized as follows: (1) Growing rotations vary between 30 years and 110 years, and (2) harvest cycles vary between 20 and 38 years. Given that the maximum permit time under the current policy is 10 years, and not taking into consideration discounting, the forest user will never be able to benefit from the second forest cycle. So the ownership allotment creates an incentive to harvest the forest before it reaches maturity. Silvicultural treatment may shorten these times considerably, but unfortunately this information is not available. Nevertheless, it is improbable that they be as short as 10 years. From the ecological standpoint, forest harvest before time is negative, because the harvested trees are not allowed to reach maturity. If they can not reach maturity, then they will not produce the seedlings necessary to maintain the forest (Ashton, personal communication, 1995). This in turn can led to a decrease in the number of commercially desirable species, and undermine the quality of the forest.

In principle the forest user will not only consider the duration of his rights, but also the financial implications of his harvesting decisions. This requires incorporating the discount rate of the forest holder. As it can be recalled from Part A (Section b), some authors claim that regardless of the duration of the rights, the forest user will always face the incentive to mine the forest (e.g. Grut, 1991). The evaluation of this hypothesis requires comparing the opportunity cost of the forest user versus the growth rate value of the forest biomass. If the opportunity cost is higher, the

[10] / One 30 year Concession was granted in 1974, but was returned by the Concessionaire. Details over this experience are summarized in Chapter I.

[11] / This is assuming that all forest users will abide to use the forest only through permits.

argument goes, then the user will always prefer to mine the forest. The following information was gathered to evaluate this hypothesis for the Colombian Pacific Coast:

(1) The discount rate for the private sector was found to be around 10% (Field work, 1994), and to range between 15 and 20% for the communities.

(2) The long term expectations for price growth for tropical timber can be assumed to range between 1.9 and 2.5 % (Vincent, personal communication, 1995)[12].

(3) The average biomass and commercial forest growth rates are summarized in Chart No. 8. They range between 2.4 % and 5.9 % considering only commercial wood increase.

Given this information, the increase growth rate value of the forest biomass will range between 4.3% and 8.4%. From this analysis one would conclude that both the private sector and the communities would have the incentive to mine the forest, regardless of the duration of use rights allotted to them. Moreover, and from a purely economic standpoint, the communities will face a greater incentive to mine it than the private sector because of their higher discount rate. The growth rate value of the forest biomass can increase under three circumstances. First, if the tradable species augment. This is a feasible outcome given the poor development of the forest sector in Colombia and the potential usable biomass[13]. Second, because of silviculture improvements that provide for higher yields. And third if there is an increase in timber price.

Given these results, Grut would argue that it is insufficient to grant long term forest use rights, and that it is necessary to additionally implement complementary forestry regulations. He suggests that as a minimum dbh regulations should be in place and enforced. These recommendations should be acknowledged.

2. Determining the Appropriate Forest Duration

Even though the previous calculations indicate that duration would be irrelevant, this is not the case. As it can be recalled from Part A (section b), there are other relevant arguments to consider in order to determine a desirable permit or forest use right duration.

Because the difficulties associated with concessions, the occasional harvest taking place directly by industries occurs through 10 year permits (Refer to Chapter I). The managers interviewed were of the opinion that these short term permits had the following problems. (1) They cause a negative incentive in forest management investment and in silvicultural research. (2)

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[12] / Ideally the assessment should be done using domestic growth rates. Unfortunately there are only short term series for Colombian timber prices that do not allow to forecast the expectation over timber price increases, which are required for this calculation. Nevertheless, considering these increases provide an acceptable approximation.

[13] / Accounting for total biomass growth could yield values as high as 11.9% (Chart No. 8).

They increase the damage during harvesting, because technical harvesting requires longer periods. And (3) they create insecurity over the availability of raw material for manufacturing operations, which in turn makes the managers reluctant to update the industry's manufacturing equipment (Field work, 1994)[14]. These critiques are similar to the ones highlighted in the literature (Part A, Section b).

Taking into account these critiques to reform forest policy would require extending permits duration, or guaranteeing their renewability up to the time that processing plants can be amortized. This time should be of at least 20 years depending on the manufacturing plant (Field work, 1994). The benefits of this policy would be to mainly two. First, to increase the efficiency of transformation industries; and second to promote orderly harvesting and processing of timber resources (Lucket and Halley, 1990). A third possible outcome, would be to decrease the amount of raw material required--and thus forests harvested, if efficiency in transformation increases.

Nevertheless, the main policy objective in this thesis is to promote the sustainable use of forest resources. This requires creating the incentives so that the permit holders do not over harvest the forest or damage it during harvesting, do not harvest the forest before time, and invest in forest management[15].

Avoiding forest over harvesting is more related to forest rents than to permit duration. However, if the permit owner faces a very short duration, he will have an incentive to over harvest the forest. Moreover, if he does not have an interest in future logging, he will carelessly undertake the first logging cycle, hampering natural regeneration for future harvests. In order to avoid before time forest harvest of the second rotation, the forest holder should be able hold the rights for at least the time of the growing rotation. Otherwise, he will have no incentive to leave the logged forest untouched, or to protect it from outsiders.

Additionally, if the investment in forest management is desirable, the permit should extend until he can reap the benefits of his investments. All these behaviors of the permit holder could be imposed to him by regulations. However, a better alternative is to create the appropriate policy so that it is in his best interest to adopt them. The current policy does the opposite. This calls for a policy reform with respect to the duration of the permits granted.

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[14] / There are industries with updated manufacturing equipment, such as the pulpwood industry. However, these industries usually have moved away from Natural forest harvesting to plantations or timber imports.
[15] / Investment in forest management would be a desirable behavior, but not a necessary one for sustainability.

CHART No. 8
HARVEST CYCLES, GROWING ROTATIONS AND AVERAGE GROWTH RATES FOR THE MAIN TYPES OF FOREST ASSOCIATIONS IN THE COLOMBIAN PACIFIC COAST

TYPE OF FOREST	Commercial Name (Common Species)	Total Area (has)	Harvest Cycle (Years)(12)	Growing Rotation (Years)	Average growth rates (%)	
					Com	Biomass
Mangrove	*Mangle, Mangle Blanco and Negro, Piñuelo, Búcaro, Nato*	261,000	N.A.	15-25 Average; 25 *Mangle* (10)	N.A.	N.A.
Natal	*Nato, Cuángare, Naidí*	N.A.	N.A.	N.A.	N.A.	N.A.
Arracachal	*Arracacho, Palma Pagana*	15,000	N.A.	N.A.	N.A.	N.A.
Panganal	*Palma Pagana, Palma Naidí, Nolí, Búcaro*	20,000	N.A.	N.A.	N.A.	N.A.
Catival	*Cativo, Güino, Nuánamo, Olleto*	363,000	38 for *Cativo* (60 cm of dbh)(11)	100 for *Cativo* (60cm dbh) (10)	N.A.	1cm/ year increase in diameter (11)
Guandal Naidizal	*Cuángare, Sande,Sajo, Tángare, Anime, Peinemono*	355,000	25 (3) (40cm dbh) At least 20 to 30 (4) &(5)	110 Average; 67 for *Cuángare*(11) (50cm dbh.); 60 for *Sajo* (40cm dbh)(4)	2-5M3/ha => 2.4-5.9% (4), (6) & (14)	10M3/ha => 11.9% (4) ,(6) & (14)
Lowland Mountain forests	*Sande,Caimo Guayacán, Tachuelo, Caimito, Aliso,Chanul Peinemomo, Iguano,*	2,816,225	30 (8)	30 for secondary sp. and 90 for primary sp.	3.8 M3/ha => 2.6-3.4% (9) & (15)	

Sources: a. Inderena (1994a); b. Universidad Nacional de Colombia (1993); c. Madereria Central (1992); d. Del Valle (1993); e. Cárdenas and Peña (?); f. Lagoenberg (1990); g. DNP (1994); h. Linares (1988).

NB.

(1) Growth rates correspond to increase % volume per year after the forest has been logged. Their evaluation thus requires to know the average remanent biomass.

(2) Information from source b.

(3) Information from source c.

(4) Information from source d.

(5) The author recommends minimum harvest cycles of 20 to 30 years for tropical forests under polycyclic harvesting systems.

(6) These percentage of growth were obtained as follows:

(i)With silvicultural treatment it has been estimated that after 10 Years 200 trees/has can be harvested, which correspond to a volume of at least 84 M3/ha.

(ii) It has been estimated that after intervention a *Guandal* forest can have an increase of at least 10M3/ha/Year for dbh greater than 10 cms. The harvestable volume, i.e. dbh. grater that 40cm, has been estimated of 5M3/ha/Year; of which only 2M3/ha/Years would be suitable for commercialization (Del Valle, 1992).

(iii) Using this information the estimated increase in biomass per year is of 11.9%; and of tradable timber between 2.4 and 5.9%.

(8) Information from source e.

(9) Information from source f.

(10) Information from source g.

(11) Information from source h.

(12) There are no data available distinguishing between harvest cycles with or without Silvicultural Treatment.

(13) Average primary forest volume 113M3/ha (dbh>13cm), but could be as high as 146M3/ha if branch wood is included (for Pulpwood); thus yielding a productivity between 2.6 and 3.4 %.

(14) With silvicultural treatment.

(15) From Natural Regeneration.

(17) N.A stands for not available information.

Additionally to the benefits indicated in the previous paragraph, two other positive effects would stem from longer term concessions. First, there will be an interest by private industry to develop long term research in silviculture. This is desirable given the low development of adapted silvicultural techniques to the country's environmental conditions (Inderena, 1994a). And second, there may be an increase interest in developing technologies for sustainable use of non timber products. Forest harvesting for non timber products can generally cause less destruction than timber exploitation (Panayotou and Ashton, 1992).

However, allocating permits to the industry for such long periods of time bares negative consequences, as discussed in Part A (Section b). The first negative implication is for the forest user itself. In fact, incurring in a contract for long term permit restricts the permit holder liquidity, i.e. he will be forced to maintain a responsibility for a very long time, unless these rights are transferable. Given the little development of forestry in Colombia, it is not clear that nowadays there will be a market for these transfers to occur. However, the expected increases in forest products demand and a more sensible forest policy may change the situation. In the proposed policy regarding comprehensiveness, the permit holder is not allowed to get rid of his responsibilities regarding sustainable forest use. Because of this, it is important that he holds the permit until he has complied with them. This, however, does not necessarily imply that he must

hold the permit for the duration of the forest rotation. He could hold the rights for a shorter time period, enough, however, to have undertaken the management responsibilities stated in the forest management plan.

Thus the proposed permit duration should have the following characteristics:

1. The permit holder is entitled to the permit for the duration of the harvest cycle of the forest he is going to harvest, e.g. 38 years for Catival with allowable dbh of 60 CMS (Refer to Chart No. 8 for the corresponding growing rotations). The growing rotations should be fixed as part of the policy based on the allowable dbh.
2. The permit holder is allowed to ask for a shorter permit than the harvest cycle if he wants so. This however does not liberate him from the management responsibilities specified in the forest management plan. Thus he can hold the permit for a shorter time under two circumstances. (1) If he can transfer the permit to another person, which would accept and be bound to the same responsibilities. Or (2) If he has already complied with his management responsibilities[16]. He can not, under any circumstance, release himself from the management and conservation responsibilities, even if he compensates for its costs. This is so, because even if the government agencies received the economic resources to do the management, they do not have the know-how or the institutional or technical capacity to undertake them[17]. Furthermore, if the permit holder can compensate for the costs of management, he might as well sub-contracted.

The success of this duration proposals depend to a great extent on the financial feasibility of forestry activities. Financial feasibility is partly determined by the complementary rent policy that the government applies. The proposal is in fact more flexible that it appears at first sight. This is so, because even though it allows the permit holders to access long term permits if they wish so, it does not oblige them to choose this option. In deed, they can choose shorter term permits. What they are not allowed to do is not to comply with their responsibilities regarding forest management and other environmental regulations. This scheme would hence have the advantage

[16] / Management responsibilities over the management of the forest, for example that the area under his permit will continue to provide sustained yield; but also over the other environmental provisions (water quality, channel conditions etc..).

[17] / As can be recalled from Chapter I, in the current policy permit holders can release from their responsibilities by paying a fee. The earnings of these fees have not been used in to manage the remaining forest.

of giving the permit holder a long term horizon for his investment decisions, and simultaneously allow him flexibility.

The second negative implication is that long term tenure limits the government flexibility in meeting changing societal needs and preferences (Pears, 1976, cited by Halley and Lucket, 1990). It is necessary to signal that this problem will mainly occur for Forest Reserves and *baldíos*. For Indian and Black collective property, the government should have less influence in their decisions. This lack of flexibility may be particularly worrying in the context of the Colombian Pacific Coast, where there is a dominance of rare and very biodiverse ecosystems, of which the ecological knowledge is very scarce. Moreover, there are increasing environmental groups, that will oppose to long term permits.

Nevertheless, there may be a partial solution to this dilemma. This solution will be to enforce and polish the current policy with respect to Forest Reserves, using forest zoning data. Forest Reserves should be classified, and it should be determined within them which are the more suitable areas for sustainable forest use. Only those areas should be destined to concessions. The rest of the areas should be protected using the forest rents from the permitted areas.

This proposal has nevertheless several caveats. First, the more suitable forest areas in silvicultural terms, may not correspond to the areas where it is suitable for industry or small scale loggers to do the harvesting. Second, this policy does not guarantee that in the future the forest assigned to permits will not be required for conservation purposes. In this sense, the proposed option decreases the problem but does not solve it. If MinAmbiente adopts the proposed strategy it will have to take some cumbersome decisions regarding the areas to assign. However, if it does, it must hold to them. Otherwise it will affect the perceived security over the rights assigned.

The proposed reforms should be applied uniformly for all property regimes, i.e. Black and Indian collective property, private property and State property. However, it is necessary to acknowledge that in the case of collective property some difficulties will arise. The difficulties will emerge especially when communities undertake communal concessions without being associated with the private sector. They stem from the same problems discussed in Chapter II regarding the lack of experience of communities in these types of projects. Their lack of experience may affect the economic success of the projects, hence making burdensome the responsibility that a long term concession implies.

However, adopting a different policy for the special case of communities could have two negative impacts. (1) Create a loophole in the policy, which would allow harvesting to occur without the required management. And (2) Foment a paternalistic government attitude, that will

ultimately hamper the community's self reliance. However if the appropriate complementary policy measures and assistance to communities take place, the likelihood of economic failure of stand alone communal concessions will decrease.

3. Issues of Permit Renewability

An alternative to permits granted for the duration of the growing rotation, is to grant them for shorter periods, and establish a renewability mechanism. This renewability mechanism would allow to renew the permit only if the permit holder has complied with his responsibilities. Such as scheme could in principle mimic longer term permit and concession rights. "Evergreen tenures" is one of such renewability mechanism, which has been introduced in several provinces in Canada. "Evergreen tenures" give option to the tenure holder, during the term of the tenure, to replace it with a new agreement for an equal time to that of the original. Under such an arrangement, the tenure holder uncertainty depends on the extent to which the government can amend the conditions of the tenure agreement at the time of replacement (Halley and Lucket, 1990).

Such a schema would not work properly in the Colombian context, to mimic long term concessions. First, the permit holders credibility over the government agencies is very low. Under such circumstance "evergreen tenure" will not decrease permit holder uncertainty, and hence be ineffective. And second, the system would allow for corruption, briberies to government agencies, and thus will not be very transparent.

However, in order to mimic tenure rights over longer periods of time that the forest growth "evergreen tenure" should be used. In fact since the tenure holder can face tenure ownership at least until the growing rotation, the beneficial behavior from long term ownership are expected to occur. However, if the forest has been used sustainably it should be allowed that the same permit holder keeps its rights, if other priorities have not been determined.

Permit renewability should also be allowed if the tenure holder has opted for shorter permit length than the growing rotation, but has changed his mind and wants to extend it. This renewability should be allowed to promote tenure holders asking for shorter permits to extend them.

4. Summary of Policy Reforms

- The following proposed reforms should be applied uniformly in all property regimes, i.e. Black and Indian collective property, private property and State property.
- Permit duration policy should have the following characteristics:

- The permit holder is entitled to the permit for the duration of the harvest cycle of the forest he is going to harvest (Refer to Chart No.8 for the corresponding growing rotations). The growing rotations should be fixed based on the allowable dbh.
- The permit holder is allowed to ask for a shorter permit than the harvest cycle if he wants so. This does not liberate him from the management responsibilities specified in the forest management plan, and the environmental regulations, up to the date he holds the permit. He can hold the permit for a shorter time under two circumstances:
  - If he can transfer the permit to another person, which would accept and be bound to the same responsibilities; or
  - If he has already complied with the management activities.

  He can not release himself from the management and conservation responsibilities, even if he compensates for its costs. He can not transfer the responsibility to the government agencies, even if these receive the economic resources to do the management. They should be authorized, however, to sub-contract forest management.
- In order to decrease limitation on government flexibility to meet changing societal needs and preferences when granting long term permits, the proposed solution will be to enforce and polish the current policy with respect to Forest Reserves, using forest zoning data. It should be determined which areas within them are the more suitable for sustainable forest use. Only those areas should be destined to concessions. The rest of the areas should be protected using the forest rents from the permitted areas.

E. TRANSFERABILITY AND DIVISIBILITY

As can be recalled from Part A (Section 3) transferability is defined as the right to sell or dispose the property granted, as well as the products from the use of an asset.

1. Transferability Conditions Under the Current Land Policy

It is necessary to distinguish between the different transferability limitations that exist. There are three distinctions to be made regarding transferability restricted by laws and regulations. These distinctions are: (1) transferability of the land, (2) transferability of the forest resources in that land, and (3) transferability of the use rights granted by the government over a forest.

As Charts No.3 and No.4 show, collective land property by Indian and Black communities can not be transferred. Indian collective land property is by the National Constitution inalienable (i.e. can not be transferred) and is not seizable. Black land property of collective use by the 70 Negritudes Law is inalienable and not seizable. However areas assigned to family use are both alienable and seizable. As Chart No. 5 shows, private land property does not have these restrictions. The restrictions on land transferability of collective property were conceived to preserve the cultural identity of these communities. However, they decrease in economic terms the value of the land. The implications of these restrictions are out of the scope of this thesis.

The rights to forest use are transferable for all property regimes. For LBC forest, it is explicitly stated that this transfer can occur through an association with the private or public sector. It is specified that this transfer can occur for persistent forest use, for harvesting, processing and marketing (Chart No. 4). Moreover, for LBC forest resources are suggested to be used as collateral for credit. For Indian *resguardos* even though it is not explicitly stated, transfer is possible because *cabildos* have the authority to authorize it. Finally for State property, Chart No.6 shows that forest use rights can be transferred from the State to a second party through delegate administration, association, permit or concession. These basic limitations provide the constraints set by land policies over forest policies. In fact, forest use can be transferred but without granting the right over the land, except in the case of private property, in which land transfer can also occur.

From an economic perspective, forest use transferability is a desirable feature. For private and collective owners it is positive that the forest use rights can be transferred because of two reasons. First, if the rights were not transferable the forest resource would be undervalued, they would only be able to benefit form the forests by directly exercising their rights (Pearse, 1990), i.e. only domestic use would be allowed, and no trading could take place. Second, transferability allows for the forest resource to be used more efficiently, i.e. the forest use can be transferred to the person who can make more out of it. This implies that if a second party can use the forest more efficiently that the owner, this person can buy out the owner. In principle, this will benefit the owner, because he will receive more benefits that if he harvested the forest directly. To this extent the income of the original owner would be maximized, because of transferability.

This last point is particularly relevant in the case of communities. Forest use transfer implies that they will be able to earn economic benefits from the forests, either by harvesting it directly or in association with the private sector (Refer to Chapter II, Part B).

Additionally, it means that the wealth they receive from the use of the forest will be higher, than if forest use rights were not transferable. However, it is important that the communities are given the option of harvesting the forests directly, by implementing the policy reforms proposed in Chapter II. It is necessary to emphasize that efficient forest use is not the sole policy objective, but also to improve the communities' self reliance in managing their forest resources.

Finally, because of the reasons discussed above, no policy reforms are proposed with respect to the transferability conditions imposed by the current land policies.

2. Transferability of the Forest Use Rights Granted

As for the forest use rights assigned through permits or concessions, the current forest policy does not make any reference to transferability, neither in favor or against it. Hence, it would apparently be possible to transfer those use rights. The same applies for divisibility. Transferability over the forest use rights granted is a positive feature. This is so, not only because of the reasons mentioned above regarding forest use efficiency and increased wealth for the owner. In the case of forest use rights, transferability is also positive because it allows the tenure holder to dispose of the rights he has been granted. As recalled from Part A (Section 3), some authors have pointed out that the main negative incentive for forest management investments are the restrictions of disposing the goods because of transferability restrictions (Halley and Lucket, 1990), because investments loose liquidity.

In Part D, Section 2, the policy regarding duration of permits and concessions was described. As it can be recalled, the forest use granted will be transferable as long as the receiver complies with the responsibilities of the original tenure holder. This should hold true even if the permit or concession holder is willing to compensate the owner. Of course this restriction only applies for forest use rights where no conversion felling is allowed, and forest use is supposed to be sustainable. As recalled from Chapter I (Section D) in the current policy the permit holder can pay a renewability resource fee, that liberates him from forest renewal responsibilities. In principle, the government agencies collecting these fees are supposed to assume this responsibility. However, this has not been so. Hence, it is necessary to modify the current policy to incorporate this restriction.

Transferability should thus be allowed under the specified conditions in Section D. Allowing transferability will in principle make forestry investments more attractive to risk averse investors (Vincent and Binkley, 1992). However in the context of the Colombian Pacific Coast,

this may not necessarily occur because of the poor development of the forestry harvesting sector. In this context, transferability may be restricted because of market restrictions of the asset, as described by Halley and Lucket (1990). However, it is possible that the sector develops, especially if the forest policy is reformed, in which case transferability should be allowed. Moreover, the allowance of transferability may promote the development of the market.

Transferability over the forest use rights will also have the positive quality of allowing for flexibility under changing circumstances and social preferences. For example, transferability under the conditions specified in Part D, would allow for permits to move from loggers to environmental NGOs, or to loggers with more efficient technologies. Additionally, given the proposals of Part C regarding comprehensiveness, transferability will allow a more efficient use of the forest including non timber products.

Finally, and to complement transferability provisions, divisibility should also be allowed. Restricting divisibility will have the negative effects of not allowing forestry operations to occur at their appropriate scale under changing technologies, and management techniques. This is particularly relevant given that the use rights may be allotted for long periods. However, divisibility over the resource use right should not hamper the renewability of the forest. If there are environmental benefits associated with larger scale management, then permit divisibility should be regulated to decrease negative effects. Additionally, divisibility of the forest use rights, as it was stated for transferability, encompass the transfer of the responsibilities too.

3. Summary of Policy Reforms

- The renewability resource fee that liberates the permit holder from forest renewal responsibilities should be abolished. The responsibilities over the sustainability in use of the forest resources should not be transferable.
- Transferability of the forest use rights should be explicitly allowed. When the permit holder transfers the permit, this person assumes the same responsibilities that the original owner had.
- Divisibility of forest use rights should also be allowed. It should not hamper the renewability of the forest. If there are environmental benefits associated with larger scale management, then permit divisibility should be regulated to decrease its negative effects. Additionally, divisibility of the forest use rights, as it was stated for transferability, encompass the transfer of responsibilities too.

F. EXCLUSIVENESS

As explained in Part A, exclusiveness is defined as the right of a property holder to prevent others from freely enjoying the benefits the property confers. This is basically a case in which exclusiveness is not enforced, even though it exists in principle. In this context exclusiveness differs from transferability. For the latter, the use of the benefits is authorized by the original owner, there is a transfer of rights, and usually a payment is involved. However, lack of exclusiveness can also occur because of the way rights are granted, i.e. outsiders are competing with the owner for the benefits.

In either case the final result from an economic standpoint is negative. Lack of exclusiveness causes uncertainty to the owner, who may fear that outsiders will use the forest before him. This may led him to harvest the forest resources faster and even inefficiently.

1. Land and Forest Property

In order to analyze the implications of exclusiveness' characteristics in the context of the Colombian Pacific Coast, it is necessary to distinguish between the exclusiveness properties determined by laws and regulations, and their enforceability. As shown in Charts No.3 to No.6, exclusiveness over the use rights granted with land property is given for all property regimes. Furthermore, the untitled lands traditionally occupied by Indian and Black communities can not be assigned to outsiders. Chart No.7 shows how for State property there are also exclusiveness provisions, furthermore illegal occupation can even cause imprisonment.

However, for all property regimes, in practice, there are severe encroachment problems, which make the enforcement of exclusiveness problematic. How severe these problems are, depends on the property regime. In the Colombian Pacific Coast encroachment and colonization is extremely common in State property. In Indian *resguardos* the phenomenon is less recurrent. As for LBC it is likely that once the titling occurs, exclusivity may take a while to be established by the communities.

Exclusiveness over the land affects forest resource exclusiveness, especially in a region like the Pacific Coast where forestry is a main productive activity. This occurs even though exclusivity over the forest resources is also granted along with land property for all property regimes. The problems of rights enforcement are partly due to the weak government presence in the region, and the corresponding low levels of law enforcement, as well as because of the peoples' ignorance over their rights. However, for LBC property, having exclusiveness over the

forest resources will be relevant. This will allow them to benefit from the forest resources in their territories, and to avoid that permits be granted without their authorization to private firms.

As for State property, the problems of encroachment are even more severe and harder to solve. Encroachment occurs whether the land is assigned or not through permits for forest use. The obvious but more difficult solution is to increase government presence in these areas, and in particular in Forest Reserve Areas. Surveillance activities should be focused on avoiding forest management, rather than fighting squatters. This should be so, because it constitutes a more attainable and realistic goal. These surveillance activities should be financed by the forest rents generated from the grant of permits in the Forest Reserves, as well as from the central government budget. Nowadays, forest rents are seldom used for forest related activities. Thus it is necessary that a new rent policy is designed, in which a portion of the forest rents received by the CARs is tied to surveillance. In the case of forested State lands assigned to permits, forest policy can also contribute to decrease the lack of exclusiveness enforcement.

Additionally to encroachment, it is usual that permanent communities occupy State property. In fact that is the currently the case for most Black communities. It is unlikely that the collective titling that is going to take place through the 70 Negritudes Law, grants title to all the communities in the Pacific Coast. It is also unlikely that they will be removed from this State owned forested areas. As described in Part A, some authors have related this type of situation with open access regimes, that may end in resource degradation. However this is not necessarily the case, especially if communal concessions are allowed in the Forest Reserves, as shown in Chart No. 2 (Chapter II).

There is no clear solution over how increased enforceability of exclusiveness over land and forest property can be attained. However, forest policy in the Colombian Pacific Coast can contribute to its enforcement. Particularly, through tenure and rent policies. The way in which forest policy can contribute is discussed in the following section.

2. Forest Use Rights

Exclusiveness over forest use rights is critical in promoting its sustainable use. As said before, non exclusivity may led the owner to exploit the forest too fast or inefficiently. Moreover, lack of exclusiveness will prevent the owner from investing in forest management because he will be uncertain of being able to capture its benefits. However, as highlighted by Halley and Lucket (1990), the establishment of complete exclusivity may be more costly than the benefits gained by avoiding the inefficiencies it entails.

Nowadays, forest use assignments grant exclusivity over the forest resource, as a specific area for harvesting is assigned through a permit or concession. However, in practice their enforcement is weak. This problem is an issue in the case of State property, as well as for collective property.

In the case of permits granted in State property this lack of enforcement is due to two causes. First, because there is no clarity over who must enforce exclusiveness over the rights granted. For example, for permits requiring contracts there are no provisions on the topic. This been so, the permit holders usually prefer not enforce their exclusivity rights. Moreover, permits are often granted in areas where dwelling communities are already using the forest. When this happens, permit holders are usually forced to negotiate with them the forest use conditions (Field Work, 1994). The second cause is the lack of interest of permit holders in enforcing the exclusivity over their rights. This occurs not only because they prefer to negotiate with the communities, but also because the overall forest policy does not provide the adequate conditions for them to have an interest in use rights exclusivity. Such policy elements are the short permit duration, the insecurity over the policy, as well as the poor enforcement capacity of government agencies. For example, since the permits are of short duration the permit holder has no motivation to protect forest regeneration to have a second harvest. Thus preventing encroachment to protect regeneration is not of their interest.

The first cause--i.e. lack of clarity over the responsibility of rights enforcement, has not easy solution. There are two possible options. To assign the right to the permit holder, or to assign it to the corresponding CAR. Both solutions are problematic. Assigning the right to the permit holder would cause considerable unrest among the forest dwelling communities. Moreover, it is not clear that the government would have the political will to undertake such a venture. The second solution is more feasible, and would require that agencies reform themselves to undertake this task, and also financiation. Finance could be provided by the forest rents paid by the permit holders. As mentioned before, the rents should be specifically destined for such a purpose, and should be designed in such a way that the CARs have the appropriate resources to comply with their responsibilities. This second solution is preferred over the second one. However it must be reinforced with complementary policy reforms as the ones described in the following paragraph.

As for the second cause--i.e. lack of interest in enforcing exclusivity rights, the forest policy reforms with respect to tenure duration and comprehensiveness will motivate permit holders to have a higher stake in enforcing them. However, these policies need to be

complemented with a sensible rent policy. Rent policy is relevant, because it determines the profitability of forestry operations and thus the permit holders interest[18].

As for communities occupying State property, allotting communal concessions is a means of assigning use rights, when they were previously not established. Even though the implementation characteristics of such concessions will differ slightly from communal concessions on collective property, similar positive results are also expected[19].

In the context of collective property, the establishment of successful communal concessions may contribute to ownership exclusivity enforceability. This may occur, because as projects become economically profitable, communities will have an increased interest in preserving the forests for their project. It is thus important that the relevant governmental policies to support the introduction of communal concessions are implemented.

3. Summary of Policy Reforms

- Surveillance of the Forest Reserves should be increased, focusing on the impediment of forest damage. Surveillance activities should be financed by the forest rents generated from the grant of permits in the Forest Reserves, as well as from the central government budget. Additionally, a portion of the rents should be specifically destined for this purpose.
- In the case of permits granted over State property, the CARs should be assigned the responsibility of assuring the exclusiveness over the rights they have granted. This requires that agencies reform themselves to undertake this task, and also to finance them. Credit should be provided by the forest rents paid by the permit holders. The rents should be specifically destined for such a purpose, and should be designed in such a way that the CARs have the appropriate resources to comply with their responsibilities.
- In order to increase the permit's holder interest in enforcing its exclusivity rights, the forest policy reforms with respect to tenure duration and comprehensiveness should also be implemented. Additionally a sensible rent policy is also required, because it determines the profitability of forestry operations.
- Communal concessions should be allotted in Forest reserves. They are a means of assigning use rights.

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[18] / A more complete assessment over the interest of the permit holder in enforcing is rights would require a financial evaluation. However this evaluation would require incorporating the forest rents. As it has been mentioned recurrently rent policy also needs to be reformed.

[19] / The main differences will be in the government role, and especially in the forest rents.

- Appropriate conditions so that communal concessions become feasible should be set up. Their success may contribute to ownership exclusivity enforceability.

G. SECURITY

Security is the less concrete of the tenure characteristics. As described in Part A, security depends on the political environment in which the tenure rights were granted, the trust the tenure holder has over the political system, as well as his expectations over the conditions of the tenure allotment.

In the Colombian context the lack of security over the forest policy reforms and the government agencies may hamper any reform proposal. The causes of this phenomena will be described in this section. However, the government has been recognizing that forest policy needs to be reformed, as well as several of its past errors. This attitude has created a collaborative environment for policy reform. Additionally, policy reform discussions have had ample participation of representatives and GRO from communities, as well as institutions from the private sector.

1. Land Assignment

Insecurity regarding land assignment is a problem in the case of Black and Indian communities. In particular, the long process that has accompanied the enactment of the 70 Negritudes Law has created an atmosphere of uncertainty within communities, as well as other potential land owners. For example, even though this Law protects Indian *resguardos* from been titled as LBC, there have been local conflicts between these two groups over territories. Additionally, the expectation of collective titling, has motivated migration of Black people into the region, causing tension between the traditional occupants and the newcomers. This is, however, an expected outcome for a period of definition over the titling conditions.

The 70 Negritudes Law was enacted by congress in 1993, and most of it is still unregulated. Particularly the sections corresponding to natural resource use are still crude, waiting for other policy reforms to occur. The pace of the process has created insecurity over how the government will to comply with the Law, as well as uncertainty over the out coming regulations. The atmosphere of uncertainty is justified, because of the lack of consensus among people in the government over the conditions that LBC should abide to. These positions range from proposals

that constraint considerably the role of the communities in their self governance over natural resources, to others that claim that no additional restrictions should be imposed on them. These debates have made leaders of communities afraid that very stringent forest use restrictions will be imposed on LBC.

The outcome of such an insecure environment is uncertain. It is possible that while the law is regulated and the accompanying policies implemented, the way the forest is used does not change. However, another possible outcome, is that the environment of uncertainty promotes forest over harvesting, not only from people from the communities applying for titles, but also from outsiders. This is why it is necessary that the government reaches consensus over the policies as soon as possible.

2. Assignment of Forest Use Rights

Insecurity over the assignment of forest use rights stems from the lack of clarity of government forest policy, and from its inconsistency over time. Lack of clarity arises due to the large number of laws and regulations that affect forest policy (at least 58 in total), as well as from the uncertainty over their validity. Lack of consistency is due to two causes. First, the institutional problems of the environmental government sector in Colombia. As described in Chapter I, before the enactment of the MinAmbiente Law, there were conflicts between the different institutions over environmental policies, as well as around the hierarchy of their authority. Second, conflicting interests between the government regarding forest sector development and natural resource conservation. There has not been a clear policy defining this tension. Additionally, since 1992 the government officials have been working on forestry policy reforms. However, there is still not clear definition of what these reforms will be, and they are still been developed. Even though the process has been long and cumbersome, the delay is justified due to the complexity of the issues and the interests involved.

a. The Private Sector

The perception of the private sector over the CARs and MinAmbiente is between a feeling of incredulity and one of collaboration. In deed, the relationship between government officials and policy makers, and the members of the private sector can be said to be collaborative, at least in its external appearance. However, forest industry managers usually feel insecure over the forest use

rights granted to them. This insecurity stems from past negative granting experiences[20] and the lack of forest policy consistency. Other factor that contributes to this insecurity is the perception that forest policy has been implemented without taking into account the needs of the forest sector industry (Field Work, 1994).

Under this environment it will be difficult to implement any policy reform, and to gain confidence from the private sector. However, policy reforms such as modifying tenure conditions as duration and comprehensiveness, or re-setting forest rents, are concrete actions that will not be judged on subjective basis. Nevertheless the perception of government agencies is relevant, because it affects their credibility over the maintenance of the proposed reforms. Thus the challenge will be to introduce the new spirit of the policy, and to convince the private sector that it is in its interest to behave accordingly. For example, if permit duration is expanded to motivate investments in forest management, but the permit holders believe that the policy will change again, then they will be reluctant to invest. Analogously for other reform proposals.

In order to augment the private sector's security over the government with respect to forest policy, the reforms proposed should be as comprehensive as possible in two main aspects. First, in doing a complete reform that tackles at the loops and uncertainties of past legislation. And second, the policy must clearly lay out the responsibilities, conditions and financing of each of the proposals. Furthermore, MinAmbiente and CARs should seek compromising the private sector with the policy reforms. The acceptance of such reforms from the private sector will be discussed in the following Chapter.

b. Black and Indian Communities

Forest use assignment in collective property will be a problematic policy to implement, because there is usually mistrust of the communities of the CARs, and in government. This occurs because the Colombian Pacific Coast has been characterized for the low government presence. Also, because these people have been deceived by the government and politician promises.

Communities requiring permits in State property may be insecure over the assigned rights, because of their lack of faith in the government due to past negative experiences[21]. The lack of definition over the conditions, the power relations of CARs over the communities, and the

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[20] / This has been the case in particular for the large volume permits, and the concession. In the first case, government has been uncertain over granting the permits, and negotiations over the contracts were difficult, with additional pressures from national and International environmental NGOs, GROs, syndicates etc. As for the concession, the company decided to return it before its time, because of a decreases in the area granted on environmental grounds, that made it unprofitable for the company (Field Work, 1994).

[21] / Recall ACIA experience described in Chapter I.

mistrust of CARs interest are upon the issues causing insecurity (Field Work, 1994). Moreover, the assignment will be problematic, because as described in Chapter I, there is a large amount of illegal timber cutting. Illegal timber cutters will be at least initially reluctant to embrace the new policy. Parallel to illegal forest use, is the fact that communities are not used to asking for permits, or comply with their environmental regulations. However, neither have they been provided of support to be able to undertake technical and/or sustainable forest use. The implementation of policies as the ones described in Chapter II, may change this situation and promote trust in the government. The most important goal is that community leaders perceive commitment from the government and the CARs in the reforms to implement.

3. Summary of Policy Reforms

- The government should reach consensus over the forest policy reforms as soon as possible, in order to decrease the current environment of insecurity.
- To augment the private sector's security, the reforms proposed should be as comprehensive as possible:
  - First, in doing a reform that tackles at the loops and uncertainties of past legislation.
  - Second, the policy must clearly lay out the responsibilities, conditions and financing of each of the proposals.
- MinAmbiente and CARs should seek compromising private sector with the policy reforms.
- The implementation of policies as the ones described in Chapter II, may promote the community's trust in government. The most important goal is that community leaders perceive commitment from the government and the CARs in the reforms to implement.

Chapter IV: CONCLUSIONS

The policy reforms proposed in this thesis range form radical changes, such as the introduction of communal concessions, to small but significant reforms, such as tightening the enforcement of existing regulations. The perception of such reforms, may however vary greatly according to the stake holders, depending on issues such as their position in the sector, their expectations and political relationships. In order to evaluate the acceptance of the set of policy reforms, it is thus necessary to take into account these differences for the various interest groups, and assess their possible reactions for the reforms that will affect them. This analysis allows, further on, to propose ways to cope with possible oppositions, and means to use possible supporters.

The present Chapter constitutes an approach to such an analysis. It will build upon the proposals made along the thesis, and the field work done during the summer of 1994. The analysis will constitute a first approach, because a more accurate one would require further interviews with a sample of the different stake holders, in which the concrete policies could be discussed. The Chapter will develop analyzing the identified stake holders, which can be classified in five broad groups: Government, Private sector, Black and Indian Communities, and NGOs. Black and Indian communities will be discussed separately, because their tenure situation varies considerably.

Also, some conclusions about the policy environment and future research trends will be highlighted.

A. THE GOVERNMENT SECTOR

The proposed policy reforms will have different degree of acceptance depending on the government institutions, and even depending on the persons within them. Nevertheless, it is useful to have an assessment of the likely position of each of the relevant institutions.

In general terms there is consensus in the Government that forest policy requires deep reforms. This preoccupation has lead different government institutions to contract several evaluation studies around forest policy. Such studies include a large six month assessment of the current situation of forest policy in Colombia (References: Inderena, 1994a and 1994b) and proposals of forest rents analysis and reforms (References: Motta, 1992; Berry, 1995). Additionally, several seminars for policy discussion have been taking place since at least 1991, gathering not only the different government agencies, but also non governmental stake holders including community leaders, NGOs and people from the private sector. This has been a long but fruitful process. However there is a pressing demand to surpass the diagnosis and step to concrete proposals.

It is MinAmbiente who will lead this process, gathering around it the different institutions. As recalled from Chapter I, MinAmbiente was created in 1993, and is just beginning to take responsibilities to all the functions assigned to it by the Law. Its involvement in the debates around policy reforms are thus rather recent, and have been part of the political transition between Inderena and the Ministry. If the reforms proposed in this thesis are implemented, it is MinAmbiente who should lead them, not only because it is the central environmental authority, but also because of its link with the Regional Corporations (CARs). Of the policy reforms proposed, the ones with respect to Tenure will have to be polished and provided to the CARs for their implementation. It should be the Ministry who promotes the respective modifications of the statutes, helps the CARs during the implementation process (e.g. negotiating budgetary requirements) and verifies the policy reform process.

Because of the participatory way in which the policy discussions have been taking place, and even more, because no proposal will satisfy all the stake holders, MinAmbiente will face major oppositions when proposing changes. In order to be successful it must reach for the political support of the National Planning Department (DNP), who has also been actively involved in the policy discussions process. Also, because before 1993, the CARs were under DNP's control. Also, MinAmbiente should seek support from the Ministry of Government (i.e. Interior Affairs)

who actively participated in the negotiations with the Black Communities, and has close relationships through several of its institutions with Indian Communities.

The DNP will be eager to promote needed policy reforms, and in particular those related to forest rents, because this has been the topic of most concern to them. The Environmental Policy Unit (i.e. *Unidad de Política Ambiental*- UPA) in DNP has been up to now a rather closed one. Additionally, environmental policy has been traditionally left to this unit, and has been scarcely debated with other units within the Department. This fact could facilitate policy reforms, to the extent that it any reforms proposals will be dealt within UPA, which has been closely following the reform process. However, it has the disadvantage that other sectors within the government that should be part of the process can be left out. For example, the Units concerned with social or industrial development.

Nevertheless, DNP should in principle be in a good position to support policies requiring institutional coordination, and moving the budgetary requirements for policy reforms. Moreover, if lending from Multinational Banks is required, it will be DNP with MinAmbiente that will have to lead the process.

However, because of its political position, DNP would not very helpful in aiding reforms related to communities. This is so, not only because it is a central unit, but also because compromise in this area could be politically conflicting for the Department. As for reforms concerning the private sector, and in particular those affecting large transformation industries, DNP will receive considerable political pressure from them. It is difficult to assess what DNP's reaction will be. Because the policy reforms are proposed for the Pacific Coast in which so little government presence exists, and so much of the region's development depends on the interests of the private sector, DNP will likely be in a difficult situation if it supports policies that generate negative reactions from these interest groups.

Within the government, MinAmbiente should also seek support from two particular projects taking place in the Pacific: the Pacific Plan (i.e. *Plan Pacífico*) and the project Biopacífico (a GEF project). The first one is a BID financed development project. Policy reforms should be easily supported by its staff, since they are coherent with the project goals. As for Biopacífico, it is a conservation project which has been trying to work closely with communities. Several elements of the reforms proposals will likely be rejected by them. Since it is a biodiversity conservation project, it is possible that they would prefer more explicit emphasis on non forest products, and other non logging forest uses. Also, they would be fearful to support a policy that they perceive might promote increased forest intervention. However, it is conceivable

that they prefer an integrated forest management approach to the current policy. In any case they could provide insightful policies regarding forest management and community organization. MinAmbiente and DNP have considerable leverage in Biopacífico's decisions, and thus could promote its participation in the policy debate, and further during policy implementation.

The CARs will ultimately be the executors of the policies. Several of the reforms proposed may be questioned, because they will have to undertake new cumbersome activities, and play a more active role in the field. However, the fact that new funds should be available to implement policy reforms, as well as fact that the policies may increase their rent capturing capacity may constitute a positive incentive. Upon the policies that might create more concern among the CARs are the following: the introduction of communal concessions and the role they must play in them; the CAR's more active part in verifying policy compliance; and the institutional reforms that the policy requires. Also, in some CARs, especially CVC and Corponariño, they might be controversy on technical grounds. The controversy might emerge around issues such as permit duration, and the contents of forest management plans.

The CARs are under the supervision of MinAmbiente, and by Law they must in principle accept the policy guidelines of MinAmbiente. Because of their new institutional structure they are likely to become more political than technical entities. This has positive and negative effects with respect to the reforms proposed. On the one hand, the actions undertaken in favor of the communities may be attractive, because they could mean political power. This will be especially true for Codechocó, and not so much for the other CARs, because communities less attractive politically in the other regions. On the other hand it has negative effects, because it is possible that the political decisions over rule the technical ones. Also, this can also affect the way the services are provided region wide.

B. THE PRIVATE SECTOR

The reaction to the policy reforms by the private sector will be mixed, depending broadly on whether it is the large transformation industries, the small transformation enterprises or the intermediaries. Different aspects of the policy will be received differently by them.

Large transformation industries will likely have a positive reaction to the proposals with respect to permit duration, some aspects of transferability and exclusiveness. This is so because several of the policies correspond to demands they have been making, such as having long term

forest use rights. Other aspects, such as the ones regarding comprehensiveness, may be not appealing to them. In particular, because it has been convenient for them to have a volume based approach through small permits or their intermediaries, rather than a forest based approach. Some of them may be reluctant to abandon their current raw material provision through intermediaries, and go into harvesting the forests directly. However, it would be wrong to generalize. In fact some industries have insisted in doing direct harvesting, and will be eager to have more favorable tenure conditions to undertake such task. Others, might face difficulties because of the technical and organizational requirement involved. In any case the opportunity of finally having a steady flow of raw material for the transformation process, may be a compelling attractive of the new policy, regardless of its negative attachments.

As for their involvement in joint ventures, the outcomes are mixed, and rather specific to the different industries. There are a group of industries that have been leading with communities all the way, without any formal or legal structure supporting their actions. These industries will in principle welcome and support communal concessions, and will probably be willing to undertake joint ventures with them (Field Work, 1994). They will welcome the fact that the role of the CARs in joint ventures will be reduced, even though they may dislike their participation in the association negotiations. The welcome of communal concessions will not, however, be the general attitude of all industries. As mentioned above, several will find cumbersome, as well as too demanding getting associated with communities. These industries will prefer to make provision contracts with the communities.

It is relevant to receive the support of firms having the organizational capacity to do sustainable forest harvesting, and associating with the communities. This is so, because as mentioned in Chapter II, it is important to tap in firms' capital and organizational capacity to promote sustainable forest use.

Small transformation enterprises reactions will also be mixed. Some may continue to work as they do nowadays through intermediaries, that will constitute the link between communities and them. However, there are numerous small scale transformation enterprises that are very close to Black communities applying for collective land titles. This closeness is not only physical. In fact, some of the enterprises may be owned by people from the communities. Under these circumstances, it is feasible that they will either promote communal concessions or undertake associations with them if it is the case. This may be attractive to them, because it will be a mean of accessing credit, and also securing more steady sources of raw material. Additionally, they might find useful benefiting from better access to markets.

However, several of the policies, also related to communities, may not be agreeable to them. The fact that people from communities will receive training and qualification, may weaken their negotiating position with them, and even make higher the prices they will have to pay for timber.

The worst off group will be, without any doubt, the intermediaries. In fact most of the proposed policies will negatively affect them: from organizing communities in communal concessions, to tenure provisions securing long term supply of timber to transformation industries. The political pressure these people can put to impede policy reforms will presumably not be very significant at the national level. However, they could oppose the policies by pressuring local governments, and especially those around the main timber gathering points, such as Tumaco, Satinga, Buenaventura and Quibdó. However, the policy reform would take a considerable period to be implemented, and people working as intermediaries will not be left out instantly and some of them may even incorporate into the new scheme. Their reaction will probably depend on the time lag they are let to adjust to the new policy.

Also, they can exert significant pressure over communities, especially in the early stages of communal concessions, and have negative effects. They may try, for example, to dissuade them to undertake communal concessions. Also, they might take more concrete actions such stopping services that the communities require and that they provide, such as financiation and product transport.

However, it is also possible that some intermediaries opt to get advantage of the new scheme, by getting involved in communal concessions. In fact, they could associate with communal concessionaires by providing services within the new policy scheme, of the activities they are already undertaking, such as transportation and commercialization. Additionally, they could eventually play a useful role in community organization. Nevertheless, it will be very difficult to insert them into the new policy.

C. THE BLACK COMMUNITIES

Black communities are in the process of getting organized to apply to collective land titling. The expectations of community leaders over collective titling are mixed. Some believe collective territories adjust to the traditional livelihood of these communities, while others are skeptical about collective property, and would have preferred individual land titling (Field Work,

1994). The latter group will presumably be apprehensive about the convenience of communal concessions, while the former group might welcome them. In either case it is relevant that there is clarity that policy reforms do not only encompass forest harvesting by the community, but a more comprehensive scheme, as the one described in Chapter I.

Most of the policies proposed in Chapter I are aimed at assisting Black communities, creating the means to increase their income, as well as at introducing in forest policy the recognition of their territories. However, the way the proposals are designed may not be totally acceptable to them. For example, the fact that credit should be given as a loan and not as a less compelling compromise, may appear unfair to them. Likely, they will argue that the communities have no way of repaying these loans. It is therefore necessary that they understand the whole philosophy of the policy.

The fact that policy reforms include proposals of community organization, qualification and market access will be very appealing to them. This is so because it will allow them to ameliorate in the medium run their income and their living conditions[1]. Moreover, it will constitute a means to begin to incorporate into the main stream economic system, without been taken advantage of because of their lack of know-how[2] in this system.

Several of the interviewees were worried that the 70 Negritude's Law stated the communities to be "forest rangers", which would deny the traditional production systems of these communities (Field Work, 1994). Even though this perception corresponds to an inaccurate interpretation of the law, the introduction of the above mentioned policy reforms (e.g. qualification, access to markets) will decrease this apprehension. And further more, it is very relevant that they perceive the government's intention to implement the complete policy package.

Black communities have been traditionally left on their own region wide, and it is just until very recently that several government plans and projects have aimed at assisting them (Plaidecop, Plan Pacífico, PNR, etc). Therefore there is between these people still great resentment and apprehension over government related activities. Even though some community leaders are politically linked to the CARs, the bulk of the people do not trust them. This will be a major barrier that policy reform will face. Although most of the policies proposed in Chapter I are specifically oriented at assisting them, they may be apprehensive about issues such as the

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[1] / As discussed in Chapter I, not all members of a community will actively participate in the communal concessions, due to the diversity of production activities. However the benefits should accrue to the whole community, as the forest is owned by it.

[2] / More traditional communities nay be rightfully apprehensive to get into this scheme. However this communities are also usually the ones that have more conservationist traditions, and less be less prone to interact with outsiders to exploit their forests.

government's intents and the permanence of the policy. In order to overcome this mistrust it is advisable that community leaders perceive the government will to undertake the policy reforms.

The 70 Negritude's Law already establishes that permits for commercial logging are required. Thus it is unlikely that this prescription cause resentment to them. However, they might dislike to have to pay forest rents as other private owners.

D. THE INDIAN COMMUNITIES

The Indian communities have been traditionally favored by Colombian legislation, and have been rather autonomous in the administration of their *Resguardos*. As recalled from Chapter I, regulations regarding natural resource have not been very stringent on them, because Indians are usually considered to be conservationists. However, this trend has ceased to be the usual.

It is thus very likely that they will oppose regulations regarding natural resource use despite of their justification. Even though the policies will only affect a marginal aspect of their sovereignty, they will be unwilling to loose independence. Moreover, they will be reluctant to accept paying fees as other private owners. However, if a good argument is made to them about the need of this policy, their reaction may be sensitive.

Most Indian leaders are concerned about the economic changes occurring in the region, and the pressures that they are putting on communities, and on their traditional livelihood. Even though the attitudes will certainly vary on a case by case basis, there will be *cabildos* that will welcome policies that allow them to promote internal regulations, as well as provide means to enforce territorial property with respect to outsiders[3]. Also, they may welcome assistance in trading, commercialization and marketing activities.

E. NGO'S AND OTHER ASSOCIATIONS

NGO's have an important political clout in Colombia, and have been actively involved in projects in the Colombian Pacific Coast. They have been meaningful participants in the policy debates around forest policy. As in other countries, there are a variety of inclinations that NGO's have, from preservationists positions to more practical ones. However, it is sensible to say that

[3] / A community not getting into communal concessions will also be able to benefit from the reform to protect its territory from been illegally logged thanks to the mobilization rules. Additionally organizing the logging activity, will make less attractive illegal logging.

generally the most salient Colombian NGOs tend to be more on the practical side. Most of them have close links with the region and are sensible to the problems people in them encounter.

NGO's have been pressuring for a while for forest policy reforms, and have actively participated in the policy debates. However, it is possible that they question several of the proposals presented in this thesis. Regarding the policy reforms proposed in Chapter I, some of them will presumably question promoting community's incorporation into the mainstream economic system, or at least that its incorporation takes place through forest use activities. They will prefer to see more explicit emphasis on non timber product development and ecotourism activities. Nevertheless they will likely welcome the opportunity to reach out to the communities through the new projects to promote their development and sustainability ideas. The new policy framework offers this opportunity to them.

Regarding the policies proposed with respect to tenure, the reactions will different for the different components. The policy shift to a forest base approach, proposed with respect to comprehensiveness, versus the current volume base policy, will be mostly welcomed. They might also appreciate that comprehensiveness includes non timber products. Moreover, they will be provided the opportunity to pressure private firms to move towards multiple forest use, with emphasis in non timber products and certified sustainability practices[4]. Additionally, they may support the fact that permit holders will not be able to delegate their forest sustainability responsibilities to third parties. Regarding permit duration, they may be apprehensive over granting forest use rights on Forest Reserves for such a long time period. However, they will be reasonable to the arguments supporting this reform.

On average, environmental NGOs will be fearful of the increase of logging activities on the Pacific Coast. However, they may be convinced that the purpose of the policy is not to encourage forest logging, but to promote sustainable and orderly forest use.

F. FUTURE POLICY RESEARCH

As mentioned in Chapter I, the deficiencies of the current Concession and Permit policy are structural and design deficiencies. These two deficiencies were partially addressed in this thesis. The primary structural deficiencies were addressed in the development of a new policy

[4] / There is a positive precedent in this respect. A Colombian logging company, has been asked to be certified by an International Certification Program, after been involved in complicated negotiations over a permit assignment, and in illegal harvesting in a *Resguardo.*

framework. Additionally, the main aspects justifying this framework, and an assessment of its feasibility were developed. However, the policy framework provided requires further development. Questions such as the Institutional setting for credit, or access to markets, need to be worked on.

Current Concession and Permit Forestry policy has two main design deficiencies: tenure and rent policies. In this thesis only tenure policy deficiencies were addressed. I decided to focus on tenure for two reasons. First, because it was more logical to follow up on tenure characteristics given the setting of a new policy framework, than on forest rents. And second, because forest tenure is more relevant in determining the forest user behavior than are forest rents. Moreover, since forest tenure has not been traditionally assessed in a systematic way in forest policy, I decided to take the challenge of developing the methodology to do a systematic analysis.

However, forest rents are a critical policy that requires to be developed. Furthermore, a logical follow up on this thesis would be to design forest rents taking into account two aspects. First, acknowledging the tenure characteristics of land, forest and use rights indicated in this thesis. And second, designing forest rents so they make a complementary tool to forest tenure policy.

G. THE POLICY REFORM ENVIRONMENT

The current policy environment is favorable for a policy reform on the Concession and Permit system. As mentioned above, the Government is undertaking a set of comprehensive studies to re-formulate its forest policy. Thus there is understanding at the government level, that the current system must be modified. In addition, Black communities in the Pacific Coast (95% of the population) will have access to collective land titles, which will empower them to participate in the concession and permit grant debate and to access concessions themselves. The private sector has had difficulties accessing the forests resources directly. This has promoted their access to timber through small volume permits or through intermediaries, and even by illegal means. The proposals of this thesis take advantage of these situations, by proposing a new forest policy framework and a forest tenure policy favorable to sustainable forest use.

It can thus stated that there is a very positive environment for policy debate and an urge for policy reforms. The Government agencies designing environmental and forestry policies are an audience for the proposals here developed.

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