

# **Environmental policy and dynamics of territorial appropriation: The tensions between the conservation of tropical forests and the expansion of cattle ranching in the Mexican Tropics**

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## **Abstract:**

The environment, rather than representing a “communal resource belonging to all humanity”, is a collective heritage in which value and nature acquire meaning at different scales. The renewal of environmental territorial heritages (patrimonies) is the result of complex processes of appropriation, which rest on a complicated set of tensions that involve different practices, interests, projects and expectations that are often deeply contradictory. Beyond the expected outcomes of biodiversity loss and global warming, the loss of tropical rainforests and the expansion of cattle ranching in the Lacandon region puts into focus the importance of geopolitical interests, the ambiguity of environmental policy strategic decisions, the limitations of decentralization policies, the crisis in peasant agriculture, the particular course of regional history (the colonization of the forest, the origin, culture and projects of the its indigenous inhabitants, population dynamics etc.), as well as those tensions and conflicts that both divide and structure peasant communities.

The application of a patrimonial approach invites us to tackle environmental problems from the point of view of the implementation of specific mechanisms of appropriation and the construction of a collective management of inherited territories. In this perspective, the preservation of the Lacandon Rainforest entails the demand for development, as well as the inevitable necessity of the participation, involvement and implication of local populations.

*Keywords: Collective heritage (patrimony), collective management, colonization, deforestation, extensive cattle ranching, protected natural area*

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## Introduction

In Mexico the area with a wet, tropical climate, the majority of which was originally covered with dense tropical forest, as well as other types of tropical vegetation (mangroves, savannahs and wetlands), used to include an area of more than 260,000 km<sup>2</sup>, equivalent to 13% of Mexico's territory. In this large area lives a population of more than 10 million people (SEMARNAP, 1999). Even though these tropical forests are the ecosystems with the most biodiversity and form part of the most abundant river systems in the country, it is currently estimated that only about 20% of the original area remains (little more than 5 million hectares). The Lacandon region is one of the regions which still retains significant areas of this type of ecosystem, in particular tropical rainforest (*La Selva*),<sup>2</sup> of which it is estimated that less than 10,000 km<sup>2</sup> remains.

The Lacandon Forest region is a mountainous area with an altitude ranging from 50m above sea level to 1600m and an area of about 18,000km. It is located in the north-eastern part of the state of Chiapas, Mexico and forms part of the border with Guatemala. This region is part of the "Great Central American Petén", an area of settlements from the classical Maya period, the most notable on the Mexican side being the archaeological monuments of Palenque, Bonampák, Yaxchilán and Toniná, among others. Given that it represents the region with the most tropical

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<sup>2</sup> In Mexico, the tropical forest is known as "Selva", and this is characterised by being composed of a large diversity of tree, bush and other plant species. The dense, humid tropical forest has different names according to the classification used by different authors: Bosque tropical perennifolio (Rzedowski, 1978:156-7); Selva alta perennifolia, and selva alta o mediana subperennifolia (the words "alta" and "mediana" refer to the height reached by the tallest trees); rainforest, tropical evergreen forest (Leopold, 1950, quoted by Rzedowski, 1978). On the other hand, in the cartography of the Selva Maya, la Selva alta perennifolia is classified according to the International Classification of Ecological Communities in the following way: Formation: Lowland tropical rainforest; Group: tropical broad-leaved evergreen forest, Subclass: evergreen forest; Class: Closed tree Canopo (Conservation International, 2000).

forest left in Mexico – forming with Campeche and Quintana Roo on the Mexican side and the Guatemalan Petén and the tropical forests of Belize, one of the most significant forest masses in Mesoamerica in terms of biological diversity and climate regulation – the Lacandon region forms part of the system of regions prioritized for conservation as defined by SEMARNAP<sup>3</sup>. The region has the precedent in that in 1978 the 330,000 hectares Montes Azules biosphere reserve was established, which represents one of the most important protected natural areas (PNA) in Mexico, as well as belonging to the UNESCO's Man and the Biosphere (MAB) programme's system of biosphere reserves. From 1992 another 6 natural areas under different levels of protection were added, making up a total of 419,450 hectares under federal government protection (table 1 and maps 1 and 2).

Table 1. Area of the Protected Natural Areas in the Lacandon Forest region connected to the territory of the Lacandon community.

PNA in the Lacandon Forest region	<i>Area</i>  <i>(Hectares)</i>	Year of Presidential Decree	Area of the Lacandon community affected	
			of Ha	%
Reserva de la biosfera Montes Azules	331,200	1978	262,000	52.3
Reserva de la biosfera Lacan-	61,873	1992	61,873	12.3

<sup>3</sup> From 2001, this Mexican Federal government institution reduced its scope and was converted into the Ministry for the Environment and Natural Resources (SEMARNAT). This would be equivalent to the Ministry for the Environment in other countries.

Tún

Área de protección de flora y fauna Chan-Kín	12,184	1992	12,184	2.4
Monumento Natural Yaxchilán	2,621	1992	2,621	0.5
Monumento Natural Bonampak	4,357	1992	4,357	0.9
Área de protección de flora y fauna Nahá	3,847	1998	3,847	0.8
Área de protección de flora y fauna Metzabok	3,368	1998	3,368	0.7
Total Sum	419,450		350,250	69.9

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Source: own production with data from the *Diario Oficial de la Federación* 1978, 1992, 1998; SEMARNAP, 2000 and SRA 1993.

However, the region continues to confront the problem of the expansion of the agricultural frontier with extensive systems of production which begin with the use of forest income and natural fertility as the main natural capital available. Unfortunately this situation, amply characterized in many parts of the world (the Amazon in Brazil, the areas of tropical forest in the Southeast of Mexico and Central America, to give a few examples), has resulted in deforestation, loss of biodiversity and the often irreversible deterioration of natural resources. In the case of the Lacandon Forest in the state of Chiapas, in spite of the different protection and conservation policies that have been implemented and, which in many cases have produced more social conflicts than positive results, deforestation has continued in the region for the past four decades and government action to halt the destruction has been ineffective. It would seem that the factors which determine the dynamic of territorial appropriation, the use of land and the deterioration of natural resources haven't been adequately taken into account. In contrast, the dynamics of deforestation have been described and quantified at length. Nor has it been possible to construct a legitimate space

where the diverse actors can negotiate their interests, which might permit the establishment and **application of norms that regulate the long term management of campesino<sup>4</sup> and indigenous communities' environmental heritage in the territory. Due to this, many of the government's actions to limit deforestation have had a limited impact.**

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<sup>4</sup> Small farmers, existing on mostly a subsistence level.



Map 1. Situation of the Lacandon region and the Lacandon community in the state of Chiapas, Mexico (taken from SEMARNAP, 2000).



Map 2. Protected Natural Areas in the Lacandon Forest region and their overlap with the Lacandon community's territory (taken from SEMARNAP, 2000).

With this essay, the intention is to go beyond a superficial explanation of the deterioration of natural resources (in particular, deforestation), as a result, say, of population growth linked to extensive forms of exploitation and rural poverty (internally determined) or because of the neoliberal and structural adjustment policies of recent years (externally determined).<sup>5</sup> From this point of view, it is considered important to include the study of the modes of territorial appropriation, as well as the establishment of different systems of property rights and rules of access and management of resources and common holdings, in the case of *campesino* communities. Likewise, the intention here is to analyze the problem of how local settlements (*ejidos* and agricultural communities)<sup>6</sup> manage the natural heritage (soil, vegetation, water, animals, etc), whilst considering the context of the legal and institutional frameworks, as well as the policies which affect the appropriation of territory and of the natural resources contained therein (forestry and others).

From this perspective, we are interested in developing a reflection which contributes to going beyond pre-determined visions (economic, demographic or ecological), and which departs from the basic notion that even if the management of natural resources appears to be a technological-ecological problem, at its heart it is a problem of social management, of social rules, controls and regulations, and therefore of institutional development, in the broad sense of the term, and of the arrival at a satisfactory level of territorial governance.

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<sup>5</sup> Here as well it is possible to ask oneself how much these policies, which expressly promote the privatization of collective ownership of land owned by *campesino* communities (*ejidos*), as well as fundamentally promoting the regulation of access and use of resources according to the market, as planned by Luis Téllez (1994), ex official of the Mexican Ministry of Agriculture from 1994 to 2000, will make the problem of the crisis in *campesino* agriculture and the deterioration of natural resources in our country worse.

<sup>6</sup> *Ejidos* are *campesino* communities who were given land by the Mexican government, as part of a long process of agricultural reform which resulted from the Mexican Revolution at the start of the 20<sup>th</sup> century.



## Territory, territorial appropriation and modes of appropriation

For this essay, let us depart from recent approaches which discuss the importance of territorial analysis as a means of overcoming environmental and local development problems. In particular, the viewing of territory as a complex resource which is made up of multiple material (and non-material) resources which are integrated in a systematic fashion; as a specific resource, in the sense that it forms an important factor in the construction of identity, and is not reproducible; as a collective resource which implies a collective appropriation and a social construction of the same; and which as a patrimonial resource synthesizes the former responses emphasizing its historic dimension which is transferred from generation to generation.

On the other hand, it is necessary to talk about social and power relations which are established in the process of appropriation of natural resources between the different interest groups. Where ownership (understood as a set of rights and not only a formal state sanctioned definition of the type of tenancy) is an indicator of the type of social relationships which are established in the processes of production and the appropriation of nature (Godelier, 1989). Thus, in this sense it is considered significant that *campesinos* perform significant economic interactions at a local level of society, expressed in different forms of work organization at a community level with the aim of mobilizing resources that go beyond the productive unit, and which in many cases represent common use resources (Linck 1991 and 1999).

This idea is complimented by the proposals for the study of local institutional frameworks in the management of resources held in common ownership: as is the

case of property rights regimes, understood as relationships which define access to resources and their collective management (Ostrom 1990 and 1998)<sup>7</sup>.

On this subject we consider the territorial focus important for the study of rural communities (ejidos) in Mexico, which already form territorial collectives who collectively decide about the modalities of use and access to existing resources in the space which they occupy. Even though the notion of territory usually makes reference to the space appropriated and occupied by a nation or a people, in the present work we will reuse the concept of territory used by Godelier: "*Territory is defined as the portion of nature, and of course, space, which a society claims and guarantees all or part of its members stable rights of access, control and use which fall on all or a part of the resources found there and, that said, society wants and is capable of exploiting.*"

Let us consider that this concept can be applied to different scales of socio-spatial organization, being used in this work in the analysis of local rural societies: ejidos and indigenous communities. Therefore it is in this scale that we can really talk about the establishment of relative control over the use and access to natural resources, as result of the recognition and endowment of lands to the collectives who claim them, in the framework of the Agricultural Reform implemented by the Mexican government. At a regional level the notion of territory can take note of the type of regional society which is formed with the predominant forms of appropriation of space and resources in said region.

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<sup>7</sup> See Ostrom's analysis (1998) about the effectiveness of different regimes of property rights, related to the level of collective activity (expressed in the regulation of resources) and the condition of forest resources in various rural communities, making reference to Varughese's study (1998).

From this perspective, we understand **territorial appropriation** as the process by which a society, collective or social group establishes occupation and control of a portion of space to make it their own, with the aim of using and exploiting its resources, defining forms of access to them and organizing economic activities which permit them to satisfy their needs. Territorial appropriation makes reference to an endless (except when the territory is abandoned), gradual and permanent process which, in the case of ejidos and communities in the Lacandon region, is a result of colonization.

On the other hand, the modes or forms acquired by territorial appropriation result from the joining of forms of appropriation in three planes or dimensions: one **subjective** dimension referring to the representations<sup>8</sup> that the social group has about the occupied territory and its resources, as well as the possible modalities of using, accessing and distributing said resources (including the ground); those which are considered legitimate based in their knowledge, previous experience, system of values, and their culture in general. An important aspect of the representations is formed by the feeling of belonging and devotion to the local community and to the territory as a space of identity, or if you prefer, of identification.

Said forms of appropriation acquire a **concrete** dimension in the uses which the population gives to the resources, in the social appropriation practices and in the

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<sup>8</sup> Understanding social representations as the ideas, mental images and values shared by a group in relation to an aspect of reality, which guide their social interaction. For example, that which they consider useful and good and that which they consider useless and bad (including damaging); that which they consider correct, legitimate and permissible and that which is incorrect and subject to social sanctions (Wever and Reveret, 1993). These authors also stress that in order to understand the evaluations of appropriation methods, it is necessary to study the decision making processes which affect them, as well as the interaction which takes place between the different interested parties in said processes. This is close to Acheson's (1991) idea, in the way in which regulation of access to resources is a result of interaction between the control exercised by the local collectives over the same and the influence of the government of each country in regulating their use.

organization of work; by means of which said resources are used. These uses and practices also express the techniques and instruments used in the appropriation of resources. We can say that it is the observable form of territorial appropriation.

An **abstract**, although by no means less real, dimension also exists in the forms of appropriation referred to as norms, rules, and institutions<sup>9</sup>, which the local community establishes to access, use and preserve the territory's resources; for the distribution and assignation of user rights to the same, as well as the benefits derived from their exploitation; and to legitimize the use and ownership between the members, forming a system of ownership rights. In addition, technical and social norms exist which regulate work organization which makes the use of resources possible. Said norms structure and give stability to the forms of appropriation, forming an essential part and the framework of social relationships which are established in the process of appropriation (Linck, 1991; Godelier, 1989; Weber and Reveret, 1993).

The real coming together of these three dimensions (subjective, concrete and abstract) forms what we have named the **mode of social territorial appropriation**, which characterizes the state in which, at a given moment, modes of appropriation are presented<sup>10</sup>. This concept of modes of social appropriation can equally be applied to characterize the modes of appropriation of each one of the natural resources and products which have the characteristic of making up a system of resources which can be clearly defined and form goods in common ownership. In addition, said system of resources requires a collective management for its use and

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<sup>9</sup> Let's go back to the idea of institutions as a coming together of rules which are established as systems of collective decisions, as well as organizational structures which are required for their application. See Ostrom (1990) and Bray and Merino, (2004).

<sup>10</sup> Taken from Godelier (1989) and Weber and Reveret (1993), the concept of appropriation used in this work includes, as well as uses and practices, social representations, and systems of property rights which define methods of access to resources.

preservation. As in the case of forest and “*agostaderos*”<sup>11</sup> resources in common lands, the stocks of fish in a lake or an irrigation system (Weber and Reveret, 1993; Ostrom, 1990).

In this way, territorial appropriation is also a process of social production which converts a proportion of the space into a complex communal belonging, the territory itself, composed of multiple material and non-material resources, and that therefore forms a heritage of the collective that claims it. (Linck, 2006: 129 – 134)

These forms of territorial appropriation are influenced by the characteristics of the territory itself and the resources it contains (distribution, quality and quantity of the same), and by the demographic dynamic, which establishes the relative abundance or scarcity of resources related to the local population and the modes of access. On the other hand, and in a relevant way, the modes of appropriation are also conditioned by the form of integration into the global society and by the economic context in which the agricultural communities are immersed – in particular the system of prices and markets - as well as for public policies: agricultural and environmental, and their concrete expression in the region.

It's from this perspective that we consider it useful to analyze the form in which each farming community (ejido) has defined the forms of appropriation and access to land, its distribution and the definition of common areas; as well as forms of organization of farm work and the modes of access to the natural resources of the ejido, going further than the general notion of ejidal land tenancy.

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<sup>11</sup> The fallow land that is used for feed the cattle.

On this subject it is considered that larger degrees of territorial appropriation will imply a more sustainable management of a territory's resources. What is understood by larger degrees of appropriation on the part of the population is: a better knowledge of the territory and its resources; a greater feeling of belonging, identity and affection for the territory; forms, ever more diversified, of use and management of the territory's resources; modes of regulation and control of access and use of resources, defined with the participation of the local people and respected by them (robust local institutions), as well as a transfer of rights to the earth and resources from one generation to another; as well as a more equitable distribution of the benefits of the use of resources. In the opposite way, the process of distribution and the loss of control on the part of the rural community of common lands and the resources they contain establish conditions which favour environmental deterioration and deforestation<sup>12</sup>. Because of this we could speak of the "tragedy of distribution (or splintering) and loss of control of resources in common us" as one of the processes which in certain conditions favours environmental destruction.

Heritage management approach and the concept of collective heritage.

In agreement with J. Mongolfier and J.M. Natali (1987)<sup>13</sup>, the focus of heritage management came up in the eighties as a response to the serious environmental problems in industrialized countries, due to the fact that:

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<sup>12</sup> Casabianca (1992) brought up the same idea in analyzing the evolution of different cases in the countries Madagascar, France (Corsica), Italy and Spain. In Mexico Luisa Paré and other authors signalled the problem that the loss of social control over the use of land and the distribution of common land constitute one of the factors that contributes – among others – to deforestation and environmental degradation in an area of Veracruz; emphasizing the necessity for reconstruction and reinforcement of local institutions to ensure a social management of natural resources (Paré, 1995 and 1996; Lazos and Paré, 2000 and Paré and Lazos, 2003).

<sup>13</sup> See J. Mongolfier and J.M. Natali's book *Le Patrimoine du Futur*, Paris (1997)

- The complexity of the interactions of the components of the management systems presenting unforeseen negative impacts or which affected third parties weren't considered.
- The traditional adaptive management, by trial and error, wasn't sufficient confronted with the accelerated, chaotic and accumulative dynamic of changes in the environment, provoked by the rapid expansion of urbanization and industrialization processes and the resulting consumerism, waste of resources and environmental contamination. And in under developed countries, processes of colonization and change in the use of land.
- The limitations which confront the standalone management, generally used by the state, have frequently been demonstrated as costly, of slow response and authoritarian, which exceed the problems affecting multiple actors and society working together: also leading to a loss of autonomy of local societies, a loss of adaptability and a loss of identity of those excluded. Every time presenting more conflicts between those involved.

In agreement with these authors, the focus detaches itself from the definition of **heritage**: as the coming together of material and non-material elements which concur to safeguard the **autonomy** and **identity** of its owner (whether an individual or a collective), as well as its **capacity for adaptation** over the course of time to a changeable environment.

In a local collective's heritage one can distinguish what is their **affective** heritage (feeling of belonging and identity, roots, affection for the territory, social fabric and cohesion), **socio-cultural** (technical and productive knowledge, and culture in general, social experience, level of preparation and education of its members), **material** (natural and productive resources, infrastructure, equipment, roads, financial resources) and **communal** (history shared by the collective, local institutions, rules and organizational structure for managing resources, political and economical relationships). It is important to stress that the notion of heritage is not only applied to the objective (material) reality of the elements that form it, rather that it also includes the coming together of relationships between those elements and their owner. That is to say it is a **linking** concept. In this way, the heritage, in its broadest meaning as a factor of **identity** is the structural element of a culture, and is the **creator of feeling** in the life of people and collectives.

From this perspective, heritage management should flow into the improvement of the quality of the territory, that is to say, in the improvement in the relationships which each person maintains with the elements of the heritage which they enjoy. We consider that taking the long term into account, which implies thinking about the next generation, frequently leads to an improvement in the quality of life of the current generation.

Personal characteristics of heritage management:

- The identifying (identitario) character of the heritage is joined to a continuance in time and space. In order that the preoccupation with its permanence in the long term should hardly be the logic of maximum profitability
- The capacity for **adaptation** supposes the **multiple and diverse** use of the elements of the heritage.
- The management of collective heritage is inevitably problematic, because use must be regulated and negotiated between the different parties. Developing their autonomy in the management of the heritage's elements.

Tropical forests: heritage of humanity or of the local population?

Deforestation in tropical forests is at the centre of interest of discussion about global environmental policy, due to its impact on the loss of biodiversity and its influence on climate change. In the area of Mexico and Central America, it is also relevant for its relationship to the vulnerability of local people confronting natural disasters and sustainable development, as demonstrated by the project entitled Mesoamerican Biological Corridor (CBM) and the Mesoamerican Initiative for Sustainable Development (IMDS) as signalled by Marquez-Rosano (2006).

In this way, the international situation and the agreements Mexico has made as a nation in front of international organizations, for example the MAB UNESCO programme, the United Nations Conference about the Environment and Sustainable



Development (CNUMAD), the biodiversity convention, and others, have influenced the formation of environmental policies for the region. In addition, the conditions of multilateral financial organizations (World Bank and Interamerican Development Bank)<sup>14</sup>.

In the local framework, the different dynamics of appropriation and production of territory which have had an impact in the change in the use of land, are results of farmers projects and strategies and of the social-economic contexts and environments in which they find themselves, as well as the capacity of farmers groups to carry out social management of their collective environmental heritages. Assuming this diversity and trying to understand it forms a fundamental point of departure for the definition of environmental policies and development strategies in the region.

The farmers and their dynamics of appropriation and production of territory are factors in the use of natural resources and in the process of deforestation; without a doubt they haven't been properly considered as interested parties in the environmental policies which are trying to confront this problem.

## Public Policies and Deforestation

Initially we posed the question about the role of environmental policy and the forms of territorial appropriation by campesinos in the process of deforestation in the Lacandon Forest area. On the subject, after analyzing the processes of change in

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<sup>14</sup> The World Bank conditions to establish an energetic conservation policy in the Lacandon Jungle, in order to finance modernisation programmes in the state of Chiapas at the beginning of the 90s have been mentioned. (Marquez-Rosano, 2006).

the different regions of the area<sup>15</sup>, we can conclude that even if deforestation in the Lacandon Region is a result of multiple factors, in the first instance this follows the process of anarchic colonization promoted by the Mexican government and the subsequent transformation of areas of forest into lands for agricultural use. In the second instance, deforestation inside the ejidos expanded due to the failure of the inadequate environmental policies and “conservation and development” programmes applied in the area. I consider that the principle reasons for the failure of these policies are:

- That in their diagnosis, they didn't consider the diversity of the modes of territorial appropriation, nor the different production systems and strategies of the campesinos and other producers; simplifying environmental problems to a problem of applying the law and its norms, and only considering the technical dimensions of the natural areas they wished to conserve.
- In their strategic objectives they didn't plan to strengthen the social management of the environmental resources and heritages in the rural communities (ejidos), nor therefore did they plan to develop productive and sustainable resource management capabilities in the local producers.
- In their implementation, they excluded rural communities and organizations from the decision making process, even though these are the principle interested parties in the real and effective management of the natural resources<sup>16</sup>.

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<sup>15</sup> In my work *Déboisement et conflits d'appropriation territoriale. Les forêts tropicales humides de l'espace Lacandon (Chiapas)*, I analyse the different dynamics and methods of territorial appropriation in campesino communities in the areas of the Cañadas, Lacandon community and the Marqués de Comillas (Márquez-Rosano, 2006).

<sup>16</sup> Reusing L. Mermet's (1992: 57-59) terms, Effective management (*gestion effective* or in fact) is the way in which the environment is managed, just as a result of the coming together of the human actions which they affect.” Mentioning as well that the evolution of nature is determined by effective management.

Respecting the magnitude of the colonization: up until 1991, 224 acts of land redistribution had been carried out by the government in Ocosingo. They benefited about 14,500 campesinos, who received 944,000 hectares (Marquez-Rosano, 2006). This broad process of colonization had an impact in the reduction of the forest area in the region, in the majority of cases occupying natural areas of tropical forest. However, the redistribution of land was unequal in the region, because though in the majority of cases, each ejido member received 20 hectares, in some cases they were given more than 50 hectares. These areas severely limited the possibility of organizing a sustainable management of the forest resources which would be economically viable, the campesinos opting for transforming the areas of tropical forest in areas for agricultural production. The exception was the decree of land endowment in the Lacandon community, which was established with the clear intention of slowing colonization and preserving the forest's resources which the government was planning to exploit through the COFOLASA<sup>17</sup>. To give an example, let's compare the area given by the government until 1991 in different areas of the municipality of Ocosingo, which includes 70% of the Lacandon Forest region, with the area of forest ejidos in the Maya zone of Quintana Roo reported by Santos, Jimenez et al, 2005:31.

Table 2. Number of ejidos and area per member in the Lacandon forest region, Chiapas and the Mayan Zone, Quintana Roo.

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<sup>17</sup> Lacandon Forest Company, interstate S.A. Company which was created in the middle of the 70s by the federal government for the exploitation and transformation of the wood of the Lacandon Jungle.

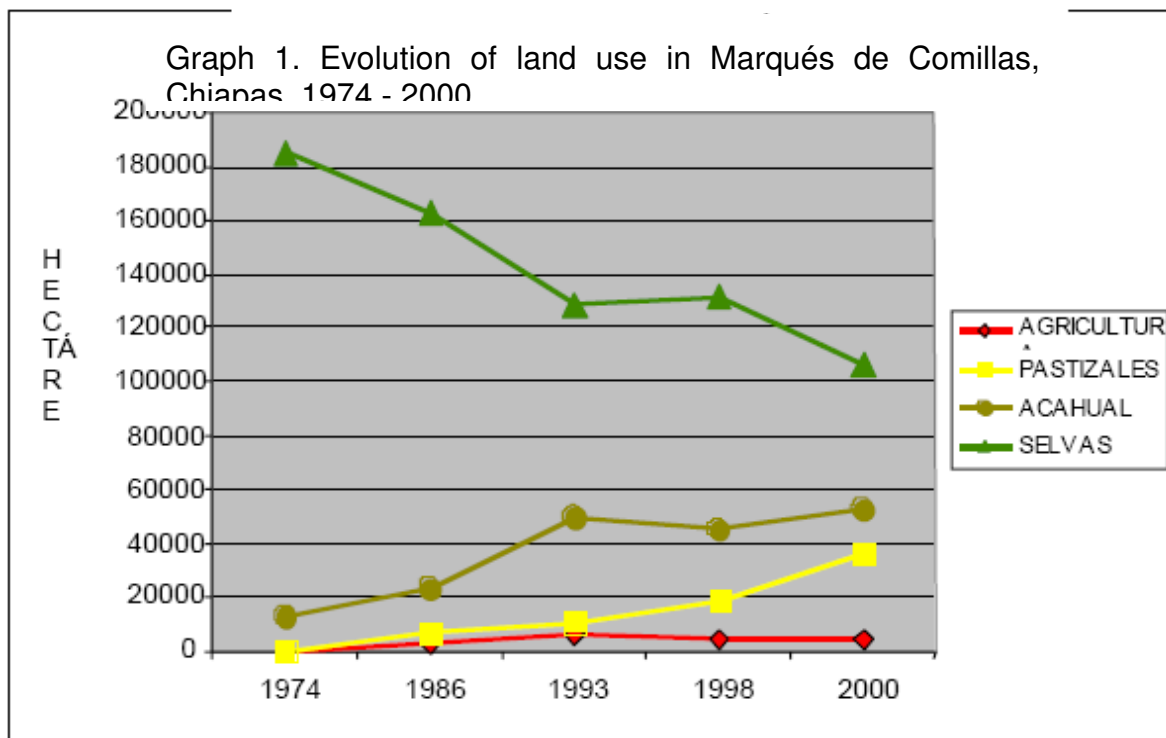
Region or area	No. of ejidos or communities	Total area (hectares)	No. of beneficiaries (Heads families)	Average no. Of hectares per ejido member
Las Cañadas y Zona Norte	186	267,200	8,783	30.4
Marqués de Comillas	37	176,200	4,177	42.2
Comunidad Lacandona <sup>18</sup>	1	501,100	1,518	330.1
Total Ocosingo – Selva Lacandona. Chiapas	224	944,500	14,478	65.2
Ejidos Forestales Zona Maya. Quintana Roo	25	335,000	5,146	65.1

Source: own work based on a digital table of data from the SRA (1995) and Santos Jimenez et al (2005:31)

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<sup>18</sup> The Lacandon community is in reality made up of 5 sub communities made up of lacandon, tzotzil and chol ethnic groups.

As one can observe, although the averages of the two regions are more or less the same (65.1 and 65.2 hectares for each ejido member), inside the region that we are interested in, only the Lacandon community, and a few ejidos of the sub region Marques de Comillas, occupy sufficient territory to begin an exploitation of the forest. However, in the case of the Lacandon community, the majority of their area has all ready been decreed as biosphere reserves and other types of protected areas; and in the case of Marques de Comillas, the difficulties confronted by the Pilot Forest Plan in this region were due to the lack of a coherent and long term policy for the development of the forest; joining the distribution of the ejido forest areas in action, amongst other factors. These factors which prevented a sustained exploitation of the forest's resources, provoked producers to spend their time on agricultural activities, especially cattle ranching, which is reflected in the expansion of pastoral areas in Marques de Comillas (graph 1).



source: own work from studies of soil coverage and years of reference (Márquez-Rosano, 2006).

Linked to the former, the lack of technical accompaniment by the government during the colonization process to plan the use of land and the natural resources found in the territory of the new ejidos, didn't allow the ordering of the territory according to the ecological characteristics of the area. Neither did they establish investigation centres which helped technical innovation, the agricultural and forest investigation carried out in the area to support campesino production and sustainable use of natural resources being practically zero. This lack of technical support implied, for the settlers, investigation by trial and error of the productive potential of the land. When many of them came from areas with different climates and soils. An example is the case of the ejido of Betania<sup>19</sup>, which cut down an area of 270 hectares of tropical forest to sow maize and pastures on flat lands, which appeared to be fertile; however, the soils were very acid (PH 5%) and contaminated so that maize production was very low and the pastures didn't prosper. Finally, these lands were abandoned as unproductive. This example illustrates that, with the lack of technical support, the cost of these forms of empirical learning in many cases lead to the destruction of the ecosystem without bringing any benefit.

In this context, the establishment of the systems of cultivation and farming were principally sustained in empirical knowledge and the hard work of the campesinos, in that extensive types of systems predominated which required little input but large areas of land, which became a factor which favoured deforestation.

Deforestation in general, and in the Lacandon forest region in particular, is a complex process, resulting from diverse social dynamics. Even if one can observe

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<sup>19</sup> This ejido of the *Cañadas* region is one of the cases referred in Marquez-Rosano (2006).

general tendencies which contribute to the process of forest loss in the region, for example the extensive expansion of cattle ranching and the distribution of ejidal lands. This reflects a gradual loss of social control over ejidal lands on the part of members.

In relation to the environmental policies which have prevailed to confront deforestation, these have been ineffective and on occasion have generated contradictory effects and social conflicts which make the problem even more complicated.

In this respect, a good illustration is the example of the authoritarian environmental policy of the governor of Chiapas, Patrocinio Gonzalez Garrido (1989 –1992), who imposed a forest no go area, penalized the use of fire in agriculture, as well as cancelling all types of support for cattle ranching in the region, in place of planning a programme of improvement from systems of livestock production to silvopastoril systems. This policy, which only imposed restrictions without offering alternatives, in a context of crisis in regional campesino agriculture due to the fall in coffee, coco and maize prices, provoked social conflicts in Marques de Comillas in 1991 and it's very probable that was one of the causes that contributed to the incorporation of regional indigenous groups into the EZLN movement in the sub region of the Cañadas.

As exemplified in the cases analyzed by Marquez-Rosano (2006) this type of environmental policy which only establish restrictions and bans in a unilateral way, cause the local population to oppose environmental protection and conservation policies, placing the principal cost of conservation on the local population. Therefore, in not planning alternatives which compensate the imposed restrictions, the most marginalized population finds itself in even more difficult conditions for confronting poverty. Because of this, said policies are not sustainable in the long term, and can put governance at risk.

On the other hand, environmental policies are sustained in a conception which simplifies reality, in focusing on the so called "objects of conservation" (the best preserved ecosystems) and in the analysis of the threats in themselves. This perspective makes an abstraction of the people, of their rights, as well as the social

relationships which are established in the use of the natural resources in their territory. In the same way, it does not consider the diverse modes of appropriation, nor is it planned to understand the social conditioners of effective management (which really occurs) of the natural resources: economic objectives of the producers, their local organization, as well as the institutions which regulate access to those resources.

In this way, we coincide with Legorreta (2004: 316-7) when he refers to the processes of conservative modernization driven by the state in the region of the Valleys and Cañadas of Ocosingo:

“The authoritarian and conservative route chosen by the state to drive forward change, provoked counter-productive effects which were neither wanted nor expected, not even by those who were behind this type of change. These unexpected effects were due above all to the aim of constantly excluding the majority [of the population] from its rights and participation in the process of change, which implies an underestimation of the possibilities for action by indigenous groups, and supposes that the state can always keep them under control. By denying them access to different forms and all at once, the indigenous people felt obliged to take the initiative for their development by using their closest resources and possibilities. This caused counter-productive effects in economic development. Environmental equilibrium, demographic growth and in governance.”

In the above I summarized the limits which currently confront government institutions, among those which stress the low-key and impersonal proposals for the rural area. I also consider crucial the lack of professional panels trained to exercise public actions which consider the logics and strategies of the campesinos and indigenous people, as well as taking everyday decisions about the use of the land. The former will result in a lack of capacity to develop a new type of public action supported by the democratic negotiation with those involved.

In terms of the former, the lack of strategic development plans for the region which benefit the rural population and contribute to a sustainable management of resources can be understood, although not justified. For example:



□ Ejidal cattle ranching has been practiced in the region since the 60s, and because of the social and economic importance of this activity, since these years a plan for developing and promoting silvopastoral systems to the same extent hasn't existed. The most important related to this activity was the extension of credit to one part of the ejidos for the purchase of cattle. These credits were applied as a form of creating a regional market of cows and calves which favored large private cattle owners.

□ Since the 50s, xate palm leaves have been extracted from the region for export to the United States and more recently to Europe as well. Because of this, it is surprising that a structure for the collective management of the sustainable extraction of this non wood resource hasn't been constructed. The former has limited a direct commercialization of this product, which contemplates the creation of added value, its selection and packed. The impulse of a system of regulation of access and extraction of this common resource is important because the poorest campesino families depend on it. However, confronted with the lack of an effective regulation, one can all ready appreciate signs of the exhaustion of this resource, because a regime of free access prevails.

□ Since the beginning of the century, the exploitation of precious woods has been carried out but it is since the 60s that forest resources have become property of rural communities (ejidos). However, social capacity for managing wood resources which supposes the extraction of only 2 species: mahogany and cedar has not been constructed either. Neither have technical studies or social agreements been fulfilled, like those which have been established in the forest ejidos of the Maya zone in Quintana Roo.

□ Finally, in spite of the "priority interest in the region", no institution has been created in the region which supports the investigation of its resources and productive systems, which develops appropriate technologies for its management and for the strengthening of a sustainable campesino agriculture. The majority of the investigation which was carried out was of an academic nature, divorced from the problems, even if there were exceptions. Neither have producer training and organization centres been established, which permit the promotion of technical changes and the organization of small producers. Only dispersed and short term projects have been fulfilled, with limited results.

Action in the region by the state has been characterized by promoting state control of economic activities during the 70s and 80s, by means of COFOLASA and

CORFO in the case of wood resources; and INMECAFE, relating to the production of coffee; as well as the institutional organization of the territory by means of agricultural distribution and government decrees which created the Lacandon community, the biosphere reserves and the other ANPs. At present, and since the middle of the 80s, the state has withdrawn from the promotion of economic activities and left their regulation and growth subject to the market.

The development projects mentioned which could be seen as successes: for example the formation of a honey producers' cooperative in Ocosingo, and the organization of organic coffee producers in the municipality of Las Margaritas, are results of sustained long term actions. These projects have been more of a social construction than a result of government action.

In order to slow the pace of deforestation in the region, it is required to develop a new type of government action, whose purpose will be a regional construction of an environmental policy which recognizes and democratically involves the present actors and the regional society, and articulated with sustainable regional development programmes.

Said policy should be orientated towards strengthening the capacities of rural communities to develop social management of their territorial heritage. For this construction it is necessary to consider above all confronting the logics of the power of civil servants, and of the interest groups in the region who currently exercise control over the region: buyers of forest and agricultural products, as well as the signalled institutional limitations.

This requires a proper decentralization and negotiation processes which reconciles development and conservation. Considering these conditions, its difficult to expect that in the immediate future the Mexican state will start to promote actions which contribute to a long term development and conservation strategy; because authoritarian and centralized political culture prevails, which is reproduced in the area of state governments. It is necessary to add to the former that the majority of the political class acts with short term political perspectives and with logics of client control of the population.

On the other hand, the coordination, coherence and continuity of the government's actions, have also been complicated, because now the plural configuration of political forces and the alternation of political parties who dispute power at different levels of government (Federal, State and Municipal) has been added. These forces are characterized by their difficulty to negotiate and arrive at agreements for the common good. Even though there have been certain democratic advances in the state administration, it has not advanced very much in a major capacity and efficiency of public action.

It's because of all the above that we ask ourselves, will regional society be able to shape and drive forward a sustainable regional development project?

#### Final Comment

The results expressed in the present work take note of the great social and environmental complexity of the Lacandon region. Complexity which is expressed as much in the diversity of sub regional conditions, as in the diversity of social responses at the level of ejidos and indigenous communities. In relatively similar contexts, the history and evolution (trajectory, dynamic) of each ejido have created a particular system of norms and rules to regulate their rights of access and use of the resources which express a social management of the latter. Also it is appreciated that the normative systems present a different level of consolidation, and several tend to be weakened.

On the other hand, even though the regulation systems are strongly influenced by public policies and the economic climate, their variants in similar contexts are evidence of the existence of a margin of collective and individual decision and action in the local field.

In this way, a concept which appears very relevant and useful is that of territory and modes of territorial appropriation as a interdisciplinary concept which allows us to

characterize these normative systems and understand the evaluations which have followed the local collectives in managing their resources, as well as the capacities and limitations which they come across in a successful sustainable management of the same . For this we consider that this focus was adequate for the study of deforestation in the Lacandon Forest.

In a similar way to that proposed by B. Pecqueur (2005) in proposing a typology of dynamics of urban development<sup>20</sup>, we can propose that in the case of the ejidos and indigenous communities, one can observe processes of territorial development or in the opposite sense of weakening and rupture of the ties which give social cohesion to the territory. Considering that in so many territorial collectives, their members develop economic activities and manage resources. From this perspective, a concept that appears very useful to us is that of territorial appropriation, understood as a process and therefore as a dynamic and a trajectory or evaluation. We can talk about processes and social logics of **territorial development** (Pecqueur, 2005; Linck, 2005) if the processes suggest a larger social appropriation of territory, which implies:

In the technological-ecological. A larger knowledge of its natural resources, incorporation of technical innovations for its sustainable exploitation, maintaining the ecological processes which sustain them;

In the social-cultural. A greater social cohesion and territorial identity, expressed in a vigorous sense of belonging;

In the economic. The existence of a evaluation (and valuation) of the resources and territory, which by their use allow necessities to be satisfied and incomes to be obtained. The presence of dynamics of territorial specification, i.e. development of economic and organizational processes which give value and special feature to the territory.

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<sup>20</sup> Pecqueur B., 2005, "Les territoires créateurs de nouvelles ressources productives: le cas de l'agglomération grenobloise", *Géographie, Economie et Société*, n° 7, pp. 255-268

In the organizational. Local institutions which regulate the use, access and transfer of rights to resources, as well as structures of social management are strengthened and the capacity for collective action is strengthened.

In relation to future generations. Management of heritage is developed, defining long term objectives.

Therefore, in the opposite way, processes of territorial deconstruction refer to processes of disappropriation, devaluation and deterioration of territorial heritages. These are expressed in the weakening of social networks and cohesion; the distribution and privatization of land and commonly owned resources; the loss of community control over the management of resources and loss of rights to the same.; furthermore the loss of local knowledge due to the migration of young people.

Finally, we think that due to this focus, we can also work on the construction of indicators of sustainable territorial development. As well as instruments for the evaluation of politics and programmes related to the environment and the exploitation of natural resources in rural zones where the agriculture of small-scale farmers is present.

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