

# Community Forestry in Oaxaca:

## An Assessment of the Level of Autonomy in Forest Decision-Making and its Environmental and Economic Importance



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## Introduction

As a student in the *SIT Mexico: Grassroots Development and Social Change* program, I came to Mexico interested in “development.” However, I have since come to realize, particularly through talks given by Gustavo Esteva, a Oaxacan scholar and Director of Universidad de la Tierra, that this term is faulted. “Development” implies a linear route of progress and designates certain countries as “developed” and others as “underdeveloped,” which can be not only humiliating but also misleading. When one stops seeing the world in terms of “developed” and “underdeveloped” – when one takes off one’s “development lenses,” so to speak – one can see that there are in fact a multitude of different ways of “living successfully” that do not involve the adoption of the Western development model, but that instead utilize and build upon traditional forms of knowledge. In order to pursue such alternatives, local autonomy, and particularly the autonomy of indigenous peoples, is of crucial importance.

The state of Oaxaca is an important place to study issues of autonomy. With 16 different indigenous ethnic groups, it is the most indigenous state in Mexico.<sup>1</sup> Communities in Oaxaca have, at least in theory, a certain degree of autonomy because they can choose to govern themselves by *Usos y Costumbres*, a traditional form of governance that eschews political parties and emphasizes community unity and the leadership of the elderly and those with life experience. Oaxaca is an important place to study autonomy also because of its high degree of communal land ownership – the vast majority of land in Oaxaca is under the ownership of *ejidos* (communities located on land grants made to landless peasants after the Mexican Revolution) and *comunidades*

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<sup>1</sup> William Gijbers, 8 December 2007, personal interview at Xiguela restaurant, Oaxaca.

*agrarias* (communities located on lands regained by peasant groups after being dispossessed of their territory). However, legal ownership has not always guaranteed communities the right to make decisions about land use. Control over land use in general, and forest use in particular, have been important issues in communities' quests for autonomy.

As a student with an interest in issues of autonomy as well as in hiking and spending time outdoors, I chose to study community forestry in Oaxaca for my Independent Study Project. Despite a long period of concessions to private and parastatal logging companies that came to an end in the 1980s, today Oaxaca is internationally recognized for its successes in community forest management.<sup>2</sup> As I will discuss in more detail later, each community's *Asamblea General* (General Assembly of all male citizens) is the maximum authority in making decisions about local forest use. In this sense, control over forest use is highly autonomous. On the other hand, the federal government continues to play a role in forest management through regulatory and supportive institutions such as the Secretary of the Environment and Natural Resources (SEMARNAT) and the National Forest Commission (CONAFOR). My research focused on the following questions: To what degree is forest decision-making autonomous? Specifically, does the presence of federal government institutions such as SEMARNAT and CONAFOR hinder communities' autonomy? Why is autonomy in forest decision-making important? Specifically, what are the implications of autonomous management for the environment and the local economy?

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<sup>2</sup> Ross Mitchell, "Environmental Governance in Mexico: Two Case Studies of Oaxaca's Community Forest Sector," Journal of Latin American Studies, 38 (2006): 519-548.

In answering these questions, I focused on the mountainous Sierra Norte region of Oaxaca, but also made a brief trip to San Tomás Texas, a community in the Chinantla region. I spent my time in the Sierra Norte in the communities of Ixtlán de Juárez and its neighbor, Capulalpam de Méndez. Both Ixtlán and Capulalpam are highly indigenous Zapoteca communities. Surrounded by beautiful pine and oak forests, they are located an hour's drive to the northeast of the city of Oaxaca, along the Oaxaca-Tuxtepec highway that runs through the mountains. Ixtlán's and Capulalpam's forests and their proximity to the state capital have been important factors in their development. Ixtlán has one of the most successful community-forestry operations in the whole country, including a community-owned sawmill and furniture factory. Capulalpam also has a community logging business, but it is much smaller than Ixtlán's and has not had the same degree of success. San Tomás Texas, the community in the Chinantla region that I visited, provides a strong contrast to Ixtlán and Capulalpam. It is much poorer and only received road access in the last ten years. It is more than a five-hour drive to the north from the state capital, the last hour or so of which is along bumpy dirt roads. Texas is a highly indigenous Chinanteca community, and Chinanteco is most often spoken language there – some of the older women I met did not speak Spanish. Texas does not have any official forest management system or community forestry businesses.

I present my research in the following sections: Methodology, Background on Forest Policy in Mexico and the Sierra Norte of Oaxaca, The Level of Autonomy in Forest Decision-Making, The Economic Importance of Forest Autonomy, The Environmental Importance of Forest Autonomy, and Conclusions.

## Methodology

My research involved secondary-source research, observation, participant observation, and interviews. In order to better understand the background of Mexican forest policy and forestry in the Sierra Norte region, I began my research by reading several academic articles<sup>3</sup> as well as issues of *Ecología*, the environment-related supplement published by *Las Noticias*, a Oaxaca newspaper, and written by Wim Gijsbers, my project advisor.

As mentioned earlier, I was based in the city of Oaxaca but took trips to Ixtlán de Juárez and Capulalpam de Méndez in the Sierra Norte region and to San Tomás Texas in the Chinantla region. In Ixtlán, I spent part of my time volunteering at the CONAFOR tree nursery, helping Juan Marcial López, the caretaker, with planting trees, weeding, etc. Mr. López also kindly arranged for me to lodge at the CONAFOR office in Ixtlán for a number of nights, where I stayed free-of-charge with several CONAFOR forest fire fighters. These experiences involved participant observation and many informal conversations with Mr. López and the forest fire fighters.

I also held formal, recorded interviews with a number of officials involved in forest management in Ixtlán and Capulalpam, including the current and former presidents of Ixtlán's Comisariado de Bienes Comunales (the local government office whose purview includes forest management), the SEMARNAT official in Ixtlán, the CONAFOR official in Ixtlán, the director of UZACHI (a union of four forest-based communities, headquartered in Capulalpam), the administrator of Ecoturixtlán (Ixtlán's

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<sup>3</sup> Mitchell, "Environmental Governance in Mexico," 519-548, and Dan Klooster, "Campesinos and Mexican Forest Policy During the Twentieth Century," Latin American Research Review, 38, No. 2 (2003): 94-118.

community-owned ecotourism business), managerial employees at Unidad Comunal Forestal Agropecuaria y Servicios (UCFAS, Ixtlán's community-owned logging, sawmill, and furniture business), and the head of Ixtlan's Servicios Técnicos Forestales (the community-owned agency that provides technical support in forest management). Additionally, during the brief trip to Texas with Wim Gijbers, I attended three group meetings of Texas residents and officials (held especially for Mr. Gijbers, who was writing a story on the area), during which I learned a bit about the various uses of the forests in the community.

Overall, the interviews conducted through the course of the research provided information and opinions on a wide range of forest-related issues from a wide range of perspectives. All interviews were conducted in Spanish. Although this presented a certain language barrier at first, my language ability improved through the course of the research, so that by the last interviews I had little trouble understanding what was being said. My interview questions varied from interview to interview, but some common themes were: use of the forests, goals of forest management, problems encountered, hopes for the future, opinions about the state and federal government's role in forests, and opinions about the level of autonomy in forest decision-making. I tried to keep questions as open-ended as possible at the beginning of interviews, and then narrowed-in the focus towards the end. When asking for people's opinions, I tried to be as direct as possible and avoided leading questions. In total, I held 11 formal, recorded interviews, as well as a number of unrecorded interviews and conversations.

Additionally, I had the chance to take a tour of UCFAS's sawmill and furniture factory in Ixtlán and to spend time hiking around the forests of Ixtlán and Capulalpam.

These experiences provided opportunities to observe community forestry “at work” as well as to see the amazing natural scenery and ecosystems of the Sierra Norte.

### **Background on Forest Policy in Mexico and the Sierra Norte of Oaxaca**

Since the end of the Mexican Revolution, land reform has brought increasing amounts of forest land under the communal ownership of comunidades agrarias and ejidos. Today, about 80% of Mexico’s forests are owned by communities. In the beginning, however, communities benefited little from this ownership. From the 1920s until 1950s, many communities rented their forests to private logging companies, which often used corruption and violence to buy timber at low prices. These companies used highly unsustainable practices, often destroying forest areas where they worked. To combat environmental degradation, the federal government stepped in and imposed a series of logging bans beginning in the 1940s. By the 1960s, however, it was apparent that the bans did little to stop illegal logging and placed hardships on small-scale wood consumers at the local level. The logging bans were gradually removed. However, the government still did not feel that responsibility for logging operations could be placed completely in the hands of communities. Instead, the government began to give long-term concessions to government/private logging partnerships. The idea was to ensure that logging created social and environmental benefits. In reality, however, the parastatals created few local employment opportunities, sent their profits outside the communities, and used unsustainable practices. Additionally, government regulations placed severe restrictions on community members’ rights to use their forests for timber and non-timber forest resources. As concessions reached maturity in the 1970s and 80s, communities

around Mexico began to organize to win local control over forests. In 1986, a new federal forestry law “rescinded the concessions, required that logging permits apply to forest owners and not third parties, and recognized the right of communities to form their own logging businesses.”<sup>4</sup> Since that time, most communities have had legal control over decisions about forest use.

In Oaxaca, the parastatal Tuxtepec Paper Company (FAPATUX) gained a logging concession for forests throughout the Sierra Norte region for twenty-five years during the 1960s, 70s, and 80s. FAPATUX created few local social benefits and degraded the region’s forests. When its concession came to an end in the mid-80s, Ixtlán, Capulalpam, and other communities in the region organized to block further concessions. After a brief transition period, the communities of the Sierra Norte gained full legal control over local forest use.<sup>5</sup>

### **The Level of Autonomy in Forest Decision-Making**

In order to examine the issue of autonomy, it is necessary to understand the political structure at the local level. In Oaxaca, the smallest political unit is the *comunidad agraria* or *ejido*. *Comunidades agrarias* and *ejidos* in the same area make up municipalities, which form the next level of government. Each municipality has one *cabecera*, or municipal capital, which is usually the largest community in the municipality (Ixtlán, for example, is a *cabecera*). Non-*cabecera* communities are known as *dependencias* (Texas, for example, is a *dependencia*).

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<sup>4</sup> Klooster, “Campesinos,” 109.

<sup>5</sup> Armando Vargas, 15 Nov. 2007, personal interview at SEMARNAT office, Ixtlán.

As has been mentioned, the vast majority of Oaxacan communities and municipalities govern themselves under the Usos y Costumbres system. This traditional system of governance has its roots in communal land ownership. The right to use communal land, among other communal rights, is acquired through the completion of obligations to the community. These obligations include *tequio*, which is weekly community service, and *cargos*, which are elected positions of authority. Cargos are usually unpaid positions, but in the case of Ixtlán certain cargos that require full-time attention do receive compensation. By completing *tequio* and *cargos*, one receives *comunero* or *ejidatario* status (depending on the type of community), which guarantees the right to access communal goods and services such as land and water, the right to become a holder in community-owned businesses, and the right to vote in the Asamblea General. The Asamblea General, or General Assembly, is made up of all comuneros or ejidatarios and is the maximum authority at the local level. The Asamblea General of each community elects local-level authorities, and all of the Asambleas of all the communities in a municipality together elect municipal-level authorities, such as the municipal president. In theory, political parties do not exist at the community or municipal levels of government. In practice, however, local factions often take turns at naming municipal presidents, whose terms can last anywhere from one to three years, depending on the municipality. Candidates from cabeceras usually win municipal elections, as they have the advantage of being well-known throughout the municipality.<sup>6</sup> In the end, ultimate authority rests in the Asamblea General, which votes directly on a

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<sup>6</sup> William Gijbers, 8 Dec 2007, personal interview at Xiguela restaurant, Oaxaca.

number of issues and has the power to remove elected officials from office if they fail to act in the interests of citizens.

In most cases, comuneros or ejidatarios are male heads-of-household. Few women take part in cargos and tequios, often because these require hard physical labor, and thus few women become comuneros or ejidatarios. Additionally, it is often difficult for men not born in the community to achieve comunero status. These factors limit the extent of democracy under the Usos y Costumbres system.<sup>7</sup>

In relation to forest management, there are several other local political institutions that are important to understand. In the case of Ixtlán as well as many other communities, the Comisariado de Bienes Comunales (Commission of Common Goods) is the local office responsible for overseeing the use and protection of communal resources and the operation of any existing community-owned businesses. The president and treasurer of the Comisariado are named directly by the Asamblea General, while the secretary is hired independently. The area of jurisdiction of Comisariados can vary. In many cases, such as that of Ixtlán, each community has its own Comisariado. In other cases, however, multiple communities share a single Comisariado.<sup>8</sup>

Two other local government institutions that are important to understand are the Consejo de Vigilancia and the Comisión Asesora. Like the Comisariado, the members of both these groups are named by the Asamblea General. The Consejo de Vigilancia (Vigilance Council) is made up of five members and is charged with watching over and evaluating the work of the Comisariado. The Comisión Asesora (Advisory Commission, also known as Consejo de Ancianos [Council of Elders]) is charged with helping the

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<sup>7</sup> Mitchell, "Environmental Governance in Mexico," 547-548.

<sup>8</sup> William Gijbers, 8 Dec 2007, personal interview at Xiguela restaurant, Oaxaca.

Comisariado to carry out its duties and with advising the Asamblea General during its periodic meetings. Although the Comisión Asesora's 20 members were traditionally all elders, Ixtlán's Comisión today contains a mix of youth, teachers, trained professionals, and elders.<sup>9</sup>

Communities that officially engage in lumber operations, such as Ixtlán and Capulalpam, administer their forests under management plans approved by the Asamblea General. Management plans stipulate norms about the maximum amount and types of wood to be extracted annually, who is entitled to engage in logging operations, which areas are to be logged and which areas are to be conserved, the reforestation activities to take place, the creation of logging roads, and other relevant subjects. Most management plans are for 10 years.<sup>10</sup> Management plan proposals are first analyzed by the Comisariado and are then taken to the Comisión Asesora for further examination. If a proposal successfully passes through these filters, it is taken to Asamblea General, which votes on whether or not to approve it.<sup>11</sup> However, before a management plan is put into effect, it must also be approved by the federal regulatory agency, the Secretary of the Environment and Natural Resources (SEMARNAT). SEMARNAT evaluates management plans on the basis of their social and environmental impacts.<sup>12</sup> In this sense, the federal government maintains a role in the oversight of community forests.

While SEMARNAT is the normative body, it is the role of the National Forest Commission (CONAFOR) to execute programs related to the conservation, reforestation, and sustainable use of forests. CONAFOR is an inter-departmental institution in which

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<sup>9</sup> Edilberto López Pérez, 26 Nov. 2007, personal interview at Ecoturixtlán office, Ixtlán.

<sup>10</sup> Lilia Pérez, 21 Nov 2007, personal interview at CONAFOR office, Ixtlán.

<sup>11</sup> Luis Pacheco, 28 Nov. 2007, personal interview at Comisariado Office, Ixtlán.

<sup>12</sup> Armando Vargas, 15 Nov 2007, personal interview at SEMARNAT office, Ixtlán.

various federal secretariats such as SEMARNAT take part. CONAFOR has a multitude of different programs for different types of forest-related projects. I spent part of my project period volunteering in the CONAFOR nursery in Ixtlán, which is part of a program to promote reforestation in conservation areas (in areas of timber extraction, management plans require that communities carry out reforestation on their own).<sup>13</sup> Another CONAFOR program, the Project for Conservation and Sustainable Management of Forest Resources in Mexico (PROCYMAF), is specifically dedicated to community forestry. Created in 1998, PROCYMAF is funded by the World Bank, which gives it some autonomy from other government institutions.<sup>14</sup> PROCYMAF's projects include conservation, reforestation, and the support of communal businesses related to timber and non-timber forest products (NTFPs).<sup>15</sup>

After learning about the roles of SEMARNAT and CONAFOR, I became interested to find out what local people's opinions of them are. Specifically, is it felt that SEMARNAT's regulatory role limits the autonomy of the community in forest decision-making? Likewise, does the acquisition of support from CONAFOR or other federal or state institutions involve requirements that affect local decision-making about forest use?

When I asked interviewees to rate the level of autonomy in forest decision-making, each one made a point of emphasizing that the maximum authority in decisions about the use of natural resources is the Asamblea General. Because the Asamblea is made up of all comuneros or ejidatarios and does not include anyone from outside the

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<sup>13</sup> Juan Marcial López, 22 Nov 2007, personal interview at CONAFOR nursery, Ixtlán.

<sup>14</sup> William Gijbers, 8 Dec 2007, personal interview at Xiguela restaurant, Oaxaca.

<sup>15</sup> William Gijbers, "Los Nueve Años de PROCYMAF: Usos y Costumbres Del Manejo Forestal," *Ecología*, 24 August 2007.

community, it is hard for outside forces to influence the Asamblea's decisions.<sup>16</sup>

Interestingly, when asked about autonomy, none of the interviewees mentioned the role of the federal or state government unless I asked them specifically about it. Perhaps this is because federal and state regulations are rarely in conflict with the wishes of the community. When I asked Luis Pacheco, the President of Ixtlan's Comisariado, how the uses of the forest would change if SEMARNAT did not impose any regulations, he told me: "I don't think that they would change, because the communities are conscious of the need to conserve the forests because they are sources of income...if SEMARNAT did not impose regulations, the communities would still manage the forests very well." In many cases, communities extract less timber than is permitted by SEMARNAT – for example, the communities of Ixtlán, Capulalpam, Santiago Xiaqui, La Trinidad Ixtlán, and Santiago Comaltepec regularly cut only 80% to 90% of the permissible volume.<sup>17</sup> Because federal regulations are often less stringent than communities' standards, it seems that they usually do not hinder community autonomy in forest decision-making.

When I asked interviewees about their opinions of CONAFOR and similar government programs, responses varied. On the one hand, federal government programs such as PROCYMAF have provided valuable support in reforestation, conservation, and investment projects.<sup>18</sup> At times, however, the amount of support received from government programs for investment projects, such as sawmills, represent a small portion

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<sup>16</sup> Luis Pacheco, 28 Nov 2007, personal interview at Comisariado office, Ixtlán.

<sup>17</sup> Eusebio Roldan, 28 Nov 2007, personal interview at UZACHI office, Capulalpam.

<sup>18</sup> Gijbers, "Los Nueve Años de PROCYMAF," 1-2.

of total costs. This benefits communities like Ixtlán that are able to foot the rest of the bill, but does not help communities with few capital resources.<sup>19</sup>

When asked about the application requirements for receiving support from government programs, many interviewees mentioned the amount of bureaucracy involved. Forms such as a register of comuneros, studies of environmental and social impacts, and the *carpeta básica*, or “basic folder” of all the community’s land deeds, are often required.<sup>20</sup> These requirements can present not only a hassle, but also a barrier to some communities. Edilberto López Pérez, the former President of Ixtlán’s Comisariado, told me that for many poor, remote communities, the costs of conducting impact studies, and on top of that traveling to and from the capital to visit government offices, are too much to bear. Another common problem is the *carpeta básica* requirement, which prevents communities with land conflicts from receiving support. Land conflicts between communities are very common in Mexico. Texas, for example, has a long-standing land dispute with its cabecera, San Felipe Usila, which has prevented it from applying for government programs.<sup>21</sup>

Although the bureaucracy involved in applying for government programs is a serious problem, it does not appear that requirements for government programs hinder communities’ autonomy in forest decision-making. First of all, it is a community’s own choice whether or not to apply for government programs, and thus to fulfill the requirements. Secondly, the problems with the requirements involve paperwork and travel expenses more than anything else. None of the interviewees said that receiving aid

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<sup>19</sup> Edilberto López Pérez, 26 Nov. 2007, personal interview at Ecoturixtlán office, Ixtlán.

<sup>20</sup> Amado Pacheco, 30 Nov 2007, personal interview at Ecoturixtlán office, Ixtlán.

<sup>21</sup> San Tomás Texas residents, 5 Dec 2007, group interview in Texas.

from government programs had required the community to make unwanted changes to its forest policies.

Another important factor to consider when examining autonomy is the various networks of forest-based communities. One example is the Unión Zapoteca Chinanteca (UZACHI), a union of three Zapoteca communities in the Sierra Norte and one Chinanteca community, headquartered in Capulalpam. These communities joined together in 1989 in response to the government's failure to provide adequate forestry advisory services. At the time, a single government forester was responsible for advising all the communities of the Sierra Norte region of Oaxaca. UZACHI responded by employing their own team of experts, which continues to provide technical advice and assistance to its member communities. In addition, since 2001, UZACHI has conducted a program to train young people from communities all around the Sierra Norte to become forest technicians. The idea is that after completing 16 weeks of courses, the young forest technicians will return to their home communities and serve as mediators between government service providers and the community. Another one of UZACHI's activities is to hold periodic conferences in which member and non-member communities can share experiences and knowledge about forest issues. UZACHI's various programs aim to provide forest-based communities with a source of self-sufficiency and autonomy.<sup>22</sup>

Another important network is the Union of the Communities of the Sierra Juárez (formerly known as the Comité Regional). This Union is made up of the Comisariados of 38 communities in the Sierra Norte, which meet monthly to discuss common issues and concerns. One important function of the Union is to share knowledge about opportunities

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<sup>22</sup> Eusebio Roldan, 28 Nov 2007, personal interview at UZACHI office, Capulalpam.

for funding for forestry projects, both from the government and from non-governmental organizations. Additionally, the Union has allowed communities to unite politically in order to lobby the state and federal government. For example, the Union is currently working to win special tax breaks for community-owned businesses (such as Ixtlán's logging business), which are still subject to regular tax rates, despite the local social benefits they provide. In addition, the Union has been working to prevent the passage of a proposed state forest law that would remove responsibilities for administering forest resources from the hands of Comisariados and instead cede these responsibilities to officials at the municipal level.<sup>23</sup> Although this bill has not been passed, it poses a serious threat to autonomy because it would effectively remove control over forests from the community-level. Thus, by lobbying and creating awareness, the Union plays an important role in promoting community interests and maintaining autonomy.

In conclusion, I think it is clear that decision-making about forests is highly autonomous. The Asamblea General is the maximum authority over the use of forest resources. Although the federal government maintains a regulatory role through SEMARNAT, its regulations are generally less stringent than community standards, and thus tend not to hinder autonomy. Likewise, government support programs do not appear to have a significant impact on autonomy because communities partake in these programs voluntarily and because the programs generally don't require unwanted changes in forest practices. Networks of communities such as UZACHI and the Union of Communities of the Sierra Norte play important roles in sharing knowledge between communities, improving self-sufficiency, and fighting threats to autonomy.

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<sup>23</sup> Luis Pacheco, 28 Nov 2007, personal interview at Comisariado office, Ixtlán.

## **The Economic Importance of Forest Autonomy**

As has been mentioned, during the period of concessions, communities in the Sierra Norte benefited little while parastatal companies like FAPATUX exploited their forests, degrading the natural resource base in the process. However, since gaining control over local forest use, communities in the Sierra Norte have used sustainable methods to exploit their forests' timber and non-timber forest resources and generate employment and profits that stay in the community.

Ixtlán has one of the most successful community-owned logging businesses in the country. The Unidad Comunal Forestal Agropecuaria y de Servicios (UCFAS), as it is known, employs over 200 people from Ixtlán and seven neighboring communities in its processes of logging, reforestation, milling, and furniture construction. A newly-constructed industrial park on the edge of town contains one of UCFAS's two sawmills, two drying ovens from Italy, and a high-tech furniture factory. A computerized tree nursery, which is expected to produce 500,000 seedlings annually, is currently under construction. The majority of the funds for these investments were provided by the community of Ixtlán, but the state and federal government have also made contributions.<sup>24</sup>

UCFAS sells unmilled wood, milled wood, and furniture. Although it has the capacity to process all of the timber it cuts, UCFAS sells about 20% of its wood unmilled for use as cellulose. Of the 80% that is milled, about 60% is then used in the furniture factory. UCFAS has distributors for its milled wood in the states of Mexico DF, Vera

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<sup>24</sup> Victor Vargas Ramírez, 29 Nov 2007, interview at UCFAS office, Ixtlán.

Cruz, Oaxaca, and Tabasco. Its furniture sales, on the other hand, are currently mostly in-state. In order to increase furniture sales, Ixtlán, Pueblos Mancomunados (a commonwealth of communities in the Sierra Norte), and Textitlán (a community in the Sierra Sur region), formed TIP Furniture Company in 2006.<sup>25</sup> TIP sells its products in three retail locations in Oaxaca city, and also won a \$10 million peso contract with the Oaxaca Institution for Public Education to provide school desks and chairs last year.<sup>26</sup> However, Edilberto López Pérez, the former President of Ixtlán's Comisariado, told me that UCFAS has since lost this contract due to political favoritism. Ixtlán did not support the Institutionalized Revolutionary Party (PRI) in the past regional elections and subsequently lost the contract.

UCFAS is certified for its sustainable logging practices by SmartWood on behalf of the Forest Stewardship Council.<sup>27</sup> This is one of the most stringent, well-recognized international sustainability certifications.<sup>28</sup> In accordance with Ixtlán's management plan, UCFAS carries out extensive reforestation activities. It also uses sawmill waste to power its drying ovens. Victor Vargas Ramírez, the industrial park's coordinator, told me that although the SmartWood certification has helped with sales to a certain extent, there is still a lack of consumer responsibility in Mexico – most consumers don't pay attention to where their wood comes from.

As a community-owned business, UCFAS is a “social business.” As Eusebio Roldán, the director of UZACHI, told me: “One of the principles of our communities is

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<sup>25</sup> William Gijbers, “Mueblería TIP Muestra Fuerza Comunitaria,” *Ecología*, 26 Jan 2007.

<sup>26</sup> Victor Vargas Ramírez, 29 Nov 2007, personal interview at UCFAS office, Ixtlán.

<sup>27</sup> Enriqueta Jiménez, 15 Nov 2007, personal interview at UCFAS office, Ixtlán.

<sup>28</sup> Mitchell, “Environmental Governance in Mexico,” 526.

to not be completely business-minded. Here we have social businesses, with social characteristics...They serve to satisfy the necessities we have as communities, such as healthcare, water, electricity, and schools.” UCFAS must answer to the Comisariado de Bienes Comunales, the Consejo de Vigilancia, and, ultimately, the Asamblea General. Its profits are divided between reforestation efforts (30%), redistribution to employees (10%), investments (30%), and allocation to the Comisariado (30%). It provides a major source of funding for the Comisariado. In fact, municipal authorities have occasionally come to the Comisariado to ask for funding for the municipal-level government. The Comisariado may also redistribute the profits equally among comuneros. Despite these important social characteristics, however, community-owned businesses like UCFAS are subject to the same tax rates as privately owned businesses. As mentioned, the Union of Communities of the Sierra Norte has been pressing for tax breaks for community-owned businesses.<sup>29</sup> Other communities in the Sierra Norte have also organized community logging and milling operations, but UCFAS has been one of the most successful.

Servicios Técnicos Forestales (Technical Forest Services) is another important forestry-related community business in Ixtlán. Like UZACHI, Servicios Técnicos is charged with providing professional advice and assistance to the community and specifically to the Comisariado in executing its forest management plan. Reforestation is one important area of Servicios Técnicos’ work. Although Ixtlán’s forests were originally mostly pine, logging of pine species, particularly during the period of FAPATUX’s concession, has left a majority of less-desirable oak species in many areas. In order to combat this problem, Servicios Técnicos has recently been promoting the use

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<sup>29</sup> Luis Pacheco, 28 Nov 2007, personal interview at Comisariado office, Ixtlán.

of the technique *mataraza*, or small-area clear-cuttings followed by long periods of natural regrowth. Mataraza does not involve planting trees, but instead relies on the natural dispersion of seeds from surrounding areas, creating forests with a plurality of tree species. Another important function of Servicios Técnicos is in preventing forest fires. It promotes awareness of forest fire risks and maintains two vigilance towers manned by comuneros during the high-risk season from March through May.<sup>30</sup> In the case of a fire, specialists from CONAFOR's anti-forest fire program come in to help organize efforts.<sup>31</sup> However, the community provides the majority of the labor in fighting forest fires as well as in keeping vigilance, a demonstration of its self-sufficiency in protecting its forests. Like UCFAS, Servicios Técnicos is a community business. It is supported financially by the community and must ultimately answer to the Asamblea General.

In addition to timber, forests in the Sierra Juárez provide a number of non-timber forest products (NTFPs) such as water, resin, medicinal and ornamental plants, and mushrooms. UZACHI has been working with women in its member communities to promote the sustainable collection of certain ornamental plants and edible mushrooms for personal use and sale. For example, a white mushroom species that is collected during the rainy season is being sold to buyers in Mexico City as well as Japan (exportation takes place through a middle man in Oaxaca, but UZACHI is working to organize direct sales). UZACHI also promotes the cultivation of a second type of mushroom and the collection of the ornamental plant *Bromelia* from the wild. *Bromelia* and other ornamental plants

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<sup>30</sup> Julio Ruiz Aquino, 27 Nov 2007, personal interview at Servicios Técnicos Forestales office, Ixtlán.

<sup>31</sup> Eleazar Hernández and Esteban Villalobos, 21 Nov 2007, personal interview at CONAFOR office, Ixtlán.

from the Sierra Norte can be seen being sold on the streets of Oaxaca city during Christmastime. The collection of all wild plants and mushrooms is regulated under special management plans that require collectors to use sustainable practices.<sup>32</sup> This ensures that these resources will continue to be available in the future.

Another important NTFP is water. Forests play an important role in attracting rainfall, preventing evaporation, and protecting ground-water sources like springs. In addition to public use, several communities in the Sierra Norte have established businesses that bottle spring water. In Santa María Yavesía, for example, 33 community members pooled an initial investment of \$25,000 pesos to create the Cooperativo Yavesía water bottling business in 2000. Yavesía's Asamblea General has since been added as an associate in the business. The cooperative employs several young women from the community and provides cheap drink water locally. It also provides free water to the local school and health clinic.<sup>33</sup>

In addition to timber and NTFPs, communities can make money off of their forests by providing services such as ecotourism. Community ecotourism businesses are found in Ixtlán, Capulalpam, and the other communities of UZACHI. Ecoturixtlán, Ixtlan's ecotourism business, was founded in 1996 on the initiative of Gustavo Ramírez, a local biologist. Although it began by providing tours of the area's beautiful forests, Ecoturixtlán has since expanded its facilities and now offers a restaurant and cabins where guests can spend the night. Ecoturixtlán permanently employs 17 community members, most of whom are young people. As a community-owned business, part of its

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<sup>32</sup> Lilia Pérez, 21 Nov 2007, personal interview at CONAFOR office, Ixtlán, and Eusebio Roldan, 28 Nov 2007, personal interview at UZACHI office, Capulalpam.

<sup>33</sup> William Gijsbers, "Agua Limpia en Un Pueblo Limpio," *Ecología*, Sep 2005.

profits is redistributed among comuneros, although it is currently recuperating recent investments.<sup>34</sup>

The economic importance of autonomous forest control can be seen through the examples discussed. Since the end of the concessionary period, communities have retaken control over their forest resources, utilizing them through community-owned timber and non-timber forest businesses. These businesses provide important social benefits and opportunities for local employment, an alternative to migration.

### **The Environmental Importance of Forest Autonomy**

Autonomy is an important theme in conservation efforts in areas of high biological diversity throughout the world. In many cases, governments have established federally- or state-managed parks that evict local residents from the protected areas. This calls into question a number of ethical issues (does conservation justify evicting people?). Additionally, this top-down management strategy can in fact have negative consequences for conservation. In many federally protected areas, illegal logging is rampant due to corruption or lack of vigilance. However, when local communities become stakeholders in forests, they play an important role in conserving their own natural resources.<sup>35</sup> This can be seen in the Sierra Norte region, whose wide range of climactic zones and biological diversity make it a priority region for conservation in Mexico. However, the region has no major federally- or state-protected areas. Instead, each community's Asamblea General directs forest use through its management plan, which dictates which areas are set aside for conservation and which areas are exploited for timber.

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<sup>34</sup> Amado Pacheco, 30 Nov 2007, personal interview at Ecoturixtlán office, Ixtlán.

<sup>35</sup> James Robson, 23 Nov 2007, personal interview at restaurant in Capulalpam.

In order to understand the environmental significance of local forest management, it is illustrative to compare current environmental practices with those of the concessionary period, when communities had little control over their forests. As has been mentioned, the Tuxtepec Paper Company (FAPATUX) received concessions for most of the Sierra Norte's productive forests from the 1950s until the 1980s. FAPATUX extracted huge volumes of pine, leaving only oak species in many areas. Ignoring government regulations, it neglected to reforest its areas of operation. These unsustainable practices left many communities with heavily degraded forests by the end of the concession period.<sup>36</sup>

However, since the end of the concession period in the 1980s, many communities have made extensive efforts to protect and reestablish biodiversity. Ixtlán currently protects 8,000 hectares of forest as conservation areas.<sup>37</sup> Many of these areas provide important sources of water and other NTFPs. Community authorities are responsible for keeping vigilance over these areas in order to prevent the spread of plagues or other parasites. (Plagues have become an increasing problem in recent years due to shifting rain patterns associated with global warming.)<sup>38</sup> In the areas that are logged, extensive reforestation is carried out. The office of Servicios Técnicos Forestales is promoting the small-area clear-cutting technique called *mataraza*, which allows for the regrowth of a plurality of plant and tree species. As has been mentioned, Ixtlán's logging business is certified by SmartWood, one of the most stringent and well-recognized international certifications for sustainable logging. Armando Vargas, the SEMARNAT official in

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<sup>36</sup> Lilia Pérez, 21 Nov 2007, personal interview at CONAFOR office, Ixtlán.

<sup>37</sup> Armando Vargas, 15 Nov 2007, personal interview at SEMARNAT office, Ixtlán.

<sup>38</sup> Eusebio Roldan, 28 Nov 2007, personal interview at UZACHI office, Capulalpam.

Ixtlán, told me that Ixtlan's logging operations have not affected the biodiversity of the community's forests as a whole.

There are a number of reasons why communities like Ixtlán place such a high priority on conserving their forests. One is that forests are a source of a wide variety of NTFPs such as water, medicinal and ornamental plants, and mushrooms. Conservation is economically important in order to protect springs and habitat for desirable plant and mushroom species.<sup>39</sup> Second, community-owned forest businesses like UCFAS are "social businesses." Rather than being driven purely by profit, it is their objective to provide services to the community and create long-term sources of employment for local people. Related to this, several of the interviewees mentioned a culture of conservation that exists in their communities. Julio Ruiz Aquino, the director of Servicios Técnicos Forestales in Ixtlán, told me: "The community has a consciousness of the forests and a forest culture...We are convinced that we must continue using, promoting, and protecting our forests throughout time. And all the work we are doing we must do for the generations to come – to leave them the forests that we ourselves inherited from our ancestors." This view of forests as long-term resources is an important reason why communities place a high priority on conservation and sustainable logging.

Although my experience is very limited, my research has led me to believe that community forestry has the potential to be very beneficial for the environment. As mentioned, communities tend to see forests as long-term resources rather than short-term sources of profit. Ixtlán provides a good example of community forestry's potential to be environmentally friendly. However, it is important to remember that many other

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<sup>39</sup> San Tomás Texas residents, 5 Dec 2007, group interview in Texas.

communities have not been as successful in preserving their natural resources. In *Environmental Governance in Mexico: Two Case Studies of Oaxaca's Community Forest Sector*, Ross Mitchell states: "Indigenous forestry operations are not exempt from poor managerial practices, conflict and corruption, and might not be any more environmentally sustainable than other alternatives."<sup>40</sup> Although many communities may suffer from poor managerial practices and conflicts, I still believe that community-managed forestry has the *potential* to be one of the most environmentally friendly forms of forest management.

## **Conclusions**

My research was aimed at answering the following questions: To what extent is decision-making about forests autonomous? Why is autonomy important in this respect? Specifically, what are the economic and environmental implications of local control over forests?

As has been discussed, forest decision-making in the area studied is highly autonomous. Each community's Asamblea General is the maximum authority in decisions about the use and conservation of its forests' timber and non-timber resources. It is difficult for outside forces to influence decision-making, because only comuneros or ejidatarios can take part in Asamblea meetings. Although the federal government maintains a regulatory role and provides support through special programs, its activities generally don't hinder community autonomy with respect to forests. In the case of Ixtlán, federal regulations are more lax than the community's standards. This raises a question

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<sup>40</sup> p. 521

for further research: is there even a need for SEMARNAT as a regulatory institution?

Another issue to pay attention to in the future is the proposed Oaxacan forestry law, which, as discussed, threatens to seriously curtail forest autonomy.

Autonomy has allowed communities to benefit from their forests economically. Forests provide communities with NTFPs such as water, wild plants, mushrooms, and attractions for ecotourism. Additionally, communities have established their own logging businesses that produce profits that stay in the community and provide employment opportunities for local people. Ixtlán has one of the most successful community-owned logging businesses in the country, but other communities in the region have not been as successful. Some possible reasons for Ixtlán's comparative success include its location, large forested area, and good community organization. However, the reasons for Ixtlán's success form an important topic for further investigation, as they could provide answers that would help other communities develop their community forestry sectors. Another important topic of study is community forestry in the context of migration. Can employment opportunities offered in community forestry provide significant alternatives to migration? James Robson, a British post-graduate student I met in Capulalpam, is currently investigating this question and others related to migration in the context of three Sierra Norte communities.

Autonomy also has important implications for the environment. When communities become stakeholders in their forests, they take on responsibility for conservation. Communities like Ixtlán see their forests not as sources of short-term profits but rather as long-term resources that must be conserved for future generations. Ixtlán is one example where autonomy has proven to be beneficial for the environment.

However, other communities in the region have been less successful with respect to conservation. Thus, wider study is needed in order to better understand the connections between autonomy and environmental benefits. Another important area for further study is global warming, the effects of which are already being seen in the region's forests.<sup>41</sup> Climate change will undoubtedly be an important issue for the future of community forest management.

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<sup>41</sup> Eusebio Roldan, 28 Nov 2007, personal interview at UZACHI office, Capulalpam, and Miguel Ángel, 27 Nov 2007, personal interview at CONAFOR office, Ixtlán.

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## **Acronyms**

CDE - *Comisión Nacional para el Desarrollo de los Pueblos Indígenas*, or National Commission for the Development of Indigenous Villages

CONAFOR – *Comisión Nacional Forestal*, or National Forest Commission

NTFP – Non-Timber Forest Product

PROCYMAF- *Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México*, or Project for Conservation and Sustainable Management of Forest Resources in Mexico

SEMARNAT – *Secretaría del Medio Ambiente y Recursos Naturales*, or Secretary of the Environment and Natural Resources

TIP Muebles – Textitlán, Ixtlán, and Pueblos Mancomunados Furnitures

UCFAS – Unidad Comunal Forestal Agropecuaria y Servicios, Ixtlán's community-owned logging, sawmill, and furniture business

UZACHI - Unión Zapoteca Chinanteca