Both conflicts and new identities result when indigenous’ traditional values of landscape and resource management are superimposed with federal governments’ management of archaeological and forest resources in federally designated protected areas. This thesis examines the relationship and discourse between two Cuicatec towns in Oaxaca, Mexico and three Mexican government agencies within the context of a federally protected and managed biosphere reserve. The Cuicatec people maintain both strong syncretic beliefs of the land that reflect their Prehispanic heritage as well as contemporary and evolving Western perceptions that view a landscape as a set of commodified resources. Through ethnographic interviews, Cuicatec participants shared how federal government resource management affected their traditions, their lives, their subsistence, and their very existence. The power and extent of government discourse from the government agencies varied in both communities thereby affecting both their knowledge and acceptance of the government resource management policies. Cuicatec participants emphasized the need for greater direct government communication coupled with financial support to meet their socioeconomic challenges that are further
exacerbated by federal restrictions on both traditional and commercial resource use. New identities are being forged as government discourse begins to promote ecotourism in the communities as way of alleviating the socioeconomic challenges. Continuing research in the region will be useful to trace the development of new community subjectivities as well as the socioeconomic effects of future tourism development in the communities.
Opposing Worldviews: Cuicatec Values of Cultural and Natural Resources in a Western Paradigm

by
Kyle P. Hearn

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Kyle P. Hearn, Author
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>The Context</td>
<td>1</td>
</tr>
<tr>
<td>The Conflicts and Purpose of Study</td>
<td>4</td>
</tr>
<tr>
<td>Description of Participant Population</td>
<td>6</td>
</tr>
<tr>
<td>Methodology</td>
<td>12</td>
</tr>
<tr>
<td>The Observed Resources in Question</td>
<td>15</td>
</tr>
<tr>
<td>Theoretical Base</td>
<td>26</td>
</tr>
<tr>
<td>Acculturation and Change</td>
<td>39</td>
</tr>
<tr>
<td>Ethnohistoric Overview of Cuicatec Resource Management</td>
<td>42</td>
</tr>
<tr>
<td>FINDINGS</td>
<td>50</td>
</tr>
<tr>
<td>Mexican Federal Government Interpretations of the Resources</td>
<td>50</td>
</tr>
<tr>
<td>Contemporary Cuicatec Beliefs of the Land</td>
<td>67</td>
</tr>
<tr>
<td>Cuicatec Relationship with Prehispanic Past</td>
<td>75</td>
</tr>
<tr>
<td>Community Reaction to Federal Resource Management Policies</td>
<td>85</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>103</td>
</tr>
<tr>
<td>CONCLUSION AND RECOMMENDATIONS</td>
<td>112</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>115</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>121</td>
</tr>
<tr>
<td>Appendix A Municipal Marginalization</td>
<td>122</td>
</tr>
<tr>
<td>Appendix B Letter of Introduction</td>
<td>123</td>
</tr>
<tr>
<td>Appendix C Interview Questions</td>
<td>124</td>
</tr>
<tr>
<td>Appendix D Land Tenure Distribution in Santos Reyes Papalo</td>
<td>126</td>
</tr>
<tr>
<td>Appendix E Pedido de Agua Celebration in Concepcion Papalo</td>
<td>127</td>
</tr>
<tr>
<td>Figure</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>1. Map of municipios in Tehuacán Cuicatlán Biosphere Reserve and area of study</td>
<td>11</td>
</tr>
<tr>
<td>2. Tierra Caliente Vegetation</td>
<td>17</td>
</tr>
<tr>
<td>3. Tierra Caliente Resource</td>
<td>17</td>
</tr>
<tr>
<td>4. Tierra Templada Oak Forest</td>
<td>18</td>
</tr>
<tr>
<td>5. Illegal Extraction of an <em>Orcon</em> from Oak Forest</td>
<td>18</td>
</tr>
<tr>
<td>6. Tierra Fria Vegetation Mesophyll Cloud Forest</td>
<td>19</td>
</tr>
<tr>
<td>7. Tierra Fria Resource</td>
<td>19</td>
</tr>
<tr>
<td>8. Tierra Fria Resource</td>
<td>20</td>
</tr>
<tr>
<td>9. Tributary of the Rio Chiquito</td>
<td>20</td>
</tr>
<tr>
<td>10. Headwaters of the Rio Chiquito</td>
<td>21</td>
</tr>
<tr>
<td>11. Exterior of Church in Santos Reyes Pápalo</td>
<td>22</td>
</tr>
<tr>
<td>12. Detail of interior of Santos Reyes church</td>
<td>23</td>
</tr>
<tr>
<td>13. Remains of prehispanic foundation in <em>milpa</em> near Concepcion Pápalo</td>
<td>23</td>
</tr>
<tr>
<td>14. Volcan Prieto peak above Santos Reyes Papalo</td>
<td>24</td>
</tr>
<tr>
<td>15. Prehispanic <em>adoratorio</em> on Volcan Prieto peak</td>
<td>24</td>
</tr>
<tr>
<td>16. Entrance into El Cheve cave</td>
<td>25</td>
</tr>
<tr>
<td>17. Excerpt from page 15 of Codex Zouche Nuttall</td>
<td>30</td>
</tr>
<tr>
<td>18. Codex Laud page 23</td>
<td>48</td>
</tr>
<tr>
<td>19. INAH officials meeting with a Zapotec community to discuss land use near Monte Albán</td>
<td>61</td>
</tr>
</tbody>
</table>
### LIST OF FIGURES (Continued)

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Water <em>adoratorio</em> (shrine) on roadside near Concepcion Pápalo</td>
<td>68</td>
</tr>
<tr>
<td>21. Tlaloc, Aztec god of Rain with rainfall as described in the Codex Machliabechi page 89</td>
<td>74</td>
</tr>
<tr>
<td>22. Prehispanic burial stone in contemporary home in Concepcion Pápalo</td>
<td>76</td>
</tr>
<tr>
<td>23. Stone axehead and necklace bead found during home construction Concepcion Pápalo</td>
<td>76</td>
</tr>
<tr>
<td>24. Tomb entrance in Cerro Chentil, Concepcion Pápalo</td>
<td>83</td>
</tr>
<tr>
<td>25. CDI Tourism Workshop in Cuicatlan, Oaxaca</td>
<td>99</td>
</tr>
<tr>
<td>26. The Cheve Cave plain area</td>
<td>100</td>
</tr>
<tr>
<td>27. Traditional handmade ceramics of Santos Reyes Pápalo</td>
<td>102</td>
</tr>
<tr>
<td>28. Traditional offering at the mouth of Cheve Cave</td>
<td>107</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1. Knowledge and Beliefs Regarding Prehispanic Sites</td>
<td>77</td>
</tr>
<tr>
<td>2. Levels of Awareness and Acceptance of Federal Government</td>
<td>86</td>
</tr>
<tr>
<td>Policies on Forest Resource Use</td>
<td></td>
</tr>
<tr>
<td>3. Levels of Awareness and Views of INAH and Archaeological</td>
<td>94</td>
</tr>
<tr>
<td>Preservation</td>
<td></td>
</tr>
<tr>
<td>of Cultural Resources</td>
<td></td>
</tr>
</tbody>
</table>
Para Amaya

La Que Me Ha Creado Una Nueva Identidad
PREFACE

ORACION AL DUEÑO DEL AGUA

[CUICATEC PRAYER TO THE SPIRIT OWNER OF THE WATER]
As told by don Ernesto Suarez of Concepción Pápalo, Oaxaca Mexico translating from Cuicatec into Spanish

Nosotros venimos aquí toda la gente del pueblo porque queremos agua y tú como madre naturaleza como dueña que es el agua no nos castigue del agua porque cada año va creciendo el pueblo y tenemos una costumbre de agradecerte. Aquí estamos chicos y grandes y venimos todos a pedir el permiso que nos des más agua, que no le falte agua a nuestras plantas, que no nos haga falta el agua para todo el uso de darle a los animalitos que tenemos. Venimos y aquí vamos a convivir un rato. Vamos a comer y de lo que traemos es una ofrenda reciba usted. Aquí traemos pollo, traemos guajalote, traemos cerveza, traemos refresco, traemos aguardiente. Con gusto vamos a depositar esta ofrenda, este regalo y que usted(s) la acepten. Aceptenlo pero que también no nos castigue con el agua. Venimos para que nos cuide el agua y también el bosque, los pinos. Que los árboles no se sequen que con la misma humedad del terreno que aquí tenemos que los árboles crezcan que los árboles nos hacen falta para construir nuestras casas que los recursos que salen de esta madera pues todos salimos beneficiados.

[We come here all of the people of the village because we want the water and you as mother nature and dueña (spiritual owner) of what is the water, don’t punish us with a lack of water because each year our town grows and we have the custom of giving thanks to you. Here we are children and adults and we come to ask your permission that you might give us more water, that our plants do not lack water, that we do not lack water for our daily needs of nurturing our livestock that we have. We come here to share with one another. We are going to eat together and please accept our offering to you. We bring you chicken, we bring you turkey, we bring you beer, we bring you softdrinks, and we bring you alcohol. With pleasure we are going to leave this offering, this gift and we hope you accept it. Please accept it but please do not punish us with a lack of water. We come to ask you to take care of the water, the forest, and the pine trees. We hope that the trees do not dry up. With the same water of the land that we have here we hope that the trees grow so that we will have the trees to build homes and that the resources of the wood benefit all of us.]
INTRODUCTION

The Context

The country of Mexico has often been considered to be one of the most biologically and culturally diverse regions in the world. Boasting a history of civilizations dating back to before the Western Christian Era, the Mesoamerican region, ranging from the modern state of Guanajuato in the north to modern day Honduras, has been considered to be one of the cradles of human civilization along with Mesopotamia, the Nile, and the Yellow River (Mann 2005: 177). Today the challenge for politicians, environmentalists, anthropologists, archaeologists, and geographers in Mexico is to choose which approach to take to manage the precious cultural and natural resources of Mexico. Caught in the middle of these Western approaches are the numerous indigenous groups who, since the arrival of Europeans, have been fighting to preserve their ways of life and keep their traditional lands.

The question is whether Mexico should follow a path of preservation or conservation. In a preservation model Mexico would limit the access of its resources to all, including the indigenous people whose cultures originated in these lands. In essence Mexico would “quarantine” its resources. With the conservation approach, the Mexican government could achieve something unprecedented, the total inclusion and participation of its indigenous peoples in the management of these lands. With the political backdrop of crises such as the 1994 Zapatista uprising resulting from indigenous peoples and their demands for land, economic assistance, and more self-determination, the challenge for the Western scientific community is to find a way to connect to the worldview of a significant group of people who have historically been marginalized by the popular
dominant culture. This challenge for Mexico, and in many ways for the world, has come together in the southern state of Oaxaca.

Oaxaca, Mexico is a literally a state within the country of Mexico, but in many ways it is a microcosm of the world with its cultural and biological diversity. In a state approximately the size of Indiana, one can find 16 different native linguistic cultural groups that can be divided into numerous dialects that are not mutually intelligible. Its plant and animal diversity is greater than or at least equal to that of the continent of Europe. This ecological diversity is due to the sharp contrasting gradients in the mountain ranges that create numerous microclimates as well as Oaxaca’s latitudinal location in the tropics. Within these microclimates numerous species have evolved that are found nowhere else in the world. Oaxaca’s native ethnolinguistic diversity corresponds with the biodiversity found within the state. There are 16 different ethnolinguistic groups registered in Oaxaca that actually comprise 157 different indigenous languages, which belong to 5 different linguistic families. The number of indigenous languages found in Oaxaca supercedes all other states in Mexico and Central America (Garcia-Mendoza 2004: 25).

The correlation between biological diversity and cultural diversity is logical. Harmon (1996: 2002) detailed this correlation when he discovered that 10 out of the top 12 countries with incredibly high plant and animal biodiversity also correspond with the top 25 most linguistically diverse countries. In the case of Oaxaca, as in many other biologically diverse parts of the world, different cultural groups have occupied and settled distinct environments where they developed distinct systems of classification and
ordering of the various plants and animals found in each of their unique geological and climatic units (Avila 2004: 482).

Mastering a knowledge of their natural environment, many of these early cultural groups were hunter/gatherer societies that later formed into more complex, sedentary civilizations that constructed monumental architecture and became dependent on agriculture. Among the most powerful and influential of the sedentary cultural groups in Oaxaca that mastered its natural environment was the Zapotec civilization in the central valleys of Oaxaca. This cultural group boasts the construction of North America’s first planned city, Monte Alban. This Zapotec city dates back 500 years before the time of Christ (Marcus and Flannery 1996: 165).

North of the valley of Oaxaca lies a region known as the Cañada, a rugged arid land of river canyons that converge and open to form the Tehuacán Valley. Richard MacNeish in the late 1960s excavated in this region. In an area known as Coxeatlán cave, he discovered the earliest known forms of maize (*Zea Mays*) and deduced that the domestication of one the world’s most important cereals occurred in this region. From the Tehuacán-Cuicatlán region, maize spread throughout the Americas. Modern maize as we know it today was created from human selection, exploitation, and cultivation of *natural recombinants* between two wild grasses (Eubanks 2001: 492). This early form of genetic modification occurred in this arid region of the Tehuacán Valley and the adjoining Cuicatlán Cañada — a region of incredible botanical and biological diversity. For the past seven thousand years, this region has been cultivated and irrigated making it the hearth of sedentary Mesoamerican culture (MacNeish 1972). Over the past few millennia, many cultures have either migrated to or developed in this region.
The Conflicts and Purpose of Study

Recognizing the precious and fragile biodiversity in the region, the Mexican government established the Tehuacán-Cuicatlán Biosphere Reserve in 1998 by decree. According to the National Commission of Natural Protected Areas (CONABIO), the Tehuacán-Cuicatlán Biosphere Reserve was created out of the concern from many scientists and local communities to protect the great biological and cultural wealth from further ecological and physical damage (CONABIO 2003). The reserve straddles the southern Mexican states of Oaxaca and Puebla over an area of approximately 3800 square miles. This declaration, however, has not gone without numerous problems. Today this biosphere reserve is one of Mexico’s largest, most ethnically diverse, and poorly managed of all the Mexican biosphere reserves. Since the arrival of Europeans in the 16th century, many of the native ethnic groups have asserted their claims over these lands, not to promote Western style use of the natural and cultural resources for profit in a capitalist system, but to simply plant their crops and feed their families. Among them are the Cuicatec, the largest ethnolinguistic group in the Cañada portion of the reserve.

Due to its rich ethnic heritage and as a cultural hearth for sedentary Mesoamerican cultures, the Tehuacán-Cuicatlán region is dotted with numerous archaeological sites that boast monumental types of architecture. The Mexican government agency, The National Institute of Anthropology and History (INAH) has played a significant role in delineating and identifying many of the archaeological sites, but has had difficulty in protecting and maintaining these sites due to a lack of funding and personnel. Local indigenous communities and INAH have clashed over the protection and management of archaeological sites and their artifacts and due to
indigenous socioeconomic pressures for expanded land use for subsistence agriculture and home construction. As a result of INAH’s financial setbacks, many sites remain unexcavated or abandoned and have subsequently been looted or built over.

Spencer and Redmond (1983; 1983; 1997) have surveyed and mapped this region extensively and have excavated several Early Formative and Classic sites in the Cuicatlán Cañada area most notably at La Coyoterla and Quiope (1983). Weitlaner (1959; 1969) provided the first in depth ethnography of the Cuicatec people. His work inspired E. Hunt and R. Hunt (1972; 1974; 1976), and J. Hopkins (1974; 1983) who were the first researchers to do the most extensive historical and ethnographic work in an analysis of Late Postclassic, Colonial and contemporary irrigation management practices. Since 1995 Van Doesburg has built on Eva Hunt’s work from an ethnohistoric perspective in his thorough work and interpretation of two Cuicatec codexes: Codice Porfirio Díaz and the Codice Fernandez Leal (2001). In their collective work, they documented the Cuicatec people’s social organization and have traced it back to pre-Columbian times.

Despite the region’s biological and cultural wealth, marginalization and exploitation of these native ethnic groups have persisted since colonial times. Today, the Cañada region and its adjacent highlands remain as one of the poorest regions in one of Mexico’s poorest states. Many indigenous men leave their villages to find jobs in larger Mexican cities or even the United States. Many never return. The numerous ethnic groups whose members remain, eke out an existence in many remote highland and canyon villages where they have often clashed with Mexican government officials representing the federally protected Tehuacán-Cuicatlán Biosphere Reserve or INAH over land use.
In this particular region, two resources share an interdependent relationship and are valued differently by the Western land managers, NGOs and scientists of the Mexican government and the Cuicatec communities that are culturally tied to the land. The “resources” are the biologically rich natural environment and the numerous archaeological sites. A third resource, the human resource – the indigenous communities – face a significant challenge: how to manage their natural and cultural heritage in the face of Western land management principles and values mandated by the Mexican federal government. These are Western values that do not always reflect their social, economic, and cultural needs – needs that are worsened by continuing emigration and socioeconomic marginalization. As a result of the intensity of federal conservation of the Tehucan-Cuicatlan region, the social context of the original occupants has been severely neglected (West and Brockington 2006).

I wish to answer the following guiding questions from my fieldwork and research:

- **To what extent has Western style land management been beneficial to the Cuicatec people?**
- **In what ways has it caused them problems?**
- **From their perspective, what are their resources? How has their perspective changed over time?**

**Description of Participant Population**

With the exception of Eva Hunt’s (1972) thorough and extensive ethnohistorical account of the Cuictatec people, prior, in-depth, ethnographic work on the Cuicatec has been limited and often quite negative. Starr’s account (1900) reflects many of the same attitudes found in the mestizo region at lower elevations in the Cañada region even today:

The Cuicatecs at Pápalo, where we examined them, are disagreeable and uninteresting Indians. They do not present a definite physical uniformity… Few
women wear notable dress … Of all the Mexican Indians visited by us these were the least agreeable, the least intelligent, and the most stubborn. We had hoped this bad impression was peculiar to ourselves, but find that they bear much the same reputation among others who have come into contact with them (Starr 1900: 68; 1902: 39).

Another account from 1945 provides a vignette of the Cuicatecs implying that they are lazy and not accustomed to working hard to feed themselves.

Son pequeños de estatura, y como la mayoría de la poblacion indígena de México se alimentan de maiz, frijol, chile, legumbres y ocasionalmente carne. Se dedican a cultivar los productos arriba citados; pero no son muy diligentes ni apegados al trabajo. [They are short in stature and like the majority of the indigenous population of Mexico they consume maize, beans, chiles, legumes, and occasionally meat. They cultivate the products cited above, but are not very diligent or dedicated to their work.] (Nieto Hernandez 1945: 332)

Because so little ethnographic work has been done on the Cuicatec people, I see this research as an opportunity to give a voice to this poorly understood and socially marginalized group of people in the Cañada. I see this work as extremely relevant in light of the new and continuing attention given to the region by the Mexican government and NGOs for its rich biological and cultural assets – assets that have been managed, developed, and used by the Cuicatec for centuries.

Many of the communities in the biosphere reserve are indigenous communities that trace their cultural heritage to pre-hispanic times and are the original and historical inhabitants of the land. Among them are the Chinanteco, Chocholteco, Cuicateco, Mazateco, Mixteco, Nahua, and Popoloca. Each of these groups has its own unique language, history, and ecological/cultural perspectives.

I chose to do a case study of two villages in the district of Cuicatlán. The district of Cuicatlan is composed of 20 municipios (akin to a county) and numerous towns and
villages. As a result of reviewing published Mexican government data from the National Commission of Natural Protected Areas (CONANP) and by consulting staff archaeologists with the Oaxaca regional office of the National Institute of Anthropology and History (INAH), I identified two villages that have a significant amount of municipal territory within the biosphere reserve. These two towns or pueblos are known as Santos Reyes Pápalo and Concepcion Pápalo. Both are cabeceras (county seats) of municipios of the same names, respectively. Among the inhabitants of the region, Santos Reyes Pápalo is often shortened to simply Reyes and Concepcion Pápalo is often reduced to Pápalo. These diminuitives are reflected in the findings of this study. Santos Reyes Pápalo has a population of 2012 and Concepcion Pápalo has a population of 700. These two towns are dominated by the Cuicatec indigenous ethnolinguistic group. Although in the United States indigenous identity is often determined more by bloodline and self-identification, for the purposes of framing this study, indigenous people in Oaxaca and in greater Mexico will follow the classification system that is more common in Latin America. Hoobler (2006) ascribes indigenous identity to those individuals who compose a community or neighborhood where the inhabitants maintain an indigenous language in the household, identify themselves as indigenous and or maintain traditions such as religious rites, beliefs or traditional dress that can traced to a prehispanic origin.

The Cuicatec ethnolinguistic indigenous group numbers approximately 12,500 and is found exclusively in the Cuicatlán district dominating several towns in the highland Tierra Templada (between 750 meters and 1850 meters) and Tierra Fria (between 1850 meters and 3600 meters) regions. Much of their territory is within the boundaries of the Tehuacán Cuicatlán Biosphere Reserve (Avila 2004: 490).
Both of these municipal territories contain significant cultural (archaeological) resources ranging from the Post Classic Era (900AD – contact) as well as Spanish colonial architecture dating to at least the 17th century (Robles Garcia personal communication). This is not a coincidence as most of the Cuicatec pueblos today are located in the same locales as at the time of European contact. Concepcion Pápalo, as a cabecera since 1544, has retained much of its territorial boundary and political importance over its dependencies (Hunt 1972: 169). Many of the visible archaeological sites found in or near the pueblo are testimony to the antiquity of the town. Ancient cacigazgo territories¹ are preserved in present municipal arrangements. In the case of Santos Reyes Pápalo, it was a dependency under the control of Concepcion that achieved independent status during the colonial era (Hunt 1972: 169). From my discussions with many of the community members in both villages, many of their houses were built on previously occupied housing sites as evidenced by the material signatures of stone tools, pottery, human remains, pottery shards, and the occasional engraved stone. The National Institute of Anthropology and History (INAH) has conducted archaeological surveys in both Santos Reyes Pápalo and Concepcion Pápalo. In the community of Concepcion Pápalo, INAH has attempted to protect two significant archaeological sites and in Santos Reyes Pápalo it has restored and sealed a high altitude archaeological site in the mountains above the pueblo.

Economically, the region of Cuicatlán suffers from a high level of socioeconomic marginalization — just below the category of very high. (ECOPRODES 2001: 40).

¹ Large landed estates in southern Mexico that were controlled by the descendants of the indigenous nobility during the colonial era and based on Pre-Hispanic land holdings.
Among the primary indicators for this socioeconomic marginalization are: low levels of per capita income, a lack of household infrastructure, low levels of educational attainment, and increasing emigration to industrial centers such as Tehuacán, Mexico City or the United States. This contributes to a decline in population in many towns as well as a gradual process of acculturation (Marginación Municipal 2002: 12). The chart (Appendix A), adapted from the Marginación Municipal 2000 demonstrates the characteristics and the differences between the two pueblos. The municipio of Santos Reyes Pápalo, according to the publication, has a marginalization ranking of very high and Concepcion Pápalo has a ranking of high.

In the higher elevations of the Cañada de Cuicatlán region, the majority of land ownership is communal and mostly subsistence based. In this region, there are serious conflicts between different Cuicatec communities that have further contributed to the community’s division (ECOPRODES 2001: 38). Due to the lack of resources, the Cuicatec people have used the forests at higher elevations as a source of fuel for heating and cooking. This has increased the deterioration of the natural resources of the area (ECOPRODES 2001: 40).

Traditional land use by the Cuicatecs has been deemed by agricultural economists to be damaging to the environment. The Cuicatecs have historically implemented a process of field use and abandonment that over time has contributed to a loss of topsoil from erosion on higher elevations (McAuliffe 2001: 47). Since colonial times, the introduction of goat herding into the region, particularly in the Tierra Caliente region, has also contributed to significant destruction of plant habitat due to grazing (Parkswatch 2003).
The convergence of both archaeological sites (cultural resources) and biosphere reserve land in these two villages led me to research the unique view and experience of community members in these two towns.

Figure 1. Map of municipios in Tehuacán Cuicatlán Biosphere Reserve (outlined in black) and area of study (in dotted square)
**Methodology**

This is a pilot case study of two villages that fall under the jurisdiction of three Mexican government agencies: el Instituto Nacional de Antropología e Historia (INAH), la Comisión Nacional de Áreas Naturales Protegidas (CONANP), and la Comisión Nacional Para El Desarrollo De Los Pueblos Indígenas (CDI). I used the qualitative grounded-theory approach to determine relevant themes from my audio transcriptions and secondary source research. In addition, I also took extensive field notes to aid in comparing my field observations with the themes that I would later pull from the transcribed interviews. To achieve this, it was necessary:

- to assess and determine the two communities’ attitudes about the reserve’s natural and cultural resources by conducting interviews in the communities of Santos Reyes Pápalo and Concepcion Pápalo.

- to review and interpret published socioeconomic data regarding literacy rates, economic marginalization, emigration, and land use and ownership among the Cuicatec to determine if there have been improvements or a decline in the socioeconomic status of the communities since the foundation of the reserve.

- to interview biosphere reserve officials and archaeologists employed by the INAH (Instituto Nacional de Antropología e Historia) to ascertain official government positions and discourse regarding the identification of natural and cultural resources, how they should be utilized, and their official communication and interaction with indigenous communities.
• to conduct pedestrian surveys of the known local archaeological and cultural sites with the company of local guide to determine proximity to the town and if the sites were still in use.

In the INAH regional office in Oaxaca City I conducted preliminary research to learn more about the cultural resource management in the valley of Oaxaca and finally continuing on to the Cañada de Cuicatlán area in the northern part of the state. Once there I spent five weeks researching and conducting interviews in the San Juan Bautista Cuicatlán district as well as working with the Commission for Indigenous Development (CDI) staff, to interview informants for the study. Both the municipal government of San Juan Bautista and the regional director gave me permission to use their facilities’ resources to complete my investigation. My primary informant, the commissioner of ecology for the San Juan Bautista de Cuicatlán municipal government, facilitated meetings between myself and several of the district mayors of the Cuicatlán, Cañada region to aid me in recruiting interviewees in the villages. I also attended the public regional meetings of the surrounding village representatives hosted by the CDI where I also verbally recruited interviewees for my study. I speak Spanish fluently and conducted all of my interviews in Spanish.

Before beginning my fieldwork I was told by several INAH officials the importance and cultural appropriateness of having official permission from a government agency in the form of a signed letter indicating that my project had been reviewed and was supported by the federal or Oaxacan state government. The INAH Monte Alban office in Oaxaca City drafted and signed a letter outlining my proposed research objectives and their support. From federal government agency representatives to the
indigenous community members involved in my study, I was told that indigenous communities throughout Oaxaca do not trust outsiders entering their lands. *El Permiso* (Permission) was granted and official documentation was provided (Appendix B).

While they fall within the larger Mexican sociopolitical cultural framework, indigenous communities maintain many local customs and local autonomy that could preclude any private or even some official activities from occurring. Without official documentation I would not be able to have an audience with the town mayor. This documentation coupled with a formal introduction by my friend and primary informant, the locally respected commissioner of ecology in Cuicatlán, facilitated my access and acceptance into all of the Cuicatec villages where I conducted my interviews. It was the mayor in both cases that granted me permission to stay in the village, conduct interviews of the town inhabitants, and he even arranged lodging. At all times while conducting my interviews I was accompanied by a representative of the local municipal government. These representatives, who were local community members, helped to lower potential feelings of anxiety and validated my research as something officially supported by the local municipal government. These representatives, who were bilingual Cuicatec/Spanish speakers, also functioned as translators when the interviewees preferred to communicate in Cuicatec. Once in a village, I employed a network sampling method. Using this method, I conducted 22 semi-structured recorded interviews in Santos Reyes Pápalo, and 20 in Concepcion Pápalo. All individuals interviewed ranged in age from 24 – 85 years. In addition, I interviewed several government officials from the CDI, INAH, and CONANP. All interviews were semi-structured ethnographic interviews. My style of interviewing was open-ended with volunteer samples from the villages. These
interviews were for approximately one hour and took place in a public setting or in the
interviewee’s home. Issues of primary concern during these interviews were perceptions
and knowledge of natural and cultural resources. Before entering the field, all questions
were examined for cultural appropriateness by my primary informant, the commissioner
of ecology in Cuicatlán, a native to the area, as well as by two INAH archaeologists who
had completed extensive fieldwork in the Cuicatlán region. The interview questions
started with general questions about the daily lives of the informants followed by more
in-depth questions about the informant’s perceptions and values regarding the cultural
and natural resources in their locale. In Appendix C are some of the questions that I used
to promote discussion. The interviews often took many different directions depending on
the interests and knowledge of the interviewee.

The Observed Resources in Question

Both the Mexican federal government and Cuicatec communities have assigned
different values to several different types of natural and cultural resources. Through
environmental necessity, strong governmental proxy institutions (e.g. public education
and non-Cuicatec teachers), some values have overlapped or been imposed from the top
down. This section will provide an overview of the cultural and natural resources in
question and those that will be discussed in this research. Sources for this information
were personal observation, published and nonpublished sources from the Mexican federal
agencies of CONANP, INAH, and the CDI, NGOs, and interviews with government
representatives of the aforementioned agencies and the people of the municipios of
Santos Reyes Pápalo and Concepcion Pápalo.
Both Concepcion Pápalo and Santos Reyes Pápalo municipios have territory that lies in the three climatic zones of Tierra Caliente (sea level to 750 meters), Tierra Templada (between 750 meters and 1850 meters), and Tierra Fria (between 1850 meters and 3600 meters). The two municipios have incredible forest resource wealth in a mosaic of different types of high altitude and temperate dry and humid forests. In the two municipios at increasing altitudes are oak forests (1600m-2900m) that gradually change to incorporate several species of pine to form a mixed oak and pine forest with greater altitude to gradually become dominated by stands of pine at the higher mixed pine and oak forests at up to 4000m in altitude (Torres Colin 2004: 107-108). Also unique in this area are large stands of mesophyll (cloud) forest (1000-2500m) found in areas of significant rainfall (>2000mm) and are marked by cool temperatures (55°-68°F) and a rich density of floristic diversity (Torres Colin 2004, Rzedowski and Palacios Chavez 1977).

Unfortunately, much of this forest wealth was overexploited by the Mexican paper company, Papelera Tuxtepec from the 1950s to the 1980s and destroyed in 1998 (ironically the same year as the founding of the Tehuacán-Cuicatlán Biosphere Reserve) by a devastating forest fire. With the departure of the paper company and the destruction caused by the forest fire, much of the forest has fallen under the jurisdiction of the Mexican federal government and since 2000 much of the Tierra Fria region has undergone intensive reforestation. Restrictions on forest use have extended to the Tierra Templada and Tierra Caliente regions as well. Forest resources in all three of these...
regions traditionally have ranged from firewood, wild edible plants, medicinal plants, and grazing lands to lumber for building materials.

Figure 2. Tierra Caliente Vegetation

Figure 3. Tierra Caliente resource
Scientific Name: Parkinsonia praecox Common Name: Mantecoso
Medicinal Plant: Bark of tree yields a powdery antidote for scorpion stings
Figure 4. Tierra Templada Oak Forest

Figure 5. Illegal Extraction of an Orcon (corner post) from Oak Forest
Figure 6. Tierra Fria Vegetation Mesophyll Cloud Forest

Figure 7. Tierra Fria Resource Common Name: Nanacate Blanco – Edible Mushroom
Figure 8. Tierra Fria Resource
Common Spanish Name: Oreja de gata      Cuicatec Name: Ni ku du bebichi
Scientific Name: Lentibul Aracea Pinguicula Use: Medicinal plant for stomach aches

Water Resources

Both Concepcion Pápalo and Santos Reyes Pápalo rely on rainfall for drinking water and to irrigate their crops. Irrigation, although limited, is implemented in largely in the Tierra Templada region. Rainfall on the slopes of both communities is dependent on the upper watersheds at the higher elevations found in the upper Tierra Fria forests. This resource, intricately tied and reliant upon large intact stands of forest, has been a traditional resource for many indigenous cultures. Both abundant summer rainfall which recharge seasonal alluvial systems and underwater acquifers are crucial to the survival of both communities.

Figure 9. Tributary of the Rio Chiquito
Because of the importance of water for all life, it maintains a unique status as both a natural resource as well as a cultural resource that has been anthropomorphized into a deity to be revered, worshipped, and respected. Sources of water have often been the sites of shrines and even pilgrimages since the pre-Hispanic era.

**Cultural Resources**

Cultural Resources in the region have both overlapping and contrasting interpretations between the state and the communities in the region. INAH has as its mission to guarantee the research, the protection, the conservation, and diffusion of information of the prehistoric, archaeological, anthropological, and historic colonial
patrimony of Mexico (INAH website 2007). Limited archaeological excavations have been completed in the area. What is largely known of the archaeological past is mostly from survey work and by consultation with local officials. In Oaxaca, many researchers have been puzzled as to the level of artistry found in the interior of the church of Santos Reyes Pápalo, a church in such a remote village. The detailed late 17th and early 18th century baroque interior of the church has achieved some notoriety and acknowledgement among both federal and private researchers (Gonzalez 2001). Although some preservation work has been completed on the retablo inside, very little archival research has been successfully completed to determine the exact dates or reasons for the ornate interior.

Within both the municipios of Santos Reyes Pápalo and Concepcion Pápalo, through archaeological surveys and local consultation, INAH has documented the existence of prehispanic sites located near or within settled areas as well as those that are in more remote, uninhabited, higher altitude locations. Due to a lack of funding and personnel, INAH has been unable to conduct in-depth research in these areas.

Figure 11. Exterior of Church in Santos Reyes Pápalo
Figure 12. Detail of interior of Santos Reyes church
photo courtesy of Joel Crisanto

Figure 13. Remains of prehispanic foundation in milpa near Conception Pápalo
Figure 14. Volcan Prieto peak above Santos Reyes Pápalo, elevation 3200m and location of prehispanic *adoratorio* (shrine) site.

Figure 15. Prehispanic *adoratorio* on Volcan Prieto peak
Natural Resources as Cultural Resources

For many indigenous cultures throughout Mesoamerica, mountaintops and caves have special spiritual significance. Within the study area, some of these locations have received significant attention not from just the local inhabitants but also federal, state, private, and even international organizations. These natural/cultural resource sites have been visited by archaeologists, environmentalists, speleologists and some tourists. The most well known cave is El Cheve in the municipio of Concepcion Pápalo. Considered by a National Geographic expedition to be the deepest cave in the Americas and among the top 10 in the world (National Geographic 2004: website), it has brought international attention to this little known corner of Oaxaca. Archaeologists have found evidence of prehispanic ceremonies performed in the cave (Steele 1997:30). Today it still retains special significance to many Cuicatec villages throughout the area as a spiritual place of pilgrimage. El Cheve cave has evoked different values by the diverse interest groups in the area and can serve to highlight many diverse themes surrounding the conflicts of community-based resource management in the region. Who will manage these resources? How will the interests of
science and tourism be managed with the spiritual beliefs of the original inhabitants of this region? What impact will poverty and marginalization have on their acceptance or resistance to these changes?

**Theoretical Base**

*Traditional Land Use vs. Western Management: Cultural Resources*

Despite continued disagreements and conflicts between archaeologists and communities, (especially indigenous communities) archaeology today has evolved to be a more inclusive practice than before. As communities have struggled for economic, cultural, social, and political control of their own resources, many scientists that have a research interest relevant to these communities have had to acknowledge, collaborate, and even cede to the demands of politically active communities. In the field of archaeology, archaeologists (although there have been detractors) have had to make the extra step of incorporating the relevant communities’ demands concerning the excavation, the duration of time spent in the field, and the location of the curation of archaeological artifacts. This new type of archaeology was first labeled as Public Archaeology by Charles McGimsey (1972). McGimsey calls on the professional archaeologist to have a social conscious in sharing and informing the public of the importance of the discipline. “Knowledge”, McGimsey states, “is meaningless and generally destructive unless it carries with it responsibility. The greater one’s knowledge of archaeology, regardless of formal training in the subject, the greater the responsibility to take the initiative, to lead, to teach, and to persuade others to do likewise.”
Mexican archaeologists in Oaxaca use a very eclectic approach acquiring and interpreting data. They are very skilled in the science of archaeology with a knowledge of new techniques such using ground penetration radar or new techniques of biochemical analysis. The social context in Oaxaca, however, is quite different and unique as compared to other areas of Mexico or in other parts of the world. Oaxacan archaeologists acknowledge by need and sometimes by choice the many different values and perspectives of the still intact and numerous indigenous ethnolinguistic communities. As a result, agreements and compromises must be made with many indigenous communities regarding excavation and preservation. When conducting an excavation, archaeologists are encouraged to develop close ties with the communities and find out what they would like to learn. This approach has yielded some very positive results with the formation of community run and owned museos comunitarios (community museums) where the communities have determined the scientific/archaeological agenda with the collaboration of government officials and archaeologists. Where a lack of consideration or dissemination of information has occurred, archaeologists have had to face dangerous situations with certain communities becoming hostile and violent because they were not informed about the archaeologists’ intentions.

This flexible/eclectic type of approach to cultural resource management can be best characterized by the Postprocessual theoretical approach. Several Oaxacan archaeologists have described their experiences and the benefits of being flexible in their community relations and scientific questions.

Nelly Robles Garcia (2000; 2003) and Jack Corbett (2000) describe the complexity of the Mexican context of archaeology. In what she describes as
“overlapping mosaics” Robles explains the role of the numerous stakeholders in managing Mexico’s cultural patrimony. These stakeholders are comprised of poor mestizos, diverse ethnolinguistic indigenous groups, wealthy Mexicans, domestic and international tourists, and even competing interests amongst various Mexican government agencies.

While the status of being open to the public is not a uniform condition for the archaeological heritage of the country, it can be considered representative of a current policy tendency toward cultural heritage, which is to exploit and overexploit the aesthetic attractions of the sites as a commodity to generate income for the national treasury. This, however, does not take into account the variety of interests among communities and individuals whose lands are overlapped by the pre-Columbian sites, and without taking into account the differing perceptions archaeological remains generate among differing populations (Robles 2000).

In the state of Oaxaca, Robles’ home state, many native groups have preserved many prehispanic material and nonmaterial traditions in a *de facto* manner despite centuries of forced acculturation at the hands of Spanish colonial authorities and later the modern Mexican nation state. Native groups succeeded at maintaining their cultural integrity by imbedding their beliefs or by hiding them from Spanish and Mexican authorities (Corbett 2000: 14). *De jure* cultural resource management has taken the form of laws and institutions that have been created for their protection.

Although archaeologists may have an agenda and values concerning heritage preservation, different communities may not share the same values. The “resource” may not be seen as something to conserve but to use:

Field experience in the practice of conservation archaeology reveals a substantial range of interpretation as to the significance and value of archaeological sites... In this sense the interpretation may range from archaeological site to tourist center, place of employment, tillable ground, community lands, ejidos, sources of
construction materials, infrastructure right-of-way, private property, and "the only piece of land" certain social sectors may ever own (Robles 2000).

Unlike the politically charged and often confrontational dealings between archaeologists and campesinos typical in the tourist saturated Central Valleys in Oaxaca, the Cañada region has a different issue: one of abandonment and unawareness. As Robles in an email described:

Land tenure and social inequality are among the issues that define the health of all resources in the region [Cuicatlán]. I saw there the most dramatic contrasts between landowners and those just socially owned (ejidos, communities). Regarding the archaeological resources, the most damaging fact, I would say, is the lack of information. People don't care because nobody gives them a reason to care! (Robles 2006: personal communication).

Raul Matadamas, (2002) a contemporary of Robles Garcia, writes of the diversity of understanding and perspective amongst indigenous communities from his extensive fieldwork throughout Oaxaca and particularly in the Cañada region. As an archaeologist, Matadamas takes a very strong post-processual approach.

La convivencia con los diferentes pueblos y sus formas de pensar siempre han indicado que cada una tiene un punto de vista sobre los vestigios prehispanicos. [Living with different indigenous communities and their forms of thought has indicated that each one has a point view about prehispanic vestiges.](Matadamas 2002: 116)

Matadamas, after spending many years in the field, has developed a close understanding of the indigenous portion of the mosaics that Robles refers to. He calls for the science of archaeology to take into account the traditional knowledge based in oral traditions and sacred locations of indigenous peoples of Oaxaca. Matadamas stresses that the archaeologist should attempt to make connections between Mexican prehispanic thought and contemporary indigenous modes of thinking today. This understanding of the diversity and richness of indigenous thought can only be attained through an intensive ethnographic component to the research. His point, however, is not simply for the archaeologist to get better results for publishing, but essentially for the archaeologist to "go native" to some
degree. In several of the communities that I visited, Matadamas was very well known and respected for his genuine respect given to the indigenous communities and their belief systems.

Matadamas traces the influence of new types of land management upon the indigenous people of Oaxaca from the colonial period to now. He sees a disconnection between the native people and the land, but one that was brought about by the colonial conquest and most recently, the laws from the early 1990s whereby Mexican citizens could sell off publicly owned community land. This combination of factors has caused several generations to lose the respect and traditional understanding of the value of the natural and cultural resources (2002: 118). Instead, Matadamas asserts that the memory of a life long ago with a strong connection to the land is now fragmented into many disjointed memories and stories. He likens this to the pre-Columbian Codex Nuttall. On page 15, the codex describes a mountain as a living organism. The feet, Matadamas says, are the base of both the mountain and the community. Without the feet, the self-sufficiency of the community (the remaining head and body) cannot be sustained. The colonial era took away “the feet” of the indigenous people. Traditional practices such as making offerings will change or possibly disappear. As a result the head and body became part of a new culture (Matadamas 2002: 122).

Figure 17. Excerpt from page 15 of Codex Zouche Nuttall
Today many indigenous communities have a desire to learn about their prehispanic past. Unfortunately, due to a lack of attention and funding from the Mexican federal government and many communities’ more pressing socioeconomic needs, many archaeological sites are often ignored, abandoned, or plowed under. Some communities in Mexico, however, have sought to take charge of their own cultural resources and have begun to align their community economic and cultural interests with those of INAH. In several communities in the Mixteca Baja and Oaxaca Valley regions, towns have formed *museos comunitarios* that have as their main theme – archaeology. In these communities, although the excavations have been done by professional archaeologists, the museums are run, staffed, and maintained by the indigenous people themselves, not outsiders. The townspeople are able to prepare and present the image of their community as they desire (Ardren 2002; Hoobler 2006). This grassroots development has what Hoobler (2006) calls a decolonizing effect whereby a community that had previously suffered from sociocultural marginalization and racism begins to have a rebirth in its cultural pride. The archaeological artifacts that had been previously hidden with shame and/or sold to foreigners are now proudly shown in the museum to outsiders. There are small economic benefits to this as well from the modest profits made from the entrance fees from the town museum.

This type of scientific and community collaboration also builds a strong case for the post-processual field of Community Archaeology (Marshall 2002). Although this form of archaeology is not new, it has come to the forefront in recent years particularly in what McNiven and Russell (2005) have labeled as “settler-colonial” contexts. In community archaeology, the use of oral tradition, on the part of the archaeologist is
fundamental to making interpretations and comparisons to archaeological evidence found at a site. On the other hand, the science of archaeology can also be used to corroborate and support indigenous oral tradition and land rights issues and conflicts between indigenous communities and between indigenous groups and governments (McNiven, Russell 2005: 245). Most importantly, it is the community near the site or representative of the culture being studied that sets the research agenda and goals of the archaeological project.

*Traditional Land Use vs. Western Management: Natural Resources*

David Harmon (2002, 2003) discusses the contrast between tangible economic values of a resource such as a park or archaeological site and the intangible values which he asserts “lie at the heart of the protective impulse…” (2003: 55). Intangible values he describes as being, “collectively defined as those which enrich the ‘intellectual psychological, emotional, spiritual, cultural, and/or creative aspects of human existence and well being.’” (Harmon 2003: 55 from WCPA 2000). As a member of the Task Force on Non-Material Values of the IUCN’s World Commission on Protected Areas, Harmon has contributed to a list of 11 major types of intangible or nonmaterial values:

1. **Recreational Values** – The intrinsic qualities of natural areas that interact with humans to restore, refresh, or create anew through stimulation and exercise of the mind, body, and soul (i.e., recreation).

2. **Therapeutic Values** – The relationship between people and natural environments in protected areas that creates the potential for healing and for enhancing physical and psychological well-being.

3. **Spiritual Values** – Those qualities of protected areas that inspire humans to relate with reverence to the sacredness of nature.

4. **Cultural Values** – The qualities, both positive and negative, ascribed to natural, cultural, and mixed sites by different social groups, traditions, beliefs or value systems that fulfill humankind’s need to understand, and connect in meaningful ways, to the environment of its origin and the rest of nature.

5. **Identity Values** – Those natural sites that link people to their landscape through myth, legend, or history.
6. **Existence Values** – The satisfaction, symbolism, importance, and even willingness to pay, derived from knowing that outstanding natural and cultural landscapes have been protected and exist as physical and conceptual spaces where all forms of life and culture are valued and held sacred.

7. **Artistic Values** – The qualities of nature that inspire human imagination in creative expression.

8. **Aesthetic Values** – Appreciation of the harmony, beauty, and profound meaning found in nature.

9. **Educational Values** – The qualities of nature that enlighten the careful observer with respect to human relationships with the natural environment, and by extension, people’s relationships with one another, thereby creating respect and understanding.

10. **Research and monitoring values** – The function of natural areas as refuges, benchmarks, and baselines that provide scientists and interested individuals with relatively natural sites less influenced by human-induced change or conversion.

11. **Peace Values** – The function of protected areas in fostering regional peace and stability through cooperative management across international land or sea boundaries or as “intercultural spaces” for the development of understanding between traditional and modern societies, or between distinct cultures (Harmon 2003: 56; Putney 2003: 7-8).

This framework has had some detractors however. Paige (2006) asserts that categories of values oversimplify or “make less complicated” the changing social contexts in protected areas. In his analysis, however, he fails to see how the categories can be a flexible framework that can be applied and reapplied to describe a variety of different regional and social contexts.

Each of the three government agencies that have a significant role in managing the resources of the Cañada region maintains or desires to foster development of many of the above values. The Commission for Indigenous Development (CDI) although very supportive of the cultural, spiritual, and identity values of the indigenous peoples in the protected region strongly desires to cultivate an understanding of the recreational, artistic, and aesthetic values among the indigenous communities to promote a tourism industry in the region. From my observations of their tourism workshops, by creating an awareness of Western concepts of leisure, nature, and aesthetic beauty, the objective of the CDI is to
create a better climate for host/visitor relationships between potential future tourists and community members.

In the Cuicatlán region, the National Institute of Anthropology and History (INAH) has as its objective the protection and conservation of the numerous prehispanic archaeological sites as well as some of the colonial era churches such as the one in Santos Reyes Pápalo. With the exception of some archaeologists such as Raul Matadamas, the intangible values that INAH represents fall largely on the scientific research and monitoring values due to a lack of adequate federal funding. Their objective, given their funding, is to lessen or prevent the impact of destructive human use on or near an archaeological site. It is only because of inadequate federal funding and staffing that INAH is unable to further its objectives in the region.

The National Commission of Natural Protected Areas (CONANP) is the government agency that administers and monitors the Biosphere Reserve. While its values are obviously in the research and monitoring category, the personnel also incorporate an educational component to promote a park-like conservation approach to the management of the natural/biological resources. They favor more of a “sustainable” approach to the utilization of the natural resources for subsistence or economic benefit.

For the indigenous ethnicities, in the region, particularly the Cuicatec, the values of the “resources” lie in the overlapping identity, spiritual, existence, and cultural categories. Only in the case of communities such as Concepcion Pápalo that have attended the tourist development workshops hosted by the CDI is the idea of the commodification of their resources considered. As a result, the acceptance (according to their own terms and understanding) of the more Western values is beginning to develop.

Hay-Edie (2003) provides a critique of the Western style of land management that nominally appears inclusive of local or indigenous values for land management. He warns of succumbing to the trend of using “traditional cultural values” to manage a protected site
because too often the Western land managers create a romanticized vision of traditional, local, or indigenous views of land management and “overlook political and economic vested interests.” Hay-Edie warns of “over-simplifying” complex realities and histories that have altered many indigenous cultures. He states, that such in vogue practices of local or indigenous inclusion by Western land management “often only select cultural values conforming with a predetermined instrumental model…” (Hay-Edie 2003: 94).

Recognizing that real inequities exist in power relationships between dominant and minority cultures he encourages an honest assessment and inclusivity of the minority voice.

It is important to recognize, therefore, that where significant differentials in power still exist around protected areas, particular attention should be given to non-dominant voices. Even though cultural value systems may not be of equal political weight, each claim should be included in the process of negotiation (2003: 99).

Much of the district of Cuicatlán is within the boundaries of the Tehuacán-Cuicatlán Biosphere Reserve. This biosphere reserve is based on the ideals of the Man and the Biosphere program (MAB) promoted by UNESCO. According to UNESCO, the biosphere reserve concept serves three primary functions described as “complementary and mutually reinforcing (Schaaf 2003: 187):

- a conservation function – to contribute to the conservation of landscapes, ecosystems, species, and genetic variation;
- a development function – to foster economic and human development that is socioculturally and ecologically sustainable; and
- a logistic function – to provide support for research, monitoring, education, and information exchange related to local, national, and global issues and development.

To maintain the integrity of the biosphere concept, all biospheres must have a three scheme type of zonation. The three zones follow a concentric pattern with the first zone or core area being the innermost region. The area is to remain off limits to human subsistence or economic activity with the exception of traditional extractive uses by local communities. Surrounding this area is a zone dedicated largely to conservation research but also to a limited amount of human settlement called the buffer zone. The outermost area, or transition zone is the area of greatest human activity involving conservation research, human
settlement, agriculture in a ideal area of collaboration and understanding (Schaaf 2003:189-190).

Although the MAB program may work in nations that have more of a homogenous society and are less class and race conscious, societies such as Mexico that have marked social inequality resulting in socioeconomic marginalization do not fit neatly into this model. Values are much more likely to clash than mesh due to the memory of historic exploitation and contemporary marginalization. Historic and enduring poverty among the Cuicatec and other ethnolinguistic groups in the region threaten the sustainability and protection of the biological viability of the region. This is the primary factor for land degradation in the Tehuacán Cuicatlán Biosphere Reserve. If communities within and near the reserve suffer from socioeconomic marginalization factors such as high unemployment, lack of access to basic goods and services, and low schooling levels, their survival strategies are likely to threaten the natural (and cultural) resources inside the protected area (Nadal 2003: 2, 11).

Neema Pathak and Ashish Kothari (2003) discuss some of the impacts that Western style conservation may have on marginalized communities. Communities living within the parameters of a protected area have to survive with limited access to available biomass resources. The new laws that have been passed in the Tehuacán-Cuicatlán Biosphere Reserve have forbidden the collection and chopping of palo verde or fresh wood. People living within the region, by law, are only allowed to collect palo seco, dry wood for their fuel uses. Women, Pathak and Kothari assert, “bear the brunt of the situation… because it is they who are responsible for collecting fodder and fuelwood.” (Pathak, Kothari 2003: 216).
Pathak and Kothari (2003) also state that one of the negative drawbacks on the human subsistence perspective is an increase in the population of wild animals. While this may be seen as positive from a Western conservationist perspective, the impact on subsistence communities that depend on livestock can be potentially devastating.

Western values of conservation and the Cuicatlán region’s traditional values can converge on some areas. The Western concepts of science and leisure can be adopted in the developing world with an improvement in the socioeconomic conditions for marginalized communities. Improved health, education, infrastructure and less dependency on biomass for fuel can reinforce the primary goals of both traditional and Western camps and ultimately lead to better conservation of the resources in question.

This improvement of economic conditions, however, is deemed by some Western conservationists (Kramer and van Schaik 1997; Oates 1999) to be an example of acculturation to Western forms of extraction and resource use. By this conversion to a more Western style of living, Kramer and van Schaik et al., assert that traditional/indigenous communities are not the wholesome ecological stewards of the land, or what Redford (1991) described as the myth of the “noble ecological savage”. Holt (2005) and Redford and Stearman (1991) instead of seeing the Westernization of values in indigenous communities as negative to the conservation principles of Western biologists, see the change in values as a new way of engaging and collaborating with indigenous peoples.

By withdrawing their support from local peoples and refusing to facilitate more informed decisions about resource use, some conservation biologists are instead advocating draconian measures to exclude locals… In essence, these conservation advocates are abandoning local communities when they could have the most
positive impact by sharing scientific understandings about ecological monitoring and stewardship (Holt 2005: 202).

Against this type of treatment, Holt (2005) sees Westernization as a process, not a fixed state of being. By adopting Western values, eventually (through a process) the indigenous will also adopt or at least be apt to adopt Western values of conservation. Consequently, she favors the scientific community sharing its ideas and knowledge with these communities. Hunn and Johnson et al. (2003), warn of generalizing and taking traditional or indigenous knowledge out of its proper context, but recommend striving to promote its worth and value in its local environment. Redford and Stearman (1991) acknowledge that Westernized indigenous peoples may not share the same values or interests as the scientific community. In many cases the interests of indigenous communities is not one of preserving biodiversity but the recuperation or acquisition of land.

…supporting indigenous land rights continues to offer the best hope for conserving and rationally using those tropical forests not contained in national parks. The communal territories of indigenous peoples maintain relatively intact large areas of land, buying time for the development of new ideas and for the creation of greater support for both biological conservation and the preservation of traditional cultural values (Redford and Stearman 1991: 254).

The relationship and communication over time between the Western state and the rural indigenous community can yield results that exemplify some degree of environmental stewardship if the socioeconomic situation as well as localized governmental interpretation of community demands and federal mandates can occur. Agrawal (2005) takes a Foucauldian perspective to this study. According to Foucault’s concepts of the technologies of power, the individual subject’s behavior is modified and controlled by the state according to what the state determines as normalcy. Individuals
and communities determine and make their own decisions on achieving the state’s policies on normalcy within the parameters predetermined by the state. As a result, individuals redefine themselves and forge new identities, but within these parameters. Incorporating this idea, Agrawal examines the development of environmental stewardship and consciousness among rural marginalized communities in India. In his analysis, Agrawal explains the complexity of environmental consciousness, not through a naive lens of an altruistic betterment for mankind, but rather through a complex continuum of ideas based on the individual’s personal interests as well as communal and formal institutional influence. Agrawal traces formal government intervention in the historical record in making attempts to regulate and preserve forest resources by limiting resource extraction. At varying levels of contemporary acceptance of these older laws, he explains that the differences in the lack or creation of environmental consciousness had much to do with the creation of community level forest councils in some communities and not in others (Agrawal 2005: 173). Yet despite these “decentralized” government institutions, individuals developed their own subjectivities (and acceptance or rejection of environmental conservation) regarding environmentalism based on their own perceived notions of autonomy and self-determination.

Villagers now protect forests and control illegal practices of harvesting and extraction. They use the language of regulation and many of the same idioms of protection that state officials deploy, but they do so in pursuit of goals that they imagine as their own and in which they often construct state officials as inefficient, unsupportive, or corrupt (Agrawal 2005: 179).

This description helps to better define the relationship between Cuicatecos in the Cañada highlands and the Mexican governmental institutions that administer the forest and cultural resources in the region. The connection or discourse between the individual
and the state has forged a new type of environmental identity built of the individual choices made by community members within the parameters of accepted behavior created by the Mexican state and disseminated through regional and local governments.

**Acculturation and Change**

The two communities of my case study, Santos Reyes Pápalo and Concepcion Pápalo are both Cuicatec communities but their cultural perspectives are quite different. To the outsider visiting these two villages one can see a striking difference. From my fieldnotes:

Concepcion Pápalo seems to have a higher standard of living than Santos Reyes. Homes seem like homes in a mestizo city or town and building material is more cement and less adobe. Most of the streets are paved. Most of the homes I’ve seen thus far have indoor plumbing (but I’m not sure where it goes). Electricity appears abundant. The people have a mestizo physical appearance as well. They physically appear less indigenous. Clothing appears more varied. Older women seem less timid, say hello and even initiate a greeting more often. I’ve heard no one speaking Cuicatec on the street. I’m told that children laugh at those who speak the language. In comparison to Reyes, I’ve seen about 6 (thus far) minimarkets that people have set up to supplement their income (Fieldnotes: August 4, 2006).

One informant told me that Concepcion Pápalo had had a road connecting it with other villages in the interior and the main central hub of economic activity for the region, Cuicatlán. This road was built in the early 1960s. Santos Reyes has had only a one-way road connecting it to only Cuicatlán and this was built in 1994. The themes of isolation and acculturation surfaced when comparing these two communities in the context of the road and transportation infrastructure.

Robert Redfield (1941), in his ethnography *the Folk Culture of Yucatan* discusses the differences between several towns and villages in the Yucatan peninsula. Isolation and cultural homogeneity versus integration and heterogeneity of a community varied
based on access and distance to other communities. Redfield visited four communities and placed them on a cultural continuum of degrees of acculturation. Those communities that had more types of transportation infrastructure such as railroads and roads were found to be heterogenous and the people reported more ideas from Europe and the United States. This was reflected in the high levels of Spanish literacy and socioeconomic diversity. Those communities that were less connected by transportation infrastructure were found to be predominately indigenous and have a subsistence economy based largely on maize production. Traditional spirituality and collectivism were much stronger in the more homogenous indigenous community while secularism, Protestantism and individuality were much more prevalent in the more heterogenous communities.

With the theme of acculturation and indigenous communities, Edward Spicer has also made early significant contributions to this field with his studies of the Yaqui of northern Mexico (1961) and many other ethnicities throughout the American southwest and northwestern Mexico (1962). The Cuicatec group of Oaxaca has obviously undergone various types of acculturation and change since contact. Spicer (1961) describes the adaptation process between two different cultures when:

…the beliefs and customs of the members of differing societies must, as a result of contacts of individuals who hold them, be adjusted to one another or, that is to say, made compatible to an extent that enables the members of the societies to get along; this process of adjustment of beliefs and customs from differing traditions may be regarded as a kind of cultural integration (Spicer 1961: 519).

Despite this, Spicer (1961) acknowledges that there is a wide range of “more or less stabilized situations with varying degrees of integration.” (1961: 520) In the two case examples featured, both Santos Reyes Pápalo and Concepcion Pápalo, although both are Cuicatec communities, have undergone unique and different paths of acculturation for
some of the reasons that Redfield referred to earlier. While Redfield discusses the roles of isolation and cultural homogeneity versus access and cultural change (i.e. acculturation), Spicer’s discussion of directed versus non-directed contact also adds to the understanding of Cuicatec cultural change as a subjected people from the late Post Classic period to the Colonial period and maintaining its role in a subordinate relationship with the mestizo population who hold the economic and political power of the region today (ECOPRODES 2001: 38).

In the context of Latin America and more specifically in the context of Oaxaca, Mexico, the process of acculturation among indigenous groups was not a uniform or a monolithic experience. The type of relations developed with the dominant culture has varied by region, ethnic group, and especially in the case of towns in the Cuicatlán Cañada region. By joining or being forced to join the Western commercial culture at varying levels of acceptance, different Cuicatec communities have developed unique relationships with the commercial culture (Bodley 1999: 23). The Christianization effect from early colonization and later the arrival of evangelical Protestants in some communities had a significant impact on the acceptance of foreign values and ideas. As a result, today the Cuicatec people are as diverse by community as they are different from other ethnolinguistic groups in other parts of Oaxaca. Cultural change, loss, maintenance, and even resurgence are all factors that affect at various degrees this ethnolinguistic cultural group.

**Ethnohistoric Overview of Cuicatec Resource Use and Management**

*The Cuicatec and Their Natural Environment: Traditional Prehispanic Beliefs*

Although changing rapidly, many Cuicatec people still maintain spiritual/animistic explanations for beliefs about occurrences in their natural environment due to a maintenance of a non Christian belief system and a dependency and spiritual
relationship with the natural environment. These are beliefs that constitute complex forms of viewing the world that manifest themselves in many rituals and community myths. Many indigenous groups know that their territory is sacred. In spite of an ever-increasing loss of culture, respect must be shown to the land, from the crops to the forests (Maldonado 2001: 198). The territory of each indigenous municipio is divided into several types of zones: the inhabited zone, the cultivation areas, and the rest of the land at higher elevations or in the Tierra Caliente that is not inhabited and not worked. It is in these three areas where the presence of the sacred manifests itself (Maldonado 2001: 198).

Based on today’s understandings of the Cuicatec and many other indigenous groups in the region, the presence of spirituality in nature was more than just the subject of folklore or legends but rather an understanding of the intervention of supernatural beings and forces that have established a relationship of reciprocity with their human inhabitants. According to the Cuicatec, these forces allow human life on the land in exchange for respect and offerings (Maldonado 2001: 200). Offerings in prehispanic times in this region were sacrifices of turkeys, dogs, and even people. In the early 16th Century colonial document the Relacion de Tepeucila, Pedro de Navarrete, the corregidor (a regional Spanish ruler) in 1579 comments on the types of sacrifices found in the Cuicatec village of Tepeucila:

“Y antes que viniesen los españoles (adoraban) a ydolos de piedra y los sacrificavan onbres y mugeres y niños y codornices y perros…” (PNE Relacion

2 PNE is an abbreviation for Papeles de Nueva España, a 16th Century compilation of documents called Relaciones Geograficas that provided a description of land holdings in the colony of New Spain for the Spanish monarch. It was first published by Francisco Del Paso y Troncoso in 1905.
de Tepeucila 1579: 95) [Before the arrival of the Spaniards, they worshipped stone idols and sacrificed men, women, children, wild birds, and dogs to them.]

Holland and Weitlaner (1959) in his ethnographic work in the region found many sacrificial traditions still intact from the early historical accounts, although significantly “modified” in some regards:

Animal sacrifice to mountain spirits is quite common and widespread in this area. It is probable that the animal sacrifices to mountain spirits … are survivals of prehispanic beliefs in rain gods. These sacrifices are still made today as they were in the past in order to supplicate the mountain spirit for help in curing the ill and inducing longevity. The location of the present day sacrifices on the tops of mountains appears to be unchanged since preconquest times… Probably the most significant alteration in the practice of blood sacrifice since prehispanic times is the shift from human to animal sacrificial victims (Holland and Weitlaner 1959: 395-396).

In an interview with Raúl Matadamas, he states that the Cuicatec and many other indigenous ethnic groups in the region have a belief in geographic symbolism – a symbolism that anthropomorphizes the land itself. Despite the rich contemporary ethnographic record of today, special documents such as the Map of Tutepetongo, an early colonial map drawn by a Cuicatec artist from the village of Tutepetongo in 1768 (Van Doesburg 2001: 411), give an example in illustrated form of the Cuicatec people’s spiritual view of the land. As Raul Matadamas of INAH illustrated in a personal interview:

This is an invaluable aid, because it is here where we begin to realize that in its geographic symbolism, they mention specific areas where “things occur”. But the most important thing is that speaking with the people, the campesinos of this region, they begin to tell us how they understand, more or less, their distribution and what we realize finally is that the hill/mountain has a head and it also has a mouth that most certainly has a cave. This cave symbolically becomes sometimes the mouth of the land and how the mountain communicates with the lord of the people, the mountain is like a living person.
Prehispanic Cuicatec Highland Settlement Patterns

The highland region east of the Cuicatlán canyon valley floor - the area of this study – is an area marked by many ravines, and tributary streams to the greater Rio Grande on the valley floor below. Cuicatec settlement in prehispanic times followed the most predictable and abundant water sources for limited irrigation and drinking water. Today the modern villages Santos Reyes Pápalo and Concepcion Pápalo, not coincidentally, mirror the past settlement patterns of the prehispanic past. In fact, many of the modern homes in Concepcion Pápalo have archaeological remains of tombs, prehispanic building foundations, and pottery from the classic and Postclassic periods testifying to prior ancient occupation.

Eva Hunt (1972) in her extensive and thorough discussion on the Cuicatec Cacigazgos states that “In order to fully understand the social organization of the Cuicatec it is necessary to understand, first, the natural distribution and characteristics of the water supply, and second, the ways in which the social structure was influenced by the need to control water,” (Hunt 1972: 168). Hopkins (1974, 1983) describes the Pápalo region as a “zone of rainfall agriculture along the mountain slopes east of the river at elevations from 1200m or 1400m up to 2280m. This zone, almost unknown archaeologically, has Postclassic settlements which were economically linked to the alluvium.” (Hopkins 1983: 268).

Use of Forest Resources-Early Colonial Accounts

Due to the more contemporary ethnographic record and the few early colonial documents that have survived, it is possible to develop an understanding of past uses and beliefs regarding many of the natural resources. The Relaciones Geograficas of
Pápalotícpac and Tepeucila written in the late 16th Century provide a first hand description of the lifestyles and traditions some 50 years after the conquest. In the passages below, the *Relaciones Geograficas* describe some of the uses that the Cuicatec had for their forest resources.

“Los arboles que esta comarca se hallan son pinos y robles baxos, de que hazen Madera para sus propias casas y edificios, y algunos copales de que se saca vna goma olorosa para sahumar como ençienso y saludable.” (Papeles de Nueva España, Relacion de Pápalotícpac 1905: 92)

[The trees that one finds in this region are pines and short oaks. From them they make lumber for their homes and buildings and some copal which is an odorous tree sap which they burn as incense and for their health.]

“En los montes de esta comarca no hay otros árboles más, que pinos y robles, que sirven para sus edificios y para leña de sus fuegos; aunque, generalmente, en los montes donde hay estos árboles, suelen coger cantidad de miel de abejas que en ellos crían, de buen sabor.” (Papeles de Nueva España, Relacion Relacion de Tepeucila 1905: 97)

[In the mountains of this region there are no other trees but pines and oaks that they use for their buildings or for their cooking fires. Generally, in the mountains there are those trees that they use to acquire a quantity of honey of good flavor from the bees that they raise.]

“Curanse con yervas y rrayzes que los naturales conoçen de que ya an dado noticia a los protomedicos de SU MAGESTAD.” (Papeles de Nueva España, Relacion Relacion de Pápalotícpac 1905: 91)

[They cure themselves with herbs and roots that the natives know about – those of which have already been given attention to by the doctors of his majesty.]

“Ay vnas cortezas de arboles que llaman Chicchipatl que quiere dezir <<medizina amarga>> lo qual cuezen y el agua de esto beben caliente, lo toman para enfermedades de frialdad, y tambien el agua coizada de vna flor que llaman Yolosuchil ques a manera de coraçon y lo propio quiere dezir su nonbe, y es para enfermedades de calor.” (Papeles de Nueva España, Relacion Relacion de Tepeucila 1905: 97)

[There is some tree bark that they call Chicchipatl that means “bitter medicine” that they soak in water and drink hot. They drink it for illness of frailty and also drink the hot water of a flower called Yolosuchil that means heart flower and is for illnesses of heat.]

*Prehispanic Beliefs Regarding Water Resources*

Throughout Mesoamerica, water in all of its forms (e.g. rivers, rain, pools) is considered sacred for its obvious life giving and sustaining properties. Many ancient Mesoamerican cultures anthropomorphized the water into different deities. Some gods
were known throughout Mesoamerica. The god of rain, was highly respected throughout Mesoamerica. The Aztecs called the god of rain, Tlaloc, the Maya called him Chac, to the Zapotec his name was Cocijo, and to the Mixtec he was called Dzahui. This deity was a sacred force associated with thunder and lighting and a central figure in the prehispanic Codices such as Codice Laud (Terraciano 2001: 264-265).

Many Mesoamerican cultures differentiate between male gods of rain and female deities of standing water. The Aztec goddess Chalchiutlicue is such a deity. (Miller, Taube 1993: 60) Eva Hunt in her study in the region also made a similar observation of a gender applied to deity of standing water in Concepcion Pápaloo.

The people of the town of Concepcion Pápaloo, dedicated to the Virgin Mary, believe that the town is ruled by, among other deities, a female supernatural being dressed in blue and green, who lives in the center of a supernatural lagoon and in water holes appearing in the shape of a snake or of a water monster, referred to in Spanish as a ballena (whale)...this female deity is responsible, in Pápaloo, for keeping water flowing over the surface of the earth, out of springs, and into the town’s canals... (Hunt 1972: 207).

In the Cuicatec region, there are still legends about supernatural snakes near or in pools of water. The serpent in many Mesoamerican cultures is representative of lightning due to its sinuous qualities, and is therefore associated with rainfall and life. (Miller and Taube 1993: 106) Miller and Taube (1993) indicate certain aspects of the sacredness of serpents that parallel much of the ethnographic record in the Cuicatec area. “Three fundamental notions accompany the Mesoamerican serpent: one, that the serpent is water; two that its mouth opens to a cave; and three, that the serpent is the sky.” (Miller and Taube 1993: 150)
The prehispanic Codex Laud (Figure 18), believed by some scholars to originate from the Southern Tehuacán Valley/Cañada de Cuicatlán region (Sisson 1983), shows on page 23 a rain god holding a twisting serpent in one hand, a symbol of lightning. Rain falls from the heavens while corn grows (lower right) on the earth. A frog servant with a speech scroll emanating from its mouth assists by pouring water on to the ground (Jansen 2005: 19).

**Traditional Prehispanic Beliefs of Caves and Mountain Tops**

In the Cañada region, many indigenous groups including the Cuicatec have strong beliefs about the mystical figure called Señor del Cerro or Sá iko (Weitlaner 1969: 444).
This spirit deity lives in the mythical *Cueva Cheve*. This supernatural being has dominion over the entire Cuicatec region. This primary deity of the mountain also manifests itself into other spirits of natural forces related to the animals, lightning and thunder, which are called *dueños* (owners) that can be favorable for agriculture as carriers or producers of rain as well as the the cause of floods which can potentially cause the people harm.

Lightning is often thought to cause destruction from a great distance. The “owners” of animals maintain the life and health of the animals and offer them protection (Weitlaner 1969: 444). There are still many community legends and stories about supernatural serpents living and dominating pools of fresh water throughout the towns of the Cuicatec region.

Steele (1997) explains that many agricultural rites and beliefs surrounding lightning, water, serpents, New Year’s ceremonies and even drought all share a correlation with cave worship according to many indigenous groups in the region.

On certain days in the moist tropics, clouds emit from cave entrances due to climatic factors which include barometric changes. This, no doubt, led to the belief which many still hold that weather originates from within the cavern; hence the rain comes from the cave. They associate the caves with the origin of rain, but more than that with the crops growing, fertility, prosperity and power. The belief is held, therefore, among certain groups that caves are the home of various rain deities (Steele 1997: 2).

Religious rites to give thanks or ask for rain are generally led by men called *curanderos* or *hechiceros*. The caves, summits of hills and sources of water are the preferred sites for the rituals (Weitlaner 1969: 444). The prayer in the preface of this document provides an example of this type of ritual.
FINDINGS

Mexican Federal Government Interpretations of the Resources

Two federal government agencies play a significant role in the management of the cultural and natural resources in the Cuicatlán district area: the first being the Comisión Nacional de Áreas Naturales Protegidas (CONANP)\(^3\) and the second agency being the Instituto Nacional de Antropología e Historia (INAH). A third government agency, the Comision Nacional para el Desarrollo de los Pueblos Indígenas (CDI) works with the indigenous communities in the region to promote socioeconomic development. Each of these agencies possesses a political stance regarding the management and interpretation of the natural and/or cultural resources in the area and maintains an onsite physical presence at varying degrees to promote their objectives with the numerous communities.

Communication to the community level from the federal government is dispersed through these agencies. At the local level are the communal land commissions called *comisariados* and the local municipal governments that administer and interpret the federal laws at a community level. The communal land commissions from the interviews and observations I made, enjoy a degree of political autonomy from the federal, state, and local governments. Common throughout Oaxaca state, the communal system is derived from prehispanic to early colonial land management practices that are essentially a heritage-based system of communal land management whereby communal land tracts are passed through family generations to sons but not “owned” in the Western sense. “Control” of these lands can be transferred (by the *comisariado*) to other families if the land is deemed abandoned by the community for an extended period of time (Mitchell 2006). Not all of the lands under their jurisdiction are cultivated. In the case study area, communal lands encompassed cultivated lands, grazing lands, timber harvesting areas, pristine forested and riparian zones.

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\(^3\) CONANP is a division of the umbrella agency Secretaría del Medioambiente y Recursos Naturales (SEMARNAT) that also controls its other related sub agency the Comisión Nacional Forestal (CONAFOR) that administers the Mexican forests.
All lands under communal control were located in the Tierra Caliente to Tierra Fria altitudinal/ecological zones. Private property in the communities was found primarily in the settled areas (see Appendix D) while communal land was located outside of the town radius in adjacent areas on the slopes in all cardinal directions. Found throughout the communal lands were known archaeological sites falling under the interest and jurisdiction of INAH. Moreover, some of these communal lands fall under the boundary lines of the Tehuacán-Cuicatlán Biosphere Reserve.

Possessing a high level of political autonomy from the popular Mexican political system, even from the local municipal government, the communal land authorities in the towns require that all Mexican government land managing agencies and external interested parties (e.g. timber companies) negotiate and obtain permission to exploit, preserve, construct or even enter lands under the jurisdiction of the communal land authorities in both Concepcion Pápalo and Santos Reyes Pápalo. The popularly elected municipal government authorities coordinate with the communal land authorities but are not fully synergistic due to the political tides and parties that may affect popularly elected governments from the federal to local levels.

In this section, the three government agencies that have a vested interest in the natural, archaeological, and human resources (CONANP (SEMARNAT), INAH, and the CDI respectively) will be described according to their interaction and work with indigenous communities in general and the Cuicatec communities specifically. The framework for analyzing these three agencies will be according to the following themes: the mission/objects of the agency in the region to illustrate their definition of the resource(s), their interaction with the indigenous communities and the challenges that they face, and finally the collaboration between the agencies to achieve goals.
COMISION NACIONAL DE AREAS NATURALES PROTEGIDAS (CONANP)

Mission/objectives

Since the beginning of the Fox presidential term in 2000, CONANP, according to the Vice-director of the Tehuacán-Cuicatlán Biosphere Reserve, Juan Manuel Salazar Torres, has been part of program to staff and promote projects in what had originally been considered “paper parks” in Mexico – parks protected in name only. CONANP as a whole collaborates with various international governments and nongovernmental agencies to promote the conservation of Mexico’s protected areas. To achieve this conservation goal, CONANP employs a variety of professionals from a cross section of academic disciplines including biologists, sociologists, anthropologists, and agricultural engineers. By having this diversity of staff they officially have the objective of working directly with the communities that are located in the Biosphere Reserve area to not only conserve natural resources in the three climatic zones, but in doing so, to achieve the primary objective of evaluating the biodiversity found in the biosphere and preserve the plant and animal biodiversity found in these ecosystems. Important to the attainment of this goal as Salazar states, “We cannot achieve this, however, without the collaboration with the communities that exist in the Reserve.”

CONANP is also charged with implementing the federal Program for Sustainable Development (PRODERS) (Parkswatch 2001). In the Tehuacán-Cuicatlán region, CONANP works with the law interpreting body of SEMARNAT, the Attorney General’s Office for Environmental Protection (PROFEPA) to enforce Mexican federal environmental law and inform the communities of what is considered legal and illegal use of the natural resources. To achieve its objectives CONANP implements several
“sustainable development” projects at the community level. Some of the community level programs that Salazar shared were:

- Encouraging high agricultural production techniques in already cultivated areas so as not deforest other areas
- Greenhouse projects of native plants to avoid the need for firewood
- Using native plants instead of exotic plants (e.g. eucalyptus) for borders and fences
- Water retention projects to prevent soil erosion
- Reforesting areas where natural springs occur to recharge the underground aquifers

These projects among others, serve the purpose of preserving what CONANP defines as the resource in the region, the plant and animal biodiversity.

Interagency collaboration

Although a goal of CONANP, collaborative activities with the CDI and INAH have been quite limited. Salazar indicated that the primary reason for this has been the differences in jurisdictions that the federal government has in the region and more often due to a lack of fiscal support.

We haven’t worked much with the CDI until about last year because of their focus of working with indigenous groups. We have a component of working with indigenous groups but it is the smaller between our two agencies. In actuality, we don’t work as close with indigenous groups…With INAH we have collaborated with Matadamas, but it has been largely an exchange of information. We don’t have much in Oaxaca… There is interest in collaborating but hasn’t been a strong important financial impetus to take up any long term projects. It needs more financial support.

Community Relations and Communication

Community relations with many indigenous communities have been tenuous since the foundation of the biosphere reserve in 1998. The reserve was pushed by biologists to be formally declared as a response to a major highway construction project that split the now delineated reserve in half. The rush to protect the region by the scientific
community was made so quickly that CONANP, according to Salazar, did not have time to consult effectively with the numerous communities living in this now protected area. Consequently, for many communities it took years to be informed that they were living on or near the biosphere reserve. “From the beginning it was not a very consensual agreement with the people.” says Salazar, “So, as a result, there is a lot of misinformation in reference to whether or not the reserve supports, prohibits or expropriates land.” Once contact had been made with some of the communities, concerns began to arise due to a fear of government intrusion into their lives and ultimately the loss of power and control of their lands.

Since the founding of the reserve, however, CONANP, has had successes with some community outreach projects in the indigenous communities in the reserve. Salazar asserts that their approach to the communities is more of a bottom-up approach whereby the communities generate a project idea and then approach CONANP. Contact is initially made in a what Salazar refers to as a “rural participatory evaluation workshop.”

We try to implement a program that they really want. They are the ones that make the proposal for the project. We listen to them, what they’re interested in doing, to find out if they had the finances to complete a project, what it would be. So they make the proposal… We don’t impose things. You see we respond to stimulus. If the communities look to receive our help then we look to see what they are interested in doing and see what type of projects we can plan. So then we try to attend to them. What we don’t like to do is just go and impose. “Oh here come those Biosphere guys and they’re bringing money, so ask for anything.” They see you and then they ask for just about anything. “What do you want me to bring you? Well, how about some chickens?” “Give it to me.”

Salazar contrasted this type of response as more common among the mestizo communities in the reserve than with the indigenous communities. The indigenous communities he stated “are usually more reserved. They don’t like the direct influence
from the institutions. They stop you and evaluate you.” Despite the hands off approach, cultural clashes do occur especially in terms of communication and trust.

The reality is, I’m going to be frank, is that they don’t have a positive image of us – the government. I don’t know if we’ve tried to change it either. We are an institution that works towards conservation. Our directive is to conserve, but our other interest is that the people use their resources. This is really what interests us. We don’t come on behalf of political party x or party y. But really, and I’m going to be frank, there are those that see us as a type of political party. I’m from PAN and they are from the PRD so they block us, thinking that we are there to influence them. So this has been a problem - the political question.

With the Cuicatec communities, according to Salazar, very few collaborative inroads had been made. Each year, the Reserve approaches a different community in a program to attempt to promote collaboration. “With the Cuicatecos, we still don’t have a specific program yet.” Salazar states, “We haven’t supported them for two reasons: one is our lack of time to attend to their communities; and the other is that we haven’t seen them willing to approach us. We’ll probably have our workshop with the Cuicatecos in the following year [2007].”

Salazar cites one of the main reasons for poor relations with the indigenous communities is the lack of agency personnel to work as promoters of the biosphere’s programs and mission. He hearkened back to an old-style political form of communicating and promoting federal policy with rural communities called extensionismo. He did, however, see this as a two-edge sword based on past events that could back-fire and only further contribute to the mistrust that community members already have of the federal government.

We don’t have enough people in order to take care of this activity which is the dissemination of information. There is a colloquial term of the government from the forties and fifties – el extensionismo (extensionism). So we lack extensionistas. The extensionista (extention agent) was a tecnico that worked for
the Mexican government in order infiltrate the communities and distribute the message of the government and generate support, but after a time it was used as an arm to manipulate the people and get votes. Sometimes the people see us as “parents” which is basically paternalism. “Papa government has arrived and he’s going to bring the money so the project is going to work well or not.” The extensionistas were the one’s who used to bring the money for projects but were not interested in if they had success.

Salazar stressed that his agency’s difficulties in working with the indigenous communities also have their historical antecedents. This he felt was perhaps one of the greatest obstacles to overcome.

One has to approach this very calmly. We can’t go in with the idea that we are the saviors and we are going in to help and save them. There are some conflicts between us and the community. There is like an idea that we are going to try to conquer them – that we’re returning to conquer them. They see you as like an emissary of the Spaniards. I’ve seen it like this. It’s as if the Conquista is still continuing. Despite the fact that this was centuries ago, they continue to believe you [as a government representative] are like a conquistador that is arriving to take away their customs and lifestyle… It’s not so easy to change this image of an invader. [Speaking in general]

**INSTITUTO NACIONAL DE ANTROPOLOGIA E HISTORIA (INAH)**

*Mission/Objectives*

The Instituto Nacional de Antropología e Historia (INAH) was founded under the *Ley Orgánica del Instituto Nacional de Antropología e Historia* (Organic Law of the National Institute of Anthropology and History) in 1939. Article 2 of the law states INAH’s objectives and functions as an agency.

“Articulo 2 – Son objetivos generales del Instituto Nacional de Antropología e Historia la investigación científica sobre antropología e historia relacionada principalmente con la población del país y con la conservación y restauración del patrimonio cultural arqueológico e histórico, así como el paleontológico; la protección, conservación, restauración y recuperación de ese patrimonio y la promoción y difusión de las materias y actividades que son de la competencia del instituto.”

[The general objectives of the National Institute of Anthropology and History through the means of scientific research of the anthropology and history related...]


primarily to the population of the country and with the conservation and restoration of the historic, archaeological, and cultural patrimony as well as the paleontology are: the protection, conservation, restoration, and recuperation of that patrimony and the promotion and diffusion of the materials and activities that are the capacity of the said institute.]

Section VI of Article 2 of the law promotes collaboration with state and local authorities to protect cultural resources.

“Seccion VI. Promover, conjuntamente con los gobiernos de los estados y los municipios, la elaboración de manuales y cartillas de protección del patrimonio arqueológico, histórico y paleontológico, en su ámbito territorial, que adecuen los lineamientos nacionales de conservación y restauración a las condiciones concretas del estado y del municipio.”
[To promote conjointly with municipal and state governments the elaboration and creation of manuals and informational brochures promoting the protection of archaeological, historic, and paleontological zones in their territorial range. That they[the didatic information] make suitable the national characteristics of conservation and restoration according to the concrete conditions of the state and of the municipality.]

INAH defines cultural resources according to Chapter III of the Mexican federal law known as the Ley Federal de Zonas y Monumentos Arqueológicos, Históricos y Artísticos (Federal Law of Artistic, Historic, and Archaeological Monuments and Zones).

It divides cultural resources into three categories: Archaeological, Historic, and Artistic.

In article 28, an official definition of archaeological resources is provided:

“Son monumentos arqueológicos los bienes muebles e inmuebles, producto de culturas anteriores al establecimiento de la hispánica en el territorio nacional, así como los restos humanos, de la flora y de la fauna, relacionados con esas culturas.”
[Archaeological monuments are the personal items and structures that are the product of cultures prior to the establishment of the Hispanic in the national territory as well the human, floral, and faunal remains related to those cultures.]

Article 39 provides further definition and even describes federal powers in determining what an archaeological zone is.
“Zona de monumentos arqueológicos es el área que comprende varios monumentos arqueológicos inmuebles, o en que se presuma su existencia.”
[An archaeological zone is an area comprised of various archaeological structures or in what is presumed to be their existence.]

Interagency collaboration

Due to INAH’s poor fiscal situation, its presence has been focused largely on central Oaxaca where tourism has taken precedence as a primary economic activity. INAH’s presence in the Cañada region has been minimal in comparison. Its collaboration with CONANP has only been as a consultant authority for overview type reports of the cultural resources found in the biosphere reserve. INAH’s collaboration with the CDI has been nonexistent in the Cañada region.

Raul Matadamas of INAH spoke of his concerns of the ongoing federal management of the natural resources in an indigenous cultural landscape:

…How do we allow the people to maintain their traditional ways of coexisting with the land? What we’re doing now is imposing a western form of management and we don’t respect the indigenous way of life. What we’re likely doing in a life of fast development is not realizing that we could alter very quickly this indigenous cultural form of coexistence that has existed until now…I believe that one has to leave them alone. Leave them to live their lives and only aid them in giving them information and education and health care. But to tell them how they should interact with nature, I believe that they, with the information, probably could create and destroy in their own way the natural conditions where they are (Interview 2006: Matadamas).

Community Relations

Oaxaca, in having a large, self-identified, and diverse ethnolinguistic indigenous population has a unique status for INAH and its community relations. Dr. Nelly Robles Garcia, the INAH director of Corredor Arqueológico del Valle de Oaxaca (CAVO) that incorporates numerous communities in the central valleys region of Oaxaca, refers to this diversity of communities and interests as a “mosaic” (2003). While in the central valleys
the primary themes, issues, and even conflicts related to cultural resource management center around rapid urbanization, land use, economic control and the commodification of cultural resources for tourism (Robles Garcia 2003), in the Cañada region of this study, the primary issues for cultural resources from INAH’s federal perspective are of preservation and conscientización (developing awareness) of the importance of the sites located there. Tourism in the region, unlike in the central valleys, is in a very embryonic state.

Views of the indigenous communities in the Cañada region among all interviewed were positive. Frustration was centered around feeling more powerless to complete INAH’s objectives due to a lack of adequate funding than with the communities themselves. The preservation of the sites was seen as the greatest of concerns for INAH’s role in the Cañada region. Destruction came from many different directions. Looting and construction were the most common concerns in the region. Surprisingly when asked about the looting, it was believed by many not to occur as much in the indigenous communities but was seen as more of a mestizo cultural trait.

The indigenous people are very noble. The indigenous person is bad when he’s crossed with white blood. This is what I believe. This could be confirmed by the anthropologists. That’s what they become when they have one drop of white blood. They are noble. These people are good (Telixtlahuaca, retired INAH custodio, 83).

Some interviewees provided a contrast in motivations between the mestizos and the indigenous communities:

The majority of the looting is occidental. When they’re working on the land or constructing something is when they discover archaeological evidence. The mestizo has a different idiosyncracy. He doesn’t have as well preserved the

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4 This comment resembles the U.S. ideology on race as a biological phenomenon.
traditions and customs of the pueblos. When he does come across a site, he sees it as a type of gold mine to obtain pieces and above all sell it – he can profit from these sacred objects from these indigenous communities…The indigenous people are more conservative with these items… This evidence shows me that they desire to preserve their traditions and customs. The mestizo, on the other hand, rejects this a bit more because he doesn’t feel the attachment (Oaxaca, INAH archaeologist).

With indigenous communities in the region, the greatest concerns and difficulties regarding community relations, according to many INAH officials, are image and trust. As with the concerns of CONANP, INAH officials interviewed discussed the previous entry into communities of federal agencies that made promises that were never fulfilled. As a result, mistrust of government policies and the agencies that enforce them is a pandemic condition not just in the Cañada region, but throughout Mexico. At times entering a community to promote some type of change in land use can cause downright hostility. If INAH officials can make some inroads into a community then the challenge for them is to convince community members to protect the archaeological sites in their locale.

It is a constant struggle to place occidental laws with the traditional laws in the pueblos. We often go to impose our federal laws, but the people of the pueblos say that it is only their laws which apply in their pueblo. It is a real conflict between those two paradigms (Oaxaca, INAH lawyer).

Finding strategies that respect local cultural norms and laws, according to INAH officials is a challenge that has required both flexibility and creativity.
Both Nelly Robles Garcia and Raul Matadamas have proposed and implemented creative means of land use for the communities that allow for a compromise – communities practice traditional low impact subsistence activities on the land while preserving the archaeological vestiges. Raul Matadamas in an interview in 2006 commented on possible alternatives.

There is a cultural resource law that says that one can’t use an archaeological site for any purpose because INAH prohibits the economic use of an archaeological site. You can’t build your house on the site, you can’t do many things. The question: Here there are 100 archaeological sites. So there are 100 spaces that aren’t being used. What’s wrong if on these 100 spaces the people plant corn? The archaeological law says that they can’t destroy the archaeological sites. The proposal is: You can’t build your house, but we can entertain the idea of you planting your food. We are confident that you won’t destroy the site because you’re not excavating rocks, putting in a floor, you’re not destroying the archaeological element… This is one form to conserve both the archaeological resource and the cultural tradition. We have our mestizo law that is complied with by the indigenous people practicing their traditional ways.
Community motives preserving archaeological sites vary, according to some interviewed. Without some type of benefit, some believed that archaeological sites would not be protected for simple altruistic reasons.

Many towns are interested in the preservation of an archaeological site if they can profit from it somehow. “I’ll take care of this, but what’s in it for me?” This is a problem because different interests get involved: economic interests, political interests, administrative interests. The people may say “Well this isn’t doing anything for me, so I don’t have to tell INAH what I might use this land for.” (Oaxaca, INAH archaeologist).

Monitoring the archaeological sites near communities was not the only a concern for some in INAH, but having a system of checks to prevent corruption at even the federal level was seen as important. In the entire Cañada region, INAH has only one custodio to monitor and report on the hundreds of archaeological sites in the area. It was also suggested that INAH should contract more people to not only monitor the sites by smaller subregions but to also have an inspector to oversee the monitors in order to prevent graft.

Two schools of thought emerged from the interviews on dealing with indigenous communities: one was a “hands off” approach, while the others promoted having a stronger institutional presence. Matadamas provided one perspective. Although we have had to send them some kind of a law, they continue operating in their world. We don’t tell them “no.” Do what you wish, we say, but please pay attention to these details because ultimately you want to conserve the archeological site. Everywhere there are laws, but now the laws aren’t so “cold” …Sometimes they tell us that they don’t want anything to do with the government, because they believe that all we do is tell lies…Well, it is your land - the land of your ancestors. It is your responsibility. If you destroy it, it’s in your hands. We in INAH can’t take care of everything…This method, has more or less worked.
Other more proactive methods were seen as necessary to improve not only INAH’s image, but also to increase the knowledge of cultural resource preservation.

What is lacking is that INAH on a national level doesn’t have a strong presence in each and every state. It will need a strong diffusion of information. It will need a way to enter the communities and help make them aware. It will take going to every one of the communities. This is really what is going to work (Oaxaca, INAH archaeologist).

According to the custodio in the Cañada region, he saw shortcomings in INAH’s institutional presence as well. He believed that there should be better dissemination of information about not only INAH, but also archaeological and historical research about the communities.

The people want you to inform them, to bring them pamphlets that explain their cultural resources. This is what we haven’t been able to do. All of the towns ask for this... They want anything that can help explain who they are (San Pedro Chicozapotes, INAH custodio).

Comisión Nacional Para el Desarrollo de Los de Pueblos Indígenas (CDI)

Mission/Objectives

The Cuicatec communities along with five other indigenous groups are administered and advised by the Mexican federal agency roughly akin to the U.S. Bureau of Indian Affairs.

This agency, the CDI has as its mission statement:

Orientar, coordinar, promover, apoyar, fomentar, dar seguimiento y evaluar los programas, proyectos, estrategias y acciones públicos para alcanzar el desarrollo integral y sustentable y el ejercicio pleno de los derechos de los pueblos y comunidades indígenas de conformidad con el artículo 2°. de la Constitución Política de los Estados Unidos Mexicanos.

To orient, coordinate, promote, support, develop, follow through with and evaluate the programs, projects, strategies and public actions in order to achieve the integral and sustainable development and the full exercise of indigenous people’s rights as stated in Article 2 of the Political Constitution of the United States of Mexico. (CDI 2007)
Within the biosphere reserve, the CDI maintains two regional offices: one in Tehuacán, Puebla in the northern part of the reserve and the other in Cuicatlán, Oaxaca in the south. In the Cuicatlán region the CDI works to promote economic and sustainable development while attempting to maintain and respect local cultural traditions. Their offices in Cuicatlán also provide other federal agencies and NGOs a forum and means to communicate with the indigenous communities in their jurisdiction area.

At the time of this field study, the CDI in Cuicatlán had been preparing an official tourism proposal plan to submit to the Secretary of Tourism (SECTUR) for approval to implement. The plan would incorporate six communities and in theory involve the inhabitants in a tourism plan to promote socioeconomic development and environmental sustainability in the region. The tourism plan in actuality captures the CDI’s primary view of the cultural and natural resources in the region – commodities that if respected, according to archaeologists and biologists wishes, can be a means of eliminating poverty and all of its secondary effects as well as contributing to cultural preservation and environmental conservation. Of the two communities covered in this study, only Concepcion Pápalo was included in the tourism plan although representatives from Santos Reyes Pápalo had been invited to take part in the diagnostic workshop in February 2006 to help determine which resources community members could identify as possibly interesting to tourists. I was told by CDI officials that representatives from Santos Reyes Pápalo rarely attended the tourism workshops held by the CDI to develop awareness among the communities to define tourism and how it can benefit a community. In an interview with Abel Dominguez, the regional director of the Cuicatlan CDI offices, he
outlined his agency’s vision of the use of the cultural and natural resources in the Cuicatec region.

I think we should have an interpretative type of tourism. A type of tourism that sees to the natural resources of the area, one that admires the flora and fauna of the land and the beautiful locations of the region. … In the case of Pápalo [Concepcion Pápalo], I think the people really admire the project that we are proposing here at the CDI. The youth in this region need employment. What we are proposing is that people live with the natural environment and the natural environment provides for the people. The people, however, should take care of the natural environment. There needs to be an equilibrium in the ecosystem between people and the environment.

Relations with the communities

Not being a federal agency directly involved in the management and/or capable of sanctioning the use of land, the CDI from observations in the Cañada region, appeared to have a neutral to favorable role in its relations with the various communities in the area.

After 2000, the Fox administration revamped the predecessor agency to the CDI, the Instituto Nacional Indigenista (INI) renaming it the CDI. Abel Dominguez criticized the predecessor agency’s work in the region, namely among the Cuicatec people:

In what is the Cuicatec population, we are very sad to say that they have lost many of their customs and traditions. I think it is due to the lack of an institutional presence. The previous agency, the INI, did not help the communities with the rescue and conservation of their traditions in those times. Now it is really difficult to recapture this.

Interagency collaboration

Abel Dominguez, an engineer by profession, was very critical of the lack of involvement and collaboration between the CDI and other federal agencies in the region.

In many communities and towns, the CDI is practically alone in its efforts. It’s difficult to accomplish everything because they don’t give us much money to satisfy the needs and what we would set out to do. Many other agencies of the federal government don’t accompany us in these efforts. The government of the state helps out even less.
Although indicated as a cultural resource commodity by some participants in the tourism workshops, Dominguez was very reluctant to include many of the archaeological sites in his tourism plan due to general lack of knowledge about them, their state of near abandonment, and a fear of damage and looting.

In regards to the archaeological vestiges, we are also sad in the abandonment that INAH has played in this. They have been lacking in promoting community museums. This leads one to ask: Where are they? How can one help me do this? We at the CDI can really promote these types of programs, but we don’t have the expertise to set this up. If INAH indeed exists, they should accompany us and we will do it. We are disposed to do it… INAH hasn’t done much work in the area. The archaeological zone in the Pápalos is in a state of decadence. We can’t put into our interpretive plan of ecotourism a part of archaeological visits, because this would be a disaster. In place of helping the people we would end up destroying their cultural patrimony.

In regards to the natural resource management done by the federal agencies, Dominguez expressed a great deal of concern over the lack of information disseminated to the indigenous communities. Moreover, he was critical of the bureaucratic obstacles created by the federal agencies that made it difficult for communities to access information about what is accepted and what is prohibited in the use and management of the natural resources.

I think the biosphere should do more work and should have more people working in this area because there are only two people working in a protected area so large. Another challenge it faces is that it doesn’t have a Management Plan. It doesn’t exist. So this has complicated the situation. So when one comisariado from Bienes Comunales says, “I want to modify my land,” necessarily, he has to ask for permission from the biosphere authorities. This then becomes a bureaucratic process. Instead of having a biosphere representative in each community, the towns become dependent. This is what I feel instead of resolving the problem of natural resource management, we are giving them two, three routes in order to arrive where we want to arrive. This is not resolved.
Dominguez also commented on what he believed was a cultural divide between the federal government and the communities. He asserted that more respect had to be given to the communities and less impositions placed on their traditional ways.

We as the CDI want to sit down with a community and discuss and take into account of the Usos y Costumbres of each community. If they say, I don’t want you to touch these things, if they speak Mixteco, don’t tell them at the meeting that they can’t speak their language. This is their right. Respect it! This is what is not accomplished. This is what often happens [between the government and indigenous communities]. Respect has to be mutual. CONANP demands that the communities respect their laws, but they have to respect the laws of each community.

A range of values surrounds the use and maintenance of resources in the communities of Santos Reyes Pápalo and Concepcion Pápalo. On one hand are many traditional values that have their antecedents in a pre-Hispanic past that some community members have chosen to revive, celebrate, and reinforce while others have chosen to abandon them. Cultural change, pressing economic needs, governmental pressures and revivals of cultural pride are all intertwined themes that make up and affect both communities. Excerpts from interviews are given to show the traditional and evolving community perceptions of the land and the exogenous pressures to manage and define their cultural and natural resources.

**Contemporary Cuicatec Beliefs of the Land**

The Cuicatec maintain beliefs regarding certain spirits and mischievous sentient creatures that live throughout their domain. Land management takes on many different forms as the Cuicatecos explain their reciprocal relationship with nature. When work is to be completed in a location such as planting a new crop, building a road, or cutting a tree, permission must be requested from the dueño or spirit/owner. This belief has been syncretized with Christianity and now incorporates the Judeo-Christian God in many of the ceremonies. If the presence of the dueño is felt and permission is not asked to use the resource (water, forest, soil, or animal) then the individual or individuals can suffer illness or
even death. During a field survey with a guide from Concepcion Pápalo, I noticed a small makeshift shrine in an outcropping of rock above a small pool of fresh water. From my fieldnotes:

I noticed an offering that consisted of a potted plant, and an empty frame and a small (but now faded) photo of what Miguel stated was the Virgin of Juquila. He said that the offering was to Soo Davi (Dueño, lord, owner of the water) I was surprised to see this because I was beginning to think that old traditions were dying out in favor of more Western ways. Here, however, was an obvious syncretic offering to the water. Pedro and Hector [of Concepcion Pápalo] later told me that all ages of people make offerings like this. The pool of water below was for drinking if passersby desired to drink. Hector and Pedro told me that before drinking, however, a cross in the water had to be made [to obtain permission]. The plant, I’m told, was symbolic of life (Fieldnotes: August 5, 2006).

Figure 20. Water adoratorio (shrine) on roadside near Concepcion Pápalo

Raul Matadamas of INAH, in describing the regional prehispanic beliefs on land management, refers to Cuicatec beliefs where a dueño is present as Tierras de Nadie (No Man’s Lands). These Tierras de Nadie should not be confused with the Western concept of a No Man’s Land as an inhospitable place.

Amongst the people [of the region] are lands that they call “tierras de nadie”. These lands do not allow people to enter whenever they wish. The people have to
perform some kind of ritual, ask permission, they have to do something very special in order to be able to enter this region where animals, plants, and where exists a nature reserve to prevent them from taking whenever they wish. This “reserve”, this area, this specific place they call “tierra de nadie” Because this land is reserved for the “dueño del monte”. Therefore anyone that goes into this area [without permission] is committing an infraction against the mountain/dueño or mother earth. So, that’s why the villages have a cave in order to go to ask, to speak.

There are dueños for many aspects of nature: water, the mountain, the animals, and the caves. In an interview with a farmer from Cacalotepec, a dependency of Santos Reyes Pápalo, he spoke of the importance of asking for permission through the gift of an offering before the use of forest resources and of the syncretism of incorporating the Judeo-Christian God:

Farmer: They would take 3 to 4 people who would do the cutting and they would take a liter or half liter of mezcal with cigars and then with this they would ask permission from the dueño.
Kyle: What did they do with the mezcal? Did they drink it themselves?
Farmer: Everyone that went to cut drank the mescal. They would drink a bit and toss a little on the ground. They would say, “This, I’m going to leave for you (usted), so that you don’t do any harm to me and that my job will go well. They also would leave a cigar there.
Kyle: Do they still have this custom?
Farmer: No. Now they might say, “In the name of God, I do this job.” That’s what they say. That is beautiful. Before, they used to ask permission from the dueño of the mountain so that nothing would happen to them (Cacalotepec farmer, male, 70).

When a strong presence is felt where a dueño may be located, it is called a lugar pesado, literally a heavy place. The dueño of the resource is more often felt than seen.

When asked of the existence of an Ivi Iti (Dueño of the animals), one informant replied:
“Yes, for example the deer, the rabbits- he takes care of them, but we can’t see him.

There are those with luck that might see him but not everyone can see him – this “dueño de los animales.” (Santos Reyes farmer, male, 80) Negative effects such as animal
attacks, deadly falls, or illnesses are believed to occur if permission is not asked for from the dueño before using a resource.

There are places that are called lugares pesados. For example, over here (gesturing North) I was working in this place in around 1980. I bought this land from the municipio and I went to cut this part of the forest down and I broke out in hives. Yes, a lot of hives. It was ugly. That’s why this place is pesado. It’s there that one has to ask for permission from the dueño (Cacalotepec farmer, male, 70).

Negative effects can be resisted in a lugar pesado, according to some, if the individual shows bravery and is believed to be in good health: “…when one has a weak body and goes there to see, they return in the evening sick for seeing this place (lugar pesado). If a man goes with a lot of courage, nothing will happen to him.” (Santos Reyes official, male, 42) Despite this, trespassing into the “wrong” area can have drastic consequences. The dueños can take many forms.

A long time ago we used to have a problem with San Pedro [Chicozapotes] over the land conflict. So the assholes used to also go into the canyon going through there. So one of these animals, the dueño del monte they say, the dueño del monte an animal was dangling in one of their roads [a large serpent] and lying over the road in the trees. This animal grabbed one of them from San Pedro they say and killed him. There was another time when two or three people were riding on horseback through this area when one of them realized that the other had been picked up by the snake. It was wrapping around him. The other man raced back to the pueblo to get help and tell the people what had just happened. Well… a lot of people left the village to try to go and help the man, but when they got to the location I think he was already dead. So, they said look there’s another one in the trees. They all had their machetes well sharpened to kill the snake, but they could not cut it with their blades, they couldn’t cut it, they couldn’t cut it. Because this wasn’t a real animal, it was something else. The family who was like my step-family told me this. He was the land commissioner for twenty years. He told me this story. That’s how it was (Cacalotepec farmer, male, 70).

Cueva de Rayo Celebration and Water Petition Rituals

In the Cuicatec region, many traditions are still practiced albeit some secretly or privately to pray (ask for) the rains to come in the early summer months. These Pedidos de
Agua (Petitions for Water) are done in time for the planting and growing season with a harvest in the fall. In Santos Reyes Pápalo, in September, the town celebrates the Fiesta de Elote, or Corn (on the cob) Festival. This festival is to commemorate the Fall harvest.

Traditionally, there used to be a peregrination to the mountains southeast of the town to a cave called Cueva de Rayo (Lightning Cave) in December or May that the entire village took part in. The presidente de municipio (mayor) of Santos Reyes Pápalo remarked that the Cueva de Rayo was a tradition that was abandoned around the beginning of the last century. All of the men interviewed regardless of age when asked about the Cueva de Rayo knew about the traditions and the location of the Cave. The mayor spoke very fondly of the tradition despite its past annulment. He described the tradition as a meeting with the dueño in the cave who he described as being very tall and wearing knee length boots with serpents on them. This dueño would speak with elders about when to plant, what to plant, and when it was going to rain. The persistent themes and Mesoamerican symbology associated with the rain deity and his symbolic accoutrements as discussed by Miller and Taube (1993), Jansen (2005), Steele (1997) and Weitlaner (1969) are quite evident in some of the descriptions brought out in the interviews. A farmer from Santos Reyes dependency of Cacalotepec described the Pedido de Agua event in detail:

There every year before just before the new year they used to go there and take some offerings. They went with musicians and with those people who knew how to adivinar like curanderos that were able to achieve communication with the Cueva del Rayo / el Dueño from there. So they went there with musicians, with birras, iscalote, which is what they had in those times. They took meats, tamales, and things to share with everyone up there. Many people went up there. There they would stay for 2 to 3 hours and then they would go. Those who knew how to speak with the Dueño de la Cueva would ask for the rain. Because if there’s no water, one can’t plant. That’s what they would go to ask for there because one needs the milpa. Before it used to rain from March or February. We would get heavy thunderstorms. It would even cause lightning and then after this rain one could begin to plant because there was sufficient moisture. Little by little until the month of June it would rain from time to time. This is what they would go up.
to the mountain to ask for – that there would be no shortage of water – that there would be enough water for the plants that they were going to plant (Cacalotepec farmer, male, 70).

The Pedido de Agua celebration in Santos Reyes corresponded with the belief that the headwaters of rivers and streams as well as weather fronts emanated from caves (see Weitlaner 1969).

The oldtimers used to have this celebration in this Cueva del Rayo. When they returned, it would start raining within a few days because this cave is very deep. It’s in this cave that water comes out (nace agua). It’s the headwaters of a brook that is the river of [the town of] San Pedro [The Rio Chiquito]. There are its headwaters (Santos Reyes store owner, male, 44).

Although many people knew of this tradition, I asked several people about why this tradition had been cancelled and no one seemed to know precisely why or when it had been abandoned. This custom, however, was recognized as something of the past and even viewed as backwards by some.

Kyle - This [tradition] was something of your grandparents?
-When it didn’t want to rain, they used to go there and ask for the rain. They used to take food and consume it there and then the rain would come. Who knows if it rained or not during those times, but they did used to do that. They would go to that cave… It didn’t do anything to them. It’s what they used to do before but they don’t do that anymore. They’ve forgotten –they’ve rejected this custom.
Kyle - Why don’t they do this anymore?
-Because today there are many studies. Those who are going to do this are people that arrive there doing stupid things (or make us look stupid) to us. God knows when he’s going to send the rain. That’s why they stopped doing this. They don’t do that anymore. They used go every year to do this, but not anymore (Santos Reyes farmer, male, 80).

Others also mentioned the change in beliefs but also the physical strain of traveling to the high altitude location.

Kyle - What was this place called in Cuicatec?
-Wobu Davi
Kyle - They don’t do this anymore?
-No.
Kyle - Did they do this in your father’s time or after?
- More than 40 years ago or even more.

Kyle - Why did the people stop practicing this tradition?
- Because the people stopped believing that and didn’t like walking all the way over and up there but now they just do a celebration with God and that’s enough. Now they say it rains (Santos Reyes official, male, 40).

Some citizens of Santos Reyes Pápalo have a desire to restore this tradition and have even begun to return to the cave and attempt to restore the rituals.

- I do know that they used to go up to ask for the rain every year before the end of the year. So, it rained very well. But after about 1950, the Presidente del Municipio stopped going up to the Cave.
Kyle - Was it a decision of the President or of the pueblo?
- It was the mayor, who is in charge, that began to stop the people from going. It was mayor who decided.
Kyle - Why?
- Who knows (in disgust)? That’s why no one has gone, no one. We did, however, go just last year because it hadn’t rained all year.
Kyle - Did you leave an offering?
- Uh huh (enthusiastically). We went as a small group to ask for the rain. We said, “vamos, it hasn’t rained hardly at all.” We took some food, some beers. We stayed for quite awhile.
Kyle - How was the response? Did the rains come?
- Well, we didn’t go with someone who knows (a curandero).
Kyle - Do you remember what the adivinos used to say in Cuicateco?
- No, they are the ones who really know how to do it.
Kyle - They go into the cave and speak?
- Yeah, they used to go in and they spoke. That’s how it was. There was like an altar inside, several clay plates, cazuelas, clay jars, spoons, ceramics (Cacalotepec farmer, male, 70).

Despite the near disappearance of this tradition in Santos Reyes Pápalo, a similar tradition is alive and thriving in neighboring Concepcion Pápalo due to a desire of the people to renew it. Every March the people have a pilgrimage to the headwaters of the Rio Chiquito high in the mountains, to show their respect by having a blood sacrifice of a domesticated animal to the dueño of the mountain (Appendix E). This event is a tradition that was waning and later revived with the help of Catholic missionaries.

…we have a rite that we have in the mountain at the headwaters of the river near where the Cheve plain is located but closer to here. It’s a place of the headwaters of the water that we use here in the pueblo. It’s a nacimiento. So we are
recovering this tradition. Every year we take an offering. Since the missionaries [Catholic missionaries that spent over twenty years in the community] were here we have revived this because we had almost lost it. Before the old-timers used to go to the headwaters. They took music. The oldtimers took offerings to the water but we lost it and we later revived it. Since then we have been practicing it. This event not only incorporates the town of Concepcion Pápalo itself, but also the surrounding villages in the entire municipio (Concepcion church layworker, male, 56).

This rite has obvious ties to ancient Mesoamerican traditions of the *Pedido de Agua* where an entire town or community would take part in a celebration to perform a blood sacrifice and give other offerings to the *dueño* of the water. In this passage taken from the Codex Magliabechi, a codex from the colonial era created by the recently conquered Aztecs to help the Catholic priests better understand their cultural traditions, a similar type of ceremony/festival is described:

“Esta fiesta se llama atemuztli quiere dezir baxamiento de agua. Por enella pedian asudios agua. Para començar asenbrar los mahizes el demonio enella se festejava. Sellama tla loc. Quiere dezir con por su nifuentia. Era enlo uacia enla tierra esta fiesta por la mayor parte. Hazian los caciques y señores y estos señores sacreficavan en las questas esclavos y ofrecrecian plumajes y en el agua ahogavan niños en lugar les diese sudios agua.” (Codice Magliabechi : 88)

[This festival is called *atemuztli* which means the falling of water [rain]. In this festival they prayed to their god of water in order to begin the planting of corn. It was for this demon[god]that they celebrated. His name is *Tlaloc*. In his name and by his influence this festival was celebrated throughout the land. The village leaders and lords sacrificed slaves on the mountainsides, offered feathers, and drowned small children in this place of their god of water.]
Resembling the ancient traditions, the Cuicatecos of Concepcion Pápalo follow many of the same pan Mesoamerican rituals:

- It’s a religious rite. It’s a custom where we take things to deposit there as an offering. So we look for a person of more advanced age that speaks the language, the Cuicatec language and he asks for permission for the land [se pide permiso a la tierra] He asks for permission to dig/excavate the soil and then he asks for permission to speak with mother earth [la madre tierra] and then we deposit the offering that we’ve taken there. In the past we’ve taken goats, a pig, a turkey, or chickens and we deposit them there as an act of saying thanks for the land giving us abundant water. The different community members take chocolate, mole, bread, tortillas, eggs, alcohol, beer, softdrinks – everything we deposit there. It’s a rite that we have successfully revived. This we do the first Sunday of March every year.

Kyle- Does this rite have a special name?

- Well it’s an acción de gracias [a giving of thanks] so that we will have abundant water all year long. There are other places around here that suffer a lot from the lack of water during the dry season, but we, thanks to God, don’t suffer from the lack of water. Even though the water diminishes, we don’t lack water because we always have enough. That’s why we have realized that this rite helps us to not have a shortage of water. That’s why we have done it. That’s why this has been revived. This also helps to unite us because we pray together at the offering and the priest gives a mass there as well. We take music there as well and they play. It’s a really big event. Everyone in the pueblo participates there as well (Concepcion church layworker, male, 56).

Although obviously having its prehispanic antecedents, the event is also syncretic in that it also includes a Christian element.

Kyle- So, this is a prehispanic tradition?

- Yes. Yes. We invite other communities to come as well from San Francisco, from Coapam, from Peña Blanca [towns within the municipio of Concepcion Pápalo]. Each community brings their own offering. They take things to share with everyone else. They share food, everything. It’s a rite that shows our Christianity. We feel like real Christians because we are coexisting with Mother Earth [la Madre Tierra] because she is the one that provides for us. The earth is the mother and the father. It gives us everything. And so, this has helped us a lot (Concepcion church layworker, male, 56).

**Cuicatec Relationship with Prehispanic Past**

While in the field, I wanted to determine what relationship community members had
with their prehispanic past and the material signatures left behind by their ancestors. Both communities had been continuously occupied since pre-hispanic times and material vestiges such as walls, foundations, cut stone, and numerous small artifacts - many of them on the surface, are present and part of the daily lives of the inhabitants. From my field notes:

The knowledge that people (those interviewed) have of the archaeological sites is impressive in Concepcion Pápalo… It was interesting to see the home of don Leopoldo who had discovered tombs and settlement remains when he built his present home. He had a large sealing stone which he used as a work bench in his patio. Edgar’s brother had found numerous necklace ringlets and had reconstructed a necklace. The people, in sum, lived with so much of their ancestors’ material signatures, that they reused or even collected. Who knows how much is stored, kept, or even sold? (Fieldnotes: August 5, 2006 Concepcion Pápalo).

Figure 22. Prehispanic burial stone in contemporary home in Concepcion Pápalo

Figure 23. Stone axehead and necklace bead found during home construction Concepcion Pápalo
Factors influencing opinions regarding the valorization and/or knowledge of these sites were gender, age, previous immigrant/migrant (i.e. internal or external) status, education, and the overall socioeconomic situation for the town. Responses ranged from complete indifference to the archaeological sites to a desire to reconnect with them and preserve them.

Table 1. Knowledge and Beliefs Regarding Prehispanic Sites

<table>
<thead>
<tr>
<th>Knowledge of Location of Sites</th>
<th>Observed Factor(s)</th>
<th>Lack of Knowledge of Location of Sites</th>
<th>Observed Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. knowledgeable but not related to them Considerable mythology surrounding them</td>
<td>Santos Reyes Papalo</td>
<td>1. Not aware</td>
<td>women</td>
</tr>
<tr>
<td>2. knowledgeable but unsure about relation, - Some degree of mythology</td>
<td>Santos Reyes Papalo</td>
<td>2. Second hand information</td>
<td>women</td>
</tr>
<tr>
<td>3. knowledgeable with tendency to believe in some relationship - Some degree of mythology</td>
<td>Previous migrant/emigrant Age 50+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. knowledgeable and possessing a Western view of cultural preservation</td>
<td>Previous migrant/emigrant Age 21-35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lack of Knowledge

The only informants that had a lack of knowledge of the archaeological sites in both towns were women. Because most identifiable archaeological sites were located near or on the planting fields, they were known and seen primarily by the men of the two towns. Of all of the women who were interviewed, only one had actually seen an archaeological site. The majority of the women who were aware of the existence of the ancient sites had heard about them from male family members and often suggested that I speak to one of the men regarding my questions about the ancient places. As one participant explained:

Kyle - Are there any sacred sites or important sites near here?  
-Yes, the older folks talk about them. I’ve heard of them but I’ve never seen one. You could ask some of the older men of about 60 to 80 years of age. Today the people of my age or your age don’t know a lot about these places … The majority of people who know about these sites are the older ones. We haven’t been living long enough and we don’t know everything (Santos Reyes domestic worker, female, 32).
Knowledgeable of Sites but No Relationship

Santos Reyes Pápalo was unique in that there were many people who were aware of the ancient sites and archaeological vestiges, but denied any relationship with the people that built the structures or left behind artifacts. A considerable amount of mythology surrounded the people that they believed to have built the places that they had seen. They referred to them as gentiles or in some cases chentiles. Gentiles or its modification, chentiles is a term commonly used by many indigenous groups in Oaxaca (see Cook and Joo 1995; Matadamas 2003) to refer to their pre-Hispanic ancestors. Both terms were used interchangeably in both towns. Those participants falling into this category of the study, referred to them as something unrelated to their community today. The term gentiles had a similar meaning to the archaic variant of the English definition of “gentiles” as a reference to “pagan” or heathen. From my fieldnotes at a meeting of the communal lands commission (comisariado):

The old men began to talk about the legends of the old ones. They called them the “gentiles”. They weren’t sure who they were or where they came from. They told me that they lived in the times of darkness and died when exposed to the sunlight. They lived for a long time, not like today. They built the ancient places that one can see up above, in the mountain and down below in the tierra caliente. They were cannibals that even ate their children. They buried their dead in those places (Fieldnotes: July 30, 2006 Santos Reyes Pápalo).

Knowledgeable but Unsure of Relationship

For some participants there was no doubt of the existence of the ancient sites but a considerable degree of doubt as to the origins of the builders of the ruins. Through observation and information passed on from elders, some participants knew and described with some detail, the sites (See Figures 15 and 16) their location, and even surmised their function as in the case of the Horno de Pan above Santos Reyes. Due to the antiquity of the sites, however, little commitment was made to call the builders of the sites their ancestors outright. The sites for most were respected and either through
official federal government communication or community agreement, archaeological sites were to remain untouched.

Kyle - Do you know what an Archaeological Site is?
- El Campanario is a place like that. It’s prohibited to plant, dig or work there. It’s in the Tierra Caliente. You can’t either work or touch that area.
Kyle - Do you know of any places like that around here?
- No, there aren’t any places like that around here. Well… up around the Cerro Pelon there is an “horno” [This is probably a reference to the “Horno de Pan” or the adoratorio that Matadamas spoke of] that one cannot touch. We don’t know what it means. We don’t know what it means because it’s a stone structure that’s very old and the people here have never known or seen when they built it. It’s in the form of an oven [horno] but made of stone.
Kyle - Is there a connection between the people who built this and others like El Campanario and those of Santos Reyes today?
- These structures are not from this century but from very long ago. There are structures like this for adivinacion [telling of the future], there are pits (Santos Reyes storeowner, male 44).

Other participants shared with me a Cuicatec term that was used to refer the builders of the ancient sites.

Kyle - Are there any old (ancient) constructions up in the mountains near Cerro Pelon or Volcan Prieto?
- There was a time when I and a group of people from Santos Reyes did a walk around the entire limits of our municipio. There was a mountain called Cerro de Cruz de Oro. There we all went, various people, not just me. There was a marker that was very, very old – not from these times now. There was a marker that maybe had separated a house but it was not a house from these times, it was something from many years ago. There were people that had lived there a very long time ago.
Kyle - Who were the people that used to live there? Did they have a name?
- There is a name.
Kyle - Can you write it down?
- I’m not sure what to tell you because in Spanish I can’t say it.
Kyle - In Cuicateco is better if you like.
- Yes, it is better isn’t it? (Continuing) The people that used to live [in this area] long ago we called by the name of Yi nga’an. They are the ones who lived long

5 The Cuicatec spelling used in the transcription is based on the Santa María Pápalo dialect of the Cuicatec language found in E. Richard Anderson’s Diccionario Cuicateco (1983). Although mutually intelligible, there are some phonetic and lexical differences between the Cuicatec towns and villages in the region.
ago – many years ago – Yi nga’an. That’s what we call the people who lived a long time ago. That’s our name for them, Yi nga’an.
Kyle - Are they the people that built these constructions up above?
- They made walls of pure stone. They formed walls out of them. Over there one sees one of these places… There in a canyon is one of these markers (señas). It’s very, very old. No one knows in what year this thing was built. The people from very, very long ago built this wall.
Kyle - Are the Yi nga’an your ancestors? Are they related to the people of today in Santos Reyes?
- I don’t know what to tell you. The people of today have another name. It’s not the same anymore. It’s not the same as the Yi nga’an. This was a very long time ago. Now we are in present times. The people who built the walls are the Yi nga’an. They are the ones who lived a long time ago (Santos Reyes retired carpenter and farmer, male, 85).

Non Western Perspective but Related

Some informants acknowledged a direct link between the builders of the prehispanic structures and the people living in the region today. For them the term chentil, meant antepasados, or ancestors. The informants also expressed a great deal of respect and sometimes fear of these sites. Many myths and legends surrounded the builders of these sites. For those in this category, there was no doubt as to who their ancestors were and they often responded emphatically in the affirmative when asked if there was connection between the ancient builders and the contemporary inhabitants.

Several informants referred to them as la primera generacion, or the “first generation”. The legends, several told me, explained that the ancients (the chentiles) existed “cuando nació el mundo,” when the world was born, and that the ancients were a strong race of giants that could lift up to 200 kilograms (in reference to the size and weight of the enormous stones that sealed the tombs in many of the archaeological sites). “Venimos de ellos,” “we come from them,” one informant asserted. All informants interviewed that shared these views had lived abroad for a number of years and were over the age of 50.
Kyle - What is a chentil?
-Ah yeah! This is where one sees where the ancestors lived.
Kyle - Whose ancestors?
-Well… I think … our ancestors. The ones before us. Because we arrived here. There’s a place (gesturing West and downhill) down there on the hillside that’s very beautiful. One can see that they built walls. That is where they say they the gentiles lived.
Kyle - Do people plant their crops on top or near this place? What type of relationship do the people have with this site? Do they plant their milpas over these places?
-No. They respect them. Where the gap is you can’t work in that area. There are places where they do plant on these places though (Cacalotepec farmer, male, 70).

Raul Matadamas discussed how many local inhabitants plant their crops on top or near some archaeological sites with the belief that they will possess more power or more force. If the cultivated plants are medicinal plants, their medicine will be considered to be even stronger and more potent.

Kyle- Have you seen any archaeological sites? What do you think of them?
-Yes. I know of one that we have here called Peña Iglesias that is between Santos Reyes and the river… There’s a group of muros that are very [emphatically] well made. They are made without any kind of mortar. It’s on top of a cliff with only a small, narrow path to get up there…There are some stairs there that are very beautiful…It’s pretty mysterious.
Kyle- Why is it mysterious?
-Because if one goes there alone, they can feel scared. They might feel strange. But we never go alone there. Sometimes a lot of people go. Alone we don’t go up there.
Kyle- Are there any other places?
-Oh yeah! There’s lots! Nearby there this place called Cerro Catin. It’s also called Cerro de la Cruz Blanca. There are a lot ruins there. There are a lot of old and long sepulchers made of pure stone. They are very well made – these sepulchers. We can’t find any remains like bones there anymore. We do find pots of clay.
Kyle- Who do you think built these places? Is there a connection between these people and the people of Concepcion Pápalo today?
-Well the first inhabitants here could have been here from 2 to 8 thousand years ago or more! We don’t know the exact date nor when this pueblo began. There’s a history that goes back 1500 years ago but this place goes back even before this – maybe even 3 thousand years ago. The thing is that these people lived in underground caves. There weren’t any houses. Above the mountain where I used to work in the fields, there are some muros that one can tell were houses. But up
there one can see that there were ruins. They are the remains of houses. They are also subterranean [note: perhaps tombs] (Concepcion Pápalo retired farmer, male, 75).

From listening to many interviews, I often heard that the chentiles lived in underground or subterranean lairs. In the places that I visited, particularly the Cerro de la Cruz Blanca (Hill of the White Cross), Peña Iglesia, and another archaeological site literally called Cerro Chentil, I found the presence of many tombs, most of which had been looted. While for some these were undoubtedly recognized as tombs, due to the human remains found in them, for others they could appear as abandoned entrances to an underground lair.

![Figure 24. Tomb entrance in Cerro Chentil, Concepcion Pápalo](image)

**Knowledge of Sites and Possessing a Western Perspective on Preservation and or Use**

For some inhabitants, the local archaeological sites were not viewed with any great importance and were often viewed as a common occurrence in their daily lives.

The less traditional the beliefs regarding their ancestors, the more indifference was found regarding the preservation of the sites.

Kyle- How do the people here feel about these sites? Do they consider them to be their cultural patrimony?
Today, the people aren’t very drawn to these sites to maintain them or feel compelled to keep others from going. No. Everything is wide open. Anyone can go there. Anyone can take what they want (Concepcion Pápalo retired farmer, male, 75).

Although apathy was not universal among the inhabitants of both towns, some informants expressed disappointment with the lack of interest and appreciation for the prehispanic cultural heritage present in their communities. The primary reasons for the lack of interest, they asserted, had to do with culture loss and more immediate pressing socioeconomic needs. In all cases where these sentiments were shared, the informants had spent a significant amount of time working abroad in either a large Mexican city (Puebla, Mexico City, Oaxaca City, or Tehuacán) or working as undocumented workers in the United States. Moreover, all informants interviewed who shared these views were between the ages of 21 and 35.

In both communities many informants indicated a desire to learn about their past. Unfortunately, due to a lack of attention and funding from the Mexican federal government and their more pressing socioeconomic needs, many archaeological sites are often ignored, abandoned, or plowed under. One participant in Santos Reyes Pápalo, when asked about the value his community placed on the local cultural resources he responded:

- Here we have an incredible lack of employment…There are things here that are rich about our pueblo but because the authorities haven’t given much importance to this or they also don’t know what it is they can do or what they can obtain of these sites [these archaeological sites]. This is something important. They just aren’t putting any value to it.
Kyle - Why don’t the people value it? Do people feel a connection to these sites? Are there places that are not frequented by people or viewed as something strange?
- Here the people don’t know how to appreciate things like that because they think that because it is something that the ancestors made it doesn’t have any value to
them. That’s why they haven’t given it much importance. But if someone were to orient us to the value of these cultures and all of these places, I think that the people would begin to realize that yes there is a great wealth in our community. As I said, if someone in the authorities could speak to the people about how we could have jobs here as a result, I think with this we could develop something. Kyle - What do the people need to be made more aware of the value of these archaeological sites?
- Well these cultures that exist are the roots of the foundation of our pueblo. It would be good that they see this as something valuable that we have here. Nothing more than that. More than that, one cannot ask more of the people because if the people as a whole aren’t in agreement here it’s the voice of the people that matters - then you can’t. We will continue as we were (Santos Reyes official, male, 32).

As seen in the previous excerpt, for some, outside influences have contributed to a loss of culture and respect for the cultural patrimony in both communities. One participant (a 24 year old) clearly blamed the community apathy on outside influences that had contributed to a devaluation of cultural heritage.

- Nowadays these pieces [archaeological artifacts] that used to be there have been taken – more for not knowing what purpose the served or they have thrown them away. If these things were still around (or available) many people would come to see them. Who knows what they would do with these pieces.
Kyle - Do the people here value these artifacts or the sites?
- I think that it’s that people are going less and less to these places. They are not appropriating these places to identify themselves with them or to understand how these places came to be or why they exist. Nor are they identifying with these sites as a community or as a people of their own so that it gives them a sense of value and importance. It’s a question of how to create awareness *concientizar* among the people to have them understand what these places and things were and what purpose they served so that they value what these things are. These things are from the past and they serve us in the present in order to know what our ancestors were and that they lived in this place before us.
Kyle - Why do you think the people have lost this awareness (*concientización*) of the archaeological sites?
- I can give several reasons: One reason can be the entrance of political parties or anything that brings in the beliefs of other peoples (or pueblos). “Over there we do it this way, so we’re going to do it that way here too.” So as a result many different beliefs have intervened here. The infrastructure projects (*lo urbano*) are a perfect example. Before (*lo urbano*), everyone spoke 100% Cuicateco. They built these things so that the village would wake up to modernization, but sometimes these things arrive and they destroy the beliefs of a village. So this has
intervened significantly to create this loss, this devaluing of everything that one has (Santos Reyes teacher, male, 24).

**Community Reaction to Federal Resource Management Policies**

Management of the forest resources and cultural resources in Santos Reyes Pápalo and Concepcion Pápalo reflect a Foucauldian model in that although “monitored” and “managed” on the community level, the community and individual decisions are based on the guidelines and parameters set and established by discourse from the federal government. Due to the more immediate and direct socioeconomic effects of forest resource use and degradation, the management of forest resources has received much more of a priority from both federal and community levels than the cultural resources.

*Forest Resources*

In both communities this “top down” discourse from the federal government has filtered down to the individual citizen in the town regarding forest resource use. Two categories emerged from the interviews that show the extent and impact of high level government discourse to the local level: *levels of awareness* of the federal government agencies administering the biosphere reserve lands and their specific policies of conservation; and *levels of acceptance* of the federal and local government policies and restrictions on forest resource use. The awareness of specific government programs and the agency Comision Nacional de Areas Naturales Protegidas (CONANP) which administers the Tehuacán – Cuicatlán Biosphere Reserve (RBT-C) varied from complete awareness of the RBT-C and its policies of conservation to simply a knowledge of the restrictions and potential fines imposed by the federally influenced local government for the “wrongful use” of forest resources.

Levels of acceptance of government policies did not correlate directly with the levels of awareness. Some participants, although they agreed with the conservation principles of the biosphere reserve, were informed exclusively by local government representatives of the
federal regulations. Other participants knew precisely what CONANP was and what they represented, but were resentful of the intrusions and restrictions placed on them. It is important to note that all participants were at least verbally compliant with the new rules and restrictions despite their levels of acceptance.

Table 2. Levels of Awareness and Acceptance of Federal Government Policies on Forest Resource Use

<table>
<thead>
<tr>
<th>Levels of Awareness</th>
<th>Levels of Acceptance</th>
<th>Cited Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge of the Biosphere Reserve or federally influenced local government discourse on conservation.</td>
<td>No Direct Correlation between Levels of Awareness and Acceptance</td>
<td>1. Acceptance of government discourse verbally compliant</td>
</tr>
<tr>
<td>2. Knowledge of restrictions on resource use but no knowledge of Biosphere Reserve</td>
<td></td>
<td>- current environmental conditions forcing local change</td>
</tr>
</tbody>
</table>

The devastating forest fire of 1998 in the forests above both towns had a significant impact on the watershed affecting the rainfall and ultimately the crop yields in both of the communities. The rains, many complained, were now coming later and were more sporadic. Many looked for answers to explain their plight or to find solutions. For many interviewed, the science and restrictions from the federal government offered a “bitter pill” with the restrictions imposed upon them, but they were able to accept them with the hope of a positive outcome on their livelihoods. Others, as the participant from Cacalotepec, looked for more traditional means to solve or explain the change in climate by returning to their ancient traditions of returning to ask for rain from La Cueva de Rayo. In all cases where traditional solutions or explanations were sought to deal with the crisis of climate change, the participants interviewed were over 60 years of age.

They say that it used to rain a lot more in the past. So there are some rocks. They told me about some rocks that are there in the mountain. They are the ones that bring the clouds, lightning, thunder, and the rain. It is said that they broke them
[the stones] and that’s why the rain comes late. It doesn’t rain like it used to… because the Piedra de Rayo [lightning stone] was broken. That’s why the rain doesn’t come on time – why it doesn’t rain like before (Concepcion Pápalo farmer, male, 69).

Levels of Awareness

Informed of federal government discourse on conservation

In many interviews, the participants expressed a variety of knowledge of government discourse concerning conservation and of the restrictions on the forest resources use. All participants who expressed a knowledge and familiarity of the biosphere reserve and of government discourse on conservation were male.

One of the greatest impacts of the new federal laws was the new restriction on the limited use of wood for lumber and firewood.

Kyle - Can you cut anywhere for firewood?
- No, because of the Biosphere coming in, it’s now prohibited. We can’t cut down trees anymore. Dead trees we can but green trees we can’t.

Kyle - Can you plant in these places?
- No, because it’s just pure forest.

Kyle - Can you plant in places that are adjacent, but that have already been cleared?
- Yes because these places have been cleared for some time. They’ve been heired to us. Only if they give us authorization from Bienes Comunales they might give us a piece of land to plant, but if not, then no. We can’t do that anymore if the lands have vegetation on them. We can’t cut down trees on these lands whenever we wish.

Kyle - Before the arrival of the biosphere, did you have your own way of managing the land?
- Ah yes, we used wood for firewood and to help us make a house, but that’s how we used to be (Santos Reyes storeowner, male, 44).

Other participants expressed a knowledge of ecosystems and the environmental impacts of ecosystem damage to local fauna.

Kyle - Do you know what the Tehuacan - Cuicatlan Biosphere Reserve is?
- Yes it means take care and do not cut, to use natural fertilizer… One has to protect the land from some animals so that they don’t harm the soil and they (the
animals) can’t. If we cut the forest and burn it, some animals won’t be able to survive (Santos Reyes official, male, 42).

Do you know what the Tehuacan - Cuicatlan Biosphere Reserve is? This has about 8-10 years of age. This was a law of conservation. Now it’s wrong to treat the animals badly because it’s difficult to recuperate these losses. If you destroy a cactus it takes a long time for it to grow back (Santo Reyes storeowner, male, 37).

Several informants who were over 65 were very cognizant of the new federal restrictions placed on them, but expressed almost a nostalgia for the previous way of managing the forest.

Now the custom of cutting wood is over…An order has come from the government representative to say that one doesn’t have permission anymore to cut trees wherever one wishes in the mountain. One can cut, but only with permission. Before no one asked for permission. One went where there were trees. One just cut a tree wherever they wanted. They didn’t have to ask anyone for permission. Now the form of doing things is different on the mountain. The way is changing. There’s a different way now (Santos Reyes retired carpenter, male, 85).

Knowledge of restrictions only

Although gas stoves are becoming more common, especially in Concepcion Pápalo, many households in Santos Reyes Pápalo still depend on firewood for cooking and heating. Since the establishment of the Biosphere Reserve, new restrictions have been placed on the acquisition of firewood. To preserve the lower mixed oak and pine forests near the towns, only palo seco (dry wood) can be collected. Palo verde (fresh wood) is forbidden. Traditionally, women have had the role of collecting wood for the domestic cooking. All women who were interviewed had no knowledge of the existence of the Biosphere, but were informed and aware of the restrictions on fuelwood collection.
In an interview with Jimena Torres, a 60 year old Cuicatec woman from Santos Reyes Pápalo, she told me of her exhaustive days spent acquiring fuelwood for her cooking fire.

Kyle: They’ve told me that one cannot go up into the mountain to chop wood. How do you get fuel to heat your food?
[translator] She cuts wood, but only dry wood (palo seco).

Kyle: Is there enough dry wood for everyone here in the village?
[translator] There isn’t a lot, she says.
Jimena: (Emphatically in Spanish) There isn’t.

Kyle: Where do you have to go to get wood?
[translator] She goes in this direction (Gesturing on the steep south slope of the mountain).

Kyle: She walks (addressing the translator)?
Jimena: With this (in Spanish Jimena speaks. She shows me the canasta with the strap.)

Kyle: Is it heavy? (I’m speaking directly to her in Spanish)
Jimena: Yes. (emphatically)

Kyle: Everyday?
Jimena: Yes, (nodding).

Kyle: Is it difficult to find wood?
Jimena: (In Spanish) Yes, it’s difficult? I go from 9 in the morning to about 1 or 2 in the afternoon.

For those male participants who knew only of the restrictions, but not of the biosphere reserve, they remarked how not only the restrictions affected their livelihood, but also how the forest fire of 1998 worsened their economic situation.

- About five to ten years ago a really bad fire came through here. The forest really burned and went destroying the forest. But before, there was a lot of wood. In the times of my parents and grandparents they used to take out and make tabla, vija, morillo, to take to Cuicatlán to sell. This is what sustained us. This is what helped us. But now there aren’t any more trees. Now it’s prohibited to cut and the fire burned everything. Before it was a very beautiful mountain there up above.

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6 All names of Cuicatec townspeople, when used, are pseudonyms in order to protect their privacy.
It will get better in the future, but only after many years—fifty to sixty years. If there’s another fire then it will continue to be the same as now (Santos Reyes retired farmer, male, 80).

Levels of Acceptance

Acceptance of government discourse

The climate change and low crop yields in the region have had a devastating effect on many communities in the region. In Santos Reyes Pápalo and Concepcion Pápalo crop yields have been reduced significantly due to the late arriving rains resulting in a shorter growing season. Government restrictions, although seen as a hardship on traditional resource collection, were perceived as potentially having a positive local impact.

In the past everyone planted wherever they wished. All the land was communal. We didn’t have any impediment to go and chop a tree down and plant. But lately with the trees disappearing there isn’t as much rain as before. All of this started changing and then the (dependencias agrarias) agrarian government agencies began to prohibit us [from cutting the forest]. But this is a public good [benefit] to be able to take care the forest because the benefit is not for someone from far away but rather the community right here (Santos Reyes official, male, 32).

Other participants, although not quite as prepared to accept the new restrictions as some, were willing to listen to new ideas to solve the crisis. Many participants showed an understanding of government discourse regarding the maintenance of forest integrity and watershed management.

Kyle - Has the biosphere reserve brought any benefits to your community?
-Well we’ll have to see because the Biosphere Reserve hasn’t been around for many years. We’ll have to see what the result of this and how we’ll live with it. Because when the land was very well forested, it used to rain a lot. Now we don’t know if it’s going to rain because of the vegetation or the water went away or if it is because it burnt or because of the weather [change in climate]. I don’t know how—perhaps the seasons have changed. The water has changed a lot. It’s not like it used to be. The water used come on time in June and around the fifteenth of July it began to rain harder. The people used to begin planting. The weather is
now changing. Now it’s not raining until July. What are we going to plant? It’ll rain one or two months and the water leaves and then what are you going plant? They say it’s because of the forest. They say it’s not sufficient. It doesn’t look good. For this reason we are looking at the decisions of those who are scientists who say that because of the trees[the lack of them], it’s not going to rain. We stopped cutting down the trees because it’s affecting us. We have to respect a bit this Biosphere because if not, in twenty years in place of rain it’s going to rain fire! (Santos Reyes farmer, male, 69).

Resentful and or critical

Those participants who were critical or resentful of the federal restrictions often cited reasons of a lack of inclusion in the decision making to manage the use of forest resources. “No habia practica con el pueblo.” There wasn’t any discussion with the community. Some referred to the government as an “absent father,” that “no cuida a los pobres” doesn’t care for the poor people.

There was never a meeting or any widespread detailed information. There never was a meeting of the communal land members (la autoridad comunal) where PROFEPA or SEMARNAP explained “Gentlemen, at the beginning of this year you will no longer be able to cut down the trees,” This never happened! Never! We only found out because the comisariado told us that it would be prohibited to hunt animals, that it’s prohibited to even hunt lizards and everything else and that we should take care of all of this. This was the only information that we had given to us. We’ve never had a detailed explanation from these government agencies. They’ve never informed us. They’ve never sat down with us with a chalkboard, a workshop, nothing (Concepcion farmer and former official, male, 49).

For others once the decision had been made to restrict the use of the forest resources, the lack of financial support to aid the towns in their endeavors frustrated their efforts.

They [The Biosphere Reserve officials] take care of all types of resources from the plants the flora, the fauna, the deer, all types of these things. It’s a protection but what the problem is, is that they don’t support us. They say that they’re going to support us in the protection of the resources. What they really do is prohibit, not support. You know. That’s what it’s like with them. So the trick is, support, you know. If I’m supposed to take care this plant, I’ll take care of it, but they
only prohibit, they offer no support to do it. If they do support it’s very little… They tell us to reforest here, don’t plant crops or take care of this plant because it’s in danger of extinction or no… They have their law, their regulations that say to take care, to protect, to prohibit, but it doesn’t say that they should be here to take care of it (Concepcion land commissioner, male, 54).

Or sometimes community members are frustrated with ineffectual federal attempts to help solve their situation:

Since the fire, the government sent in the Army to help out with the reforesting of the area. When the soldiers showed up, they came with rifles! What they should have brought were shovels – not rifles! How is a soldier going to help us with a rifle out here?! (Concepcion land commissioner, male, 54).

Abel Dominguez of the CDI in Cuicatlán explained the financial stresses placed on communities as a result of the new federal restrictions and the lack of financial support to compensate for hardships.

There was a puma prowling around near Jocotipac. It ate the livestock of the people and the people there depend on these animals for their livelihood. Their horses allow them to move around their lands, their oxen allow them to plow their soil. In this area the puma ate five or six animals. No one paid the people for their loss. “CONANP, the Puma ate my livestock,” the people would say. CONANP would respond, “Don’t kill it! Don’t kill it!” Their livestock are their livelihood. This is a livelihood of a people, of a community, of a family. CONANP doesn’t have a responsibility to the people of these communities within the biosphere boundaries… If you have wild animals on your reserve and the citizen also has his animals then you need some type of assurance that these wild animals are not going to eat and destroy livelihoods. There has to be some kind of co-responsibility. The laws from CONANP came later. The people were already here. The people’s laws take precedence. This is what still needs to be worked on (Interview 2006: Abel Dominguez).

Some participants, although they understood and agreed with much of the government discourse on ecosystem conservation, had a strong level of skepticism of the federal government’s intentions and actions to promote real change.

We are going to suffer from a lack of water and many resources that are required to be a human being. We are using it all up. One has to make the government aware of the consequences…The government always says that it’s doing this
great thing and that great thing. But if one really gets to core of what they’ve done, it’s not much. For example, after the fire [of 1998] the government only replanted pine trees in areas that were visible from the roads, but much further within no one planted anything. This was politics as well. Some people got rich off of the trees. They might think that they got rich, but we all, in the end, are negatively affected because a tree is for our whole life. It represents the air, oxygen, fresh air, beauty (Santos Reyes teacher, male, 24).

Cultural Resources

The preservation of pre-Hispanic cultural resources in Mexico and Oaxaca more specifically have been given special attention and importance for management only when the locations have been commodified and accessible to tourism. Pre-hispanic archaeological sites that are remote and/or are located in areas without tourist infrastructure, have suffered from looting, construction, overgrazing, and/or remain little studied or unknown to archaeology. INAH has several custodios (monitors) in Oaxaca state who have the responsibility of monitoring the condition of known, recorded prehispanic archaeological sites (see Cruz Vasquez 1999). Not professional archaeologists, the INAH custodians have the job of evaluating the condition of the sites, collaborating with the communities that live near the sites to promote preservation, and if possible, preventing their destruction. Unfortunately, these custodians in more recent years have been reduced in number due to federal cutbacks within INAH and therefore struggle to perform their monitoring duties (Robles Garcia, personal communication). Consequently, in both communities, most informants indicated no knowledge of INAH or its principles of preservation. As a result, many community members do not often share the same views as the Mexican government due to its inability to promote its policies as well as enforce them.

The table below differs from the previous table and reflects INAH’s financial inability to adequately fund the enforcement and promotion of federal cultural resource preservation laws. While all interviewed were aware of at least the restrictions on forest use, the same cannot be said of the study participants’ awareness of INAH and federal policies
regarding cultural resource preservation. Because cultural preservation laws lack adequate enforcement in the region and do not represent a clear, tangible, and direct socioeconomic need such as watershed management, measuring levels of acceptance or compliance with the laws is not wholly relevant because government discourse has played such an insignificant role in the daily lives in both towns.

Table 3. Levels of Awareness and Views of INAH and Archaeological Preservation

<table>
<thead>
<tr>
<th>Levels of Awareness of INAH and Federal Management Laws</th>
<th>Point of Contact with Federal Laws</th>
<th>Views of INAH and/or Archaeological Preservation among participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aware of INAH and archaeological preservation</td>
<td>employment or land use conflict with INAH</td>
<td>1. Favorable – if INAH promoted and preserved a traditional cultural property</td>
</tr>
<tr>
<td>2. Aware of restrictions but not of INAH</td>
<td>informed by the local land commission</td>
<td>2. Unfavorable – if restricted agricultural land use to preserve an archaeological site</td>
</tr>
<tr>
<td>3. Unaware of both INAH and restrictions</td>
<td>n/a</td>
<td>3. Indifferent – not relevant in the participants’ daily lives even if aware</td>
</tr>
</tbody>
</table>

The limited archaeological excavations and projects done and funded by the Mexican federal government have been relegated to more salvage archaeology than research based. When such projects are done, INAH representatives have employed local inhabitants to take part in the salvage projects. An INAH archaeologist that had worked in the Cuicatlán Cañada region and currently working for the UNESCO World Heritage Site of Monte Alban, commented that around the Monte Alban archaeological zone (a major generator of tourist revenue) there are no more excavations, just salvage archaeology “rescate” and the preservation of what we already have right now. He felt that they lacked the funds and personnel to adequately protect Monte Alban and the 3000 other sites throughout Oaxaca.

In nearly all of the interviews, when participants knew of ancient sites, very little importance was given to them. Only when the potential use of them as tourist attractions
could reap economic benefit did these locations have a practical place in something other than community folklore. Despite interest in the potential use of these sites for tourism, many participants considered these sites as secondary in importance when compared to their more pressing needs regarding forest resource use for fuel and watershed management. As one informant described the situation:

-Well for us these sites are abandoned because no one pays attention to them. These are archaeological sites of the community that no one pays attention to. Kyle- Why?
For the reason that there aren’t many resources, there are no roads to get to these places in order to determine what to do with these places for another type of tourist or attraction. It’s like what I said about the lack of means here. They don’t exist (Concepcion land commissioner, male, 54).

Consciousness arose among many community members of the “value” and preservation of archaeological sites when their local archaeological sites could actually be viewed as income generating “resources” to attract tourists.

-There used to be indifference of these sites because the people used to say that they didn’t have any value because they were from the ancestors. That’s why they destroyed them. But now, we see that they are sites that have a lot of historic value.
Kyle – Why do the have this value now?
-Because Oaxaca is a big archaeological zone that attracts a lot of tourism and it’s a very touristic location. There there is a lot of value placed on things of antiquity, the culture that they used to have, where we came from, from what people we came from (Concepcion health care worker, male, 49).

Awareness of INAH and governmental goals of preservation varied from total awareness of both to simply an awareness of the restrictions of building or excavating in a known archaeological site to being unaware of either the restrictions or the existence of INAH. Most participants in the study fell under the second category. Information was passed to them not directly from the federal government, but from the local land
commissioners who were themselves informed by federal agency representatives in formal meetings either in the towns or at meetings at the CDI offices in Cuicatlán.

Kyle - Are there special places where you wouldn’t want to see people cultivate or construct?
- Everything depends on where they decide to do the activity. In an archaeological site, for example, it’s a very delicate site and they can’t construct just anywhere. So there, we shouldn’t construct anything.
Kyle - Why?
- It’s delicate because here in Mexico it’s federal property. So one can’t build in these sites. We have to respect these sites to avoid having any problems. We can’t construct there because it could help the pueblo (Santos Reyes storeowner, male, 37).

Although the preservation goals of INAH had arrived at the community level, some study participants indicated a community level respect for ancient sites that complemented INAH’s goals due to their belief in a relationship with their pre-Hispanic past.

Kyle - What do you know about these places [archaeological sites]?  
- We don’t have anything because these things one cannot break off and take home. You look at it and that’s all. No one has the right to break off something and take it home because it belongs to the old ones - it’s guarded/protected (Santos Reyes farmer, male, 37).

In both communities, the participants that were aware of INAH had both positive and negative comments regarding government policies on preservation. In Santos Reyes Pápal the colonial church (see Figures 11 and 12) was the point of contact with INAH for many community members when historic architects came to restore the church retablo and other parts of the church interior. This official visit and others previously, had developed among the people an awareness of the value that the church had to outsiders. While in the mayor’s office, he proudly showed me a large well-illustrated book of colonial churches in Mexico that included color photographs of the Santos Reyes
church’s interior. Those individuals who had had contact with INAH in Santos Reyes Pápalo were able to convey an understanding of the INAH’s goals of preservation

I went to Oaxaca City last year about monumental sites like the church [in Santos Reyes] that is very old. Places that you can’t touch or tear down. INAH told us that we have to protect and take care (Santos Reyes farmer, male, 69).

Concepcion Pápalo, due to its pre-Hispanic importance as a señorío and an important cacigazgo during the early colonial period has several archaeological sites within and near the town. Several participants shared with me the experience of a visit to the community that INAH had made to Concepcion Pápalo in the late 1980s to survey the area for prehispanic monumental architecture. The result of the survey yielded several sites which INAH declared off limits to agriculture, grazing, and construction. Many of these sites were located on private or communal land used for agriculture. Fences were constructed around some of the areas to keep livestock out. Although many study participants indicated that they complied with the federal laws imposed upon them, when comfortable, some revealed their true feelings on having to cede land to protect archaeological sites.

-I was the (comisariado) community land commissioner from 1986 to 1989 and the people from Anthropology and History [INAH] from Mexico came and they spoke to a man called Mariano Gonzalez. Mariano Gonzalez had some cultivated land in a place where there were ruins and they prohibited him from working there anymore.
Kyle -Why?
-Because it is an archaeological zone.
Kyle- Did he stop working?
-He stopped working.
Kyle - Did they offer him money or something?
-(Emotional) There doesn’t exist not one document, nor any money. Nothing! What money?! They didn’t give him anything. Nothing, because the people here are so impressionable (sensible) they sat down and chatted with him and told him (imitating a condescending soothing voice now) that he shouldn’t continue to work in this area because it’s an archaeological zone.
Kyle - Didn’t he need the land to plant his crops? -To sustain himself, that’s right! (Emotional) He didn’t ask for anything! He didn’t ask! Even if he did ask they wouldn’t have given him anything! If you prohibit me from working over here, then give me another location where I can work. How do I do it if in this place I cultivate and use for my sustenance – for my family? That’s what he should have said. But no! They prohibited him from working and he being very timid, gave it up (Concepcion farmer, male, 49).

The Commodification of Resources for Tourism

Much of Oaxaca’s economy today relies on tourism. Focusing more on cultural and ecotourism rather than exclusively the beach resort model found in other regions of Mexico, Oaxaca has entered the tourist industry by emphasizing its contemporary indigenous cultures, archaeological sites, and its diverse natural environment according to the official state government webpage: (http://www.eoaxaca.gob.mx). Although many parts of Oaxaca have been discovered by tourists or marketed to tourists, the Cuicatec Cañada region has not been among them. On the official government website, the link to the descriptions of the indigenous ethnicities quotes the ECOPRODES study (2001) referring to the Cuicatecs as the Oaxacan indigenous group that “maintain subordinate relations with the mestizos… resulting in the inhibition of the participation in the processes of autonomous organization.” In comparison to the other Oaxacan indigenous groups’ webpage links, the link to the Cuicateco description provides only cursory statistical information.

Of the two communities covered in this study, only one is beginning to enter the tourism industry – Concepcion Pápalo. The other town, Santos Reyes Pápalo, has been and continues to remain isolated from state and federal government tourist development. The CDI has sponsored several workshops hosted by an NGO called Asesores en Desarrollo Turístico Sustentable from Mexico City. All communities were invited to
send representatives to attend. At these workshops, the facilitators worked to provide a definition of tourism, types of tourism, what community hospitality is, and encouraged the different community members to identify their cultural and natural resources that may be attractive to tourists. Surveys were taken of each participant community’s potential tourist offerings during the workshop and the results were given to the CDI to include in their tourism plan to submit to SECTUR. Concepcion Pápalo had several attendees at every workshop.

As the centerpiece of the CDI tourism development plan is the use of the Cheve Cave systems and plains area to attract tourists for its aesthetic beauty and adventure/ecotourism potential. This system is located on the communal lands of Concepcion Pápalo. At the time of this fieldwork, plans were being developed to build cabins and a restaurant in Cheve cave system and plain area. Other plans such as aquaculture (introducing fish into natural pools for sport fishing), horseback riding, and rappelling were also being considered, but were later eliminated from the plan due to environmental impact and sustainability concerns of introduced animals into the area.
In Concepcion Pápalo, community support for and awareness of the CDI tourism project was widespread among those interviewed. Concerns arose around the control of the resource and doubts centered around the how much of the profits would actually reach the community members. As one informant stated, “If they are going to build [cabins] in Llano Cheve it should belong to the community. It should not be privately owned.” (Coapan de Guerrero farmer, male, 39).

The CDI’s official tourism education discourse had effectively diffused throughout the community of Concepcion Pápalo. As a result, the terms “turismo,” and “turista” were well known throughout the community.

Before going to Santos Reyes Pápalo and attending the CDI tourism workshops, I was advised by Raul Matadamas in Oaxaca City to not use the term “turista” in my interview questions, because the people may not be familiar with the word or even understand the concept. One participant in Santos Reyes who had worked several years abroad explained the difficulties that some townspeople may have in understanding tourism. In addition, he shed light on what it would take for Santos Reyes to accept tourism.
Here what’s going on is that the people haven’t left Santos Reyes. They don’t know what tourism is. They don’t know what generates this activity. Maybe, because the people don’t have an idea of what this is if they see people from some other place they think that these people are here to steal. So this is perhaps another reason why they haven’t promoted this. Basically, I don’t see this [tourism] as something negative, but rather a benefit to generate more jobs. Here we have an incredible lack of employment. In the future, if one of the authorities wants to get this up and running, I think, after speaking with the people, maybe they would accept the entrance of tourism. There are things here that are rich about our pueblo but because the authorities haven’t given much importance to this [tourism] or they also don’t know what is they can do or what they can obtain of these sites (Santos Reyes official, male, 32).

Instead of using the term tourism, I asked participants to share with me what they considered to be beautiful or important about their town. I also asked them to describe the places that they would like to show a visitor/guest to their town. When worded in this way, most participants expressed pride in their colonial church and its interior. Men, reflecting their sphere of work in the agricultural zones on the peripheries of the town, mentioned the archaeological sites and mountaintop views from the Volcan Prieto. Both men and women mentioned the forest for its beauty. Some participants expressed an interest and pride in teaching visitors the Cuicatec language while others mentioned sharing the traditional craft of making ceramics, “There are people who may be interested in coming to see those who make ceramics. Here they make ceramics. They make jars. People may be interested in seeing this. We could show them.” (Santos Reyes domestic worker and potter, female, 35).

Not all interviewed were positive about what their community could potentially offer. Some participants could not think of an answer or others did not find anything worth showing to outsiders:

I don’t know if there’s anything beautiful around here. I don’t think there is anything beautiful here because we live and spend almost all of our time here in
the mountains and we’d like to go the city but because of a lack of money we can’t leave. We can’t leave because of our families, because to leave one always needs money. We’re always bored here. No, I don’t think there are beautiful things around here. It’s just the mountains. We’d like to go the city, there one finds beautiful things but because of money we can’t, we can’t leave here (Santos Reyes domestic worker and head of household, female, 39).

Important to note is that among some female participants, the Cuicatec language was not universally highly valued.

The Cuicatec language we don’t like anymore because Spanish is more widespread. Before we almost couldn’t speak Spanish, but now many people speak it...speaking and learning Spanish is difficult for us. We only have known our language and when we go down to Cuicatlan [to the regional market] or another place our language is not useful, but Spanish is. The Cuicatec language is not useful to us but only around here. When we leave here it doesn’t serve us... In the city they take advantage of us because we don’t speak Spanish. They take advantage of us because we can’t protest because we can’t speak Spanish. This is what happens to us (Santos Reyes domestic worker and head of household, female, 39).

Figure 27. Traditional handmade ceramics of Santos Reyes Pápalo
DISCUSSION – Implications for Cultural and Natural Resource Management

Understanding, definition, and value of the natural and cultural resources in the municipios of Santos Reyes Pápalo and Concepcion Pápalo and between the federal land agencies has both differed and found similar ground. Between the two communities, access and communication to the regional, state, and national markets and sources of communication have played a significant role in socioeconomic development and the reception of exogenous cultural and political discourse. This access (or lack of) in turn has either inhibited Western style economic and infrastructural development and culturally encapsulated Santos Reyes Pápalo or contributed to a higher degree of Western style development resulting in a higher degree of acceptance of federal discourse on resource use and management in Concepcion Pápalo.

Community Management of Cultural Resources and Relationship with the Land– Trends

Both communities have a strong desire to reconnect with their past (prehispanic and colonial). It is incorrect, in this case, to assume that the greater the access to Western ideas, the greater one would find acculturation and rejection of traditional ways. One exception to this premise would be the use of the traditional language which is above 95% in the number of speakers in Santos Reyes Pápalo yet only 50.33% in Concepcion Pápalo (Marginacion Municipal 2000). Knowledge of the past and relationship to the prehispanic archaeological vestiges was much greater among those interviewed in Concepcion Pápalo. The revival of the annual community wide prehispanic giving of thanks water ceremony and the maintenance of many traditions involving water in Concepcion Pápalo provide strong support of this. Contrary to Santos Reyes Pápalo, very few interviewed in Concepcion Pápalo denied a direct ancestral relationship with the
builders of archaeological sites. Paradoxically, in the more isolated and linguistically preserved Santos Reyes, one finds more rejection of prehispanic traditions such as the once community levelPedido de Agua tradition and less of a direct connection with prehispanic ancestors (e.g. defining the chentiles/gentiles as another “race” of people).

In both communities, pre-Hispanic archaeological sites evoked economic “value” when they were equated with potential income generation from tourism. Harmon’s (2002, 2003) intangible cultural, spiritual, and identity values were stronger with the natural prehispanic locations such as the nacimiento de agua site or the Cueva Cheve system in Concepcion Pápalo. No prehispanic built site observed near either community was still in use or evoked any strong expressions of intangible value. Sites were either quarantined and separated from the community as in the case of Cerro Chentíl in Concepcion Pápalo or so remote from the inhabited or cultivated areas of the municipio that they were infrequently visited or unknown to the general population (e.g. Horno de Pan in Santos Reyes Pápalo or Peña Iglesia in Concepcion Pápalo). An exception to this, could be found in some cases in Concepcion Pápalo where some sites (e.g. Cerro de la Cruz Blanca were well known and commonly viewed as cultural icons for the town yet still used for cultivation. In most cases, when sites were located within inhabited areas, subsistence needs such as home construction, or crop land use outweighed any potential intangible notion or value that would allow for the preservation of the site in a Western archaeological sense. Although in Santos Reyes Pápalo, Harmon’s spiritual, cultural, and identity values did not apply to the pre-Hispanic built environment, they did however apply to the colonial built environment in terms of its unique baroque church.
Laws imposed on the communities from INAH to restrict grazing and agriculture near archaeological sites were resented by the communities but complied with out of fear of federal prosecution. The motive for preservation was not one largely based on cultural or spiritual values, but fear. Missing from INAH’s sanctioning of the land was an educational component to the federal discourse to allow for the development (or awakening) of spiritual, identity, and cultural values. Also missing from INAH’s sanctioning (in reference to Concepcion Pápalo) was financial assistance to compensate for the loss of land or education (as is now promoted by Nelly Robles Garcia and Raul Matadamas) on how to preserve an archaeological site through the use of agriculture. The previous policies of INAH in these cases were grounds for community wide resentment.

There are several possible underlying and interconnected mechanisms that have contributed to community-wide knowledge and ties to the cultural resources used and valued on spiritual, cultural, and identity levels. The first is the commodification of the resource by an outside source such as the CDI. El Cheve cave and plains area have been marked for tourist infrastructure development. Although controversy surrounds the smaller details of management such as waste disposal and who will profit from the new infrastructure, the community of Concepcion Pápalo has shown interest in maintaining and having a close relationship to the site due the potential revenue it could generate. The Cerro Chentil archaeological site in Concepcion Pápalo is cited as a potential location to be managed by the community under this commodity mechanism due to the desire by community members for it to be included in the CDI tourism plan. It maintains a controversial status due to federal fears of possible damage occurring to the site.
The second mechanism is the degree of socioeconomic marginalization in a community. Very few reasons were given in the interviews for the disappearance of the Cueva de Rayo tradition in Santos Reyes Pápalo. The primary reason given by participants was the remoteness and distance of the location which signified a community wide hardship. This coupled with the influx of Western value systems such as science and occidental education resulted in the abandonment of the tradition. Socioeconomic hardships have had less of an impact in Concepcion Pápalo by comparison due to its selling of its forest resources to the Mexican paper company for exploitation from the 1950s to the 1980s. This significant community-wide income boost also contributed to the earlier construction of the road connecting Concepcion Pápalo with the interior communities and the outside world. Although the same value systems entered Concepcion Pápalo as they did in Santos Reyes Pápalo, the improvement in the socioeconomic needs of the people in Concepcion Pápalo allowed for them to concentrate and maintain more of their community cultural resources and traditions than in Santos Reyes.

Exogenous influences were not always intentional or unintentional forces of acculturation in the communities. Sometimes they were forces of renewed community interest in local cultural resources. In both communities researchers (domestic and foreign) examined the colonial church in Santos Reyes Pápalo and the Cheve Cave system in Concepcion Pápalo. Important to note is that both sites (built and natural respectively) had spiritual, cultural, and identity values associated with them. The colonial church of Santos Reyes is used for its obvious Western spiritual reasons and the
Cheve Cave was and continues to be used by the Cuicatec people for spiritual adoration as well. In both cases the researchers developed close ties with the communities and shared their scientific results with them. In interviews in both towns, the participants shared much of the discourse passed to them from findings from the researchers.

In some cases the mechanism for community level management of cultural resources was internal. This management was implemented if two conditions were met: the community memory of the purpose and use of a site or sites was still intact; and the traditional location or site was relevant to a community wide subsistence need (e.g. source of water). In Concepcion Pápalo the Nacimiento de Agua festival was revived, and town elders still remembered the prayers in the Cuicatec language. In Santos Reyes Pápalo, the potential for a revival of the Cueva de Rayo ritual at the site is always present because it has yet to fade from the community memory. Some individuals, as the resident of Cacalotepec and others from his community indicated, would like to revive the tradition and have even began to restore the custom on a limited scale.
Table 4. Mechanisms for Community Level Resource Management of Cultural Resources

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Source of Mechanism</th>
<th>Actual (A) or Potential (P) Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodification for tourism</td>
<td>External -federal agency, NGOs</td>
<td>El Cheve System (A), Cerro Chentil (P)</td>
</tr>
<tr>
<td>Degree of socioeconomic marginalization and surplus of food and resources</td>
<td>n/a</td>
<td>Concepcion Pápalo</td>
</tr>
<tr>
<td>Sustained attention given to a community’s cultural resources by outside</td>
<td>External - federal agencies, NGOs, foreign researchers</td>
<td>Church of Santos Reyes (A) Cheve (A)</td>
</tr>
<tr>
<td>researchers and the knowledge gained shared with the local inhabitants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An existing community level memory of the use and purpose of the site</td>
<td>Internal and External</td>
<td>Concepcion Pápalo (A) Santos Reyes (P)</td>
</tr>
<tr>
<td>which could possibly signal a revival or an outright rebirth of the</td>
<td></td>
<td>Nacimiento de Agua Cheve Cave</td>
</tr>
<tr>
<td>custom (internal)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Community Management of Natural Resources – Trends**

Although a significant hardship in both communities, both towns have upheld the demands of the federal government to reduce the domestic and commercial use of their forest resources. Even though the discourse from the federal government did not directly arrive to community level, all participants in the study knew of the basic restrictions of forest resource use. It is important to stress that this is not entirely due to the “effective communication” given by the Mexican federal government, but more of a combination of community need and official discourse. The probable decisive factor for the compliance of the two communities was the massive destructive forest fire in 1998 that affected both communities. These effects went beyond the mere contention over the use of the forest resources, but extended to an even greater catastrophe – the reduction in seasonal rainfall. This environmental catastrophe likely opened the door to communication between the local and federal levels.
Traditional styles of forest management were seen as potentially harmful to their continued lifestyle and as a result, the communities decided to incorporate and co-opt the scientific, Western value systems from the federal government into their management style. Unfortunately, there are limitations to this new style of management. Although there has been acceptance of these new exogenous management principles, both communities and others throughout the Tehuacan-Cuicatlan Biosphere Reserve have had a difficult time meeting the new expectations placed upon them by the federal government due to a lack of financial support. In line with the assertions of Pathak and Kothari (2003), the difficult socioeconomic reality for both communities surfaces when they are pressured and expected to uphold and maintain strict environmental laws but are not given financial compensation for loss of land, livestock, or time.

The “environmentality” of Agrawal’s work (2005) is apparent in the development of a more Western environmental outlook, identity and management style in the communities. This Western outlook of the communities, however, can make some uncomfortable who want to hold onto the myth of Redford’s (1991) “noble ecological savage” as both communities have begun to embrace Western management principles. This process and openness to Westernization, as Holt (2005) describes has and can continue to promote collaboration between the federal government and the communities. Desperation and need have facilitated this new worldview development moreso than pure governmental intervention resulting in perhaps a unique identity-amalgamation of the two worldviews. Although the objectives of the land management agencies in this study differ from the goals and objectives of the communities (environmental stability and economic prosperity), the collaborative outcome can possibly be the same (Hay-Edie
2003). Unfortunately, the most significant factor stymieing this collaboration, is the lack of a fiscal complement to the proposed and current policies. Second only to this, is the history of community mistrust of federal policies regarding land management.

Federal management and communication has changed in many ways as many indigenous communities have pushed back or rejected more direct “top-down” approaches. Corruption at all levels has also hurt efforts at legitimate discourse between federal and community representatives. Today federal authorities (with significant financial debilities), perhaps reflecting the neoconservative approach by the ruling federal party, the National Action Party (PAN), appear to be attempting a more decentralized approach than before in contrast to the past abuses of power of the previous long-reigning corporatist Institutional Revolutionary Party (PRI). This new marriage or relationship between federal agencies and communities has proven uneasy since the founding of the Tehuacan-Cuicatlán Biosphere in 1998. Communities have indicated that they have not received information about what is required of them under federal law and both INAH and CONANP have expressed frustration at being ineffectual in the full dissemination and enforcement of federal laws and regulations. Although some within the ranks of these management agencies still maintain and favor a more “hands off” approach to dealing with the communities, others would prefer a more engaging policy of discourse with the communities.

The CDI, although not a land managing agency, has attempted to marry cultural resource management, natural resource management, and indigenous community needs of economic development under the umbrella of a tourism development plan that commodifies the traditional beliefs and resources found in the Cuicatec region. As is
their function, they have attempted to directly engage communities to voice their interests and then provide the funding to develop a functional plan for tourist development. The test for the success of this plan, however, will be in how much of the profits from this venture will remain in the communities.

Although a case study, this research has focused on a region and a people of Oaxaca that has been little studied when placed in the greater context of indigenous archaeological, economic, historic, psychological, and social research currently undertaken in Oaxaca, Mexico today. While many of the intricacies of this study are unique to this region. The themes of state influence, discourse, power, and control over resources and their contrast with indigenous communities’ needs, perspectives, and traditions regarding land use are pertinent to the greater global discussion regarding the co-management of resources. Moreover, the relevance of this discussion relates to the challenges facing indigenous communities in maintaining traditional resource use and practices while needing to adapt to external environmental, political, and social pressures which can threaten acculturation or at the least, the abandonment of cultural practices.
CONCLUSION AND RECOMMENDATIONS

Due to the factor of socioeconomic marginalization, the Cuicatec in the towns of Santos Reyes Pápaló and Concepcion Pápaló in the Tehuacán-Cuicatlán region are finding it difficult to survive in their own traditional lands. With the establishment of the Tehuacán-Cuicatlán Biosphere Reserve and its federal objectives concerning management, they often find that they are no longer welcome or are confused about the correct usage of their traditional natural resources. Compounding the difficulty of the situation are numerous archaeological sites found in the region that are loosely or nominally managed by INAH. Thus the communities have had their traditional local-level management superimposed with another federally mandated management from Mexico City. The result of this new sphere of federal management has led to confusion and frustration for many inhabitants in the region.

As result, conflicts have arisen between the reserve officials and various indigenous communities over the use of the land and its resources. On one side, the Mexican government has passed the laws and regulations for the “correct” usage of the federal lands, while on the other hand, many indigenous communities, due to their struggling socioeconomic condition, find it difficult to fulfill the expectations concerning land usage created for the reserve. The Mexican government will need to have the cooperation and “buy-in” from the communities if it is to succeed at maintaining the biodiversity of the region and fulfill the conservation objectives of the biosphere reserve mission. Most importantly, it will need to address and ameliorate the issue of socioeconomic marginalization, to ultimately attain ecological sustainability within the biosphere.

Larger socioeconomic and historical problems stemming from poverty and
corruption to racism that are seen on a much larger national level are also found within the reserve's boundaries. Economic, political, and social marginalization of the many indigenous communities plagues the region. A general lack of trust of governmental institutions is rampant in southern Mexico and this creates a difficult climate for collaboration. The issue of socioeconomic marginalization among the native communities must be addressed in order to preserve the region's cultural and natural resources. Therefore, a management plan from the Biosphere Reserve that incorporates not only environmental protection and sustainability but, economic development as well must be implemented. This can be achieved by a complete coordination between the indigenous communities first and foremost, and CONANP, INAH, and the CDI. Each party will need to express and have their objectives met. At the center of this management plan will have to be community-based economic development and education. Indicated from the people in this study was a desire for economic prosperity, knowledge of their past, and the protection of their natural resources in order to preserve their cultural identity and way of life. Therefore this management plan will require a combined effort to complement, reinforce and expand the communities’ knowledge base through education. This plan should incorporate the views, knowledge, and cultural norms found within the indigenous communities.

Researchers have documented a large amount of ethnobotanical knowledge in the Cañada de Cuicatlán region. By starting income generating activities such as community museums dedicated to the local archaeology or other ethnobotanical gardens as in the case of Cuicatlán, some communities may be able to supplement their economic income from subsistence-based agriculture with more ecological and or cultural enterprises. The
Mexican government could provide economic subsidies to promote and publicize the new areas found in the reserve. Moreover, money could be allocated to bolster ongoing environmental education programs with young people both in and out of school. By making investments to improve the access to goods, services, and education for the indigenous communities within the reserve, thereby alleviating the effects of poverty, protecting natural and cultural resources can seem much more viable and possible.


### Appendix A: Municipal Marginalization

**Source: Marginación Municipal, Oaxaca 2000**

<table>
<thead>
<tr>
<th>Municipio</th>
<th>Pop. 60+</th>
<th>Pop. 0-14</th>
<th>Female</th>
<th>Literate</th>
<th>Access to Water</th>
<th>Access to Electricity</th>
<th>Access to Electrical Grid</th>
<th>Sanitation</th>
<th>Treatment</th>
<th>Primary</th>
<th>Secondary</th>
<th>Tertiary</th>
<th>Population Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concepción</td>
<td>67,76</td>
<td>100</td>
<td>414</td>
<td>216</td>
<td>7.11</td>
<td>69.08</td>
<td>2.64</td>
<td>30.77</td>
<td>69.08</td>
<td>30.77</td>
<td>69.08</td>
<td>69.08</td>
<td>30.77</td>
</tr>
<tr>
<td>Pápalo</td>
<td>61.22</td>
<td>12</td>
<td>90</td>
<td>50</td>
<td>7.72</td>
<td>69.08</td>
<td>2.64</td>
<td>30.77</td>
<td>69.08</td>
<td>30.77</td>
<td>69.08</td>
<td>69.08</td>
<td>30.77</td>
</tr>
<tr>
<td>Santos Reyes Pápalo</td>
<td>5.16</td>
<td>11</td>
<td>77</td>
<td>38</td>
<td>7.72</td>
<td>69.08</td>
<td>2.64</td>
<td>30.77</td>
<td>69.08</td>
<td>30.77</td>
<td>69.08</td>
<td>69.08</td>
<td>30.77</td>
</tr>
</tbody>
</table>

*Note: The table contains data on various indicators of marginalization, including population demographics, literacy rates, access to water and electricity, sanitation, and education levels.*
Oaxaca de Juárez, Oax., a 21 de julio del 2006
“2006 año del Bicentenario del Nefelico
del Benemérito de las Americas, Don Benito Juárez García”

AUTORIDADES MUNICIPALES DEL
DISTRITO DE SAN JUAN BAUTISTA CUICATLAN, OAXACA.
P R E S E N T E

CARTA DE PRESENTACIÓN

Por este, me permítan presentar al C. KYLE PATRICK HEARN, quien realiza su Servicio Social en esta Dirección dependiente del Instituto Nacional de Antropología e Historia (INAH) a mi cargo a efecto de que se le permita llevar a cabo la investigación tendiente al proyecto “MANEJO DE RECURSOS CULTURALES Y NATURALES”, quien es procedente de la Universidad de Oregon State., Estados Unidos de America, el cual realizará una serie de investigaciones tendientes al manejo de los recursos culturales y naturales de la región de la Cañada, abocándose a ese Distrito de Cuicatlan, Oaxaca. Por lo que de la manera más atenta por este medio le solicito brinde usted todas las facilidades que sean posibles.

Lo anterior debido a que la Universidad de Oregon State, a lo largo de muchos años ha tenido interés en el estudio de diversas zonas de la Republica Mexicana, con el objeto de tener un conocimiento de las grandes culturas prehispánicas que se desarrollaron en este país, para futuras investigaciones dentro se ese Distrito que se caracteriza por una gran diversidad de cultura tanto natural como histórica.

Sin más por el momento le agradezco sus finas atenciones a la presente, esperando contar con su apoyo, reciba un cordial saludo.

ATENTAMENTE

DRA. NELLY M. ROBLES GARCÍA
DIRECTORA DE LA ZONA ARQUEOLÓGICA
DE MONTE ALBAN

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2006 – 2007
Appendix C: Interview Questions

• ¿Desde cuando vive usted aquí?
  How long have you lived here?

• ¿Cuántas viven en su casa?
  How many people live in your home?

• ¿Dónde consiguen la comida?
  Where does your food come from?

• ¿Dónde trabaja usted?
  Where do you work?

• ¿Trabaja usted en su propia tierra o en la tierra de otra persona?
  Do you work on your own land or the land of another?

• ¿Utiliza usted algunas de las plantas de esta region en su casa? ¿Cuáles de ellas? ¿Para que?
  Do you use some of the plants in this region for in your home? Which ones? For what uses?

• ¿Cuales plantas son las más importantes en su casa?
  Which plants are the most important in your home?

• ¿Puede usted describir las plantas más importantes? ¿Donde crescen? ¿Como se las usa?
  Could you describe these plants? Where do they grow? How does one use them?

• ¿En su opinion, que lugares de la comunidad o la region serían ideales para:
  - cultivar
  - construir
  - hacer turismo (que venga gente de fuera para conocer)
  In your opinion, which places in your community are ideal for:
  - agriculture
  - construction
  - tourism

• ¿Ha cambiado o crecido su pueblo desde que usted era un niño?
  Has your town changed or grown since you were a child?

• ¿De que manera ha cambiado o crecido su pueblo?
  How has your town changed or grown?

• ¿Sabe usted lo que es la Reserva de la Biosfera de Tehuacán-Cuicatlán?
  Do you know what the Tehuacán Cuicatlán Biosphere Reserve is?

• ¿En su opinion, que beneficios ha traído la Reserva de la Biosfera de Tehuacán-Cuicatlán? Ha traído algun problema?
  In your opinion, what benefits has the Biosphere Reserve brought? Has it caused any problems?
• ¿Sabe usted lo que es un sitio arqueológico? Si es así, ¿puede hablarme sobre ello?
Do you know what an archaeological site is? If so, could tell me about one?

• ¿Conoce usted algún sitio antiguo? ¿Puede describirlo para mí por favor? ¿Dónde queda?
Do you know of an ancient place (site)? Could you describe it please? Where is it located?

• ¿Qué opinión tiene sobre los sitios antiguos de su comunidad?
What is your opinion about the ancient sites of your community?

• ¿Hay alguna conexión entre la gente que vivía allí y la que vive ahora?
Is there a connection between the people that lived there and the people of your town today?

• ¿Ha tenido usted contacto con el Instituto Nacional de Antropología e Historia (INAH) en los últimos cinco años, y en los últimos diez, y en los últimos quince?
Have you had contact with the INAH in the last 5 years, 10 years, or 15 years?

• ¿Cómo describiría usted su relación con el personal de INAH?
How would you describe your relationship with the INAH personnel?
Appendix D: Land Tenure Distribution in Santos Reyes Pápalo
Appendix E: *Pedido de Agua* Procession and Offerings in Concepcion Pápalo

Photo courtesy of Padre Eugenio Cardolini

Photo courtesy of Padre Eugenio Cardolini